Successfully Educating Students with ONH

how educators can make a difference from the start

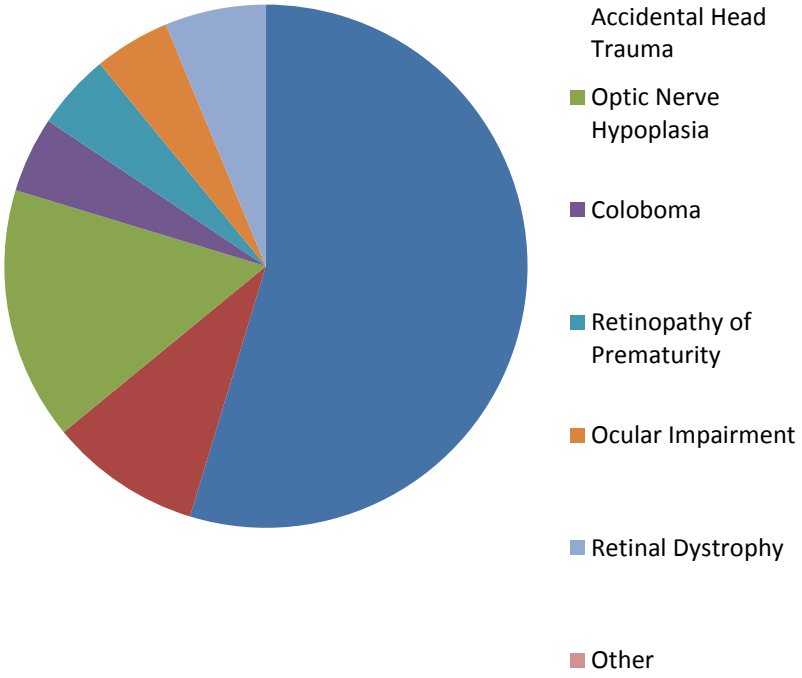
“A diagnosis of optic nerve hypoplasia warrants neuroradiographic and endocrinologic testing for risk factors of delay and developmental assessments for early intervention planning.”

Demographics

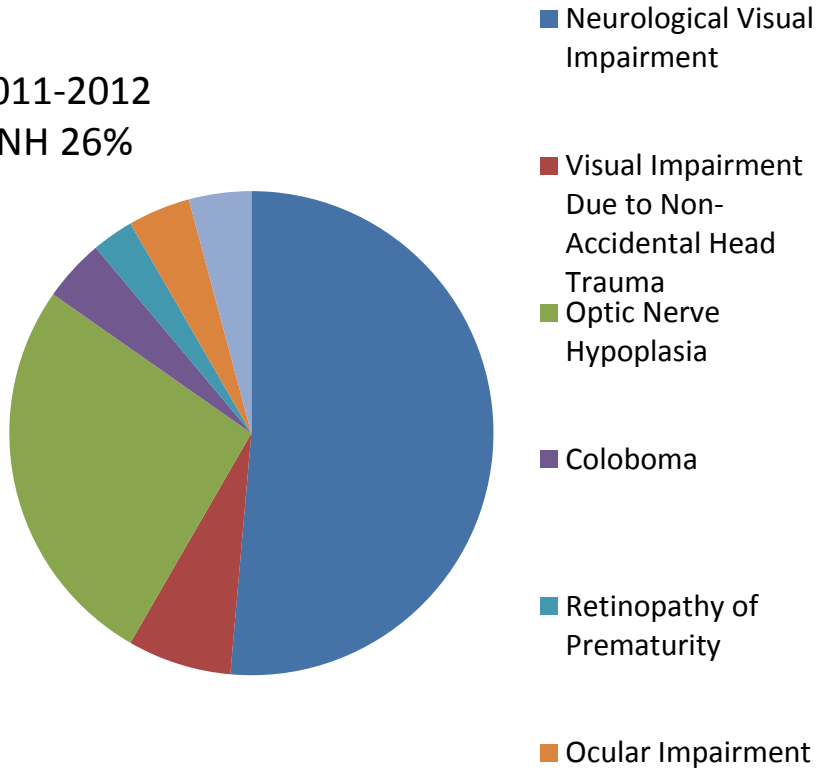
- At NMSBVI preschool campus 18 % of our population has a diagnosis of ONH
- Presently 32 confirmed cases under 3 years old – baby program
- 50% of the students in my classroom are diagnosed with ONH
- 1977 – 1.8 per 100,000
- 2006 – 10.9 per 100,000

Incidence at NMSBVI

NMSBVI – ECP
2010 – 2011
ONH 16%



2011-2012
ONH 26%



National Demographics

- Among children under 5 years of age
- prenatal Cataract is the leading cause of legal blindness, accounting for 16% of all cases.
- optic nerve atrophy (12% of all cases) and
- Retinopathy of Prematurity (9% of all cases)

(National Society to Prevent Blindness, 1980).

A study of children in schools for the blind in the United States revealed that 19% of 2553 children were cortically blind, and **12% had visual loss from optic atrophy or optic nerve hypoplasia**

(Steinkuller, Du, Gilbert, Foster, Collins, & Coats, 1999; cited in Gilbert & Foster, 2001).

What educators need to know about ONH

- Defining Characteristics
- Underdeveloped optic nerve

Clinical Associations:

- Hypopituitarism dysfunction
- Developmental Delay
- Social Delay
- Motor Delay

Developmental specialists look for visual cues when identifying ONH in children
-Small stature
-Sensory issues

"pallor"
"small optic nerve"
"Underdeveloped optic nerve"

When a child has a visual diagnosis of ONH, there are a host of other medical issues to test for.

- Brain evaluations and tests (CT, MRI)
- Hypopituitarism (pituitary malfunction)
- Growth Hormone (blood tests are required to measure growth hormone)
- 6:10 children with ONH do not make enough GH.
- Hypothyroid (TSH) “Thyroid levels should be checked when the diagnosis of ONH is made and at least every year after diagnosis.”

- Sex hormones (Endrocinologist will perform a blood test. Tests should be performed when child is diagnosed or at less than 8 or 9 months of age)
- Cortisol production deficiency
- Low Blood Sugar “Lack of growth hormone, lack of cortisol or lack of both can cause a body’s blood sugar level to be low.
- Low ADH (Diabetes Insipidus) dehydration and high sodium content

www.chla.org “Optic Nerve Hypoplasia: A Guide for Parents”
*also available in Spanish

Strategies for Success : educating students with ONH

Educational Impact

- From – *Optic Nerve Hypoplasia* (presentation)

Julie Greenlee and Angela Howe

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The student will require some medical monitoring as well as educational assessment
Depending on visual impairment increase or decrease font to meet needs of acuity and/or visual field
Will likely need an O&M evaluation

http://www.faculty.sfasu.edu

Retrieved 2 5 11 rosipaw www.flickr.com

Effective Teaching Strategies (general)

- Flexibility is key
- Adapt according to child's mood
- Discern causes of discomfort and stress
- Utilize quiet times of day for optimal learning
- Limit exposure to busy environments
- Be persistent
- Defined limits for behavioral challenges
- Consistency and communication for all team members
- Give the student coping strategies
- Keep calm
- Organize activities so the child is "in charge"

Specific Strategies

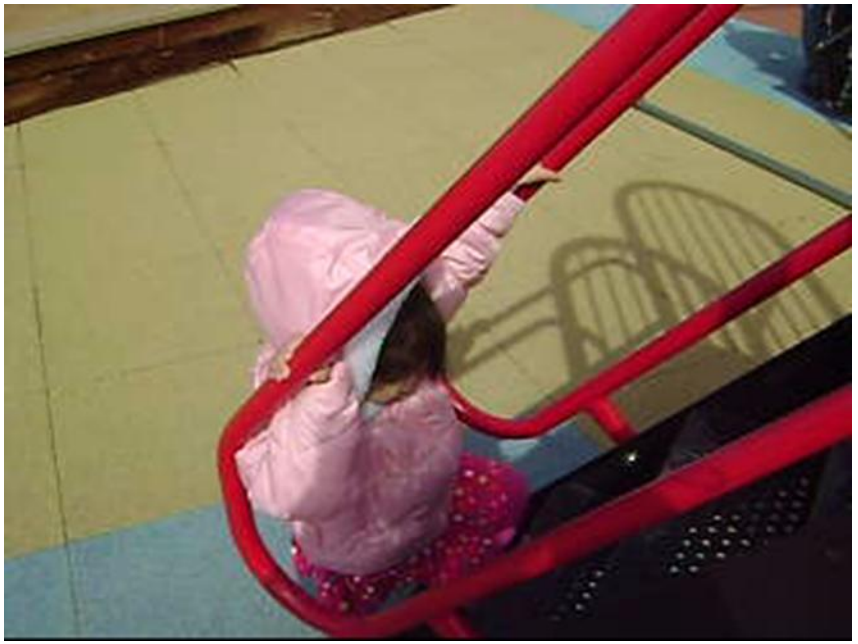
Simple

complex

Increase sensory information according to child's cues

- Simple
- Single demand
- Familiar environment
- Reduced noise
- No peers
- 1 staff member

- Outside
- Windy, cold, sunny
- Noisy
- Pulling
- Walking
- Touching railings
- Ascending
- Instruction



Increasingly complex social situations and demands

Flexibility within instruction is vital because

- Sensory integration issues
- Discomfort brought on by incontinence, clothing, hunger, thirst, etc. . .
- Inability to deal with stress
- Irritability
- Fatigue/sleep issues
- Poor health

Keys to educational success for students with ONH

- Medical issues must be addressed before programming can be effective
- Advocates for the student must be able to explain “behaviors” based on their knowledge of the condition
- Think. . . .

Not….

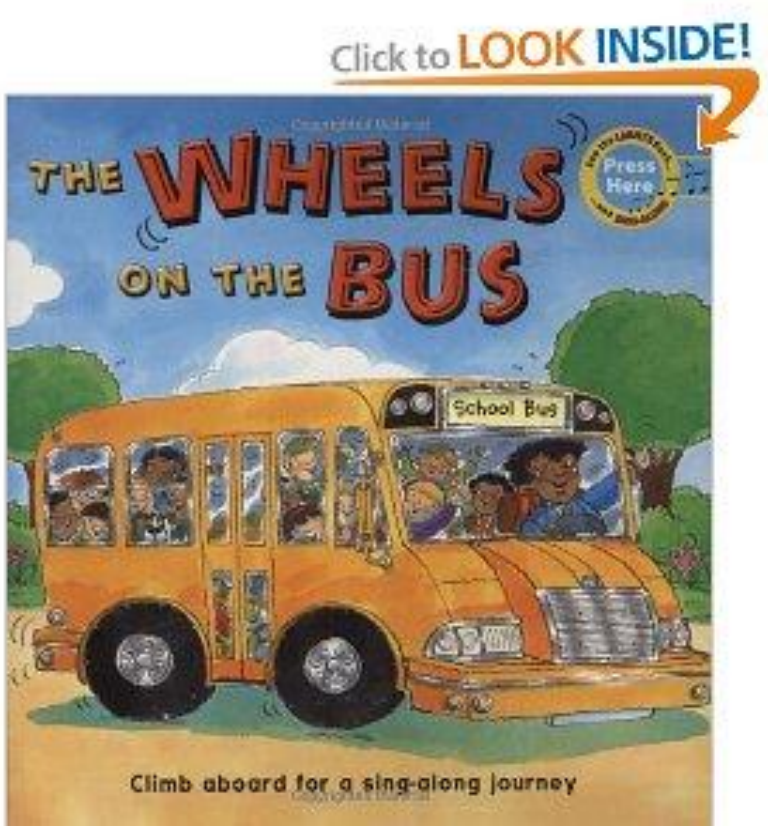
What is the role of the TVI/Early Interventionist?

- Provide medical information associated with ONH to both families and professionals
- Develop strategies with the team and ensure communication and consistency
- Debunk ONH stereotypes

Tools and Adaptations

- Object Permanence

Pre-literacy



Pre-braille

Assistive Technology

ZOOLA

FUN SOUNDS

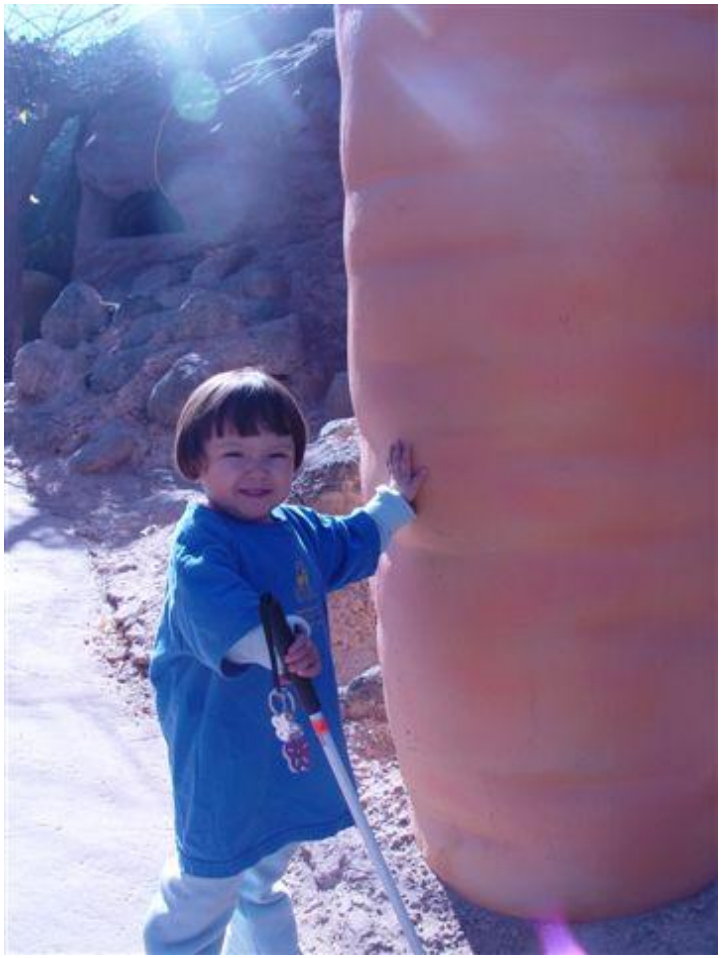
MONSTER MELODY

BEHAVIOR


"Feel Better"
Menu


Water
Whistle
Squeeze
WEDGE
GUM
BRUSH
Take a Walk
Jump

J, 3 YEARS OLD



- Bilateral ONH
- Pituitary issues
- Sensory integration issues
- Difficulty dealing with stress
- Urinates frequently
- Poor appetite
- PICTURE OF JULIE NOW!

J, Now 5 Years

- Butterfly Protocol

Choices

Expectations

Social success

- Active role during meals
- “Happy Plate”

Behavior Strategies

Allow student to participate in planning Process

Provide one on one time with an Adult before integration into group

Self-evaluation

Outcomes

Social Awareness

S, 3 years old

- Bilateral ONH
- Sensory integration
- Orally defensive
- Growth hormone
- Gross motor delays
- Language delays

E, 4 years

- “Extreme” Bilateral (NLP)
- Pituitary deficiencies

(cortisol and thyroid)

- Gross and fine motor delays

Resources

- Dr Mark Borchert presentation in Albuquerque, 9/09

www.chla.org "ONH: a Guide for Parents"

- Septo-Optic Dysplasia/Optic Nerve Hypoplasia & Autism Spectrum disorders, Terese Pawletko

- From – *Optic Nerve Hypoplasia* (presentation)

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