



**NATIONWIDE CHILDREN'S**  
*When your child needs a hospital, everything matters.*

## Helping Hand™

*Health Education for Patients and Families*

# Hearing Assistive Technology (HAT)

Hearing assistive technology (HAT), formerly called FM systems or assistive listening devices (ALDs), help people with hearing loss hear better. HAT can:

- Be used with a hearing aid (HA) or cochlear implant (CI).
- Make sounds louder.
- Make a speaker's voice clearer if they're far away or if they're talking in a noisy place.
- Keep the person with hearing loss from trying too hard to hear.

## Parts of a HAT System

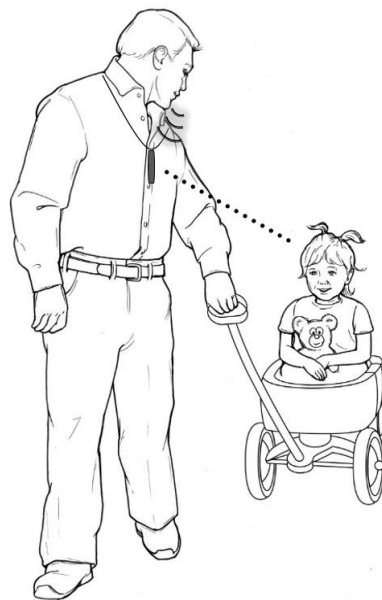
A HAT system has 2 parts – a **microphone** and a **receiver**. The microphone is the part someone speaks into. It picks up the sound and sends it to the receiver. Your child's ear doctor (audiologist) can recommend a receiver that will work best for them.

There are several different types of receivers:

- Boots – attached the to the HA or CI
- Integrated receivers – built into the HA or CI
- Body-worn – neck loop or clip the child wears that sends signal to an HA or CI
- Desktop – a speaker on the child's desk
- Sound-field – speakers located in different parts of the classroom

## Types of HAT

- HAT can be used between 2 people or a in a group of people.
  - A 2-person system is called a personal system. The speaker wears a microphone and the person with hearing loss wears the receiver (Picture 1).
  - A system used by a group or in a classroom is called a sound-field system. The speaker wears a microphone that sends the sound to a loudspeaker. Everyone in the room is able to hear the person talking.
- HAT can send (transmit) sounds differently. The 2 most common types are:
  - Digital modulation (DM) system – changes sound into digital data like a computer.
  - Remote microphone (RM) – a Bluetooth® system. Some RMs send sounds directly to the HA or CI. Others may need the hearing-impaired person to wear a device around their neck or clipped to their clothes.



**Picture 1** A personal system sends the sound directly to the receiver attached to each HA or CI.

## Getting HAT for School

Ask your child's school who is in charge of HAT or special education.

- You may be told to contact with the school's educational audiologist, special education coordinator, or principal.
- Write down or record any time you communicate with the school.
- HAT may be recommended for your child, but the decision to provide HAT is district and/or school specific.
- Some children may not qualify for HAT under Ohio laws with only hearing loss. However, the school may consider your child's needs when making the decision to provide HAT.

If you have any other questions about HAT, contact the Audiology Department at Nationwide Children's Hospital at (614) 722-3951.