Module: **Visual Conditions and Functional Vision: Early Intervention Issues**

Session 1: Working With Families and Eye Care Professionals

Handout I: Sample Portfolio for Young Child With Visual Impairment

EIVI Training Center. (2003). *Sample portfolio for young child with visual impairment*. Chapel Hill, NC: Early Intervention Training Center for Infants and Toddlers With Visual Impairments, FPG Child Development Institute, UNC-CH.

Functional Vision Assessment

Name: Rachel
DOB: June 26
Assessment Date/Time: February 2
CA: 8 months
Referral Source: Family
Assessment Location: Home of family
Assessor: M.Ed., pediatric vision specialist

Referral questions
Family is concerned that Rachel is not reaching for her bottle and other toys.

Ophthalmological/optometric information
Rachel has been seen by Dr. _____ from August 8 to February 5. She has Peter's anomaly in both eyes which is a central cornea malformation characterized by adherence of the iris to the *descemet's membrane* (cross-section of the eye) and the innermost corneal layer. Rachel has had PKP—penetrating keratoplasty (the opaque cornea is removed and replaced with a donor cornea) on both eyes. She has also had cataract extraction in both eyes (lens of the eye is removed and high-plus glasses have been prescribed). She has a good reflex in the right eye (normal red glow emerging from the pupil when the interior of the eye is illuminated). There is questionable red reflex in the left eye. If this reflex is absent or diminished, there may be an opacity between the cornea and the retina. Rachel is currently wearing glasses of +15.00 in both eyes. Her intraocular eye pressures are also high at 37 in her right eye and 33 in her left eye as of February 5. Rachel is taking Prednisolone, an anti-inflammatory steroid, and Timoptic, a topical medication that reduces internal pressure in the eye. Timoptic is used in the treatment of glaucoma to lower elevated eye pressure that can damage vision.

Background/medical information
Rachel was born full-term by caesarean section and weighed 8 pounds, 12 ounces at birth. Her mother also has Peter's anomaly and has a prosthetic right eye and a hole in the retina of her left eye.

Setting
Rachel was seen in her home with both her mother and father present. The assessment was at 12:00 noon. There was diffused natural light from south-facing sliding glass doors.

Pupillary response
Normal.

Eye movements
Rachel appears to prefer her left eye. She reached for a toy if she was presented with a touch cue first. She was interested in looking at a board book of photographs of babies. One side of the book had the photos and the other had colors. She preferred the colored side, viewing it at 8 inches maximum. Rachel is light sensitive when outdoors. Her best viewing distance appears to be about 8 to 10 inches. She appeared to prefer toys with lights or shiny metallic surfaces.

Near vision
Summary of Teller Acuity assessment: Using both eyes, the following responses were seen with the forced preferential-looking test using the Teller Acuity Cards:

2.4 cy/cm @ 30cm = 20/360 – 20/650 (based on 38cm)

The Acuity Cards provide a measure of near acuity, not distance acuity. The child is shown black-and-white stripes on gray cards. Eye and head movements of the child are used to determine whether the child can see the stripes. Stripe width is decreased until the child no longer shows evidence of detecting stripes. The measurement indicates that Rachel's near vision is below typical range for her age. Confidence of this assessment is fair, given that Rachel became inattentive and uninterested in the activity.

Distance vision
Rachel did not look at the toys presented to her unless they were within 3 to 4 feet. Her mother feels that Rachel does not look at her older brother as he walks around the house.

Visual field

Field loss: Yes___ No_X_

Rachel looked at the presentation of a red metallic pompom in all quadrants. The object had to be within close visual range (3 to 4 feet) and visually appealing, and Rachel needed to be provided with a touch cue.

Summary

- Near vision below typical range for her age
- Peter's anomaly in both eyes
- Penetrating keratoplasty in both eyes
- Wears glasses of +15.00 in both eyes
- Intraocular eye pressures high in both eyes
- Appears to prefer the left eye
- Reaches for a toy if presented with a touch cue first
- Light sensitive when outdoors
- Prefers toys that have lights or shiny metallic surfaces
- Observed toy presented in all visual fields (up, down, both sides, and diagonally)

Recommendations

1. Continue to make regularly scheduled ophthalmological visits with Dr. _____, pediatric ophthalmologist, and Dr. _____, glaucoma specialist. Some questions to ask:
   - Should Rachel be wearing prescription sunglasses when she is outdoors?
   - Will Rachel be a candidate for lens implants?
   - Rachel need to continue to take prednisolone because it is a steroid medication?
   - What is Rachel's best viewing distance based on her prescription (arm's length, 2 to 3 feet)?

2. Rachel should have the services of a teacher of children with visual impairments to support her needs as a child with a visual impairment.

3. Provide Rachel with a variety of toys that light up and are shiny so she will begin to reach out for them and interact with them in a variety of ways.

4. Rachel should be provided opportunities to look at things as close as she needs to see them. Due to Rachel's aphakia (cataract extractions), a special note should be made regarding this use of a black light. It is believed that the normal lens absorbs ultraviolet light, protecting the retina from exposure. When there is no lens to perform this function, the retina can be damaged. Use of a black light should be avoided.

5. It is important that Rachel be protected from bright outdoor lights as much as possible.

6. Good contrast between a toy and the surface the toy sits on is helpful.

7. Reduce visual clutter by placing just one or two items on a surface with good contrast (light or dark solid-colored towel, sheet, or blanket).

8. Stress and fatigue have a negative impact on visual performance. It may seem that Rachel can see better at some times than at others.

9. Early developmental activities are very important at this age.
   - Take Rachel around the house and name the sounds for her so she can make sense of the noises around her because she might not be able to see the sources of sounds clearly.
   - Put Rachel under a baby gym and show her how the hanging toys feel and sound when they move.
   - Provide Rachel with many opportunities to explore different objects with her mouth and hands.
   - Use toys with lights that attract her attention.
   - Always position her securely so she can use her vision optimally. Infants who are not physically secure tend to not feel comfortable enough to use their vision consistently.
   - Continue to introduce a cup to Rachel so she gets used to handling it. Alternate between using a bottle and a cup, and gradually increase the amount of time she has the cup.
   - Provide Rachel with clues that it is time to eat—put a bib on her, put her in a highchair, and put the spoon (or cup) in her hand

For more information

http://rob66.freeyellow.com/ (Peter's anomaly support group)
http://www.smbs.buffalo.edu/oph/ped/PETER.htm (information about Peter's anomaly)
http://med-aapos.bu.edu/publicinfo/store1/petersanomaly3.56AM.html (family email regarding Peter's anomaly)

Ophthalmological Report

Name: Rachel
Patient age: 0 Yrs 6 Mos
Exam date: January 17
Referred by: _________

Chief complaint: Here for 6 wk. follow-up. Doing very well. Wearing her specs consistently.

Allergies: nkda

Medications: pf 1% ou qhs

Vision (cc): (grating)
RE: 1.6 cy/deg untapped hiconf
LE: same
NEAR:

Pupils:
RE: irreg
LE: irreg

Ductions: |+---**RE**---+| |+---**LE**---+|
full

External: There is a dim red reflex left eye, but an excellent view right eye.

Anterior sag: Both grafts are clear and compact, there is an anterior chamber present in each eye. In the left eye there is pigment migration with a dense plague present that blocks the visual axis.

IOP:
RE: 40
LE: 50 crying

Assess: Good view of retina right eye, glimpse of normal appearing nerve, cup about 50% estimate. Her IOPS are elevated today; I will start timoptic xe today ou, and ask that she return to see Dr. _____. He may suggest that we do an EUA or she may be able to manage IOP without.

Plan: Refer to Dr. ______ for help with management of IOP

Follow-up: Dr. _________

Teller Acuity Card Sheet

Patient's name: Rachel
Birthdate: June 26
Due date: _______
Age at test (from due date): 8 months
Tester: Dr. ______
Test distance: 30 cm

Test date: 2/2
Sex: M___ F_X_

Holder: Father
Test number: 1

cy/cm	**Test # 1** OU OD OS (circle 1) SC CC (circle 1) **Indicate type of lens**	**Test #2** OU OD OS SC CC	**Test #3** OU OD OS SC CC
low vision card	+		
0.32	+		
0.64	+		
1.3	+		
2.4	+		
4.8	-		
9.8	-		
19.0			
38.0			
BLANK			

Raw Score: cy/cm for finest grating seen: OU:____*2.4*___OD:________OS:________
cy/cm = 20/360 - 20/650

	5 (high)	4	3	2	1 (low)	Too fussy to finish test	Too sleepy to finish test	Too inattentive to finish test
Confidence OU:			X					X
In OD:								
estimates OS:								

Comments about test: Cards were presented in both the horizontal and vertical presentation.

Audiology Report

Name: Rachel
Test date: February 25
Tested by: Dr.________

DOB: June 26
Audiometer: GSI 61
Referred: ASDB

Background Information: Rachel, age 2.8, was seen today in the University of JW Hearing Clinic for an audiologic evaluation. She was referred by __________ of the JW Schools for the Deaf and the Blind Outreach program for her annual evaluation to follow up on her hearing sensitivity. History was provided by Rachel's mother, _______. Rachel was born with Peter's anomaly, which is a rare congenital disorder involving the eyes. Because of this, she has had multiple corneal implants and is soon to be scheduled for another one in her right eye. Rachel is visually impaired and reportedly can only identify bright lights and large objects. She had a newborn hearing screening that was reportedly normal. Rachel's mother does not feel Rachel has a hearing impairment. Rachel is able to follow simple commands, turns her head to hear sounds in her environment, and currently has a vocabulary of about 40 words. She is also receiving speech therapy and is able to put 2- to 3-word phrases together. Developmentally, Rachel walked at less than one year and reportedly has good balance. She is also able to pick up objects off the table and can feed herself, although she is just learning how to use eating utensils. Rachel is currently in good health and takes no medications. Her mother reports no ear infections, drainage, or complaints of pain from Rachel. Previous test results dated 3/19 and completed at the Center for Hearing Impaired Children indicated at least borderline normal hearing. It was recommended that she be followed up in one year.

Test results: Tympanometry was completed and revealed normal pressure, volume, and compliance bilaterally. Otoscopy was deferred in light of normal tympanometry and Rachel's increasing discomfort at having her ears handled. Speech awareness thresholds were obtained in sound field at a low conversational level of 20 dB. Behavioral observation techniques were used in sound field to obtain audiometric responses with fair to poor reliability. Individual responses were observed at as low as 25 dB at 2000 Hz and 30 dB at 1000 Hz and 3000 Hz. A single response was observed for 500 Hz at 50 dB. Rachel would remain seated on her mother's lap only for a short period of time and then walked around the sound booth. She was also vocalizing throughout the test session. Quieting/listening behavior, head turn toward the sound, and attempts to locate the sound by looking around the booth were all observed in response to various stimuli. Rachel also stomped her feet to a familiar rhyme when she heard it through the speaker. Otoacoustic emissions were attempted but Rachel would not tolerate the probe in her ears.

Summary and recommendations: Today's limited results suggest no greater than a mild hearing loss, although Rachel's hearing is likely better than these findings indicate. Responses to speech suggest that Rachel can hear and understand speech at low levels. Further frequency specific testing is needed to confirm normal hearing. It is recommended that Rachel's hearing be re-evaluated after she has started preschool.

Developmental Assessment

Name: Rachel
Date of Birth: June 26
Date of Evaluation: March 13
Date of Progress Report: March 19

Therapist: _________
Support Coordinator: _________

Background: Rachel is a 32-month-old girl who has Peter's anomaly. She was born at 40 weeks' gestation, weighing 8 pounds, 12 ounces. She has had numerous surgeries for glaucoma and corneal transplants. Her birth history is otherwise unremarkable. Rachel lives with her parents and brother, who is receiving preschool services at ______ as part of Unified School Districts special education program. Rachel's parents have provided many learning opportunities for Rachel, and have supported specific skill acquisition during their activities at home.

Dr. ______ is Rachel's primary physician, and she has seen Dr. _____ for ophthalmologcal assessments. ______, pediatric vision specialist, has seen Rachel for functional vision assessments. Please see her report for more information. _______, parent provider with SWsDB, has provided home programming. ______, occupational therapist, has provided consultation as needed for fine motor skill development.

Assessment Results

Setting. Rachel was seen in her home for assessment. Her mother helped with testing and gave additional information. An informal checklist, the SKI*HI Language Development Scale for Visually Impaired/Blind Children, was used. This test was thought to provide adequate and reliable information regarding Rachel's speech and language skills.

Vision and hearing. No concerns regarding hearing. Rachel has had a formal hearing assessment on February 25 with _____ at ASDB and results were within normal limits in at least the better ear. Vision has been monitored by Dr. ____. Rachel has undergone a few surgeries just this year for corneal transplants and for glaucoma. She has not been comfortable following surgeries and this has influenced her interaction with others and her acquisition of new skills. Rachel continues to need extra time to visually orient to and recognize newer objects. She prefers certain colors, continues to filter light with objects, and gazes at shiny objects without recognizing other features of that object.

Observations and play. Rachel does enjoy interacting with other people and toys. She separates easily from her family when in her familiar home, approaches other adults, and sometimes shares her toys with them. Rachel explores toys by gazing at them and flapping them; she will spend an equal amount of time using them in the way in which they

are intended. She has sometimes needed prompts to use a toy purposefully and has enjoyed the outcome of her actions if there is an interesting sound or visual effect. Rachel enjoys social turn taking with specific activities (favored songs that her family sings to her, pretending to feed adults or brush their hair) and will move away from adults if they offer less familiar activities without first having time to explore the objects on her own terms. Rachel bangs, pats, mouths, waves, and throws toys. She places objects inside containers, tries to open containers, and puts objects together in a functional way (brushing hair, putting shoes on baby doll or on herself, putting balls into a ball toy, or on a ball maze). Rachel purposefully chooses toys by what is brightest, shiniest, or most familiar. She doesn't necessarily choose a toy that would fit into a play scenario. Rachel has used single-step functional play in which the action can be repeated with different people (e.g., brushing her own hair, her doll's hair, an adult's hair). She can be prompted to expand her functional play. Rachel usually plays with one toy at a time. She does not group toys, neither does she put them away on request.

Communication skills. According to the SKI*HI, Rachel's receptive and expressive language skills are solid to the 16-month level with scattered skills seen through the 20-month level (C.A. 32 months). Rachel recognizes names of family members and objects (though she is reluctant to select them when they are named) and recognizes action words and short phrases. She follows familiar or gestured action commands and has just begun to "get" an object that is in another location and bring it back to the adult. Rachel recognizes body parts (feet, tummy), selects a few clothing items when they are named (shoes, dress), and enjoys looking at pictures in books. She has favorite books and will bring them to her parents so that they can read them to her. Rachel knows her dressing sequence and knows where familiar objects are kept. She inconsistently selects objects when they are named. At times she prefers to explore and play with objects without regard to suggestions made by adults. She does not necessarily show interest in integrating new play ideas when they are verbally suggested but can imitate new actions or varied actions with toys. Rachel is still learning the give and take of communication. She enjoys having other adults to play with and is slowly warming to the notion that there is a turn-taking pattern to exchanging ideas and actions.

Rachel communicates with others using a combination of facial expressions, general gestures, a few manual signs, words, and core phrases. She has used a wide variety of sounds in babbling with intonational changes. She infrequently imitates sounds, but does watch and listen intently as others use her sounds. Rachel sometimes imitates words and short phrases that she hears, and she also is reported to use phrases appropriate to the setting as a means of commenting or protesting ongoing action. This can be very inconsistent and has not been a reliable method for acquiring new words. Rachel more readily imitates nonspeech sounds (raspberries, lip smacks) when she is in control of the sounds to be used in a turn taking type game. Words that Rachel has used include names of objects ("shoe," "juice," "Coke," "ball," "look" [for "book"]), people ("P.C.," "Mommy," "Papa," "Sisi" or "Rae-Rae" for herself, "Becky" [family friend]), greetings ("hi," "bye"), regulator words ("more," "all done," "stop," "look"), and locations ("up," "out"). Rachel uses her words as frequently as she uses general gestures to make her needs known. Her

parents report that she has begun to use two-word phrases in repeated situations ("up now"). Rachel uses her gestures, sounds, and words to make requests, to respond to others, to call attention to herself, and to protest.

Summary and recommendation. Rachel is a 2-year, 8-month-old girl who has been seen for early intervention and speech language therapy services. She has made slow, steady gains over the past year in the areas of sound play, word use, and word recognition and in using new and varied play actions. Rachel is currently showing a moderate delay in communication and interactions skills. It is recommended that Rachel continue to participate in individual communication therapy and that a preschool program be investigated when she turns 3 years of age.

Suggested goals:
1. Rachel will continue to expand her receptive and expressive language skills.
2. Rachel will show understanding of one- and two-step commands.
3. Rachel will group objects according to use and function.
4. Rachel will recognize a variety of objects when they are named.
5. Rachel will show beginning understanding of adjectives, pronouns, prepositions, and location words.
6. Rachel will maintain a short dialogue with an adult that involves single words around a single topic.
7. Rachel will use 10 to 20 words for familiar objects, actions, people, and locations during a 10-minute play activity.
8. Rachel will imitate and use a variety of core phrases (“my turn,” “go away,” “come here,” “what’s that,” “want more,” etc.).

It has been a pleasure working with Rachel and her family. They are quite invested in her progress and have provided a very nurturing and secure environment in which to learn. Please call me at _______ if there are any questions regarding this report.

Speech Language Pathologist