



Guidelines for Speech and Voice Banking

The Assistive Technology Clinic (ATC) is an interdisciplinary clinic providing services for augmentative and alternative communication (AAC), seating and mobility, and environmental aids for daily living (EADL). ATC and the ALS/Neuromuscular Clinic are housed together at Sunnybrook Health Sciences Centre (SHSC). The ATC/AAC Team, consisting of a speech-language pathologist (SLP), occupational therapist (OT) and technical support staff, i.e. communicative disorders assistant (CDA) and technicians, works in collaboration with the ALS/Neuromuscular Clinic in providing assistance to persons with ALS throughout the continuum of care.

In the early stages of speech and voice change, a person's speech may be slurred and voice may be weak and raspy. These changes typically become more prominent after talking for an extended period of time and/or when tired later in the day. You are certainly encouraged to use your natural speech as much as possible, but within your level of comfort.

Following are some strategies that may help you to maximize your speech efforts:

- Understand the changes in your breathing, voice and speech.
- Have important conversations when least tired.
- Speak for shorter periods of time.
- Speak in quiet, well lit areas.
- Face your communication partner.
- Swallow saliva before starting to speak.
- Take a breath before speaking.
- Speak fewer words per breath; speak in shorter sentences.
- Speak slowly. Exaggerate mouth opening and tongue movements.
- Spell word out loud if listener is not able to understand a specific word.

As your speech becomes more difficult for you and more difficult for others to understand, you are encouraged to discuss the options for communication aids with your SLP. There are a variety of communication aids, from very simple to very complex. Examples are:

- Alphabet/Phrase Boards
- Writing Boards
- Portable Amplifiers
- Speech Generating Devices (SGD)

If you think that you will be interested in getting a SGD in the future, you may wish to consider Voice Banking, i.e. recording/saving messages with your natural voice while your speech is still easily understood.

The ATC team has prepared guidelines as a reference if you wish to consider Voice Banking for possible future use with a SGD.

Voice Banking

1. What is voice banking?

Many people with ALS lose their ability to speak and may choose to get a SGD. Some people with ALS like the idea of using their own voice when it becomes necessary to use a SGD to communicate. Voice banking is the recording of one's speech/voice for future use in a SGD. If you are considering this option, it is necessary to record messages when your speech and voice are still easily understood.

2. What are the methods of voice banking?

Method A: Playback of recorded messages

Recorded messages can be programmed into a SGD and used when needed for communication. With this method, only recorded messages will use the person's natural voice. Newly created messages, using spelling, will use the SGD's artificial voice (i.e. synthesized speech).

Method B: Synthesized speech

ModelTalker is a speech synthesis system designed specifically for users of SGD's. This method of voice banking allows for both recorded messages and newly created messages, using spelling, to be spoken using the person's natural voice. It requires the potential user to record a large sample of words and phrases using a specific software program. Information and software for using ModelTalker are available

on the University of Delaware, Speech Research Lab website
www.asel.udel.edu/speech/ModelTalker.html

3. How can I prepare for voice banking?

You are strongly encouraged to discuss voice banking with the Speech-Language Pathologist (SLP) associated with the ALS Clinic where you receive services.

For **Method 1**, your SLP can provide you with:

- a framework for organizing and documenting the messages to be recorded for future use with a SGD
- procedural guidelines for recording and saving your messages into a computer for future use with a SGD.

Each clinic may have a different format for collecting, organizing and providing messages to be used for creating communication displays, and for recording and saving messages. It is recommend that you use the format and recording method of the Clinic where you plan to be assessed for a SGD.

For **Method 2**, follow the steps provided on the ModelTalker website.

The ATC format for organizing and documenting messages is provided for your reference. *See Appendix A (Personalized Message List)*. Procedures for recording and saving your messages into a computer are provided for your reference. *See Appendix B*.

Appendix A: Personalized Message List

The Personalized Message List will be used to program your Speech Generating Device (SGD). It is recommended that you include messages to meet future needs. Examples of messages are provided. Delete messages that you do not want to be included in your SGD and add your personal messages to each topic. There is no limit to the number of messages and topics may be added to the last page of the Message List.

Following is a guideline for organizing your messages into topics.

Health Care Needs

I am having difficulty breathing.
I need suctioning.
I have cramps.

Nutrition/Hydration

My mouth is dry.
I have no appetite.
I want something to eat (list food preferences in chart below).
I want something to drink (list drink preferences in chart below).
Cut my food into small pieces.

Food Preferences	Drink Preferences

Body Positioning

I want a pillow.
I want to go to bed.
I want to sit on a chair.
I am uncomfortable. Please reposition me.
I want my neck collar.

Environmental Needs

Turn on/off the light.
Water the plants.
Feed the dog/cat.
Check the mail.

Places

I would like to go outside.
I would like to visit _____.
I want to go to the dentist.

Appendix B: Recording and Saving Messages into a Computer

Organization:

1. Create a folder for each topic of messages on your Personalized Message List.
2. Record the messages from each topic as you have written on the Personalized Message List by using one of the following procedures:

Procedure 1: Saving messages as .wav files, using a computer

1. Plug a microphone in your computer. Test microphone to make sure that it is recording clearly.
2. Go to the Start Menu > Programs > Accessories > Entertainment > Sound Recorder
3. Record the first message
4. Listen to the recording. If you are satisfied with the quality, proceed to save the message.
5. Choose 'Save'
6. Save the message as a .wav file.
7. Proceed to record and save all messages as outlined above. *Be sure to save each message as a separate .wav file.*

NOTE:

- Least expensive
- Quality reduced due to background noise and feedback (Sound editing software is commercially available to improve quality of recording)
- Uses up a lot of hard drive space.

Procedure 2: Saving messages as .wav files, using a digital audio recorder

Purchase a digital audio recorder and follow the directions for recording and uploading files to your computer. *Be sure to save each message as a separate .wav file.*

Procedure 3: Saving messages as MP3 files

Download MP3 recording software and follow the directions for recording and saving messages as MP3 files. *Be sure to save each message as a separate MP3 file.*

NOTE:

- MP3 files use up less hard drive space than .wav files BUT are not compatible with all SGD's.