



## ILLINOIS SCHOOL FOR THE DEAF OUTREACH

**FREE** training and consultation for  
Illinois children with hearing loss

[bit.ly/ISDOutreach](http://bit.ly/ISDOutreach)



Search for Illinois School for the Deaf Outreach



State of Illinois  
Dept. of Human Services  
Illinois School for the Deaf

**Bruce Rauner, Governor**  
**James Dimas, Secretary**  
**Julee Nist, Superintendent**



DESIGNATED SERVICE  
COORDINATOR  
TRAINING  
2018

*Supporting Families who have children who are deaf,  
hard of hearing, visually impaired, blind or deaf-blind*

Welcome to DSC training year 2, Bridges Conference 2018 in Bloomington at the ISU Alumni Center.

# VISION IMPAIRMENT

# DEFINING VISUAL IMPAIRMENT

- Visual impairment involves a visual condition that interferes with performing academic and daily living skills
- A TRUE visual impairment will/can not be corrected with contacts or glasses
- Functional vision is often different than a measured visual acuity from ophthalmologist



This is a fairly broad definition of visual impairment. While some children with visual impairments may wear glasses, a true visual impairment can not be corrected with prescription lenses. Also, it is important to note that functional vision which is how well a person is able to use their vision is not the same as the measurement of their vision (acuity) that one receives from the ophthalmologist. DTVs can help child improve the use of their FUNCTIONAL vision (learning how to use it)

# CHILDREN WITH VISUAL IMPAIRMENTS



- Wide range of visual abilities
  - Total vision loss
  - Light perception/Light projection
  - Legally blind
    - 20/200 or less in the better eye WITH correction
  - Low Vision
    - 20/200 – 20/70

Students with visual impairments have a wide range of abilities. First of all, students' visual abilities vary, from having no usable vision, to having light perception, to being functionally blind (unable to use your vision), to being legally blind, to having low vision. Legal blindness is defined by the eye chart we use at the oph's office, as 20/200 or less in the better eye.... Low vision is defined as ...

# CHILDREN WITH VISUAL IMPAIRMENTS

- Wide range of overall abilities
  - Visual impairment is sole disability
  - Multiple disabilities
  - Deaf/Blind
  - Academic or functional skills



# WHAT IS VISION?

- Our ability to see is shaped by interaction of the following factors:
  - Visual Skills
  - Individual Skills
  - Environmental Skills



Vision may be thought of as a combination of visual skills, individual skills, and environmental factors.

Visual skills are obviously important. If your vision is not clear, or if you cannot control the movement of your eyes, it will be difficult to see. What is less obvious is that individual skills, such as your physical abilities, are just as important. For example: if it is difficult to hold your head up, using your vision is a challenge. In the same way, the environment can have a great effect on vision. When the sun is shining in your eyes, it is difficult to see, right? Sometimes just a bit of glare from a window can have the same effect on a person with certain visual conditions. And all of these factors change, so a person with visual impairment's vision may change from day to day or even hour to hour.

What is vision: Corn (1983) model of visual functioning

Visual skills: acuity, visual fields, ocular motility, color perception, processing (optic nerve and visual pathways)

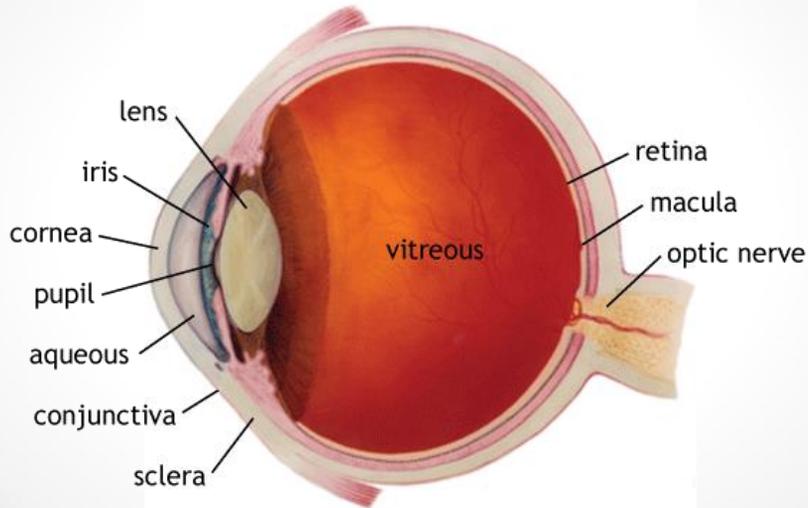
Individual skills: Cognition, sensory integration, perception, physical abilities

environmental factors: illumination, color, contrast, size

# VISUAL SKILLS

- Acuity
  - The “score” you get from reading the eye chart
  - Sharpness of vision
- Visual Fields
  - How far can you see “out of the corners of your eyes”?
- Ocular Motility
  - Tracking
  - Scanning
- Color Perception
- Processing (optic nerve and visual pathways)

# VISUAL SYSTEM



To describe the visual system, we can follow the path that light takes when it enters the eye. First, light passes through the cornea, which focuses a large portion of it. Then it travels through the aqueous and the pupil to the lens, where it is focused even more. The light travels through the jellylike vitreous and comes to a point on the macula, which is a point on the retina, the inner layer of the eye. The retina contains millions of photoreceptor cells (rods and cones), which send their signals to the optic nerve, which relays the message to the brain. Here the light is interpreted as a visual image, and this is what we perceive when we see.

## WHO ARE THESE CHILDREN? WHAT CAN WE DO?



The combined effect of a hearing loss and an accompanying disability presents a unique and complex problem for professionals and parents.

Multiple disabilities create a pattern of problems, different from the problems usually associated with any disability alone.

The fact that there are many differences among children with multiple disabilities adds to the difficulties of providing appropriate programs.

However, there ARE things that can be done



# TYPES OF VISUAL IMPAIRMENT

## SYNDROMES ASSOCIATED WITH VISION IMPAIRMENT

- CHARGE Syndrome
- Aicardi Syndrome
- Angelman Syndrome
- Dandy-Walker Syndrome
- Duane Syndrome
- Familial Exudative Vitreoretinopathy (FEVR)
- Peter's Anomoly
- USHERS Syndrome
- Zellweger's Syndrome

SOME VISUAL  
IMPAIRMENTS YOU  
CAN SEE

# MICROPTHALMIA

- One or both eyeballs are abnormally small
- May appear to be missing but generally some eye tissue is present
- Vision loss ranges
- May have other eye abnormalities
- Estimated 1/3 to 1/2 affected have microphthalmia as part of a syndrome



Microphthalmia is not as common as other VI

May be associated with other eye abnormalities: Colobomas are missing pieces of tissue in structures that form the eyes – can appear as notches or gaps in the colored part of the eye (iris), retina (light sensitive tissue that lines the back of the eye), choroid (blood vessel layer under the retina), and/or the optic nerves (carry information to the brain)

Cataracts – clouding of the lens which we will talk about more soon

# ALBINISM



- White hair
- Very light colored skin
- Lack of pigment in the colored part of the eyes
- Rapid, involuntary back-and-forth movement of the eyes (nystagmus)
- Sensitivity to light (photophobia)
- Poor depth perception
- Legal blindness or complete blindness

# COLOBOMA

- Coloboma of the iris – fairly good vision. Colobomas in the retina or optic nerve may experience vision loss in specific fields resulting in difficulty with close up visual tasks (reading, writing, play) and may not be able to be corrected.



# ANOPHTHALMIA



- Absence of one or both eyes
- Often results in total blindness or limited vision
- May be fitted for conformers to help the eye sockets and bones grow properly

# SOME COMMON TYPES OF VISUAL IMPAIRMENT

# RETINAL DETACHMENT/TEARS



Floaters

High Myopia (severe nearsightedness) at risk for retinal detachments as well



# GLAUCOMA



Glaucoma is the buildup of pressure in the eye that can cause damage to the optic nerve. It can lead to permanent vision loss. Glaucoma is characterized by typical field changes and thinning of the retinal nerve fiber layer. Deterioration is usually very gradual but by the time field loss becomes clinically apparent, over half of the retina's ganglion cells may already be irreversibly damaged.

# CATARACTS/APHAKIA



Cataracts is the clouding of the lens. Can be congenital or acquired; may be secondary to retinal disorders such as retinal detachments. Surgical removal is the only treatment for cataracts. Aphakia is the absence of the lens (due to surgical removal). Child may have glasses or a contact lens to correct refractive error. Accommodations are needed to help child view objects at near distance and reduce glare.

# HEMIANOPIA

## What It's Like



**This is how a street scene looks with normal vision.**



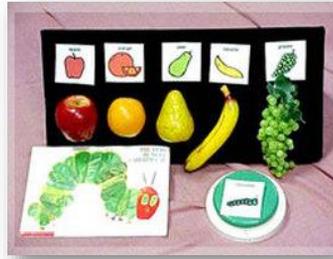
**Example of a Hemianopia**

Distinct field cuts. For example, child may have field cut on right side in both eyes. I have worked with children who have been diagnosed with hemianopia secondary to having a stroke while in utero.

# VISION LOSS STRATEGIES

# STRATEGIES

- Say your name as you approach
- Hand under hand or elbow guidance
- Describe what is happening; always use verbal and/or tactile cues
- Use specific descriptions (rather than “here” or “this”)
- Give hands on experiences
- Be mindful of positioning



Here is a short list of modifications that work for most, if not all, students with visual impairments.

One of the trickiest ones is using specific descriptions. Place the child's hand on top of yours or gently prompt them with elbow guidance rather than grabbing their hand. Provide verbal cues to let them know what is going to happen, what is happening around them. Try to be aware of every time you say something vague like “it's over here” Instead, try to describe everything specifically (left or right), like saying “The ball is next to your left leg”. Always give hands on experiences – tactile books, use real objects to help “illustrate a story”. Positioning is very important when working on visual skills. It is a challenge for many children with visual impairments to work on vision skills when they are not in their most comfortable position. This occurs because if they are sitting or in a stander they may be trying very hard to keep their head up, body stable – which makes it very challenging for them to use their functional vision to its fullest. I will discuss more strategies that are more “CVI specific” but can be used with other visual impairments during our discussion with CVI.

# MORE STRATEGIES

- **Illumination**
  - Avoid glare (child should have his/her back to windows)
  - Be aware that children may have more difficulty traveling in poorly lit areas or in bright sunlight
- **Contrast**
  - Mark entryways/stairs with brightly colored tape
  - Use a black or white background to present objects
- **Size**
  - Larger print size or pictures
- **Distance**
  - Allow child to hold close to their faces
- **Color**
  - Use bright, solid colors rather than pastels

Turn the child away from a light source unless of course you are using a light box to gain visual attention. I will discuss more strategies that are more “CVI specific” but can be used with other visual impairments during our discussion with CVI.

## EVEN MORE STRATEGIES

- Learn to interpret child's subtle responses:
  - Change in breathing patterns
  - Shift of eye gaze
  - Change in body position
  - Becoming still, calm, or upset

# RED FLAG -VISION



- ❖ Brain injury (shaken baby, HIE)
- ❖ “Healthy eyes” – Structures are normal but exhibiting atypical visual reactions
- ❖ Lack of oxygen
- ❖ Birth trauma
- ❖ Hydrocephalus
- ❖ Brain bleeds

Since you may have a child in your classroom who has not yet been identified, we'd like to give you some red flag behaviors that may indicate a hearing loss. As we review these, you will note there are many similarities between ADHD, Autism or Aspergers, and hearing loss.

Over labeling of kids on IEPs

# PARENTS ARE KEY!!!

- Parents can:
  - Maintain consistency in the child's life.
  - Help the child maintain self-discipline.
  - Help with continued therapy between sessions.
  - Provide good nutrition and a good night's sleep.
  - Give positive reinforcement and encouragement.
  - Provide love and acceptance.



We can't do it alone. We can't underestimate the power of a parent to support and encourage the child. Without their support, the battle is almost insurmountable. If education is not important to the parents, chances are, it won't be important to the child, either, and no matter how hard you work, you may not be able to accomplish what you could with the parent's support.

EXCELLENT INFORMATION  
IS AVAILABLE FROM  
PARENT CENTER HUB

<http://www.parentcenterhub.org/>



## YOUR DSC CONTACT

Andrea Marwah

331-702-8944

[Andrea.Marwah@Illinois.gov](mailto:Andrea.Marwah@Illinois.gov)

# FREE TRAINING AND SERVICES!!

## Contact:

- ☎ Outreach Staff (217) 479-4393
- ☎ Toll Free (877) 339-2686
- ☎ Fax (217) 479-4328
- ☎ website [www.illinoisdeaf.org](http://www.illinoisdeaf.org)

*Your Trainer: Andrea Marwah*  
[Andrea.marwah@illinois.gov](mailto:Andrea.marwah@illinois.gov)  
331-702-8944

