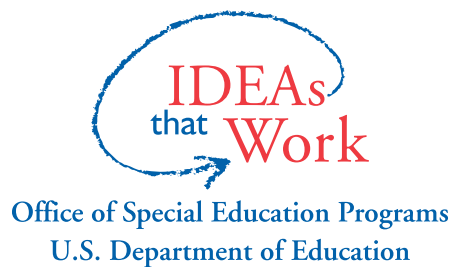# Tipsheets and FAQs

NDC
National Deaf Center
on Postsecondary Outcomes

Summary

This booklet is a collection of Pepnet 2 tip sheets and FAQs on various deaf issues.

Improving the
Language and Learning of Students Who are Deaf

Teaching students who are deaf or hearing should mean linking both language and content learning. Since students must learn both the language used in and the content of the courses they take, teachers must be able to teach them the language, reading and writing of their subject area. This tipsheet discusses ways to adapt the content of a course so that students who are deaf or hard of hearing can learn from the ideas of others and put new ideas into their own words. Here are some suggestions:

The More Ideas are Discussed and Presented Engagingly, the More Students Will Learn

- Before beginning class, have students summarize the ideas of the prior class, then relate those summaries to the goals of the current class.

- Break students into small groups to review homework assignments. This jumpstarts their memories and gets them using the language they are learning.

- Make ideas come alive through drama. If students are studying the catalyst role of enzymes, act out how these enzymes "grab" amino acids to assemble proteins!

- Use blackboard diagrams to illustrate "pictureable" ideas and label them or use pre-selected images from the Internet to illustrate a point.

- Use analogies for comparisons. If measurement conversions (inches to centimeters) are being taught, first use monetary conversions (dollars to dimes) to reinforce the idea of changes in form but not amount.

- List and refer to key concepts and vocabulary on the blackboard during class. Use visually projected notes when possible, pointing to key words and phrases.

- Give students more time to manipulate ideas through discussion before assigning writing tasks. Jot down key ideas on the board that they might want to think more deeply about for a particular assignment.

Reading Across the Curriculum: The More Students Understand Others' Writing, the More They Will Learn

- Give a brief overview of a reading before assigning it, jotting down key words on the board that students will encounter. If the reading is a narrative, write character names and roles on the board.

- Give students reading guides for difficult sections of texts. Include comprehension questions as well as short explanations of key words and background references.

- Consider giving students partially filled-in outlines of assigned pages. Vary these outlines—first, give major ideas and ask students to fill in the details; next, give details and ask them for the major ideas. For new vocabulary, include language that surrounds key words in a text-- if a key word is *majority*, include its surrounding words *opinion of the court* as in *the majority opinion of the court* to allow students to see how words "go together," or chunk, which will help in remembering them. Mention what part of speech the word is, making sure that it fits how the word is being used in the example.

- Show students how to "mark up" text by underlining and writing side-notes and questions, using either a computer or a document camera connected to an LCD projector that projects onto a whiteboard.

- Visually project as much text as possible using the methods mentioned above. Using your index finger, point out new vocabulary and its linguistic context (the surrounding phrases or clauses). Encourage interpreters to stand or sit as close to the text as possible. Read difficult portions of text aloud, modeling strategies readers use.

Show how meaning builds from prior to present text and how readers predict meaning and keep reading to test predictions.

- All reading assignments should have a companion writing assignment. Require students to re-read and re-write unsatisfactory assignments after they have benefitted from class discussion.

Writing Across the Curriculum: The More Students Create Their Own Ideas in Writing and Integrate the Ideas of Others, the More They Will Learn

- Give students more writing assignments, perhaps shorter pieces as opposed to one or two longer ones.
- Create writing assignments that engage writers, such as response papers and position papers.
- Analyze models of good student writing, showing students exactly what is expected. Talk explicitly about how the authors crafted their pieces and then name their works in memorable ways so that they can be referred to again for other writing assignments. Say things like, "Notice how this quote perfectly fits after its lead-in."
- Suggest networked programs such as Blackboard's Discussion Board, where students might be assigned exploratory writing before formal writing. Select well-done exchanges to be viewed in class the next day. Encourage students to cite this more casual writing in their later assignments, giving credit to the student-author.
- Show students how to cull information from their readings to address an essay topic and to organize these citings into an outline. It is much easier to follow a student's chain of thought in a rough outline than later, when it may get lost in a tangle of prose.
- Encourage multiple drafts of written work and respond to each draft.

A **FLUENCY, CLARITY, CORRECTNESS** approach might be tried this way:

- Response to Draft 1: Mention whether the assigned topic was addressed, if enough information was provided, if it was well ordered and relevant. Point out unclear language.
- Response to Draft 2: Continue to ask questions that will address remaining issues of development and coherence. Continue to point out unclear language.
- Draft 3: Consider using a writing tutor to edit the piece based on the grammatical needs of the student. Writing tutors need to be fluent in the language of the student and skilled in teaching grammar in a consistent way. An X-Word Grammar approach might be tried. For more information about X-Word, visit: http://xwordgrammar.pbworks.com. Some thought might be given to instituting this approach program-wide.
- Consider ending each class five minutes earlier so that students can write what they learned during the session and note any questions. Students could read these notes aloud at the beginning of

These suggested practices will help students improve their language skills by strengthening their understanding of new ideas through language, reading and writing. The more opportunities students are given to "talk," read, and write about their new learning, the more they will indeed learn.

See if your institution would consider linking courses in pairs or clusters, connected by themes, so that students' language, reading, and writing about a particular theme can be enriched by the different teachers' unique perspectives.

How do the copyright laws apply to video clips found on the internet, such as YouTube?

PEPNet

Unless otherwise indicated, such as those licensed under Creative Commons, these video clips are also copyrighted. Anyone who creates an original work holds the copyright to it. "No publication or registration or other action in the Copyright Office is required to secure copyright" (http://www.copyright.gov/circs/circ1.pdf).

Additional Resources:

PEPNet TipSheet
http://pdcorder.pepnet.org/media/1155TPSHT_Captioning.pdf

Described and Captioned Media Program
http://www.dcmp.org

National Captioning Institute
www.ncicap.org

WGBH in Boston
http://ncam.wgbh.org/dtv/basics/captioning.html

Captioning Web
http://www.captions.org/

FCC
http://www.fcc.gov/cgb/consumerfacts/closedcaption.html

WebAim
http://www.webaim.org/techniques/captions/

Captioning Laws
http://www.captions.org/caplaw.cfm

**Visit www.pepnet.org for additional information and resources
or for a listing of outreach specialists by state/territory**

PEPNet is sponsored by the U.S. Department of Education and Office of Special Education Programs.

IDEAs that Work
U.S. Office of Special Education Programs

ENHANCING COMMUNICATIONS OUTSIDE THE CLASSROOM

Larry Sivertson Hearing Loss Network

SUMMARY

While many institutions provide communications access for hard-of-hearing students in the classroom, few have made a similar effort outside the classroom. Providing complete access for students with hearing loss begins with the commitment of a university's administration. Some students may require accommodations in several communications situations they encounter on a daily basis.

The institution's staff must be dedicated to meeting students' needs, must understand the communications issues associated with hearing loss, know appropriate technologies and techniques to mitigate the effects of hearing loss, and be willing to make the additional effort that may be required.

KEY TERMINOLOGY

Hard of Hearing
The term "hard of hearing" refers to any student with hearing loss who prefers spoken language as her primary means of communication.

Universal Design
Refers to the practice of designing an environment that is accommodating to all people, regardless of disabilities.

KEY CONCEPTS

One of the frustrating aspects of hearing loss is the stigma and denial that often accompany it. Despite the fact that only a minority of Americans with hearing loss are senior citizens, our society still perceives hearing loss is something that happens to old folks. So younger people often are reluctant to admit their hearing loss, or to do anything about it.

It's difficult enough to provide appropriate accommodations for people who openly seek help. But how do you do so for people have not identified themselves as having hearing loss? It's probable that those students far outnumber the ones who are upfront about their hearing loss. And many of them encounter numerous significant communications barriers during a typical day on a typical campus.

One effective solution is universal design. Designing the environment so that people with untreated hearing loss are accommodated is beneficial not only to them, but also to the student population at large.

SUGGESTIONS FOR ACTION

• Incorporate into your institutional culture the notion that all facilities, personnel, events, and resources should be accessible to all students.

• Understand the concept of "Universal Design" and explore solutions that incorporate those principles.

• Ensure that your DSS personnel understand the unique challenges associated with serving hard-of-hearing students, and also understand the technology and techniques that assist in meeting those challenges.

• Implement a program to encourage hard-of-hearing students to contact DSS for support and guidance.

• Develop and conduct a "Living With Hearing Loss" class that encourages students to accept their hearing loss, understand their rights and responsibilities, and master the various technologies and techniques that can assist them in dealing with their hearing loss. Topics should include:

   3 Psychosocial aspects of hearing loss
   3 Hearing loss acceptance
   3 Importance of self-advocacy
   3 Rights and responsibilities of students with hearing loss
   3 Hearing aids
   3 Hearing assistive technology
   3 Telecommunications devices
   3 Alerting devices
   3 Hearing loss organizations
   3 Communications strategies
   3 Institutional resources for students with hearing loss.

- Conduct mandatory orientations for instructors, administrators, and staff in which attendees learn appropriate behavior when working with students with hearing loss.

- Think creatively about how to apply the available resources in novel ways to provide communications access in challenging situations.

ADDITIONAL RESOURCES

Universal Design

http://www.washington.edu/doit/Faculty/Strategies/Universal/

Classroom Acoustics

ANSI Classroom Acoustic Standard (ANSI S12.60-2002), (2002), http://asastore.aip.org/

Nelson, Peggy, Soli, Sigfrid, and Seltz, Anne, (2002) *Classroom Acoustics II: Acoustical Barriers to Learning*, http://asa.aip.org/classroom/bookletII.pdf

Seep, Benjamin, Glosemeyer, Robin, Hulce, Emily, Linn, Matt and Aytar, Pamela (2000, August) *Classroom Acoustics: a resource for creating learning environments with desirable listening conditions*, http://asa.aip.org/classroom/booklet.html

http://www.access-board.gov/acoustic/index.htm

http://www.quietclassrooms.org/

Classroom Lighting

Illuminating Engineering Society of North America (2000) *Guide for Educational Facilities Lighting*

Sound Field Systems

Teachers find that mikes amplify learning, The Herald-Tribune, Feb. 3, 2006, http://www.heraldtribune.com/apps/pbcs.dll/article?AID=/20060203/NEWS/602030395

Accessible Computers

The TRACE Center at the University of Wisconsin-Madison
http://trace.wisc.edu/

Electromagnetic Interference and How to Prevent It

http://www.access-board.gov/research/interference.htm

Accommodating Hard of Hearing Students in Athletics

Palmer, Catherine V., Butts, Stacy L., Lindsey, George A. and Snyder, Susan E. (1999) *Time Out! I Didn't Hear You*, Sports Support Syndicate, Inc., Pittsburgh, Pa. USA
http://www.pitt.edu/~cvp/timeout.pdf

Movie Captioning

Rear Window Captioning
http://ncam.wgbh.org/mopix/

Theater Captioning

Personal Captioning System website
http://www.personalcaptioning.com/

Sound Associates website:
http://www.soundassociates.com/products/icaption

Caption Display website:
http://www.captiondisplay.com/html/systems.html

Scholarships for Foreign Study

http://www.uni.edu/neuhaus/sertoma/scholarshipshearing.html

Interviewing and Hearing Loss

http://www.hearinglossweb.com/Issues/Employment/hl_and_work.htm

http://www.hearinglossweb.com/res/hlorg/alda/cn/2000/work.htm

http://qcshhh.tripod.com/id19.html

Psychosocial Aspects of Hearing Loss

http://www.asha.org/about/publications/leader-online/archives/2002/q1/020319d.htm

http://www.hearinglossweb.com/Issues/psych/psych.htm

Harvey, Michael (1998) *Odyssey of Hearing Loss: Tales of Triumph*, DawnSign Press

Myers, David (2000) *A Quiet World: Living with Hearing Loss*, Yale University Press

Hearing Loss Acceptance

http://www.hearingresearch.org/Dr.Ross/Reflections_HOH_audiologist.htm

http://www.hearingresearch.org/Dr.Ross/coping_with_a_hearing_loss.htm

http://www.ifhoh.org/papers/trychin.htm

The Importance of Self-Advocacy

http://www.handsandvoices.org/needs/advocacy.htm

http://www.uncc.edu/sdsp/

Rights of Students with Hearing Loss

http://www.hhs.gov/ocr/civilrights/resources factsheets/504.pdf

http://www.section508.gov/index.cfm?FuseAction=Content&ID=15

http://www.ada.gov/

Hearing Aids

http://www.hearinglossweb.com/tech/ha/ha.htm

http://www.vitalco.net/Hearing/Types.htm

http://www.hearingaidhelp.com/hearing-aids.html

Hearing Assistance Technology (Assistive Listening Devices)

http://www.hearingloss.org/learn/hat.asp

http://www.asha.org/public/hearing/treatment/assist_tech.htm

http://www.hearinglossweb.com/tech/ald/ald.htm

Telecommunications Devices

http://www.acdhh.org/uploads/AzTEDP%20Catalog%20 8-08.pdf

http://www.ddtp.org/CTAP/services_and_equipment/products.asp#products

Alerting Devices

http://www.nchearingloss.org/alert.htm

http://www.hearinglossweb.com/tech/alrt/alrt.htm

Emergency Planning for Students with Hearing Loss

http://www.uwm.edu/Dept/EHSRM/EMERGENCY/evacada.html

http://www.hearinglossweb.com/Issues/EmergPlan/emerg_plan.htm

http://www.cepintdi.org

Hearing Loss Organizations

http://www.agbell.org

http://www.alda.org

http://www.hearingloss.org

http://www.saywhatclub.com

Communications Strategies

http://clerccenter.gallaudet.edu/InfoToGo/011.html

http://www.therubins.com/geninfo/speechrd.htm

http://www.cuedspeech.org/

Institutional resources for students with hearing loss

http://www.pepnet.org

http://www.pepnet.org/south/

http://www.mcpo.org/

http://wrocc.csun.edu/

http://www.pepnetnortheast.rit.edu/

Doesn't the Fair Use Law allow educational institutions to make multimedia content accessible by adding captions?

PEPNet

The Fair Use Law allows instructors or institutions to copy and distribute certain copyrighted materials for educational purposes, with limits on the portion of the total work that may be copied and how long it can be in use. It does not allow users to change the material's format or alter its content, meaning, for example, that a VHS tape cannot be converted to a digital format or vice versa. Most importantly, captions cannot be added without permission of the copyright owner.

Visit www.pepnet.org for additional information and resources or for a listing of outreach specialists by state/territory

PEPNet is sponsored by the U.S. Department of Education and Office of Special Education Programs.

IDEAs that Work
U.S. Office of Special Education Programs

Campus Safety

And the Deaf Community Working Together

If your campus has students who are deaf or hard of hearing, your Public Safety department needs to become aware of some basic information about deafness in order to serve those students well. Public Safety officers may interact with deaf students in a variety of situations:

- Reporting a theft
- Emergency medical situations
- Reporting items lost or found
- Parking violations
- Requests for services

Let's start with some basic information about deafness and deaf culture. It is important to know that there is a difference in the degrees of deafness that people may have.

Vocabulary

- The term "deaf" is preferred by many students who identify with the deaf community whether they are deaf or hard of hearing.
- Hard of Hearing often is used when the person has some hearing or uses hearing aids. Hearing Impaired may be viewed by members of the deaf community as an insult because they feel they are not impaired. Deafness is their way of life, with their own culture and language (ASL – American Sign Language, which is recognized as a language with its own syntax and grammatical structure).

Be aware that there is a Deaf Culture and people who are deaf are proud of it. Deaf culture has similarities and contrasts with other cultures.

Communication options

There are many ways to communicate with a deaf person. Choosing one of the modes below or using a combination of them is acceptable. Remember, the goal is to communicate.

Pantomime: We all use pantomime in everyday life. You may use your hands to describe the size, roundness, or placement of an object. Facial expressions sometimes are all that is needed to project a feeling or thought.

Speechreading: Remember that not all deaf people are skilled at reading lips. Speechreading, therefore, is most effective when combined with other forms of communication. Eye contact and proper lighting always are important for effective communication. Deaf people need to see your face in order to read your lips. They depend heavily on certain factors that the hearing community takes for granted, such as facial expression and eye contact. It is important not to over-exaggerate your lip movements. Talk slowly (normally) and clearly without over-exaggerating words.

Written communication can be used for short conversations when asking direct questions, giving direct answers, and giving directions. It is not well suited for lengthy communication, which can be exhaustive, especially dealing with matter that requires details. Another drawback of written communication is that it is time consuming. Written communication sometimes can be difficult, depending on the level of the deaf person's knowledge of standardized English.

Interpreting is an excellent choice for communication. The interpreter will convey your tone of voice and inflection through facial expression, body language, and intensity of the signs used. It is helpful to brief the interpreter on the nature of the incident/situation. Sit/stand next to the interpreter and face the deaf person. Speak to the deaf person, not the interpreter. Be aware that interpreters interpret ALL that they hear.

Sign language often is taught through community service organizations, local high schools, or colleges and is an excellent way to communicate with the deaf community. This will show your support and enable you to be more prepared in emergency situations.

Internet communication

The rise in popularity of the Internet has opened new doors to communication between deaf and hearing people. The use of TDDs/TTYs (telecommunication devices for the deaf), has significantly declined in favor of these options for live communication:

- Internet Relay Service: This online service allows a deaf person to type to an operator who, in turn, makes a phone call for that individual. Essentially, this service is a relay call via TTY/TDD performed online. The most popular online relay services are Sprint Relay, IP-Relay, and i711.
- Video Relay Service: VRS is similar to the Internet relay service with the added bonus that the deaf person can see the interpreter and can communicate in real time through the use of TV and a camera, in order to make a phone call. Again, with the advent of the Internet, people can make VRS or VP calls (deaf-to-deaf) using their

computer's web camera and a program, such as Skype, which is free.
- Instant Messaging Service. These are real-time, live text and/or video interactions between two or more people. These include Skype, MSN, ICQ, Yahoo!, and AOL; all of them are free to use. Many of them also provide free web cam connectivity, and IP Relay, Sprint Relay, and other relay services host a user name (e.g. on AIM, "MY IP Relay" is the screen name for IP Relay services).

Use of Interpreters

Learning to work with an interpreter is easy and an effective mode of communication. It is a good idea to establish guidelines or procedures to abide by when engaging interpreting services so that there is no confusion.
- Have a procedure set up for contacting an "on call" interpreter during the day and at night. Meet with the interpreting services department or community agency to coordinate logistics.
- Have an understanding of the geographical boundaries and services the interpreter will be providing for your department and financial obligations. Should an assisting police department need interpreting services off campus to conclude its investigation, it is important to have a policy/procedure set up for when and where your interpreters will be used.
- Are the interpreters certified? Do they need to have special certifications to interpret legal proceedings in your state or on your campus?
- Interpreters will not be called upon as witnesses to testify as to what was said during an interview but may be called upon to testify that communication occurred.

Emergencies

During an emergency the ability to communicate not only saves time but may save a life. Training for emergencies is always good management foresight.
- Teach officers "emergency signs": who, what happened, where, hurt/pain, hospital, ambulance, medicine, pills, how much, relax, and interpreter.
- Have a response procedure for "no-talk" telephone calls that are identifiable by location (ex: "Blue light" emergency call boxes, residence halls, offices etc.).
- During nighttime vehicle stops, position your flashlight between you and the driver, shining the light up or across so you both are illuminated and the light is not in either person's eyes.

- Learn vehicle and traffic signs: license, registration, insurance card, stop sign, speeding, wait, and ticket.
- Student Rights/Miranda Warnings: Explain these in other words. For example: You have the right to remain silent = You do not have to answer my questions if you don't want to. Some deaf students may understand the words but not the concept. A written form with an explanation of the rights helps maintain consistency and clarity.
- Handcuffing cuts off important modes of communication. You may consider using Handcuffing belts (which secure the person's hands in front) after the person has calmed down. They allow communication to resume and maintain officer safety.

Consider this...

Here are just a few "tips" for you to consider when communicating with a deaf person.
- The "deaf nod." As you ask questions the deaf student nods his/her head "yes" during interviewing. This does not always mean "yes" to your question. The deaf person may only be indicating that he/she understands the words you are using, but may not understand the concept. Be sure your communication is clear. If it is not, use a different mode.
- Large, fast gestures/signing indicate the deaf person may be under stress and that emotional levels are high. To someone not knowing this, it may appear that the person is aggressive or out of control. It can be helpful to move the person to an isolated area and/or have the person sit down where communication can be slowed down and improved.
- Eye contact is a must for communicating with a deaf person (yelling does not help). Facial and body language also are important.
- Deaf students yield to sirens the same as any driver with the stereo on.
- You can reduce stress and gain cooperation by first explaining the actions you are going to take or need from the deaf person.
- To gain the attention of a deaf person, it is acceptable to flick the lights on/off, stomp your feet, bang on the table and/or wave your hand.

For more information on how to contact professionals in the campus safety field, as well as other topics covered by the PEPNet Tipsheet series, visit PEPNet's website at http://www.pepnet.org.

CART Communication Access Realtime Translation

What is CART?

Communication Access Realtime Translation – (CART) – is the instant translation of the spoken word into English text performed by a CART reporter using a stenotype machine, notebook computer and realtime software. The text is then displayed on a computer monitor or other display device for the student who is deaf or hard of hearing to read. This technology is primarily used by people with hearing loss, but it also has been used by people with learning disabilities or those who are learning English as a second language.

How does CART work?

CART reporters write in a phonetic language, called STENO. Using the stenotype keyboard's 22 keys and a number bar, they learn unique combinations of letters to represent sounds or phonemes. The keyboard is chordal; therefore, multiple keys are pressed at the same time, much like playing chords on a piano, to represent certain phonemes. When an outline is written on the keyboard, it passes via cable to a computer for processing. This processing can be referred to as "translation" because it takes the phonetic outlines written by the reporter and translates them into English words using a special dictionary created by the reporter. This dictionary contains word parts, whole words, phrases, names, punctuation, and special entries used by the reporter during a realtime session.

What special equipment is needed ?

Most CART reporters already own their own hardware and software for realtime display. Their hardware includes a personal computer that is at least a Pentium notebook computer with a 120 Mb hard disk drive, 8 Mb RAM, and 2 serial ports. Some CART reporters also purchase an optional external VGA or SVGA color monitor, which enables the student that they are assisting to see the screen better.

Other parts of their hardware include a realtime cable that connects the computer-assisted shorthand machine to the laptop computer. The reporter will also need to purchase a printer that can either be a letter quality dot-matrix printer or a bubble ink-jet printer. The reporter must also purchase a computer-assisted shorthand machine, realtime translation software, and software that enlarges their text for the student that they are assisting. The CART reporter will rely on the college to provide any overhead projectors, screens, video hookups, large format displays, or other equipment that may be requested to meet specific classroom needs.

How much does the CART service cost?

Compensation for CART reporters working with students who are deaf and hard of hearing varies considerably, based on training and experience. The National Court Reporters Foundation suggests $40-$75 per class hour, $15-$40 per hour for preparation time (30 minutes for each class hour), and $15-$40 per hour for production time (editing and distribution). Colleges with little or no experience using CART reporters may wish to check with other colleges that have hired CART reporters.

Ideas for faculty working with CART

Here are some strategies for faculty members using CART reporters:

1. Meet with the CART reporter before the first class and give the reporter a course syllabus, textbook for the class, handouts, outlines, readings, overheads, and vocabulary lists that will be useful for the CART reporter to use to prepare for class. The specialized vocabulary for the class will be entered into the reporter's dictionary, which will help to maintain a high translation rate. This is advantageous for both the reporter and the student(s).

2. Introduce the CART reporter and the CART service at the beginning of the first class. Show your support of the service. Tell students that the CART reporter has been assigned to one or more students for the term of the class.

3. Allow the CART reporter to explain briefly what realtime translation is, and invite interested students to look at the screen after class. Explain that, through the use of realtime translation, the reporter will write the teacher's and classroom participants' spoken words; the text of this lecture will display on a computer monitor or other display device in English for the student who is deaf or hard of hearing to read. Also, remind students that at the conclusion of each class, the reporter will provide the student with a copy of the lecture text from the realtime translation either in the format of an unedited ASCII file on a diskette or a printed copy of the edited text.

4. Permit the CART reporter to sit in a location that makes hearing you and the students in the class as easy as possible.

5. Make sure that the student being assisted is able to watch the screen and the speaker at the same time. Since the translation and text display are usually one to four seconds behind the speaker, it may take the student who is deaf or hard of hearing a few seconds longer to respond. Try to limit the class discussion to one person speaking at a time, so that all students have the opportunity to participate.

6. Restate or summarize students' comments if they are hard to hear, or somewhat disorganized. The CART reporter knows he or she must follow the intent of the speaker at all times. The reporter will render as near a verbatim translation as possible, always conveying the content and spirit of the speaker. Sometimes, a new term is introduced that will not translate properly. The reporter may then use substitute language which is computer-translatable so that the term can be understood by the student.

7. The CART reporter may begin editing class notes during "down times" in the class. Decide whether hearing students will have access to these notes. Be sure your preference on this matter is well understood by the CART reporter, all the students – both hearing and deaf – and your department head or dean.

Other features of the CART service:
- The text on the screen will reflect everything going on in the environment, including environmental sounds and speaker identifiers. Examples include:
INSTRUCTOR:
MALE STUDENT:
FEMALE STUDENT:
(LAUGHTER)
(APPLAUSE)
(BELL RINGING)

- The CART reporter will work with the instructor and the student(s) in each class to ensure cooperation and quality of reporting.

- The CART reporter will always have a back-up reporter to take over the class in case of illness, and will inform the instructor of this change.

Community Rehabilitation Programs

According to figures cited by Boone and Watson (1999), each year about 7,800 individuals who are deaf or hard of hearing graduate or leave secondary schools in the United States. Of those, only about 2,000 have the skills to succeed in colleges or universities with appropriate support services. For many of the remaining individuals, one option that can provide the support and training they need to work and live independently in their communities is a Community Rehabilitation Program (CRP).

CRPs are "programs that facilitate or provide direct vocational rehabilitation services to individuals with disabilities" (Jones & Sligar, 2002). Support options include vocational evaluation; communication skills assessment; employment services; post-employment services; employer and community awareness; independent living skills training; and advocacy, including training in self-advocacy. Almost 40% of individuals receiving services complete their programs and another 40% achieve positive employment outcomes (Hagen-Foley, D.L., Rosenthal, D.A., and Thomas, D.F., 2005).

Most CRPs serve people with a wide range of disabilities, often co-occurring disabilities. In order to effectively serve individuals who are deaf, late deafened, hard of hearing, deafblind and those who have co-occurring disabilities, staff members must be knowledgeable in three areas: hearing loss, communication skills, and their own professional discipline. Familiarity with the socio/cultural and medical aspects of hearing loss, the ability to use ASL and recognize a variety of communication systems used by people who are deaf or hard of hearing, a basic understanding of the wide range of assistive technology available, and access to a network of community resources are critical.

Communication Assessment

Communication access is the most critical factor for this population, especially for those who communicate in non-traditional ways.

Assessing communication skills is crucial in the vocational rehabilitation process. Evaluation should include determining an individual's strengths, weaknesses, and language preference, adding background and experience into the equation. Functional communication skills for the work place should be a major focus.

Vocational Assessment

Vocational assessment is defined by Hamilton (2007) as "a process of collecting information that can be used in decision-making, career planning and service plan development." Since many standardized tests do not have norms for the population of deaf or hard of hearing, the emphasis should be on situational assessments and hands-on work experience.

Full- service employment services programs also include job-seeking skills training: targeting or creating jobs, creating resumes, practicing interviewing skills, learning the culture of the hearing workplace, developing self-advocacy skills, job coaching, and follow up. The process should be flexible enough to meet the needs of job seekers in all stages of work readiness. Graduates of postsecondary academic and training programs may only need assistance in using local resources to target jobs, brushing up interviewing skills, or developing a resume. Individuals with prior work experience may need to update resumes. Those leaving secondary programs with little or no work experience, co-occurring disabilities, or using alternative communication modes may require comprehensive services with long-term follow up services consisting of ongoing assistance with communication needs, assistance in advancement in the company, and problem solving to eliminate barriers as they arise.

Living Independently

To be successful in the workplace, individuals also need skills to live independently in their communities. Finding and maintaining housing, handling money, establishing a social network, and setting up reliable transportation are all important elements for stable employment. CRPs can provide support services in the area of housing, housekeeping, money management, social skills and networking, and work-related skills such as time management, transportation, and dealing with authority.

Individuals with acquired hearing loss may benefit from adjustment counseling to help them accept their loss.

Most CRPs enjoy close working relationships with state Vocational Rehabilitation Services in their area. Vocational Rehabilitation Counselors, including specialized Rehabilitation Counselors for the Deaf (RCDs), refer their customers to CRPs for employment services. In the best-case scenarios, the VR counselor, CRP staff member, representatives of other community resources, and the individual work as a well-synchronized team to ensure timely, high quality services leading to successful employment. CRPs also collaborate with postsecondary academic and training programs complementing classroom and learning expertise with connections to community resources and employment services (Jones, D., and Sligar, S., 2002). Forging strong relationships early in the process, when individuals are 14 to 16 years of age, allows more time to plan effectively, and leads to smoother transitions to adult life in the community.

While some CRPs focus on services for the deaf or hard of hearing, most CRPs serve people with a wide variety of disabilities. When individuals who are deaf or hard of hearing are choosing a facility, how can they be certain that staff members are qualified and that the agency as a whole meets basic standards? The facility should have communication, physical, cognitive, and attitudinal accessibility (Faulkner et al., 2004). As noted above, professionals serving this specialized population must be skilled in the areas of hearing loss, communication skills, and their own professional disciplines. Candidates for service can request documentation of professional training and experience. Planning and program should be "person driven," allowing individuals to participate fully in the process (Hagen-Foley et al., 2005). To evaluate the agency as a whole, they should look for certification. One of the most widely used is the Commission on Accreditation of Rehabilitation Facilities or CARF (CARF, 2010). CARF sets standards for quality of service and conducts regular onsite surveys to ascertain that CRPs meet those standards.

References

Boone, S. & Watson, D. (1999). Identifying the Technical Assistance Needs of Community Based Rehabilitation Centers Serving Persons who are Deaf or Hard of Hearing. Retrieved November 30, 2010, from http://www.wou.edu/education/sped/wrocc/boone.htm

CARF International. About Us: Quick Facts. Retrieved from http://www.carf.org/About/QuickFacts/.

CBR: A Strategy for Rehabilitation, Equalization of Opportunities, Poverty Reduction and Social Inclusion of People with Disabilities. Joint Position Paper (2004). Retrieved November 30, 2010 from unesdoc.unesco.org/images/0013/001377/137716e.pdf

Faulkner, G., Harmon, M., Johnson, L., Knopf, E., Latz, R., Parnes, A., Currie-Richardson, D., Sligar, S. (2004). Strategies for Community Rehabilitation Programs to Serve Consumers Who Are Deaf, Hard of Hearing, Late Deafened or Deafblind. Midwest Center for Postsecondary Outreach (MCPO) St. Paul College – A Community & Technical College.

Hagen-Foley, D.L., Rosenthal, D.A, Thomas, D.F. (2005). Informed Consumer Choice in Community Rehabiiitation Programs. Rehabilitation Counseling Bulletin, 48(2), 110-117.

Cued Speech

Cued Speech (CS) is a tool used to make spoken languages visible. While it uses the hands to communicate information visually, it is not a form of sign language. Signed languages are languages in their own right and use the hands, body, and face to present complete concepts rather than words. They have their own grammar systems and vocabularies. Cued Speech is not a language at all, rather a system used to communicate traditionally spoken languages through vision alone.

In American English, eight distinct handshapes move between four specific locations on or around the face. These synchronize with the normal mouth movements of speech to represent the sounds of spoken language, or phonemes. Without voice, many of the movements of the mouth during speech look alike. The signal received by a speechreader is incomplete and often results in misunderstanding. The addition of manual cues serves to supplement the oral information and eliminate any ambiguities that might exist. With clear distinction between individual phonemes, one no longer depends on contextual clues to guess the message as one must with speechreading alone.

As an example, say the following words silently to yourself in a mirror: math, bath, and path. Note that they are impossible to distinguish from one another without ample context. Adding the appropriate cues to each word would convey the information necessary to identify each word correctly, with or without context.

Using CS, an utterance may be made fully visible sound for sound, syllable by syllable. Complete access to the phonological structure of a spoken language, such as is made possible through Cued Speech, is critical to the acquisition of decoding skills necessary for literacy.

Why was it developed?

Literacy is the original and primary goal of Cued Speech, and it has proven successful toward that end. It also enables hearing parents to communicate with a deaf or hard-of-hearing child using their own, native, spoken language. Young children must be immersed in an environment rich with fluent language models if they are to develop sophisticated language skills and cultural sensitivity. There is perhaps no better place for this to occur than at home where children can learn in a natural and efficient manner.

Who uses Cued Speech?

Families of deaf children have been cueing in the United States and abroad for more than 30 years. Cued Speech has been adapted to more than 50 languages

---

CUED SPEECH CONSONANT HANDSHAPES

1	2	3	4
p	k	s	n
d	z	h	b
zh	v	r	hw (why)
	tH (the)		

5	6	7	8
m	sh	j	y
f	l	g (go)	ng
t	w	th (thumb)	ch

CUED SPEECH VOWEL PLACEMENTS

MOUTH	CHIN	THROAT	SIDE*
ee (see)	ue (blue)	i (sit)	oe (home)
ur (her)	aw (saw)	a (cat)	ah (father)
	e (net)	oo (book)	u (but)

- /oe/ and /ah/require slight forward motion; /u/ requires slight downward motion

DIPHTHONGS

SIDE-THROAT	CHIN-THROAT
ie (tie)	ae (cake)
ou (cow)	oi (boy)

and dialects. CS allows hearing parents to convey their native spoken language with ease. Some families use both English via Cued Speech and sign language, while others who prefer sign language as their primary mode of communication also cue as a tool for developing English literacy.

Cued Speech may also be used in educational settings, either by classroom teachers who cue or by cueing interpreters, called Cued Speech Transliterators, or CSTs.

What is a Cued Speech Transliterator?

A CST is a person who conveys all spoken and other auditory information visually using Cued Speech. They repeat silently with cues what is spoken by others, as well as environmental sounds. The consumer receives a syllable-by-syllable, visual rendering of spoken language only a split-second behind the presentation of the original speaker. Occasionally, a CST uses special support techniques, like gesture, paraphrase, and restructuring to accommodate for special needs or circumstances. Depending on the needs of a particular student, a CST may be cueing all the language, academic, and social information occurring in a classroom. For another student who is using sign language in the classroom primarily, a CST might cue spelling tests, new English vocabulary, phonics and reading instruction, or foreign language instruction.

Skilled transliterators are individuals who not only cue proficiently, but have received training specific to their role and function with a variety of consumers in multiple settings. They must adhere to professional standards and codes of ethical conduct similar to sign language interpreters. Cued Speech Transliterators often are required to hold state quality assurance levels and/or national certification.

Who would use a CST?

Preschool through postsecondary students throughout the country are able to participate fully in mainstream educational settings with access provided by Cued Speech Transliterators. For teachers, working with CSTs is very much like working with sign language interpreters.

Transliterators also are requested by some deaf adults for access to a variety of day-to-day activities within the community. Like sign language interpreters, CSTs may be asked to facilitate communication at business meetings, doctor appointments, and theatrical events.

How do deaf individuals who use Cued Speech communicate?

Most use oral communication when interacting with hearing people. Many use sign language when interacting with deaf people who sign.

How can I learn to cue?

Cued Speech instruction is available throughout the U.S. from a network of certified instructors. Cue Camps are a popular way for families and professionals to develop their cueing skills. Videotape/DVD lessons are available.

Cued Speech Resources

National Cued Speech Association

www.cuedspeech.org

Cued Speech Transliterator Evaluation and Certification:

Testing, Evaluation, & Certification Unit, Inc. (TECUnit, Inc.)
P. O. Box 125, Draper, UT 84020-0125
1(800) 523-0964
www.tecunit.org

Interpreting & Biomechanics

Cumulative Trauma Disorder*

Cumulative trauma disorder (CTD) refers to a collection of disorders associated with nerves, muscles, tendons, bones, and the neurovascular (nerves and related blood vessels) system. CTD involves the following:

- The repetitive performance of a physical task
- A task repeatedly done with force, speed, or with extremities placed in awkward positions
- Insufficient rest at appropriate intervals and inadequate recovery time

CTD symptoms may involve the neck, back, shoulders, arms, wrists, or hands. Interpreters with CTD may experience a variety of symptoms including: pain, joint irritability, swelling, pins and needles sensations, numbness, and skin color/texture change.

Initially, symptoms may begin during or immediately following an interpreting assignment and subside within a few hours. Or, they may first occur at night, disrupting sleep. Unaddressed symptoms may become more pronounced, lasting for a longer time. Eventually symptoms may become incessant, obstructing normal daily activities.

One component of a multifaceted prevention and management program of CTD is biomechanics.

What is Biomechanics?

Biomechanics relates to an interpreter's workstyle and is affected by their posture, movements, and periods of rest.

Good posture maintains the proper alignment of one's bones and connective tissues (muscles, tendons, ligaments, arteries, and veins) and provides a stable base from which to work.

Biomechanical movements of the body (mainly the arms) can be generally classified as low risk or high risk. It is important that interpreters strive to work with a low-risk work style. This requires the modification of the interpreter's work style movements. Movements fall into the following categories: *"micro" rest breaks, force, hand/wrist position, fingerspelling, processing, work envelope, static loading, posture, and breathing.*

The more *rest breaks* interpreters take during an interpreting task, the less post-interpreting fatigue they will experience. Interpreters must take adequate rest breaks not only between each assignment, but also during the interpreting task. A "micro" rest break means lowering the hands as often as possible. This can be done by placing the hands in a neutral position on the lap if sitting or to the side if standing. There are many opportunities for rest during an interpreting assignment. For example, a speaker pausing provides an opportunity for interpreters to rest their hands.

Forceful, or "*ballistic*" signing is thought to be a significant contributor to CTD. Signs should not be consistently hard and abrupt.

Maintain a neutral *hand/wrist* position as much as possible. Frequent deviations (the severe bending of the wrist in any direction from a neutral position) correlate strongly with CTD injuries.

Fingerspelling should be produced without excessive force or speed.

Lexical, phrasal, and sentential processing may affect the interpreter's workstyle. More processing time may afford a smoother and more controlled signed product.

* Based on research from the Center for Occupational Rehabilitation at the University of Rochester (New York) Medical Center

The interpreter's *work envelope* is the signing space. A normal work envelope usually is composed of a space approximately one inch beyond shoulder width extending from the head to the waist and with a depth of approximately half of the fully extended arm.

Although the arms sometimes reach to extend the envelope, this should not be the predominant signing style. More tension results when interpreters extend their arms or upper extremities outside the work envelope. Fatigue increases as the distance of reach increases. You can demonstrate this principle by holding a book at waist height near the body, then at shoulder height with arms extended.

Static loading means holding a muscle or muscles in a tense position. This can result in muscle fatigue. Drawing the shoulders up toward the neck and having insufficient "micro" rest breaks are examples of static loading due to stress. There is not sufficient recovery time for healing when muscles are in a constant state of tension.

A relaxed and upright posture, whether sitting or standing, reduces the amount of work back muscles have to do. Also, proper spinal alignment is less taxing on the back (though it might take a while to teach the muscles a new way of working). It may promote increased capacity for breathing.

Full abdominal *breaths* increase the volume of oxygen and carbon dioxide transferred by the lungs. This will provide all the cells of the body with a critical resource and may induce a relaxation response.

Break Time
Prolonged interpreting (over an hour without a break) also contributes to mental fatigue and may increase errors in the interpreter's work.

Why is it a concern?
With little or no rest, muscles become fatigued. Fatigued muscles, when contracted, restrict blood flow and contribute to the incidence of microtraumas. Microtraumas are microscopic tears in muscle fibers. Over time, and without proper rest breaks, substantial damage can occur to muscles and tendons.

Other possible conditions/problems resulting from inappropriate biomechanics:

*   Tendinitis (inflammation of tendons)
*   Carpal Tunnel Syndrome (pressure exerted on the median nerve that passes into the hand through the narrow carpal tunnel of the wrist)
*   Thoracic Outlet Syndrome (compression of nerves and blood vessels in the neck and shoulder region)

Biomechanical guidelines for working with interpreters:
A rest break of 10 minutes for every hour of an assignment is recommended. If an assignment goes longer than a few hours, a team interpreter should be there to share the workload. This should give each interpreter sufficient opportunities to rest their muscles. Proper support while seated or standing is also important.

For more information on how to contact professionals in the interpreting field, as well as other topics covered by the PEPNet Tipsheet series, visit PEPNet's Web site at http://www.pepnet. org.

Oral Transliterating

What does an oral transliterator do?

An oral transliterator provides communication access to a person who is deaf or hard of hearing and who uses speechreading and speaking as a means of communicating. The oral transliterator, positioned in front of the speechreader, inaudibly repeats the spoken message, making it as speechreadable as possible. This is called Expressive Oral Transliterating. An oral transliterator also can audibly voice the spoken message of the person who is deaf or hard of hearing for the hearing audience. This is called Voicing or Voice-Over.

When are oral transliterators used?

Oral transliterators are used in a variety of situations: educational settings; religious services and ceremonies; job interviews; medical and legal settings; areas of employment; conferences and workshops; town meetings; etc.

They are especially helpful when:

• there are multiple speakers (such as a discussion)

• the speechreader cannot see the speaker clearly (for example, in a large auditorium)

• the speaker is not speechreadable (such as a speaker with facial hair covering the lips)

• the speechreader is unfamiliar with the speaker

• the environment is not conducive to speechreading or to understanding the speaker who is deaf

What are the characteristics of an effective oral transliterator?

1) Oral transliterators must be speechreadable (lipreadable) to an average speechreader with little or no effort. They must have natural and clear articulation with no exaggerated lip movements or mannerisms.

2) Effective oral transliterators are naturally expressive when they speak, using facial and body expression to enhance the speechreading process.

3) Oral transliterators must have the ability to speak inaudibly. It is very distracting to the hearing audience to hear an oral transliterator whispering loudly or making "smacking" noises while transliterating.

4) Oral transliterators must have excellent short-term memory and must be able to understand easily the speech of a variety of both hearing and deaf speakers. The ability to listen to information and hold it in one's short-term memory, while simultaneously "mouthing" (for expressive oral transliterating) or voicing (for voice-over transliterating) other information is vital.

5) Oral transliterators must be able to concentrate for long periods of time in the midst of all sorts of distractions - visual and auditory. This not only involves listening to the speaker/s and concentrating on the message, but always being aware of what is happening in the environment and relaying this information to the consumer.

6) Oral transliterators must be comfortable with the English language. There are times in the process of transliterating when it is necessary to paraphrase, rephrase, or make appropriate substitutions of original information to aid in the speechreading process. All of this involves manipulating the English language while maintaining the intent of the speaker's message.

7) Oral transliterators need to have knowledge of speech production and the speechreading process to enable them to identify speech sounds or words that are not easily visible on the lips.

8) Oral transliterators must use verbal and nonverbal techniques to support the speechreading process, especially in coping with the potential limitations mentioned above. Sometimes a particular word is not visible on the lips or is homophenous (a word articulated in the same place, thus looking the same on the lips as another word), which can be confusing to the speechreader. The oral transliterator can use the verbal technique of adding a clarifying word before the "difficult" word. For example, in the sentence, "She had a beautiful vase.", the oral transliterator would transliterate, "She had a beautiful flower vase." or "She had a beautiful vase for her flowers." A nonverbal technique would be using palm writing to clarify two numbers that look the same on the lips (such as fifty and fifteen). The oral transliterator would hold up her palm and write the correct number on the palm for the speechreader to "read."

9) Oral transliterators must have a thorough understanding of the NAD-RID Code of Professional Conduct and of their role as described in the Code.

What credentials should an oral transliterator have?
The transliterator should be trained and certified as an Oral Transliterator by the Registry of Interpreters for the Deaf (RID), this country's premier certifying body. For more information about RID and the certification process, go to RID's Web site at www.rid.org.

If such a person cannot be found in your area, look for a trained Oral Transliterator possibly with state approval. Some states also may have state-based screening programs similar to those used for sign language interpreters.

Clarke Mainstream Services in Northampton, Massachusetts, offers an annual summer workshop in the fundamentals of oral transliterating. In addition to beginners, many sign language interpreters attend this training to gain the skills necessary for effective oral transliterating. If you would like more information about the Mainstream Center's oral transliterating workshop, visit: www.clarkeschools.org.

Educational oral transliterating
Educational oral transliterators can be found on all educational levels: elementary school through college. Often the greatest challenge to mainstreaming for a student with hearing loss is gaining access to information. A typical classroom is primarily an auditory environment, where listening is the key to getting the most information. Hearing loss obviously is a major barrier to receiving information through listening. Oral transliterating is an effective option for many "oral" students, defined here as those who use their own voices, hearing, and speechreading for receptive information. These students use some degree of residual hearing–perhaps through a hearing aid or cochlear implant—and may use an FM system in the classroom. The oral transliterator facilitates all of the information from the teacher and other members of the class in a way that makes it easy for the student with hearing loss to speechread. If the student doesn't understand the content of the material, the student asks the teacher for clarification. The oral transliterator does not teach or tutor, but facilitates communication.

When an Individual Education Program (IEP) specifies oral transliterating services, it is recommended, though not dictated by law, that the student have input into the choice of candidate.

Not all people can be easily speechread. Not all people with hearing loss have the same speechreading ability. The student should have an opportunity to communicate with the candidate to judge his/ her speechreadability before the candidate is hired.

A knowledgeable person or organization should supervise oral transliterators in educational settings. This should include observations and an evaluation of the transliterator at various intervals during the year, along with feedback from the deaf student about the effectiveness of the service.

Oral transliterators should also be required to upgrade their transliterating skill through additional training on a regular basis.

Schools should develop job descriptions that clearly outline the responsibilities of the oral transliterator. *One job description does not fit all oral transliterating situations, since they may vary according to the educational setting, the age and grade level of the student, and the needs of the school or program.*

Using an FM System with an oral transliterator
Can a student who uses a personal FM system in the classroom also use an oral transliterator? This depends on the individual. Many students use the FM system and prefer to listen when classroom conditions are optimal and they can see the speaker, but rely on the oral transliterator when these conditions are not optimal, such as during a fast-paced class discussion or when student in the back of the room asks a question. There are some students who use the FM system and the oral transliterator simultaneously. Also, many students use an oral transliterator in conjunction with a trained notetaker. The transliterator provides moment-to-moment access, while the notetaker provides a summary of notes to be used after class.

Do students with cochlear implants use oral transliterators?
Yes, many do, but again this is very individual. As with students using the FM system, some cochlear implant users prefer to listen and watch the speaker when conditions are right and rely on the oral transliterator at other times.

Deaf Culture

Deaf Culture

It often comes as a surprise to people that many deaf people refer to themselves as being members of Deaf culture. The **American Deaf culture** is a unique linguistic minority that uses American Sign Language (ASL) as its primary mode of communication. This tipsheet provides a description of Deaf culture and suggestions for effective communication.

Common terms used within the Deaf community:

The American Deaf culture has labels for identifying its members. These labels reflect both cultural values and beliefs.

Deaf - This term refers to members of the Deaf community who share common values, norms, traditions, language, and behaviors. Deaf people do not perceive themselves as having lost something (i.e., hearing) and do not think of themselves as handicapped, impaired, or disabled. They celebrate and cherish their culture because it gives them the unique privilege of sharing a common history and language. Deaf people are considered a linguistic minority within the American culture. They have their own culture and at the same time live and work within the dominant American culture.

Deaf, hard of hearing, and deafened - Within the Deaf culture these words refer to a person's audiological status. Notice lower case "d'" is used. People who describe themselves as "hard of hearing" or "deafened" do not see themselves as members of the Deaf culture. Some may know sign language but their primary language is English.

Hearing Impaired - This term often is used by the media and society in general to refer to people with a hearing loss. A more acceptable generic phrase is "deaf and hard of hearing" to refer to *all* people with a hearing loss. Within the Deaf culture, the term "hearing impaired" often is seen as offensive. It suggests that Deaf people are "broken" or "inferior" because they do not hear.

Hearing - Within the Deaf culture the term "hearing" is used to identify people who are members of the dominant American culture. One might think the ASL sign for "hearing" is related to the group's ability to hear (e.g., pointing to the ear). However, the sign for "hearing" is related to the ability to "talk." The act of talking is clearly visible to Deaf people, whereas listening or hearing is not. From the Deaf culture perspective, it is the act of "talking" that clearly separates the two groups.

Comparison of Values:

The most dominant cultural pattern in the United States is *individualism.* Most Americans have been raised to consider themselves as separate individuals who are exclusively responsible for their own lives. Common phrases that reflect this cultural pattern are "Do your own thing," "Look out for number one," and "I did it my way." For example, when Americans introduce themselves, they feel it is important to include their name and occupation, which serve to emphasize their uniqueness. Closely associated with individualism is the importance Americans place on privacy. Americans have "personal space" and "personal thoughts." They find it odd if a person does not value "being alone."

In contrast, one of the most dominant cultural patterns in the Deaf culture is **collectivism**. Deaf people consider themselves members of a group that includes *all* Deaf people. They perceive themselves as a close-knit and interconnected group. Deaf people greatly enjoy being in the company of other Deaf people and actively seek ways to do this. When Deaf people first meet, the initial goal is to find out where the other person is from and to identify the Deaf friends they both have in common.

A person's physical appearance is noted and remembered because it is the landscape for all signed communication. Sometimes a person's name may not come up until the end of the conversation. Closely associated with collectivism is the importance of open communication. Having secrets or withholding information work against an interconnected collective.

The behaviors associated with cultural values are deeply rooted. We do not consciously think about the rules involved when making introductions or how to say goodbye when we leave. As children we saw these behaviors repeated often and have long since fully incorporated them into our cultural repertoire. It is only when we are placed in a culture that uses different rules that we realize there is another possible way to accomplish the same task. For example, when a Deaf person leaves a gathering of other Deaf people, the process is quite lengthy. In Deaf culture one approaches each group to say goodbye, which often results in further conversation. The entire process may take more than an hour to accomplish. This behavior may seem unusual; however, if we remember that Deaf culture highly values being interconnected with all of its members, the behavior makes a great deal of sense.

American Sign Language:

Another important cultural value for Deaf people is their language - ASL. Most Deaf people spend the majority of their lives with people who do not know ASL. It is only when Deaf people are in the presence of other Deaf people that all communication barriers are removed.

It is obvious to most people that ASL is a visual language. What is not so obvious is how the visual nature of the language impacts on the rules for communication. In spoken languages there is no requirement for eye contact between the speaker and listener. In fact, we spend very little time looking at each other. We are not used to maintaining eye contact for long periods of time. Also, we often allow environmental noises to take our attention and we divert our eyes. In a signed conversation the "listener" must always look at the "speaker." From the Deaf perspective, broken eye contact or the lack of eye contact shows indifference.

Most hearing people do not freely and effectively use their face and body to communicate, so Deaf people see their communication as lifeless and lacking emotion.

Facial expression and body language are integral parts of ASL. Deaf people have an exceptional ability to use and read nonverbal communication. They pick up on very subtle facial and body movements. An important aspect of body language is the use of "touch." Touching another person is used in Deaf culture to greet, say goodbye, get attention, and express emotion.

Guidelines for Communication:

1) Most people feel uncomfortable when meeting a Deaf person for the first time. This is very normal. When we communicate with people, we generally don't have to think about the process. When faced with a Deaf person, we are uncertain which rules apply. We don't know where to look, or how fast or loud to speak. When the Deaf person gives us a look of confusion, we don't know how to correct the problem. Accept the fact that your initial communications will feel uncomfortable and awkward. As you interact more, you will start to feel more comfortable and know how to make yourself understood.

2) It's okay to write to a Deaf person. The Deaf person will appreciate your effort even more if you use a combination of gestures, facial expressions, body language, and written communication. Some Deaf people can lip read very well. If one approach doesn't work, try another. If the Deaf person uses her/his voice and you don't understand, it's fine to indicate the person should write.

3) Most people engage in very quick and efficient conversations. We often lose patience when someone is having difficulty understanding. We look for ways to speed up the interaction. Deaf people highly value face-to-face communication and perceive it as an investment, not an imposition. Take the time to communicate and connect. If the Deaf person does not understand, she or he will ask questions. If you do not understand the Deaf person, stop the conversation and ask for clarification. Never fake understanding or say, "Never mind, it's not important." No matter how trivial, share the information.

4) Deaf people listen with their eyes. A Deaf person cannot look at an object and at the same time listen to you describe how to use it. Only talk when you have eye contact with the Deaf person.

5) Many Deaf people will use a sign language interpreter. You should speak directly to the Deaf person, not to the interpreter, and maintain eye contact with the Deaf person. This will feel awkward because the Deaf person will be looking at the interpreter, not you, but it will be noticed and appreciated by the Deaf person.

6) Some people are reluctant to attempt to communicate directly with a Deaf person when they use an interpreter. Use the beginning and end of the conversation as an opportunity for direct communication with the Deaf person. When you take the initiative to shake hands, make eye contact, use gestures, touch and/or smile, you are communicating in a visual and tactile manner.

Please note these guidelines aren't meant to be an inclusive list in working with culturally Deaf people, but a starting point for improved conditions.

UNDERSTANDING COMMUNICATION ACCESS

Cheryl D. Davis, Western Oregon University
Samuel R. Atcherson, University of Arkansas, Little Rock

SUMMARY

Words are only one piece of what we pick up auditorily. When we have normal hearing, we are able to discern words in our own language from gibberish or other languages; we recognize the difference between speech, music, and environmental sounds; we can locate where sound is coming from; we can often identify the age range and gender of the speaker, the presence of an accent, and we can sometimes even identify who the speaker is, solely based on sound. In addition, we get vital grammatical and social cues auditorily. We can hear when a speaker has finished a thought, and similarly can make decisions about when it is appropriate to interrupt. Finally, we hear words and apply meaning. When the hearing mechanism is damaged, these abilities are compromised.

KEY CONCEPTS

Service providers may not see the need to accommodate individuals with less than profound hearing losses, thinking:

- The label "hard of hearing" indicates the individual does not have a serious impairment,
- People who can hear well enough to make a phone call would not qualify for an accommodation,
- Clear speech indicates that the person does not have a severe hearing loss,
- A classroom accommodation would not be necessary if one is not needed in the intake or application interview,
- People who speechread or who have hearing aids or cochlear implants do not need accommodations.

Many would be surprised that none of these statements are true.

Why might someone be able to communicate effectively during the intake interview but face challenges on the job or in the classroom? Hearing aids are very effective in quiet, one-on-one situations. In an intake interview, the counselor usually uses his or her best listening skills and maintains eye contact. This gives the listener full access to the speaker's face. In addition, the conversation

likely is taking place in a quiet, more optimal listening environment, and it is a conversation with give and take. Facial expressions and body language greatly facilitate understanding. In a lecture in school or a training or meeting at work, this does not typically apply. There is limited eye contact, minimal opportunity for response or feedback, it is less likely to occur in an optimal listening environment, and at the same time, the listener is held completely responsible for the information presented.

Physical Properties of Sound

Three physical properties of sound impact our ability to hear: distance, reverberation, and signal-to-noise ratio (SNR). The greater the distance from the sound source, the less impact the sound waves will have on our eardrums. At the source, a sound might be 65 dB, but at 4 feet it is 53 dB, and at 16 feet it is 41 dB (Blair, 1990). Small changes in distance can impact audibility. Reverberation results in echoing of sound. Even small echoes can have a negative impact on the clarity of sound. SNR refers to how loud the sound we want to hear (signal) is compared to the background sounds (noise) we are trying to overcome. Individuals who experience a hearing loss need the signal to be at least 15 dB louder than the noise, whereas individuals with normal hearing require a SNR of only 6 dB (Blair, 1990). Additionally, in noisy settings, hearing aids and cochlear implants may work against the individual by amplifying background sounds along with the signal. Assistive listening devices or other accommodations may be required.

How Much is Enough?

The audiogram charts speech sounds with frequencies ranging from low to high across the top and loudness ranging from softest (0 decibels) at the top to loudest (110 decibels) at the bottom. Some speech sounds are high pitched and soft (e.g., /s/, /f/) and others are lower pitched and louder (e.g., /g/, /b/).

What is a person hearing and how much information is needed to understand the entire message? As an

example, hearing loss in the higher frequencies is the most common type of loss. In looking at a mapping of common speech sounds by frequency or pitch and decibel (dB) or loudness, it can be seen that even a mild high frequency loss means the individual loses the sounds s, f, t, h, p, th, sh, ch. These are extremely common sounds. Additionally, in English the s and t sounds provide plural and past tense information, and the difference between can and can't. When these key sounds are missing, the message becomes ambiguous. So, if you can hear "most" sounds, isn't that enough?

> In looking a a ma ing of common   ee   ound by requen y or i   and de ibel (dB) or loudne , i can be   een a even a mild igh requen y lo   mean   e individual lo e   e ound   .

The above sentence is the third sentence in the previous paragraph. Only the high frequency sounds listed above have been removed. Not counting the list of sounds at the end, 74% of the letters of the original sentence could be heard, but only 43% of the words are left intact. What percent of the message would the individual understand? Being able to hear 75% of a message may seem adequate, but functionally, it is devastating.

SUGGESTIONS FOR ACTION

- Remember that hearing aids and cochlear implants do not provide "20/20" hearing for the individual with hearing loss.
- Evaluate the setting and the sound source, not simply the individual's hearing.
- Ask audiologists for functional information about how the individual functions in noise.
- Understand the importance the brain plays in interpreting sound, and realize that this varies greatly among individuals.
- Recognize that, as is true for the wheelchair user, some environments will be accessible to the individual with hearing loss, while others will not. Individuals should not need to fear that if they do not request accommodations in all settings, they will not be considered "disabled enough."
- Consider all accommodation options, including speech-to-text services, assistive listening devices, oral interpreters, and moving the classroom.

ADDITIONAL RESOURCES

Blair, J.C. (1990). Front-row seating is not enough for classroom listening. In Flexer, C., Wray, D., & Leavitt, R (Eds.) *How the student with hearing loss can succeed in college: A handbook for students, families, and professionals*. Washington, D.C., Alexander Graham Bell Association for the Deaf.

Is it ever appropriate to have both Speech-to-Text Services and Interpreting in one class for one student?

PEPNet

The dual accommodations of interpreting services and speech-to-text services for the same course are rare, but there may be specific circumstances for which an individual determination for dual accommodations might be appropriate. In some circumstances the complexity of the content and the need for thorough notetaking may make it appropriate and/or cost effective.

Accommodations should always be determined case by case. Speech-to-text services may not be appropriate for all students, and interpreting services will not be appropriate for all students. It is important to involve the student in discussions about their communication preferences.

Recommended Reading:
Americans with Disabilities Act Responsibilities for Postsecondary Institutions Serving Deaf and Hard of Hearing Students Second Edition QUESTIONS AND ANSWERS

Visit www.pepnet.org for additional information and resources or for a listing of outreach specialists by state/territory

IDEAs that Work
U.S. Office of Special Education Programs

PEPNet is sponsored by the U.S. Department of Education and Office of Special Education Programs.

The student communicates fine with me in my office; why does he need a sign language interpreter for class?

PEPNet

Students who are deaf or hard of hearing may rely on a variety of communication modes, depending on the setting and purpose of the dialogue or communication. Speechreading skills and residual hearing may be effective in one setting, but ineffective in another. This may even be true for students who use assistive listening technology or speech-to-text services and/or who may have a cochlear implant. Students who experience hearing loss vary on degree of loss, type of loss, age of onset, and preferred communication mode. All of these factors impact a student's ability to speechread. Approximately 30 % of English speech sounds are visible on the mouth. Speechreading involves using residual hearing, watching body language and facial expressions, and knowing the topic. A student will not be able to follow if there are group discussions or instruction given while the instructor is looking down or has his back to the class. The following factors impact a student's need for a sign language interpreter:

- acoustics, size, lighting of room
- student's familiarity with the subject
- lecture vs. discussion format
- instructor's accent or facial hair that obscures lips.

These factors also influence a student's need for a sign language interpreter in one class but possibly not in another.

It may be difficult for the student to monitor her speech for loudness and clarity in a classroom versus a small office. A classroom interpreter can project what the student is signing to the instructor and class with appropriate loudness and clarity and enables the student to participate in class discussions effectively.

One-on-one communication with a student in a quiet disability services office often includes information already familiar to the student. When compared to the classroom, where the information is new and unfamiliar and the acoustics may vary, it is easier to understand why students may require sign language interpreting services, speech-to-text services, or assistive listening devices.

The student truly is the best judge of when he needs support services such as interpreting. This is further supported by Title II of the Americans with Disabilities Act, which states that, Institutions must give "primary consideration" to the communication preferences of the individual with the disability.

Additional Resources:

Interpreting For Postsecondary Deaf Students

Teacher Tipsheet: Interpreting

Nondiscrimination in Higher Education: What's the Law?

Americans with Disabilities Act: Responsibilities for Postsecondary Institutions Serving Deaf and Hard of Hearing Students

**Visit www.pepnet.org for additional information and resources
or for a listing of outreach specialists by state/territory**

IDEAs that Work
U.S. Office of Special Education Programs

PEPNet is sponsored by the U.S. Department of Education and Office of Special Education Programs.

Why do some students with cochlear implants request accommodations and others do not?

PEPNet

While not all students will have the newest and the best technology, in general both hearing aids and cochlear implants (CIs) can provide great benefits for individuals with hearing loss. Students with cochlear implants run into some of the same issues in the communication-laden academic environments as students with hearing aids. *Both devices have microphones that will amplify all the sounds coming into them, not just the particular speech signal the individual wants to hear.* Depending on the age of the device, it may take advantage of technology to improve on the situation, but it is impossible to completely eliminate background noise.

In addition, room acoustics play a major role in the intelligibility of speech, especially for those who have some kind of damage to their hearing mechanism. Many other factors come into play concerning the intelligibility of speech:

- How loud is the signal?
- How clear is the speech?
- How far away is the speaker?
- How much competing noise is there?
- Is the vocabulary familiar?
- Is the speaker organized or rambling?
- Is there one speaker or many?
- How much preparation do students have on the topic?

Particular to cochlear implants, additional questions include: How long has the individual had the implant? Is it an older implant? Did the individual have exposure to spoken language before losing his or her hearing?

Even so, it is difficult to predict how well any individual's brain will learn to interpret the new speech signals (and other sounds) it is receiving with the implant. Simply put, for some students it is a matter of an exceptional response to the CI, for others it is that there are other factors in the environment that interfere with getting a clear speech signal, and for others still, it is a combination of factors relating to the sender of the message, the receiver of the message, and the environment.

Therefore, some students might require accommodations such as an interpreter, even though they have a CI. Ultimately, the service provider should check in with the student to find out what kinds of communication environments he or she does well in, and which ones are problematic. Asking about the past will be informative, but it is also important to welcome the student back after experiencing a few classes for further discussion. College classrooms and the rate at which content is presented will likely be different, especially from high school environments. The student will be able to provide a great deal of information that will help the service provider to understand the student's communication experience.

More information on these topics can be found at:
www.beyondhearingaids.com
www.hearingloss.org
www.hearinglossweb.com
http://www.geocities.com/heartland/prairie/4727/bhframe.htm
www.wou.edu/~davisc
http://pdcorder.pepnet.org/media/1221Demystifying.pdf

**Visit www.pepnet.org for additional information and resources
or for a listing of outreach specialists by state/territory**

IDEAs that Work
U.S. Office of Special Education Programs

How can colleges support students who are Deaf-Blind?

PEPNet

www.pepnet.org/faq.asp

College students who are deaf-blind can be found on campuses across the country from community colleges to Ivy League schools. Although the term deaf-blind implies a complete absence of hearing and sight, in reality, it refers to individuals with varying degrees of vision and hearing loss. The type and extent differ from person to person, but the key feature of deaf-blindness is that the combination of losses limits or slows access to auditory and visual information. Because of this, a student who is deaf-blind will require extra time and supports to fully participate in college life, both academically and socially. The best practices supports and accommodations may include:

1. orientation and mobility instruction to learn how to navigate the campus,

2. interpreters and/or assistive technology in the classroom and to communicate with fellow students and faculty,

3. notetakers in the classroom,

4. large print or braille course materials,

5. specialized computer software to access electronic materials, and

6. support service providers (SSPs)—specially trained professionals who enable people who are deaf-blind to access their environments and make informed decisions by providing visual and environmental information, sighted guide services, and communication accessibility.

Social relationships are an essential part of college life, but the time and effort it takes to access information and communicate with fellow students may make it hard for some students who are deaf-blind to develop social relationships. In addition, those who grew up using American Sign Language and have a deaf identity may experience rejection and misunderstanding from their deaf peers. Staff and peers on campus should be educated about deaf-blindness in order to create a pool of natural supports for the student who is deaf-blind. This can greatly reduce feelings of isolation and of being overwhelmed that students may experience.

It is important for students to have easy access to social events, sports, clubs, and leisure time activities. Interpreters who are familiar with deaf-blindness and SSPs should be available and aware of ways to support communication and mobility in dimly-lit or noisy settings.

Ways to Support College Students Who Are Deaf-Blind

1. Treat the students as experts when choosing accommodations. They know the most about what works for them.

2. Be flexible regarding the time it takes to get a degree. Students may need reduced course loads or time off between terms.

3. Persevere when things are not working. It may take time to find the right combination of supports.

4. Provide awareness training for staff and faculty, especially for those who work in disability and interpreting services.

5. Make sure at least two campus staff members are knowledgeable about each student's needs and are available to serve as contacts to ensure that students have continuous access to support.

6. Connect with your state's commission for the blind, commission for the deaf, and Helen Keller National Center Regional Representative. By working with these agencies, you may be able to help students get assistance from local services (e.g., eye doctors, O&M instruction, or financial aid).

7. Hire interpreters and support service providers to help students access campus and social events.

8. Review local transportation options with students so they know what is available. Students who are deaf-blind rely on public transportation.

9. Alert groundskeeping staff that there is a student with deaf-blindness on campus. It is important to keep walkways and curb cuts clear, especially in snowy regions.

Students who are deaf-blind are often more limited by the attitudes and limitations others impose on them than they are by their hearing loss and visual impairment. With the right supports, they can have the same opportunities to succeed academically and enjoy campus life as other students. They need opportunities to access challenging and enriching classes and they have the right to try new things, to fail, and to try again, just like any other college student.

This FAQ was provided by the National Consortium on Deaf-Blindness (NCDB). It is based on the NCDB publication College Students Who Are Deaf-Blind. For more information about deaf-blindness or about support for college students, contact NCDB by e-mail at info@nationaldb.org, by phone at 800-438-9376 (Voice) or 800-854-7013 (TTY), or visit us on the web at nationaldb.org.

Resources:

- Arndt, K. (2011). College students who are deaf-blind. National Consortium on Deaf-Blindness. Available at nationaldb.org/NCDBProducts.php?prodID=111

- Technology Resource List from the National Federation of the Blind: http://www.nfb.org/nfb/Technology_Resource_List1.asp?SnID=685347126.

- NCDB Selected Topic on "Postsecondary Education." Available at nationaldb.org/ISSelectedTopics.php?topicCatID=55

- Jordan, B. (2001). PEPNet tipsheet: Considerations when teaching students who are deaf-blind. Available from http://resources.pepnet.org/files/387_2010_4_7_13_17_PM.pdf

- Helen Keller National Center Regional Representatives: hknc.org/FieldServicesREGREPADD.htm

- American Association of the Deaf-Blind. (2010). Support service providers (SSPs): An introduction. Available from www.aadb.org/information/ssp/ssp.html

**Visit www.pepnet.org for additional information and resources
or for a listing of outreach specialists by state/territory**

IDEAs that Work
U.S. Office of Special Education Programs

PEPNet is sponsored by the U.S. Department of Education and Office of Special Education Programs.

When do I need to hire a team of interpreters?

PEPNet

http://www.pepnet.org/faq.asp

The answer to this question is not as simple as it may seem. There are many factors that influence how long one interpreter can interpret without experiencing a degree of mental and physical fatigue that increases the rate of interpreter errors and the risk of repetitive stress injuries.

According to the Standard Practice Paper published by the Registry of Interpreters for the Deaf (RID) titled "Team Interpreting":

"The decision to use a team rather than an individual is based on a number of factors, including, but not limited to:

- length and/or complexity of the assignment,
- unique needs of the persons being served,
- physical and emotional dynamics of the setting,
- avoidance of repetitive stress injuries (RSIs) for interpreters."

It is recommended that any class that is longer than one hour be considered for a team. There are some class situations that are longer than one hour that may be handled by one interpreter. These may include a three-hour computer lab class that consists of brief lectures using the remainder of the time on independent computer work. Another class may only be one hour, such as Public Speaking, where students routinely give presentations one after another that would require two interpreters. Whether to provide a team or not should be considered on a case-by-case basis looking at all of the factors.

Providing a team of interpreters when the situation requires is cost effective, especially when you consider the impact on the retention of skilled interpreters, the quality of the interpreting services, the possibility of repetitive stress injuries, and/or worker's compensation lawsuits.

Additional information can be found on the following links:

NETAC Tipsheet: Interpreting.(pdf document)

NETAC Tipsheet: Interpreting and Biomechanics (pdf document)

NETAC Tipsheet: Hiring a Qualified Interpreter (pdf document)

RIT: Interpreting For Postsecondary Deaf Students

RID Standard Practice Paper: Team Interpreting (pdf document)

**Visit www.pepnet.org for additional information and resources
or for a listing of outreach specialists by state/territory**

IDEAs
that Work
U.S. Office of Special
Education Programs

PEPNet is sponsored by the U.S. Department of Education and Office of Special Education Programs.

A student is complaining about an FM system. I don't wear hearing aids. How do I test the system?

PEPNet

In general, you can plug a headset into the receiver and listen, just as you would with a CD player or IPOD. Have someone speak into the microphone on the transmitter and make sure all the components are turned on and you have adjusted the volume. This will tell you the quality of the sound being provided by the transmission system. If the sound quality is not good, you might change the batteries and also test in multiple locations to see if there is interference. If the sound quality still is not good, contact the manufacturer to find out about maintenance for the device.
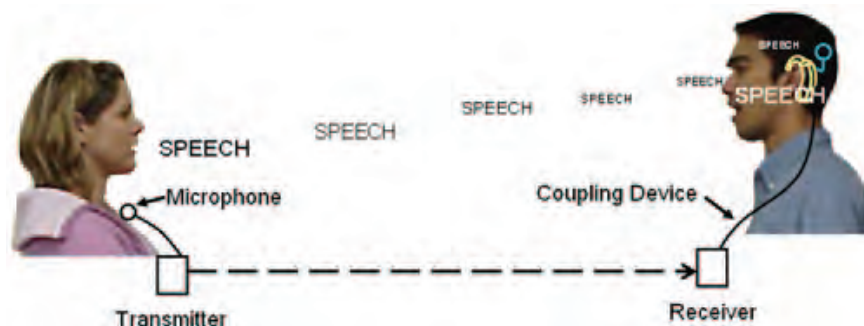
If the student is using telecoils (an option on some hearing aids and cochlear implants) and a neckloop instead of headphones, you would need a separate induction receiver, sometimes referred to as a "neckloop tester." Induction receivers look similar to FM receivers. They have a jack for headphones and an on/off volume control.

After you have listened with headphones plugged into the FM receiver and you know the transmission part of the system is working, you can test the neckloop. Plug the neckloop into the FM receiver and move the headphones to the induction receiver. Now place the induction receiver next to the neckloop, and have someone speak into the microphone connected to the FM transmitter. You'll hear what is being broadcast through the FM system. If all the elements seem to be working, the student should have his or her telecoil checked out. If it is not working, there may be some problem with the neckloop (wires are easily bent or broken in neckloops). (Of course, you need to be sure the induction receiver is functioning, too. You can try this out by holding it up to the telephone speaker when it is off the hook. You should be able to hear the dial tone through the headphone. Most landline telephones should give off a magnetic field that will be picked up by the induction receiver.)

With cochlear implants, it may be necessary to either a) try the same equipment out on a different cochlear implant user or b) bring in a specialist who can evaluate the CI and how it is interacting with the equipment.

Caution: you should check the equipment in the room where it is malfunctioning and involve the users (both speaker and listener). If the speaker is not using the microphone correctly, that can be a simple problem to fix that you won't realize if you don't observe it. Sometimes the equipment will pick up interference in a particular environment or when other equipment is turned on in an environment; thus, testing the equipment in your office may not produce the same results.

A student is complaining about an FM system.
I don't wear hearing aids. How do I test the system?

PEPNet

More information on these topics can be found at:

www.beyondhearingaids.com

www.hearingloss.org

www.hearinglossweb.com

http://www.geocities.com/heartland/prairie/4727/bhframe.htm

www.wou.edu/~davisc

Demystifying Hearing Assistance Technology: A guide for service providers and consumers (PDF Document)

Figure courtesy of Samuel Atcherson.

**Visit www.pepnet.org for additional information and resources
or for a listing of outreach specialists by state/territory**

IDEAs that Work
U.S. Office of Special
Education Programs

PEPNet is sponsored by the U.S. Department of Education and Office of Special Education Programs.

A MODEL PROGRAM TO PROVIDE ACCOMMODATIONS TO COLLEGE STUDENTS WHO ARE HARD OF HEARING

Denise Kavin, National Technical Institute for the Deaf
Marcie Sacks Botto, William Rainey Harper College

SUMMARY

The mission of the Student Access Center (SAC) in a postsecondary institution is to create a comprehensively accessible environment for students with disabilities through determination of eligibility, adherence to legal mandates, and offering a variety of accommodations. An estimated 400,000+ students who are hard of hearing or late-deafened attend postsecondary institutions in the United States. SAC personnel usually have limited experience and information about serving students who are hard of hearing, and may erroneously assume that such students do not need accommodations, as they may appear to communicate well with hearing people in one-on-one situations. Likewise, there is a tremendous range of awareness and acceptance of hearing loss within this student population.

The SAC can have an instrumental role in the recruitment, transition, retention, and graduation success of students. A model program may include services or components that cover transition, identification and eligibility, documentation and assessment, policies and procedures, accommodations, and student leadership and self-advocacy.

KEY TERMINOLOGY

Assistive Listening Devices
ALDs utilize wireless technologies to amplify the speaker's voice via a lapel or independent microphone, and may be effective for students who have residual hearing.

Audiogram
A hearing test that charts hearing loss in terms of frequency of the sounds and decibel level or volume.

Auxiliary Services
Referred to as "appropriate accommodations" that can vary from student to student, situation to situation. Examples include oral interpreting, notetaking, and speech-to-text services.

Computer Assisted Real-Time Captioning (CART)
Computer Assisted Real-Time Captioning, which utilizes a transcription system like that used in the courtroom to prepare of verbatim transcript of what is being said as it happens in real time.

Typewell or C-Print-Systems
Systems that transcribe speech to text utilizing a laptop computer with abbreviation software to transcribe meaning-for-meaning in lectures and discussions.

Cued Speech
A visual phonetic alphabet defined by handshapes and location by the throat, chin, mouth and jaw, used in combination with speechreading.

Hard of Hearing
Individuals with hearing loss who do not communicate using sign language. Their preferred mode of communication is to utilize their residual hearing with or without amplification or assistive listening devices, speech, speechreading, and speech-to-text accommodations.

Speechreading
A means of communication in which an individual communicates by "reading" one's lip movements. Approximately 30% of the English language is formed within the oral cavity, not visible on the mouth. The ability to speechread may be affected by accents, facial hair, room acoustics, size, lighting, classroom set-up, familiarity with the topic, and the student's own speechreading ability.

Student Access Center (SAC)
A postsecondary program responsible for the provision of academic and support services to qualified students with disabilities.

Testing Accommodations
A typical modification, or test accommodation, such as extended time, that allows a student who has difficulty processing written languagean opportunity to have additional time to read and comprehend the questions.

IMPORTANT CONCEPTS

There are often misunderstandings regarding the legal mandates that apply to services received in K-12 and postsecondary education. In high school, the Individuals with Disabilities Act (IDEA) governs disability services. In postsecondary education, Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) governs disability services. IDEA accommodations are based on entitlement, and the Rehabilitation Act and the ADA are provided only if requested, and if the student is determined eligible. Thus, it is the postsecondary student's responsibility to self-identify, seek assistance from, and responsibility utilize services from the SAC.

Students utilize SAC services in different ways. Some may not be aware that such services are available or that they are eligible, some may choose not to register for services, some may register for services but may not be aware of, or be reluctant to use, services different than those they received in high school, and others may over-zealously demand services.

Because faculty and staff have the closest proximity to students potentially needing services, it is critical that they recognize signs of hearing loss including:
- Responses that are off-point or unrelated to questions or comments
- Voice volume that is too soft or too loud
- Frequent requests for information to be repeated
- Appearance of listening to class discussion, without actual participation

However, the ultimate responsibility and right to disclose one's disability lies with the student.

For students to be eligible for services, an audiogram must be obtained from a licensed audiologist. Some campuses also have speech and hearing clinics that can serve as a resource.

Administrators, faculty and staff need to understand that students with disabilities are not the sole responsibility of the SAC, but are the responsibility of the entire college. Efforts need to be made to educate campus personnel through training, one-on-one emails, phone calls, and public relations. The SAC specialist also may write letters to faculty describing the accommodations used by students in their classes, and faculty members may include statements on their class syllabi to inform students with disabilities of SAC services.

Appropriate accommodations may include:

Priority registration
Early registration will allow students the benefit of making wise choices regarding schedule, course load, and teachers. When the SAC has the students' schedule well in advance, they are better prepared to plan for accommodations such as captioning, oral interpreting, and captioned media.

Preferential seating
Some students benefit from sitting near the front/side of the classroom to follow lectures and discussion. This is a personal decision and responsibility of the student.

Notetaking
Students benefit from notetaking services, as they are unable to speechread or read captioning while simultaneously taking notes. A notetaker may be a student in the class, or hired from outside, with pressure-sensitive or carbonless paper provided by the SAC. Notes may be sent electronically to the student afterward. This may be a paid or volunteer service, or with incentives such as priority registration and bookstore vouchers.

Tutoring
This is not a legally mandated service, but some SACs provide this service as a benefit to the student. If a student utilizes tutoring services within another department of the college, the SAC needs to provide access and accommodations.

Testing accommodations
Hearing loss may affect one's use of the English language, and thus may affect one's test-taking skills. Testing accommodations are considered on a case-by-case basis, and some accommodations may include extended testing time, a private testing room free of distractions, and in unusual circumstances, oral or essay exams rather than multiple choice formats.

Hearing assistive technology
Students should be educated on various ALD options. However, be aware that some students may be unfamiliar with and perhaps reluctant to use such auxiliary aids as FM Systems as they may be seen as aesthetically unappealing to students unused to them. SAC staff need to ensure that the equipment loaned to students is in excellent working condition and also should be able to provide orientation to students on the equipment.

Oral interpreters/cued speech
Oral interpreters sit directly in front of the student and mouth the speaker's words without sound. The interpreter may substitute words with better

visibility for speechreading, and use body language/ gestures to supplement the message. Cued speech interpreters may also be used. These are not common accommodations, and such interpreters are not always easily found.

Speech-to-Text services and captioned media

Both are useful for individuals who rely on printed English to understand what is being said. They may include CART, C-Print and Typewell, all different forms of software programs to provide speech-to-text services. Transcript copies may be given to the student via hard copy or electronically. Speech-to-text services may be provided remotely from any location that is equipped with an internet line or phone line. If the service is provided remotely, it is beneficial for the instructor to wear a lapel microphone, consistently repeat all spoken comments and questions, and be provided cooperative support from Information Technology professionals. It is also important to provide captioning for media, online coursework, and materials. To ensure that the captioning of media becomes college-wide policy, it is crucial to communicate to administrators the importance of this accommodation.

When purchasing materials, look for an icon identifying that a product has been captioned. To broadcast the captions, a captioning decoder must be used. All televisions 13 inches or larger manufactured for use in the USA after 1993 have captioning features embedded and can be turned on using the menu options. Personally taped programs also should have retained captioning and can be viewed by turning on the captioning feature.

Academic waivers and substitutions

Some courses may be inaccessible to students, such as foreign language courses. SACs should have policies on how course waivers and substitutions can be requested and an equivalent course considered. Some colleges may offer instructional support and remediation that go above and beyond what is legally mandated to promote student success and retention.

SUGGESTIONS FOR ACTION

Transition to Higher Education

- Develop relationships with stakeholders including students, parents, teachers, guidance counselors, resource/ itinerant teachers, and vocational rehabilitation (VR) counselors.
- Conduct outreach to schools and VR through college fairs, high school and campus site visits, awareness activities, exhibits,. student panels, and partnerships.
- All college acceptance and admission materials should include prominent and easily identifiable information about SAC services and information regarding the self-disclosure process such as a self-disclosure form, addressed and stamped postcard, or website contact for the SAU office
- Develop an active working relationship with the local VR office. Regularly scheduled meetings should take place, and a VR counselor could be designated to work with all students with disabilities at a particular college.
- Consider offering an orientation course with academic credit, designed to educate students about the variety of accommodations available, diversity, time management, and interactions.

Identification and Eligibility

- Implement a process for identifying students with disabilities, especially during the acceptance or orientation period.
- Train faculty and staff to identify and refer students to the SAC.
- Faculty and staff should also include access statements in their course syllabus and other materials.
- Encourage students to willingly self-disclose and request accommodations from instructors by developing a rapport, teaching advocacy, and fostering relationships with more experienced students who are actively disclosing and utilizing accommodations.

Documentation and Assessment

- Conduct an intake interview with the student should be held to review accommodations used in high school, communication technologies available, and strategies that can be used.
- It is crucial for the SAC service provider to establish a rapport with the student, and to follow up with regularly scheduled meetings, printed information, and copies of the program's policies and procedures.

Policies and Procedures

- Have written policies and procedures in place that outline steps to obtain appropriate accommodations (e.g. documentation needed to be eligible for services, requesting services in a timely manner, and responsibly utilizing services). These policies should address faculty/student responsibilities, notetaking, speech-to-text captioning, oral interpreting, equipment loans, and captioned media.
- Refer frequently to these policies and procedures, and have students review and sign these documents. These documents will protect the institution in case a student fails to use services responsibly.

Determination of Appropriate Accommodations

- Meet with the student to conduct an intake interview to determine preferred mode of communication, describe available accommodations, and teach the student how to request and use them.

- Refer students to campus and community resources. Students can be introduced to other students who also use accommodations and participate in campus clubs or organizations. Follow-up meetings should be conducted.

Working with the Administration

The cost of providing access and accommodations is often an ongoing administrative and budgetary concern. It is often cost effective to hire full or part-time staff rather than contractual staff. In addition, it is prudent to keep in mind that the cost and responsibility of providing legally mandated services is the responsibility of the whole college, and everybody benefits. Some programs have utilized creative strategies for maximizing resources, such as a cost-sharing plan between the college and vocational rehabilitation, and collaborative "loaning" of personnel among institutions.

Student Leadership and Self-Advocacy

Students benefit from leadership development opportunities, such as invitations to educate the college community about working with hard of hearing students, participation in campus clubs and organizations, interactions with other such students and alumni, and mentoring programs.

ADDITIONAL RESOURCES

C-Print:
http://www.ntid.rit.edu/cprint/

Captioned Media Program
provides a free-loan media program, with more than 4,000 open captioned titles:
http://www.cfv.org/

Cued Speech:
http://www.cuedspeech.org/default.asp

Information on assessing the communication tools of hard of hearing persons:
http://www.mcpo.org/greg/index.htm

Free templates on policies and procedures regarding access services and accommodations such as interpreting, captioning, faculty responsibilities, notetaking, students, and parents:
www.pepnet.org

Free templates of letters written to faculty members describing the accommodations that may be used by hard-ofhearing students enrolled in their classes:
www.pepnet.org

Jacksonville State University
Disabled Student Services Website:
http://www.jsu.edu/depart/dss/index.html

National survey of salaries and fees for interpreters and captionists:
http://www.surveymonkey.com/DisplaySummary.asp?SID=918554&U=91855478570

Northern Illinois University
University deaf/hard of hearing program serving ~ 40 students with hearing loss.
http://www.niu.edu/caar/index.shtml

Speech-to-Text Services Network
organization to focus on development of qualifications for service providers:
http://www.stsn.org

Tips for Faculty and Staff- free guide for faculty and staff working with deaf and hard-of-hearing students:
www.pepnet.org

Typewell: http://www.typewell.org/home.html

William Rainey Harper College
Hard of hearing/deaf program in a community college serving ~ 50 students with hearing loss.
http://goforward.harpercollege.edu/page.cfm?p=2979

ADJUSTING TO HEARING LOSS DURING HIGH SCHOOL: PREPARING STUDENTS FOR SUCCESSFUL TRANSITION TO POSTSECONDARY EDUCATION OR TRAINING

Dianne Brooks, National Technical Institute for the Deaf

SUMMARY

Completion of postsecondary education frequently builds upon a student's successful academic and personal experience during high school. For students with hearing loss, healthy adjustment to hearing loss is a key lifelong developmental process. The vast majority (94%) of approximately 1.1 million K-12 students with hearing loss are educated in regular schools and do not receive any educational support services. Many of these students have a mild hearing loss or hearing loss in only one ear. Yet, even a mild or unilateral hearing loss can be significant for a student. Approximately 37% of children with minimal hearing loss fail at least one grade and many have significantly more problems with their behavior, self-esteem, and social skills compared to children with normal hearing. Further, these students are often not aware of their hearing loss, possible educational accommodations available to them, and their legal rights to these accommodations. Intervening professionals should become knowledgeable and well-informed about issues involved in living with hearing loss. This tipsheet offers suggestions for identifying students who do not know that their hearing loss can affect them academically, socially, and emotionally. A four-stage framework is described for understanding a student's readiness for accepting help. Also included are suggested interventions that facilitate the student's adaptation to their hearing loss. These interventions also offer a broad perspective beyond high school that can be extrapolated to postsecondary students by college service personnel.

KEY TERMINOLOGY

Universal Newborn Hearing Screening (UNHS)
Routine hearing screening of all newborn children before they go home for the first time. Most states require UNHS for early identification of hearing loss in children.

Pre-lingual onset of hearing loss
Hearing loss that occurs prior to age 3. This group of students includes those with mild or moderate, and unilateral hearing loss (hearing loss in only one ear).

Progressive hearing loss
Hearing loss that gradually deteriorates over time, or which drops suddenly. The gradual decline in hearing may not be immediately noticed.

Late-deafened
Comprises several sub-groups. Causes of hearing loss may result from side effects of toxic medications administered for a life-threatening health condition, or hearing loss resulting from various life-altering health disabilities or accidents.

Pediatric cochlear implants
Cochlear implantations that take place before the child reaches the age of 2, or during late adolescence

At risk students
Students demonstrating any of the following behaviors:
- Inconsistent response to sound
- Delayed language and speech
- Speech that is unclear
- Does not follow verbal instructions well
- Often says "Huh?"
- Does not respond when called
- Parents, school personnel and other service professionals express concerns about hearing, speech, language, or learning abilities
- Evidence of any type of hereditary hearing loss
- Ear infection or fluid in the middle ear persisting for at least three months

KEY CONCEPTS

It is essential to understand states of "help-seeking" readiness and "help acceptance" through which most people progress in adapting to their hearing loss. It is also important to understand and determine the

"help-readiness" stages of the significant others in the student's life, such as parents, family, teachers, educational support staff, coaches and peers since they can either facilitate or hinder the student's adjustment to their hearing loss.

SUGGESTION FOR ACTION

The four stage framework and associated interventions:

Stage 1

Unaware of the need for help or behavior change
The student is typically unaware of significant factors such as knowing he has a hearing loss, or does not realize that the hearing loss contributes to difficulties in school, at home, with friends, or their personal emotional state.

Intervention strategies:
- Identify hearing loss during routine in-school screenings, or refer to private audiologist for evaluation
- Utilize self-reporting assessments
- Screen/interview at risk students
- Disseminate risk factor information to key school personnel annually and online
- Support the student and parents' follow-up with audiological evaluation

Stage 2

Aware that a problem exists, but unaware that help is available.
The student is aware that she has difficulty hearing, but is unaware that assistive technology, environmental improvements, and specific communication strategies exist that can significantly augment communication skills, improve academic achievement, and enhance social-emotional well-being.

Intervention strategies:
- Explore the student's academic and career interests, goals, plans for the future through interviews, structured conversations.
- Support the student and parents' follow-up with audiological recommendations
- Inform the student, parents, teachers and other key people about hearing loss and available resources on a regular basis

Stage 3

Aware that a problem exists and help is available, but not interested in or ready to accept help
Students at this stage often have had their hearing loss diagnosed previously, and are experiencing complicated grief over their lack of normal hearing. Parents are also often grieving at this stage over the permanency of their child's hearing loss.

Intervention strategies:
- Acknowledge the parents' and student's preference to have normal hearing
- Encourage parents, family members, teachers, other significant adults and peers to act consistently in making changes for an accessible, effective communication environment for the student with a hearing loss. Healthy acceptance of hearing loss is achieved when the student and family view communication accommodations, including wearing hearing aids, as just another "normal" everyday life activity
- Provide training to school teachers and other core staff regarding communicating and teaching students with hearing loss
- Collaborate with the audiologist in maintaining ongoing contact with the student and parents with respect to challenges imposed by the student's hearing loss
- Use Communication assessment tools to focus discussions about the impact of hearing loss
- Engage the assistance of a qualified mental health professional where appropriate
- Engage other student and adult role-models living effectively with their hearing loss
- Explore summer camp opportunities for the student to meet others with hearing loss.

Stage 4

Aware that a problem exists and help is available.
Interested in and ready to accept professional help
Students, parents, teachers and significant others have resolved grief, and achieved a healthy acceptance of the hearing loss. The focus at this stage is on the student's future with respect to achieving academic or vocational goals and minimizing any negative effects of the hearing loss across all key components of the student's life.

Intervention strategies:
- Create regular opportunities to meet peers in support groups
- Provide training to students on strategies to effectively manage auditory, visual, and mental fatigue
- Train the student in developing self-monitoring and self-advocacy skills
- Introduce the student and family to assistive technology and common accommodations
- Introduce the student and family to vocational rehabilitation and PEPNet services
- Seek summer and part-time employment opportunities for hard of hearing students.

ADDITIONAL RESOURCES

Assistive Technology:

http://www.pepnet.org/SearchRes.asp?cx=013997268836787448173%3A4s8xait0cos&cof=FORID%3A11&ie=UTF-8&q=Defining+Communication+Access+%231127&sa=go#458

http://www.wou.edu/education/sped/wrocc/links_adaptive_tech.htm

http://pdcorder.pepnet.org/media/greglog/

http://www.wou.edu/education/sped/wrocc/links_adaptive_tech.htm

http://www.wou.edu/education/sped/wrocc/HA%20Primer%20-%20web2.pdf

Classroom Acoustics

http://www.asha.org/members/deskref-journals/deskref/default

http://www.acoustics.com/ra_education_standard.asp

College Access Guides for Students with Hearing Loss

http://centerondeafness.utk.edu/

http://www.wou.edu/education/sped/wrocc/commaccess_files/frame.htm

pdc.pepnet.org/content/PDFforms/FacultyCatalog.pdf

http://www.wou.edu/education/sped/wrocc/HT%20Read%20Audiogram%20web.pdf

Mental Health

http://clerccenter.gallaudet.edu/Clerc_Center/Information_and_Resources/Info_To_Go.html/mentalhealth.html

http://www.deafhoh-health.org/resources/MHStandards/

Recommended Readings (autobiographies, counseling/guidance)

On the Fence: the Hidden World of the Hard of Hearing, Drolsbaugh, Mark (Ed). (2007). Springhouse, PA: Handwave Publications

Between Two Worlds.: Resilience to Trauma: An Inspirational Voice from Cyberspace, Chapter from *Odyssey of Hearing Loss: Tales of Triumph,* Harvey, Michael A (1998). San Diego, CA: Dawn Sign Press, pp71-93 & pp.199-219

Dear Mom and Dad, If Only You Had Known. A chapter from *Odyssey of Hearing Loss: Tales of Triumph,* Harvey, Michael A. (1998). San Diego, CA: Dawn Sign Press, pp. 13-48

Counseling Persons with Communication Disorders and their Families, 4th Ed. Luterman, David M. (2001). Austin TX: Pro-Ed.

Hidden Frustrations, Mann, Maureen. (2004). Omaha, NE: Boys Town National Research Hospital.

Alone in the Mainstream: A Deaf Woman Remembers Public School Olivia, G.A. (2004). Washington, DC: Gallaudet University Press

Missed Connections: Hard of Hearing in a Hearing World Stenross, Barbara (1999). Philadelphia, PA: Temple University Press

Self Assessments

http://www.asha.org

http://www.trychin.com
    Living with Hearing Loss: At School
    Living with Hearing Loss: Workbook
    Communication Rules
    Getting Along
    SPEAK OUT! Tips on public speaking for people who are hard of hearing
    Actions speak Louder! Tips for putting on skits related to hearing loss

Self Assessment of Communication–Adolescent and Significant Other Assessment of Communication–Adolescent. Elkayam, J., & English, K. (2003). *Journal of the American Academy of Audiology,* 11(9). 485-499

Student self-administered guides/training modules

http://www.pepnet.org

    iTransition
    Career Interests and Education Choices: It's My Plan! (Module 1)
    First Year College Success: Be the One (Module 2)
    Essentials for College Living: It's My Life (Module 3)
    eFolio: My Online Portfolio! (Module 4)

Student information guides

http://centerondeafness.utk.edu/pec/products/essentials.pdf

http://www.pepnetnortheast.rit.edu/publication/financing_your
_education/

Summer Camps, Internship Opportunities

http://www.aaas.org/programs/education/

http://www.ntid.rit.edu/ntidweb/prospective/eyf.php

http://www.agbell.org/DesktopDefault.
aspx?p=Leadership_Opportunities_for_Teens

http://clerccenter.gallaudet.edu/Clerc_Center/
Information_and_Resources/Info_to_Go/Resources/
Summer_Camps_for_Deaf_and_Hard_of_Hearing_
Children.html

**Training Packages for supporting
hard of hearing students**

http://www.pepnet.org/SearchRes.asp?cx=01399726883
    6787448173%3A4s8xait0cos&cof=FORID%3A11&ie=U
    TF-8&q=item+1022&sa=go#353

http://ncrtm.org/

Self-Advocacy for Students Who are Deaf or Hard of
Hearing, English, K.M. (1997). Austin TX: Pro-Ed

What responsibility does a school have for getting uncaptioned video clips captioned?

PEPNet

Per the ADA (Americans with Disabilities Act) and section 504 of the Rehabilitation Act course materials must be provided in an accessible format for students with disabilities. For students who are deaf or hard-of-hearing, this means presenting audio content as text. The most accessible way to provide the text is to add time synced captions to the video. Methods used to add captions vary by media.

The best method for VHS tapes is to add line 21 captions either as open captions (always viewable) or closed captions (able to be turned on and off, but requiring a caption decoder).

Adding captions to a DVD requires that the DVD be reauthored. If it already contains captions, note whether they are listed as "subtitles" or "subtitles for the hearing impaired." Regular "subtitles" add spoken words for hearing individuals whose first language may not be English and may not include all the information a person with a hearing loss would need. "Subtitles for the hearing impaired" include speaker identification, sound effects, and other auditory information.

Online or digital media are easier to caption since their formats do not need to be altered. There are several free or low-cost software options which will allow you to add captions in-house.

Institutions may choose to add captions in-house or outsource the project. Adding captions in-house can be time consuming. There are many variables but the average 30 minute video can required between 10 and 14 hours to caption. Outsourcing a captioning project can be costly but may save time and frustration in the end. For a list of captioning agencies approved by DCMP (Described and Captioned Media Program) go to: http://www.dcmp.org/caai/nadh11.pdf

Showing only captioned media in the classroom not only ensures accessibility but can benefit all students.

Visit www.pepnet.org for additional information and resources or for a listing of outreach specialists by state/territory

PEPNet is sponsored by the U.S. Department of Education and Office of Special Education Programs.

IDEAs that Work
U.S. Office of Special Education Programs

Understanding Communication Access (Tipsheet)

This tipsheet is one in a series of publications that addresses services provided to students who are hard of hearing. It describes the physical properties of sound that can support or impede understanding, the impact of amplification, the importance the brain plays in interpreting/understanding sounds, and the variability among individuals.(2009)

An incoming student majoring in a health sciences program needs a stethoscope. Who is responsible for purchasing an amplified stethoscope, and how will the instructor know that the student is accurately reporting information and describing sounds?

PEPNet

http://www.pepnet.org/faq.asp

Purchasing a Stethoscope

If the health sciences program makes stethoscopes available for students during class, then accessible technology should also be available for students with hearing loss. It may be difficult, however, to purchase an amplified stethoscope without student involvement because it is difficult to speculate on how effective a particular device may be for potential students. Consulting with deaf or hard-of-hearing professionals who use amplified stethoscopes may help if the student cannot participate in the selection process.

A student in a health sciences program that continually uses a stethoscope should consider purchasing his/her own device. Several amplified models may be a good fit for a student with residual hearing and use of personal amplification; this might involve the use of either telecoils or direct audio input. Students with cochlear implants (CIs) may be able to use a patch cord to plug their CI processor into a stethoscope. Some stethoscopes can be connected with an output jack to a PDA equipped with specialized software to create a visual display. The Association of Medical Professionals with Hearing Losses (AMPHL) provides an overview of this topic on its website; note the references below for contact information.

Using a Stethoscope

The classroom instructor may use a "teaching stethoscope" when working with students to identify heart and lung sounds, or to give an accurate blood pressure reading. A teaching stethoscope generally has more than one headset so simultaneous listening can occur; some models offer the option of filtering or amplifying the sounds. Other models can be connected with/to a PDA to create a sound recording for classroom use.

Students should practice using the stethoscope so that they can better understand the sounds they hear. They also can use audio materials available online or on CD to distinguish normal and abnormal heart and lung sounds. Several of these are described on the AMPHL website. In addition, graphic auscultation systems may be used to see heartbeats instead of hear them.

Resources

Association of Medical Professionals with Hearing Loss www.amphl.org
PAH-MD (Promoting Awareness in Health Care, Medical and Deaf)
www.urmc.rochester.edu/smd/stdnt/pahmd/

Exceptional Nurse www.exceptionalnurse.com/

Accommodation and Compliance Series: Nurses with Disabilities (Job Accommodation Network)
www.jan.wvu.edu/media/nurses.html

**Visit www.pepnet.org for additional information and resources
or for a listing of outreach specialists by state/territory**

IDEAs that Work
U.S. Office of Special Education Programs

PEPNet is sponsored by the U.S. Department of Education and Office of Special Education Programs.

What factors should a student who is deaf or hard of hearing consider when choosing a professional, trade or vocational school for careers such as EMT (Emergency Medical Technician), massage therapy, firefighting, truck driving, and others?

PEPNet

www.pepnet.org/faq.asp

Advancing educational opportunities for people who are deaf or hard of hearing

The work world today abounds with a variety of job choices, and choosing the right career is an important decision. Talents, interests, skills, and abilities are important elements in choosing the perfect job as is considering costs–in time as well as money– of getting the training required by a given profession.

Professional, trade and vocational schools offer an array of job and professional training that can lead to employment in cosmetology, firefighting, massage therapy, truck driving, medical and dental professions, the building trades, computer programming or repair, and plenty of others. Many of these professions do not require a college degree but do require some type of training and may require a high school diploma or GED.

Before investing time, effort, and money in a training program it is important to research and understand the requirements of a chosen occupation. This includes understanding any potential barriers or challenges that might be encountered. Some professions allow trained applicants to be hired and to begin working immediately. For others, successful completion of the training or coursework is only the first of several requirements, which may include passing certification or licensing exams prior to being able to work in the field.

Licensing, certification, or employment requirements may call for essential functions such as physical strength, mobility, and, in some cases, communication and language skills. Requirements may vary from state to state, so it is important to be aware of the occupational prerequisites in those states where individuals plan to work. For example, in some states, individuals who are deaf can become truck drivers. They can drive intra-state but they can't drive inter-state because the licensing requirements vary, and not all states will allow truck drivers with a hearing loss to get a license. As strict and inflexible as these requirements may seem, legal action has sometimes been effective in modifying them.

When choosing a training program, find out if the training program or school falls under the jurisdiction of the Americans with Disability Act (ADA) and if so, which title:

- **Title II** requires that state and local governments give people with disabilities an equal opportunity to benefit from all of their programs, services, and activities, including education. Many schools and vocational training providers that receive federal funding will have experience in providing accommodations. They will have procedures in place for requesting and getting the right accommodations to ensure that individuals who are deaf of hard of hearing have access to the same educational opportunities as hearing students.

- **Title III** applies to private training programs or schools whether or not they receive federal funding. Under Title III, public accommodations must comply with basic nondiscrimination requirements that prohibit exclusion, segregation, and unequal treatment. This includes effective communication with people who are deaf or hard of hearing. However, many private "proprietary" or "trade" schools and training programs may be unfamiliar with the ADA, have no established disability services offices or established procedures to handle the provision of accommodations. In these cases potential students who are deaf or hard of hearing need to understand their legal rights and responsibilities and be ready to self-advocate and work with the school to get the accommodations they need. Getting access to many of these programs may be complex and could require careful planning and take considerable time and effort.

What factors should a student who is deaf or hard of hearing consider when choosing a professional, trade or vocational school for careers such as EMT (Emergency Medical Technician), massage therapy, firefighting, truck driving, and others?

PEPNet

www.pepnet.org/faq.asp

In summary, successfully pursuing a dream job requires:

1. Knowing the requirements of the job.
2. Knowing the applicable laws and regulations.
3. Knowing your rights.
4. Knowing how to plan ahead.
5. And knowing how to self-advocate.

Resources:

EEOC on being qualified for the job
http://www.eeoc.gov/facts/jobapplicant.html

U.S. Department of Transportation physical qualifications for drivers
http://www.fmcsa.dot.gov/rules-regulations/administration/fmcsr/fmcsrruletext.aspx?rule_toc=760&section=391.41&section_toc=1781

Medical Examination Report for Commercial Driver Fitness Determination
http://www.fmcsa.dot.gov/documents/safetyprograms/Medical-Report.pdf

Firefighter who is deaf describes his career (ASL)
http://flashovertv.firerescue1.com/Media/2502-How-To-Be-A-Deaf-Firefighter/

The Life of Rescue Personnel – Article from the Association of Medical Professionals with Hearing Loss website: http://www.amphl.org/firefighters.php

Court rules UPS must consider driver applicants who are deaf or hard of hearing
http://www.winston.com/siteFiles/publications/Bates_v_UPS.pdf

**Visit www.pepnet.org for additional information and resources
or for a listing of outreach specialists by state/territory**

IDEAs that Work
U.S. Office of Special Education Programs

PEPNet is sponsored by the U.S. Department of Education and Office of Special Education Programs.