

Autism and Hearing Loss: Getting The Most Out of Your Audiology Report

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OBJECTIVE

To ensure parents and caregivers are provided with thorough and clearly written and understandable audiology reports. Such reports should provide detailed testing and recommendations, along with necessary resources for further evaluation needs, such as autism.

BACKGROUND

Hearing loss and autism can present similarly in young children (i.e., lack of eye contact, nonsocial behavior, etc.). Furthermore, one in 59 children with hearing loss are also diagnosed with autism. Ensuring a child receives an appropriate and timely evaluation for autism is vital and can be more difficult in rural areas where resources are not as accessible, such as Wyoming.

Frequently, children with whom there are concerns for autism are seen initially by an audiologist to rule out hearing loss. It is within an audiologist's scope of practice to observe, screen, and provide resources for further evaluation for autism. However, such information is not universally depicted in an audiology report, and, at times, reports can be confusing and lack important information. As such, there is a need for a universal report template that can be utilized by audiologists to document behavioral observations during appointment(s), as well as provide available and reliable referral sources for autism screening and evaluation, so that children can receive appropriate and timely diagnoses.

METHODS

1. Researched providers who advertise autism services in Wyoming and surrounding states.
2. Created a list from the providers who were found to be reputable.
3. The audiology template used at CDC+ Audiology, a pediatric audiology clinic in Casper, WY was extended to include a section termed 'Autism Resources'. Additionally, areas were added in the 'Case History' and 'Audiology Test Battery' sections to indicate "red flags" for autism observed in the child's appointment(s).
4. Within the 'Autism Resource' section, a list of reputable facilities and providers, along with the importance of an autism evaluation is included, along with a website for family support of children with autism.

RESULTS

Child Development Center (CDC) + Audiology Clinic
In Collaboration with the Wyoming Early Hearing Detection and Intervention (EHDI) Program

Kalley Ellis, Au.D., CCC-A Clinical Audiologist Kim Reimann GBVS Parent Advocate, Family Educator

PATIENT REPORT

Patient: [Patient First Name] [Patient Last Name]	Gender: Select gender
Birthdate: August 16, 2019	Age at evaluation: Y, M, D
Parents: [Parent 1 First Name] [Parent 1 Last Name] [Parent 2 First Name] [Parent 2 Last Name]	Evaluation Date: [Click to select date]
Address:	
Phone:	
Physician:	

CASE HISTORY:
[Patient Name] was referred to CDC+ Audiology, due to failed late onset hearing loss (LOHL) hearing screenings completed at the [Child Development Center]. Per parental and screener report, [Patient Name] has a history of not liking his/her/their ears touched and is more of the reason why they believe [Patient Name] failed the screenings. Choose an item. was accompanied by her/his/their Choose an item.

[Patient Name] was born [Full term/premature] at [HOSPITAL] on [Click here to enter a date]. Pregnancy and birth complications were/were not reported. Birth records indicate [Patient Name] passed the initial Automated Auditory Brainstem Response (AABR) newborn hearing screening in both ears. [Patient Name] had no identified risk factors at birth currently associated with late onset hearing loss, including no family history of hearing loss in childhood.

Parental concerns for hearing and speech were/were not reported, noting [Patient Name] [Insert parent comments here]. She/he/they is learning sign language and uses approximately X signs. A significant history of ear infections was/was not reported. Concerns for Autism were, were not indicated, noting [Insert parent comments here]. No screening or testing for autism has yet to be completed. [Patient Name] receives early intervention services through the [Child Development Center].

AUDIOLOGY RESULTS:
Today's (Click here to enter a date.) results are consistent with:

Soundfield:

Right Ear:

Left Ear:

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CDC+ Audiology Patient Report: [Patient Name]

AUDIOLOGY TEST BATTERY:
These results were obtained while [Patient Name] was awake and alert.

- **Otoscopy:** This provides a visual inspection of the outer ear and ear canal. Otoscopy revealed a clear canal with visualization of the eardrum in both ears.
- **Immittance (IMM):** This test provides information about movement of the eardrum, the health of the middle ear, and the size of the ear canal. Immittance testing using a 226 Hz probe tone revealed a [Select Type] in the right ear, indicating [Select Option], and a [Select Type] in the left ear, indicating [Select Option].
- **Visual Reinforcement Audiometry (VRA)** This test requires the child to respond to an auditory stimulus by turning their head toward the side on which the stimulus is presented. A visual reinforcer (puppet or cartoon video) is presented once the child turns to the correct side of the presented stimulus. Testing was completed through inserts today, with good to fair reliability. The following results were obtained:
Right Ear:
Left Ear:
Of note, responses below normal (15 dBHL) were not obtained to preserve patient's attention and obtain more information. Additionally, the following observations were made throughout testing today:

RELATIONSHIP OF HEARING LOSS TO LISTENING AND LEARNING NEEDS:
Hearing plays a vital and often subtle role in the early development of a child. Children learn speech and language from listening to others around them. If a hearing loss exists, a child may not be able to receive optimal benefit from spoken language during this period of growth, and as a result, delays in speech and language may occur. Many hearing problems can be developmentally significant. It is important that hearing loss be identified so that appropriate developmental management can be provided.

RECOMMENDATIONS:
Follow-up Care (Audiological/Medical)

- [Patient Name] should continue to follow up with his pediatrician, as recommended.
- [Patient First Name]'s hearing should be re-evaluated every XX months, due to [Insert Reason]. An appointment has been scheduled for [Date and Time]. Please contact CDC+ Audiology at (307) 421-5765 with any questions or concerns prior to that time.
- It is recommended that [Patient Name] have limited exposure to loud noises and if she/he/they is/are exposed to loud noise that she/he/they use hearing protection.

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CDC+ Audiology Patient Report: [Patient Name]

Early Intervention Follow-up Care

- It is recommended [Patient Name] continue to participate in early intervention services with the [Child Development Center]. Participation in appropriate early intervention services is considered vital to [Patient Name]'s continued speech and language, social/emotional and cognitive development. Contact [Child Development Center Phone] with any questions about the early intervention program.
- It is recommended [Patient Name] participate in a "One Before Two" Developmental Screening at the [Select Child Development Center]. An appointment can be made by calling [Child Development Center Phone].

Autism Resources
Autism is a developmental disability that can affect a child's behavior, communication, and social skills. A diagnosis can be determined as young as 18 months, with "red flags" appearing as soon as 12-15 months. Such red flags include poor eye contact, reduced social smile, poor joint attention, reduced imitation, speech delay or regression, reduced giving for shared enjoyment, unusual reactions to stimuli (smells, tastes, sounds, textures), and difficulty in changes of routine. As stated by the Centers for Disease Control, "monitoring, screening, evaluating, and diagnosing children with ASD as early as possible is important to make sure children receive the services they need to reach their full potential". Some concerns for hearing loss and autism can look the same, making it difficult to know which cause, or a combination of the two, is contributing to a child's developmental delay. Based on today's results and observations, it is recommended that [Patient Name] pursue an autism evaluation. Below is a list of reputable facilities within Wyoming and around its borders, where an evaluation may be completed.

Wyoming

1. **Dr. Kenneth Bell, Ph.D.; Melissa Jenkins, Ph.D.**
Dr. Kenneth Bell, Ph.D. and Melissa Jenkins, Ph.D. are clinical child & adolescent psychologists in Casper, WY. They specialize in clinical child & adolescent psychology.
 - **Park Ridge Behavioral Healthcare**
6500 East Second Street, Suite 101
Casper, WY 82601
307-462-4876
 - **Rocky Mountain Behavioral Healthcare**
940 East Third Street, Suite 212
Casper, WY, 82601
307-577-3050

Colorado

1. **NeuroDevelopment Center of Colorado – Ft. Collins, CO**
NeuroDevelopment Center of Colorado is an independent clinic that clarifies developmental, learning and behavioral issues with exceptional skill, clarity, and compassion. More than 80 pediatricians and other health care providers choose NCC for evaluation services.
 - **Address:**
608 E. Harmony Road
Suite 202
Fort Collins, CO 80525
(970) 282-4428
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CDC+ Audiology Patient Report: [Patient Name]

2. **Children's Hospital of Colorado**
Developmental Pediatrics at Children's Hospital Colorado offers evaluations and follow up for a variety of developmental, behavioral and learning differences. This includes issues associated with developmental delays, intellectual, learning and other developmental disabilities, such as autism spectrum disorders.
 - Main number: 1.800-624-6553
 - Neuroscience Dept: 1-720-777-6630

Other Resources

1. **Casper Autism Support**
<https://www.casperautismsupport.com/resourceswebsites>

Parent Support

- As a continuing support to [Patient Name] and [Patient 2 First Name], they are encouraged to maintain contact with CDC+ Audiology staff if they have questions, comments or concerns regarding the management of [Patient Name]'s hearing or recommendations received from medical and/or developmental appointments.
- Research has shown the most important predictor of success is meaningful and effective family involvement.

Additional Information:

- [Patient 1 Name] and [Patient 2 First Name] signed a release and were informed that this report will be shared with [Insert Providers].
- [Patient 1 Name] and [Patient 2 First Name] indicated that they understood the information and recommendations that have been provided.

Please contact Kim Reimann, Guide By Your Side Parent Advocate, at (307) 258-0967 at any time if you have questions, comments, or concerns about today's visit and/or for support with raising a child with a hearing loss.

Please contact Kalley Ellis Au.D. at (307) 421-5765 if you have any questions regarding your appointment or report or to schedule an appointment.

Kalley Ellis
Kalley Ellis, Au.D., CCC-A
Clinical Audiologist
Child Development Center, Casper
In Association with the Wyoming EHDI Program

Kim Reimann
Kim Reimann
Wyoming Families for Hands & Voices
Guide By Your Side, Program Coordinator
Parent Advocate, Family Educator

Cc:

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ACKNOWLEDGEMENTS

This project was supported in part by the Health Resources and Services Administration (HRSA) under the Leadership Education in Neurodevelopmental Disabilities (LEND) Grant T73MC11044. This information or content and conclusion are those of the author and should not be construed as the official position or policy of, nor should HRSA, HHS or the U.S. Government infer any endorsements.