

## FM Systems

Background noise and a substantial distance between the person talking or sound source and the listener can create difficult listening situations especially for children with hearing impairments. A Frequency Modulated or FM system is the most commonly used device to overcome these difficulties. The main advantage of an FM System is to make speech clearer and background noise less bothersome.

### **How FM Systems Work:**

- The parent or teacher wears a wireless FM transmitter microphone either at chest level or at the level of the mouth
- The microphone may also be placed on a table as a conference microphone to allow the FM user to hear all the voices around the table
- The FM transmitter sends a low power FM radio wave signal to a wireless FM receiver that is within approximately a 50 foot radius
- The receiver picks up the signal from the microphone and routes it to the child's hearing aid, cochlear implant, or other device.

### **Types of FM Receivers:**

- can be body worn or worn at ear level (more common)
- may work independently from hearing aid or be connected directly to hearing aid



Independent FM System



Hearing Aids with  
an integrated FM  
Receiver



Transmitter

## Using the FM system:

When the FM receiver is connected to the hearing aid, parents have three options to choose from.

1. Using the hearing aid microphone on its own
2. Using only the FM microphone
3. Using both the hearing aid microphone and the FM microphone simultaneously

The FM system should be used whenever the distance between the parent or teacher speaking and the listener is greater than 3 feet, which is optimal listening distance, and for noisy situations.

Usually, the hearing aid microphone and the FM microphone are used simultaneously. This allows the child to receive a consistent signal from the person talking into the FM transmitter microphone while still hearing the surrounding sounds, including the child's own voice.

Funding for FM systems is available through the Ontario Assistive Devices Program (ADP) and the Assistance for the Ontario Children with Severe Disabilities (ACSD) program. Speak to your audiologist about the use of an FM system for your child.

## References:

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