2015 Southwest Orientation and Mobility (SWOMA) Conference

Assessment to Intervention for Babies with Visual Impairments
Saturday, November 7th
8:30 AM-10:00 AM

Presented by
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From Assessment to Intervention for Babies with Visual Impairments: WHAT TO DO WITH BABIES FOR O&M??!!

Awareness+ Anticipation+ Participation = Independence!!!

- When we can increase the child's awareness levels, then we are encouraging independence!
- When we can establish anticipation of familiar activities and routines, then we are moving toward independence!!
- When we can increase the child's participation and interaction with his environment and with activities, then we are achieving independence!!!

Let's Go Back to the Basics…….

- Have you used the appropriate assessment tool?
- Has your assessment tool identified areas of need?
- Has your assessment tool identified the child's likes/dislikes?
- Do you understand what motivates the child to move?
- Do you know when the child is the most alert and ready to learn?
- Does the child anticipate any activities of daily living/care?
- Does the child's environment promote environmental awareness?
- Is the child's immediate environment set up to encourage self-initiated independent exploration?

How do we know learn about the child's likes and dislikes?

- Parent interview!!!!
- Observation!!!
- Using Assessment tool questionnaire to gather background information!!!
- Active Learning Materials and Activities Planning Sheet

http://www.tsbvi.edu/attachments/article/3415/ActiveLearningPlanningSheet.doc

What are some Appropriate Assessment tools to use for a child who is…

Typically Developing?

- AER Preschool O&M Screening (Dodson-Burk, Roman)
- Oregon Project
- Inventory of Purposeful Movement Behaviors (2004, T. Anthony)
- TAPS Teaching Age Appropriate Purposeful Movement

Multiply-Impaired?

- AER Preschool O&M Screening (Dodson-Burk, Roman)
- O&M Assessment :Early Years of Birth-3 Years (T. Anthony)
- Individual Sensory Learning Profile (T. Anthony)
- INSITE: Developmental Checklist for Multi-handicapped Sensory Impaired Infants and Young Children

Sensory Learning Kit: (APH and Millie Smith)

- SLK Guidebook and Assessment Forms
    - Arousal States Profile
- SLK Routines Book
    - Routines are broken down into categories of alert levels with goals in communication skills, cognition, and motor functioning :
        - Quiet alert
        - Active alert
        - Partial participation

About Arousal States

Descriptions of Typical Arounsal States (Als, Tronick, Lester, & Brazelton, 1977; Snell & Brown, 2002)

Asleep

- Eyes closed, rhythmic breathing, and/or little or no movement
- No evident response to sensory events in the environment

Drowsy

- Heavy eyelids, repeated opening and closing of the eyes, and/or unfocused stare
- Random movements of the face or limbs, some vocalization
- Intermittently oriented to sensory events in the environment for a short time

Quiet Alert

- Open eyes and focused attention on some sensory event in the environment
- Attention may be visual, tactual, or auditory

Fussy

- Inability to maintain orientation and mild distress
- Crying/Agitated
- Grimace, frown, cry, or scream. Breathe irregularity.
- Show increased tension in body tone. Engage in self injurious behavior.

What arousal state(s) involve the most learning for the child?

- Quiet Alert: the learner is most receptive to environmental stimulation
- Active Alert: best learning occurs

Smith, M.Ed. Millie, SLK Guidebook and Assessment Forms, American Printing House for the Blind, INC. Louisville KY 2005, (p. 17)

About Arousal States (From the SLK)

Learning partners can increase the learning potential of any interaction significantly by helping the learner achieve a quiet alert arousal state.

In order to do that, learning partners must be able to:

- Recognize the learner's arousal states
- Predict when typical arousal states are going to occur
- Identify positive and negative response modes
- Use positive sensory experiences to calm, arouse, and orient the learner

Phases of a Motor Event

Research has discovered that there are several phases to every motor event where electrical activity in the brain can be measured during each phase.

The four phases are:

- Preparation Phase: learner plans and gets ready
- Initiation Phase: learner begins to move
- Execution Phase: learner carries out the activity
- Termination Phase: learner processes feedback

Which phase(s) have the most electrical activity level in the brain?

- Preparation Phase
- Initiation Phase

Learners can prepare to do their part if they know two things:

- What is going to happen next
- That somebody is going to wait for them to do what they can do

What does this have to do with O&M?.....Everything!

- PREPARATION = AWARENESS AND ANTICIPATION!!!!
- INITIATION= PARTICIPATION= INDEPENDENCE!!!!

Developing Anticipation

- Anticipation cues are important for letting children know what is about to happen.
- When a child can predict what is about to happen, she can learn to prepare herself, participate, and develop purposeful movement within the activity.
- Allow for “wait time” to respond!!!
- Consistency is key!
- Repeat, Repeat, Repeat!!!

Anticipation Cues

Cue	Goal / Purpose
Clap hands and say “up”	Raigen will begin to anticipate, prepare her body for being picked up, improve tone / head control, tense body
Put your face against Raigen’s cheek and say “cuddle time” and rocking	Raigen will prepare herself for being cuddled, improve head control, tone in body, request more rocking through her body movements
Touch lip balm to mouth and say “mouth”	Raigen will move her lips, move her head toward lip balm when moved, take strns with Raigen making “kissy” sounds
Tap on shoulder and say “suction time”	Raigen will reduce her startle response to the sound of the suction machine coming on
Touch diaper to Raigen’s hands and say “diaper time”	Raigen will maintain grasp on diaper, explore diaper with her hands, anticipate being manipulated during the changing
Smell scented lotion and rub in her hands, name body parts while massaging lotion	Raigen will anticipate lotion routine. She will rub her hands together, she will move body part when rubbed.

Tips for Developing Successful and Meaningful Routines

- Build routine around child's likes and dislikes (movement, mylar pom-pom, etc.)
- Add skills to target (rolling, head control, increasing eye contact)
- Include family members in the routine! (older siblings are great to use!)
- Keep steps short and simple.
- Use short phrases. Talk less!
- Give the child wait time!!! Include "wait time" in steps of routine.
- Model and perform routine several times giving full assistance w/out expecting child to respond immediately! Be patient! You will not see results immediately!
- Make handouts clear and easy for parents/siblings/caregivers to follow (laminate/print on bright paper to hang on refrigerator!)
- Once child begins to anticipate and participate in some of the routine, add more challenging activities to expand the routine

Materials for Promoting Independent- Self Initiated Purposeful Movement

- Crinkle blanket
- APH Rip It Ball
- APH Invisiboard
- Play-Yard
- PVC A Frame
- Mylar pom-pom, mylar paper, silver safety blanket
- Hop it Ball
- Sensory Learning Kit
- Resonance board
- Boppy pillow/swim noodles

Let’s Practice with Beatrice (aka: Bea)

Bea loves her kitty.

Figure 1 A gray kitten perches on the shoulder of the toddler named Bea.

Bea is learning to sit.

Figure 2 Photograph of Bea sitting on a blanket on the floor maintaining her balance by propping her arms in front of her.

Bea loves to play!

Figure 3 Opening image of the first video of Bea playing on the floor.

Figure 4 Opening image of the second video of Bea playing on the floor.

SAMPLE ROUTINES BY BEVERLY

Bea's Blanket Routine

Purpose: develop anticipation of routine, request "more", and assist w/segmented rolling

**Try to use the same blanket each time for this activity to encourage Bea to associate the blanket with this specific routine. You will need 2 people to do this routine.

Step 1: While Bea is lying on her back, show her the blanket and say "it's time to swing". Position her onto the blanket so she is in the middle. Each person will hold 2 corners of the blanket and lift her off the floor.

Step 2: Say: "Let's swing Bea!" Swing Bea in the blanket while singing "side to side, side to side, Bea is swinging side to side". Repeat song 2 times then lower Bea gently to the floor while tilting blanket so that Bea is encouraged to roll out of blanket. You may need to provide assistance for the rolling part.

Step 3: After Bea has rolled out of blanket, ask her "do you want to swing more?" Wait several seconds for her to process and respond. Look for her to do one or more of the following to indicate "more": turn head and look at blanket, smile/laugh/vocalize, initiate movement toward blanket.

Step 4: When Bea has indicated she wants "more", assist her with rolling back onto middle of blanket. Repeat steps 1 to 4 again.

Charlie's "UP" Routine

Purpose: to encourage Charlie anticipate when he is about to be picked up and participate with the movements of pulling to sitting

Step 1: With Charlie lying on his back or in supported sitting, clap your hands in front of Charlie, say "UP, UP, HANDS". Then hold out your hands, within arms' reach of Charlie's. Repeat 3 times, waiting 5 to 10 seconds in between each trial.

Step 2: Wait for anticipation, any eye contact, eyes moving to look at hands, body movements, or for Charlie to move one hand or both toward your hands

Step 3: When it appears that he anticipates being picked up, or you have attempted 3 trials, take each hand and gently pull him up, just slightly off the floor or surface, then wait for Charlie to tense up his body and bring his head forward.

Step 4: When he has begun to participate with the movement, pull him all the way up to sitting, then pick up.

"Row-Row-Row Your Boat" Routine

Purpose: indicate desire to continue an activity by requesting "more" through a variety of methods (reaching, moving body, vocalizations, eye contact). Independently maintain sitting on the floor for increasing time. Improving trunk control and balance.

Positioning Guidelines: Sit in front of child and place pillow behind him or support if child falls back. Child can circle sit (legs in a circle w/bottom of feet together), sit w/legs extended, legs crossed, OR straddled over your legs with feet flat on floor. (THIS DEPENDS ON THE TRUNK CONTROL OF CHILD)

Step 1: While child is sitting in front of you, hold out your hands and ask him, "Do you want to play row your boat, give me your hand". Wait for child to give you his hand(s).

Step 2: Once child has given you his hands, Begin to sing the song: "row-row-row your boat gently down the stream (while rocking him back and forth), if you see an alligator, don't forget to scream" (lift his arms up over his head while pretending to scream).

Step 3: After song is over, place child in sitting position with hands on floor in front of him. Wait several seconds and gradually increase the amount of time he is sitting independently. Give support for sitting as needed**.**

Step 4: After wait time is over, ask, "Do you want more? Give me your hands". Gently touch his hands with yours and wait. Once he demonstrates that he wants "more", by touching your hands, moving, making vocalizations, etc. start over with step 2.

Repeat Steps 2 to 4 at for least 5 consecutive times. Encourage head control, pulling to sit, and sitting for longer periods of time.

TORI'S BOUNCING ROUTINE

Purpose: request more (ie. eye contact, body movements, and/or vocalizations). Improve overall head control. Helping pull to sitting from back. Encourage head control. Encourage protective reactions on each side and at the front (putting hands out to catch self when moved off balance), and to increase length of time of weight bearing on hands.

Step 1: Begin with Tori sitting on your lap facing you, preferably with her legs straddled over yours. Initially support Tori at her chest and under her arms. As she becomes stronger, you can give support at her hips and pelvis.

Step 2: While gently bouncing Tori, ask her "do you want to bounce". Stop and wait for eye contact, body movement, or vocalizations from Tori to indicate she wants to bounce.

Step 3: When bouncing, sing the phrase “ride a little horsie, go to town, ride a little horsie, don’t fall down”. As you say “down”, do one of the following activities, in this order:

- Hold at top of shoulders while you lean Tori back onto your legs, say “up” while slowly lift her slightly off your legs, briefly wait for her to lift her head and bring it toward her chest, then to help lift self-back to sitting.
- Support under arms, lean Tori to her left side, waiting for her to catch herself with her left hand, placing hand on floor. You may need to facilitate this at first. Slowly increase the amount of time she bears weight on her left hand, begin with 3-5 seconds.
- Support under arms, lean Tori to her right side, waiting for her to catch herself with her right hand, placing hand on floor. You may need to facilitate this at first. Slowly increase the amount of time she bears weight on her right hand, begin with 3-5 seconds.
- Lean Tori forward, waiting for her to catch herself with both hands in front, facilitate if necessary. Allow her to bear weight on her hands, and encourage her to push herself up to sitting, give support at the top of her shoulders.

Repeat steps 2 and 3 several times, giving Tori the opportunity to complete each of the above activities at least twice.

My Top Ten Favorite Objects/Materials to Use

1. Resonance Board
2. Boppy Pillow/Swim Noodle
3. Play-Yard for creating a defined space
4. A-Frame PVC Mobile
5. Crinkly Blanket
6. APH Rib It Ball
7. Mylar Pom-Pom, Mylar Paper, Silver Safety Blanket
8. APH Invisiboard
9. APH Sensory Learning Kit
10. Hop it Ball or Exercise Ball

Case Study: Beatrice

Using the Dodson-Burk and Hill Preschool O&M Screening Tool (Form A) OR the AER Preschool O&M Screening, 2nd Edition, let's plan how we are going to meet these needs.

Motor:	**How?**

Visual Functioning:	**How?**

Auditory Skills:	**How?**

Tactile Skills:	**How?**

Body Imagery:	**How?**

Exploratory Behavior:	**How?**

Other Needs:	How?

Notes:

Resources:

Inventory of Purposeful Movement Behaviors, Tanni L. Anthony, Ph.D., COMS

https://www.tsbvi.edu/attachments/379_purposeful-movement-inventory.pdf

O&M Assessment: Early Years of Birth through Three Years, Tanni L. Anthony, Ph.D., COMS

https://www.prcvi.org/files/workshops/OM-Assessment-Anthony.pdf

Als, H., Tronick, E., lester, B.M. & Brazelton, T.B.(1977). The Brazelton neonatal behavior assessment scale. Journal of Abnormal Child Psychology, 5, 215-231

Smith, M.Ed. Millie, *SLK Guidebook and Assessment Forms*, American Printing House for the Blind, INC. Louisville KY 2005, (p. 15-17)

[redacted] Independent School District
Orientation and Mobility Initial Assessment

Student: Beatrice [redacted]

Date of Birth: 8/26/2010, 14 months old

Campus/Placement: [redacted] Elem/ VI Infant

Date of Evaluation: November 14, 2011

PURPOSE OF EVALUATION

Beatrice was referred for an Orientation and Mobility Evaluation to assess her strengths and needs and determine eligibility for O&M services. The O&M Evaluation addresses how Beatrice's visual impairment may impact her overall development, including her environmental awareness and exploration and self-initiated, independent purposeful movement.

BACKGROUND INFORMATION

Beatrice is a fourteen month old little girl who lives at home with her parents and two siblings. She had a normal birth but at 6 months old, she was diagnosed with Macrogyria, a neuronal migratory disorder, which affects swallowing and global development. Beatrice has recently been diagnosed as having Cerebral Palsy and receives Botox injections in her hips for spasticity. She takes medication for spasticity and reflux. Beatrice currently receives private physical and occupational therapy. The physical therapist is working on bearing weight on her legs and feet, range of motion stretching, and sitting. She has been prescribed AFO's (ankle-foot-orthotics) and will receive them soon. She is being considered for speech therapy for feeding concerns. At the time of this evaluation, a Functional Vision Evaluation/Learning Media Assessment was conducted by a Certified Teacher of the Visually Impaired which states that she meets eligibility criteria for [redacted]ISD special education services as a student with a visual impairment.

Beatrice's last eye exam occurred on 10/11/2011, with Dr. [redacted] The report states that Beatrice's current diagnosis includes: Macrogyria (a neuronal migratory disorder where there are less neurons in the rear top of the brain), developmental delay, photophobia, congenital motor nystagmus in both eyes, and poor central fixating. There is reported to be reduced visual fixing and following behavior in both eyes with an estimated visual acuity to be 20/200. Beatrice is considered legally blind with a central and peripheral field restriction and does have a serious vision loss after correction. An additional report from Dr. [redacted] M.D. on 11/2/2011, stated that she has been diagnosed with Cortical Visual Impairment.

EVALUATION/RESULTS

The Dodson-Burk and Hill Preschool Orientation and Mobility Screening, Form A, was used to gather information to determine how Beatrice's visual impairment may affect her awareness of the environment, body awareness, and purposeful movement and exploration of her immediate environment. The assessment tool gathers information pertaining to gross motor, visual functioning, auditory and tactile skills, body imagery, and exploratory behavior. Results were gathered from information provided by Beatrice's mom and direct interaction and observation of Beatrice while playing in her bedroom.

GROSS MOTOR

Beatrice's main means of mobility is being carried and scooting on her tummy. She is transported in a stroller and spends time in her high chair and swing. She loves movement and when gets upset, she calms down with "rough play". While placed on her tummy, she raises her head 90 degrees with her chest off the floor, turns her head from side to side, and can maintain position propped on her elbows for over one minute. She is beginning to reach from this position and can roll from her tummy to her back. She also "army scoots" on her tummy and can pivot her body to face the opposite direction. When on her tummy, she works to get her knees under her bottom while propping on her elbows and maintains this position for several seconds. While on her back, she keeps her head turned to the left side and does not consistently lift her head toward her chest. When pulled to sit, she has a slight head lag. She enjoys throwing herself back, but will not pull to sit. She is not able to perform segmented rolling, but can roll from her back to either side. Beatrice cannot move into sitting by herself but can sit when placed in prop sitting with her hands on the floor in front of her. She can sit for almost 1 minute although she tends to lean forward on her hands after several seconds. She showed good head control while sitting, but is not able to reach from this position, rotate her trunk and hips, and does not show protective reactions by putting her arms out to catch herself when off balance. During her PT sessions, she can stand with support against a bench and bear weight on her feet for several minutes at a time. She will be receiving AFO's in the near future.

VISUAL FUNCTIONING

Throughout the evaluation, Beatrice demonstrated a head tilt to the left and upward as well as a delayed response to visual stimulation. Her mother reported that she is more motivated to look at people than toys or objects and even avoids visually attending to toys and objects. She does not like mirrors, will look at another person in the mirror but avoids looking at herself. She visually recognizes her family members and strangers. She was observed shifting her gaze to view a single object paired with movement up to 18 inches away. She shifts her eyes to track a

moving object with a jerky tracking movement of her eyes. She can turn her head to visually follow a moving object. Beyond 3 feet, Beatrice did not react to visual stimulation.

AUDITORY/TACTILE SKILLS

Beatrice does respond to environmental sounds, including music, bells, animal sounds, and voices. Her mom reported that she has always loved music since infancy, startles to loud sounds, and recognizes sounds in the home made by her siblings. She shows a delayed reaction to unfamiliar sounds at times and looks at the sound source after several seconds. She turns her head to look toward familiar sounds and understands some verbal cues by her parents, such as “up up”. She has different cries for when she is tired, hungry, uncomfortable, and makes a variety of consonant and vowel sounds.

Beatrice shows awareness of being touched. She likes being tickled, sucks on both her thumbs, and can find her toes. She batted at a toy suspended above her several times. She rarely uses her hands to reach for, interact with, and explore toys. Her mom reported that she will reach to push a toy/object away. When presented with a maraca, which was placed in each hand, she could maintain a grasp on the toy with her left hand, but did not grasp it with her right hand.

BODY IMAGERY/EXPLORATORY BEHAVIOR

Beatrice plays with her own hands and fingers and reaches for her feet and toes. She does not identify body parts upon request. She does anticipate being picked up when told “up up” and gets herself ready to be picked up. When playing movement games with her parents, she will move her body to request “more” and she anticipates body movement games, including peek-a-boo and itsy bitsy spider song. Her mom reported that she relaxes her arms to prepare for the movements.

Beatrice uses her vision at times to inspect her surroundings, especially people, although she does not always interact with toys and objects. She shows less interest in toys than people and shows a preference for interacting with people over toys. She will look at her parents faces and touch them. She is not yet consistently reaching for toys/objects touching her body or searching for dropped objects.

SUMMARY/RECOMMENDATIONS

Beatrice is a sweet and social little girl who does demonstrate a need for Orientation and Mobility services due to her visual impairment and global developmental delay. She would benefit from services to address the following areas:

- Improve body/spatial/environmental awareness through the use of increased visual efficiency skills (fixating, shifting gaze, tracking), auditory skills (recognizing sounds, locating/reaching toward sounds, moving toward sounds), use of tactile skills (reaching and exploring tactile stimulating toys/objects) and body movement routines

- Improve gross motor skills and purposeful movement by providing activities, equipment, and setting up environments to promote sitting, reaching, rolling, scooting, pivoting, crawling, standing, etc.

- Orientation and Mobility services should occur in the home environment twice per month for 45 minute sessions. The O&M Specialist will collaborate with other services providers to ensure consistency and gathering of ideas.

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Texas School for the Blind & Visually Impaired

Outreach Programs

Figure 5 TSBVI logo.

"This project is supported by the U.S. Department of Education, Office of Special Education Programs (OSEP). Opinions expressed herein are those of the authors and do not necessarily represent the position of the U.S. Department of Education."

Figure 6 IDEAs that Work logo and OSEP disclaimer.