Seamless Transitions from Pediatric to Adult Hearing Health Care

Presented by Catherine Palmer, Ph.D.

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This course is presented in partnership with
Seamless Transitions from Pediatric to Adult Hearing Health Care

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Learning Objectives:

- Participants will be able to:
  - Describe a transition plan that encourages young adults to take control of their hearing health care
  - List auditory milestones critical for independence
  - Describe technology that can assist with accomplishing these milestones
So many transitions…

- Health care
- Audiological care
- High School to College
- High School to Work
- Home to living away

Goal: Increased Independence

- Highly dependent on successful communication in day-to-day situations
- Audiologists are a critical partner
- Managing transition from pediatric activities to adult activities
- Managing the transition from pediatric care to adult care is important
## DIAL
### Developmental Index of Audition and Listening

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Age</th>
<th>Milestone</th>
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</thead>
<tbody>
<tr>
<td>Infant</td>
<td>0-28 days</td>
<td>startled response; attends to music and voice, soothed by parent’s voice; some will synchronize body movements to speech pattern; enjoys time in “en face” position; hears caregiver before being picked up</td>
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<tr>
<td></td>
<td>2-4 months</td>
<td>May look for sound source; associates sound with movement; enjoys parent’s voice; attends to noisemakers; imitates vowel sounds</td>
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<td>4-8 months</td>
<td>uses toys/objects to make sounds; recognizes words; responds to verbal commands; separates from parent; enjoys music; uses rhythm games</td>
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<td></td>
<td>8-12 months</td>
<td>attends to TV; localizes to sounds/voices; enjoys rhymes and songs; understands NO; responds to vocal games (e.g., So Big?); starts to use multi-touch screen to develop speech and language with adult collaboration</td>
</tr>
</tbody>
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| Toddler   | 1 year     | dances to music; uses parent answer telephone/doorbell; answers to name call; babbles with inflection; tries to imitate words; follows simple directions; attends to books; uses multi-touch screen with assistance to aid in conversation & interaction |
|           | 2 years    | listens on telephone; dances to music; listens to story in group; goes with parent to door; awakens to alarm clock; attends to travel activities and communication; recognizes names of familiar people, objects and body parts; uses 2-4 word sentences; repeats words overheard; engages in video face activity (e.g., FaceTime, Skype) |

| Early School Age | 6-8 years | uses telephone applications meaningfully (e.g., music, alarm clock); enjoys iPod/headphones; uses alarm clock independently; responds to smoke detector independently; responds to car noise independently (e.g., truck or car backing up); uses technology to communicate ideas and feelings and find information; uses computer games, tablets, and video games for education purposes |
| Late Elementary  | 8-10 years| uses television for entertainment & socializing; attends to radio; may ride bikes and scooters without supervision; responds to sirens for street safety; participates in clubs and athletics; enjoys privacy in own room; enjoys computer/audio games, tablets, and video games for educational/recreational purposes; plays team sports; more academic demands are expected |
| Middle School   | 10-14 years| independently owns cell phone and uses as communication tool; attends movies/plays; develops musical tastes; watches movies/TV with friends; engages in peer activities (riding bikes, contact sports) |
| Adolescent      | 14-18 years| goes to dances; begins driving (e.g., needs to hear sirens/turn signals); independently owns cell phone and uses socially; participates in school groups/clubs; engages in concerts with friends; employment/ADA; |
| Adolescent      | 18-22 years| employment/career decisions; travels independently; listens in college lecture halls/classrooms; participates in study groups/extracurricular activities |
When is a child “ready” for adulthood?

Institute of Medicine and National Research Council (2002)  
Forum for Youth Investment “Ready by 21”

- Physical development
  - Healthy habits and relationships
  - Good risk management skills
- Psychological and emotional development
- Intellectual development
- Social development
- Economic self-sufficiency
- Civic engagement through volunteering, political activity or community religious group participation

How are these things measured? Do/can chronic illnesses delay maturation?
What is a transition of care and why is it important?

- **Transition** occurs as pediatric patients move from childhood to adulthood.
  - The needs of a child are not the same as the needs of an adult.
  - Even if the provider remains the same, the model of care will need to change to reflect the patient’s growth and maturation.
  - Pediatric patients with chronic conditions may require more planning and preparation.
  - Pediatric patients with complex medical conditions

- The goal is to provide uninterrupted, developmentally appropriate health care services.

The American Academy of Pediatrics released a guidance document for pediatricians containing a planning algorithm for this transition.

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Cooley & Sagerman (2011)
What are the goals of transitional care?

*Blum, Garell, Hadgaman, et al (1993)*

- Provide high-quality, coordinated, uninterrupted healthcare which is patient-centered, age and developmentally appropriate, culturally competent, flexible, responsive, and comprehensive
- **Promote skills in communication, decision-making, assertiveness, self-care, self-determination, and self-advocacy**
- Enhance sense of control and interdependence in healthcare
- Maximize lifelong functioning and potential
- Support parents and guardians of young persons during transition and enhance their advocacy skills

Available Models of Transition

*McDonagh (2005)*

**Direct Transition**

- Pediatric Clinic
- Adult Clinic

**Sequential Transition**

- Pediatric Care
- Transition Clinic
- Adult Clinic

**Developmental Transition**

- Skills Training
- Development of Support System
- Adult Clinic

**Professional Transition**

- Adult Providers
- Pediatric Providers
- Patient
- Parent(s) / Guardian(s)
- Adult Clinic
**Preferences of young patients transferring**

McDonagh (2005)

- Preference to meet the adult team prior to transfer
- Consider timing & space when scheduling appointments
  - Pediatric appointments often taken longer than adult appointments
- Need time to teach self-advocacy skills
- Proactive approach from adult provider
  - “If you are ever worried about X, Y, or Z, know that you can come talk to me about it...”

**Suggestions from parents to improve transfer of care pathways**

McDonagh (2005)

- Introduce concept of independent visits in early adolescence (11+ years)
  - “In the next 2-3 years, you may want to spend some time with your provider without your parent/guardian around...”
- Ensure effective disease education
- Ensure posters in waiting room and brochures to inform pts of opportunities to be seen alone and their rights to confidentiality
- Explain rationale to young person and parents
- Continuity of professionals between visits to assist in confidence building of both the patient and parent prior to independent visits
- Turn taking approach during appts:
  - “First, we’ll let John [child] tell me how things are and ask his questions; then we’ll come to you [parent].”
- Encourage young person to prepare for visit with parent/guardian the night before
  - “Write down issues and questions on a piece of paper. Bring it with you to ensure nothing is forgotten or missed.”
- If a parent is reluctant to let go, explore their fears
  - “What are you worried about if your son/daughter is seen without you?”
- Clarify what the young person wants shared with their parent/guardian prior to the latter joining the conversation
- Parent/guardian seen concurrently by another team member so their own needs can be met?
Suggestions from the literature about making the transfer successful

Reiss, Gibson, & Walker (2005)
McDonagh (2005)

- Begin transition early
- Pediatric providers share medical histories with adult-oriented providers
- Use of transition clinics
- Use of nurse to oversee transition
- Improving understanding of differences between pediatric and adult care
- Opportunities to practice independent disease management
- Navigating adult health care system
- Promotion of peer-to-peer information sharing
- Provide training to adult providers
- Provide opportunity to meet adult team prior to transfer
- Consider timing & space when scheduling appointments
- Proactive approach from adult provider
- Ensure posters in waiting room and brochures to inform patients of opportunities to be seen alone and rights to confidentiality
- Explain rationale to young person and parents
- Turn-taking approach during appointments
- Ensure effective disease education
- Encourage young person to prepare for the visit the night before
- Explore parental fears
- Parent/guardian seen concurrently by another team member

We will show how we handled each (or how we couldn’t)

UPMC Audiology Transfer Process

- The Audiology Transfer Checklist helps pediatric patients to develop the skills that they will need to use hearing aids as an adult. Additionally, there is a space for these patients to see the differences between pediatric and adult care and ask questions.

- The Audiologist Directory gives pediatric patients information about the adult clinic they will be going to and the audiologist they will be seeing.

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Parking is available in the UPMC Presbyterian Parking Garage.
Scan QR code below for map location.

The following Port Authority Transit buses stop in Oakland:

Please bring the following things with you to your appointment:
Your hearing instrument(s)
Accessories (remote control, Bluetooth streaming device, etc)
Previous hearing tests
Your health insurance card
Money for to pay for parking or transit fare
Bring payment if you might need device repairs, reprogramming, batteries

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UPMC Department of Audiology
Audiologist Directory
Oakland Location

200 Lothrop St., 4th Floor
Eye & Ear Institute
Pittsburgh, PA 15223
Phone: 412-647-2000
Fax: 412-647-2026

Diana Ashe, AuD
Debra Baimo, MD
Rick Byrne, MA
Sharon Ness, MA
Barbara Rose, AuD
Kathleen Silberstern-Vernon, AuD
Catherine Palmore, PhD
Director of Audiology
Lisa Zklek, AuD
Students with an IEP (individual education plan)

- Must have a formal written transition plan as they are leaving their high school
- This should have input from the student, parents, educators, and specialists (e.g., audiologists)
- Sophomore or Junior year

Components of Proposed Protocol

- Pediatric patient turns 12 (Begin transition process)
- Begin to prepare pediatric patient for eventual transfer (Use Audiology Transfer Checklist throughout teenage years)
- At appointments, deliberate discussions of transition process and opportunities for pediatric patients to develop necessary skills (Includes resources for parents and patients to understand how things will change)
- Patient turns 18 (Written transition plan completed and in place)

- Patient reaches age of transfer (18? 21? 26?)
- Transfer of NOAH files, audiograms, progress notes, relevant medical history to new audiologist
- Adult care begins!

Would be great to have an opportunity to meet new audiologist prior to appointment!
Opportunity for open house event; virtual tours/meetings
Suggestions from the literature about making the transfer successful – **what have we addressed?**

Reiss, Gibson, & Walker (2005)

McDonagh (2005)

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If you are the peds person, give instructions

(Patient Name)

**TRANSITIONING FROM A PEDIATRIC TO ADULT FACILITY**

Dear Colleague,

Thank you for being a part of the transition of audiology care of this patient from Children’s Hospital of Pittsburgh of UPMC to your facility. As you may or may not know, we tell that our patient transfers their care to an adult facility after their 21st birthday when they no longer have hearing aid benefits under Pennsylvania’s Medical Assistance program. Up until this point our patients receive 100% coverage for hearing aids, earmolds, hearing aid repairs, batteries, and diagnostic testing. Therefore, they may be unaware of the total cost associated with hearing aid-related services, instruments, and accessories. Any information you can provide the patient in this area would be greatly appreciated and helpful in this transition.

Enclosed, please find the following important information you will need to help make this patient’s transition audiology care as seamless as possible.

- [ ] Last audiologic evaluation with report
- [ ] Hearing aid programming information
- [ ] Last real ear measures (including latest RECD measurement)
- [ ] Last hearing aid dispensing note

You should be aware that most patients in our facility have been programmed using the DSL v. 5 pediatric fitting algorithm. This algorithm provides significantly more gain than adult fitting strategies. It is future fittings you may wish to consider using DSL when programming a new device to ensure patient satisfaction.

Sincerely,

The Audiology Department, Children’s Hospital of Pittsburgh of UPMC
412-624-5500 (office), 412-624-5502 (fax)
Educate schedulers about what the transitioning patient should bring

- Educate schedulers about what the transitioning patient should bring
  - Devices
    - Hearing aid(s), cochlear implant(s), accessories
- Transferring programming files
  - NOAH files (.nhax)
  - CI files (.cdx)

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[Continued logo]
To export a NOAH file and send by email:

Make sure you select a patient file to export before you begin this process – otherwise it will export your entire database!

Select a name for this file and make sure you save it to a place where it can be accessed.

To import a NOAH file:

First, save the file to your computer (remember where you saved it and what you called it!).

Find the file, select it, and open it.

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When a young adult needs a new hearing aid or reprogramming

- Importance of real-ear to coupler difference (RECD) measurement
- Importance of the evidence-based target selection
SPL thresholds and targets calculated using entered (personalized) RECD
SPL thresholds and targets calculated using average RECD

Devices
Hearing aid(s), cochlear implant(s), accessories

- Fitting Rationale
These two REAR graphs are using the exact same audiogram and RECD. What's different??

Suggestions from the literature about making the transfer successful – what have we addressed?

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Influences on Transition Process

- Pediatric patient
- Insurance companies
- Administration in adult office
- Administration in pediatric office
- Adult healthcare providers
- Educational setting
- Pediatric healthcare providers
- Parent(s) or guardian(s)
- Otologic care coordination
- Device & accessory issues (warranties?)

Specific/immediate needs of the young adult who has transferred to adult care
College

- Away from home
- Establish audiological care
- Office of Disability Services
- *Time Out! I Didn’t Hear You* (second edition)
  - [https://pitt.box.com/v/TimeOut](https://pitt.box.com/v/TimeOut)
- May already use accessories
- Safety – look outside of hearing health care

Work

- Local or moving away
- Establish care
- Accommodations in the work place
  - Communication
  - Safety


References related to the DIAL


2018 Signia Expert Series

July 13, 2018 at 12 PM ET
Cognition and hearing: Should this be part of my clinical practice?
Pamela Souza, Ph.D.

July 31, 2018 at 12 PM ET
OTC – Over The Counter or Over the Cliff?
Thomas A. Powers, Ph.D.

August 9, 2018 at 12:00 PM ET
Hearing aid selection and fitting: Clinical tips from recent research
H. Gustav Mueller, Ph.D.

August 28, 2018 at 5 PM ET
Perspectives on the diagnosis and remediation of Auditory Processing Disorders: some things we know and some things we still need to find out.
Harvey Dillon, Ph.D.

Thank you!!!