

STARTING AT THE BEGINNING: A CASE STUDY ILLUSTRATING POSITIONING, ACCESS, AND AT APPLICATIONS WITH A VERY YOUNG CHILD

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Introductions

- Hi! I'm Michelle...
- Who are you?
- Goals for the webinar



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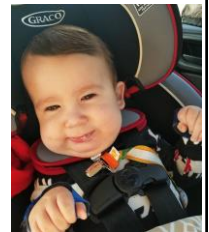
What we will be covering:

- We will be exploring a case study in depth of a very young child
- Positioning
- Access
- Communication
- Play
- Mobility

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Case Study

- Gabriel
- Age at initial evaluation: 15 months
- Diagnoses:
 - Encephalopathy
 - Seizures
 - Later diagnosed with Lennox Gasteau syndrome
 - CVI
 - Developmental delays



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Functional Status

Age 15 months:

- Gabriel displayed increased muscle tone intermittently in some areas of his body
- Hands fisted
- Often extends back and neck, arching rearward
- Unable to sit independently
- He can partially roll from side to back

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Initial Positioning

- Gabriel was spending most of his time being held or laying on his back on the floor
- Standard stroller
 - not providing adequate support, trunk is collapsing
- Tumble Forms feeder seat on loan from the early intervention program
 - Promoting posterior pelvic tilt
 - Lack of lateral trunk support and head support, arching



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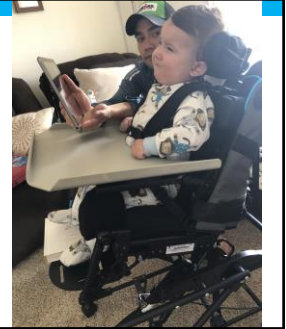
Initial Recommendations:

- Adaptive stroller with adequate postural support
 - Hi Low base for use in the home
 - Stroller base for use outside
 - The family lived in a second story apartment. They left the stroller base in the garage and carried the seat and Gabriel upstairs
- Bath chair
- Referred to Physiatrist at Children's Hospital
- Recommended further evaluation to develop access for play and communication
- Recommended considering a stationary stander in the future

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Results:

- Gabriel in his adaptive stroller with Dad!
- Stroller base used outside
- Hi Low base used inside
- Bath chair was, according to Mom, "A life changing bath experience!"



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New Positioning

- Gabriel has the stability and postural support he needs to be functional



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Second Evaluation

- I returned to the home once the stroller was delivered to look at access now that Gabriel was well positioned. He was now about 18 months old.
- He was able to readily activate an AbleNet Jellybean switch by his left hand, on the tray
- He was able to accurately interact with a switch App on a tablet
- This allowed us to get a glimpse of what this young man may be capable of!



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Access – So What?

- Determining access as young as possible was critical
- Finding a switch site opened up the following:
 - An opportunity for play
 - An opportunity for participation with family and other children
 - An opportunity to develop independence, choice, and seeing himself as a capable person
 - An opportunity for others to see what Gabriel was capable of
 - The ability to start developing scanning skills for future communication
 - The ability to start using a communication app / communication device
 - The potential to use a mobility device
- And it all started with a switch...
 - Well, and good positioning!

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Access – more questions

- How did you know where to put the switch?
 - Gabriel could also activate a switch by the left side of his head, but he seemed to prefer using his hand and has good control, despite his fisting
- How did you know what type of switch to use?
 - The Jelly Bean is bright, has a nice click so he knows he has activated it, activates easily but also allows him to rest his hand on it and then press down to activate. It is also a good size for placement at the hand.
- Did you consider other access methods?
 - Gabriel does not have adequate motor control or vision to use Direct access
 - Gabriel does not have adequate vision for Eye Gaze

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Speech Therapy Begins!

- Gabriel began seeing Jill Tullman, SLP-CCC in the Denver area for communication
- He began to use an App on a tablet to communicate!
- He loves going to therapy and playing with Miss Jill!



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Speech Therapy

- Never too young to communicate!



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Stander

- Gabriel eventually received a stander
- Important for weightbearing, hip development, and just being upright!
- Gabriel's parents had larger wheels and a push handle added so they can more readily take this outside. Great idea!



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Alternative Seating

- While Gabriel is well supported in his adaptive stroller, it is sure hard to push a shopping cart and the stroller at the same time!
- He now has a Firefly GoToSeat that fits in the shopping cart! Not much room for groceries, but participation is important!



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Play Time!

- Gabriel's Mom is so creative and smart!



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Play Time!

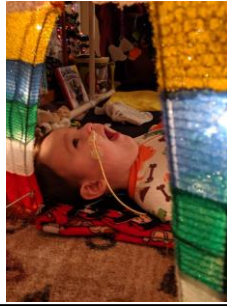
- Gabriel's uncle has been adapting toys for play time!
- *Video



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Play and Visual Time!

- Gabriel's Mom comes up with awesome ideas!
- This was from Home Depot...



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Play and Visual Time!

- We talked about using a PowerLink to allow Gabriel to turn this on and off!



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Back to Positioning...

- Gabriel is well positioned in his adaptive stroller
- He has alternative positioning options, including a stander and GoToSeat
- But he spends a great deal of time in bed...
- Sleep Positioning is critical to maintain postural alignment, preserve range of motion, and limit development of orthopedic asymmetries
 - Hip integrity
 - Spinal alignment



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Sleep Positioning

- Gabriel can be well aligned at this point (age 27 months)
- The goal of sleep positioning is to use those long hours of sleep, while the body is relaxed, to maintain this alignment
- Gabriel currently sleeps at an incline as he is prone to choking



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Sleep Positioning

- At first glance, he looks fine
- At closer examination:
 - Trunk lateral flexion (concave right) and rotation (left forward)
 - Pelvic rotation (left forward) and obliquity (right high)
 - Hip flexion and abduction (left side)
 - Head often turned to one side, mostly right



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Recommended Sleep Posture

- Recommendations included supports at lateral trunk and pelvis, either side of head, specialized support to align legs, and small towel to unweight heels



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Recommended Sleep Posture

- Wait a minute, give me the details!
- Lateral trunk and pelvic supports are rolled bath towels placed between 2 sheets and wrapped in Coban wrap to prevent movement. After Mom lays Gabriel down, she 'tucks' these in, giving them a slight twist against his body
- A bag of rice is placed on each side of his head under the pillow to promote a more midline position
- Hand towel rolled under the lower legs, just above the heels
- Comfort Company 'Comfort Foot Double' with leg separator to keep legs aligned with hips



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Current Sleep Position at Home

- Z-Flo pillows on either side of trunk, pelvis, and lower extremities



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Back to Communication

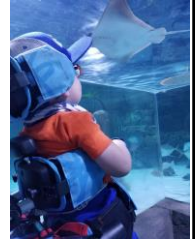
- Gabriel continues to do very well with his communication!
- He uses a Jelly Bean switch mounted on his tray by his left hand
- He uses single switch auditory scanning, but watches the display
- He shows clear accuracy and intent and is quite motivated!
- *Video



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Back to Life

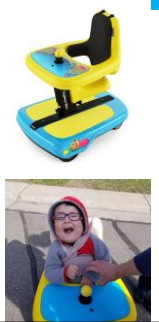
- Gabriel's family was able to move to a home which has greatly improved accessibility
- The family is starting to explore an accessible vehicle



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Mobility

- So... Permobil came out with a new mobility device for very young children, the Explorer Mini. It has limited positioning and can only be accessed by joystick, but I wanted to see how Gabriel would react
- The good news:
 - He loved it!
 - He quickly demonstrated understanding that he was moving this base
- The not so good news:
 - Not enough postural support
 - The joystick was too difficult for him to use
- *Video



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Mobility

- Gabriel recently received an adapted ride-on car!
- His GoToSeat fits in this base, providing better support
- He can more readily use the switch by his left hand
- The good news:
 - He loves it!
 - He can move this much more readily and is more comfortable
- The not so good news:
 - He cannot control directional movement
 - Caregivers can with a remote control
- *Video



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Mobility



Next Steps:

- Gabriel has shown that he is ready for a power wheelchair evaluation
- I will start with Gabriel in his adaptive stroller. His current switch will become Forward
 - When he activates the switch, I will push the stroller Forward
 - We will then work to identify 2 more switch locations for Left and Right. Again, I will move the stroller in those directions when he activates these switches, stopping movement when he releases the switches
- We will then schedule a power mobility evaluation and try a power wheelchair with these switch sites
 - We will have to ensure adequate postural support for Gabriel
 - Possibly using the GoToSeat in the evaluation power wheelchair

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Next Steps:

- Seated Positioning
 - Monitor
 - Gabriel has grown and a taller back in is the ordering process
 - Eventually he will require different seating and a manual tilt in space wheelchair
- Nighttime Positioning
 - Monitor
 - Make changes, as needed
- Standing
 - Monitor
 - Adjustments were required recently
 - Future adjustments will be needed for growth
 - He may use this in the prone position in the future, as he is ready



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Next Steps:

- Communication:
 - Continue therapy
 - Continue to develop language and vocabulary
 - Continue to develop participation
 - Long term – prepare for pre-school



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Gabriel is learning to count!

- Telepractice session with Jill Tullman, SLP
- *Video

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Next Steps:

- Mobility:
 - Initial evaluation with adaptive stroller and switches
 - Evaluation with power wheelchair



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Questions?

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Take Home Message:

- Early Intervention is so important!
- Never underestimate these kiddos!
- These interventions are very interrelated!



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Thanks!

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