

# VIRGINIA PART C HEARING SCREENING FORM

## Instructions

The Part C hearing screening may be conducted by any Part C provider who is trained to conduct the hearing screening.

### **Section 1: Prior Hearing Screening or Audiological Evaluation**

This section must be completed for all children proceeding to eligibility determination.

Check the appropriate box under Newborn Hearing Screening. This section is used to record the results of a newborn hearing screening completed in Virginia or in any other state with a newborn hearing screening program. If the service coordinator is unable to verify results with the family or primary care provider, then (with parent permission) she may contact the Virginia Department of Health (Follow-Up Coordinator, 804-371-5338). All infants requiring follow-up from the newborn hearing screening (due to failing the screening, missing the screening, or a “pass but at-risk” result) are listed in a database at the Department of Health. The Department of Health has advised that if the child was born in Virginia and is not listed in the database, you may assume that the child has had and has passed the screening.

If applicable, complete the information under “Other Hearing Screening Results” and/or “Full Audiological Evaluation.” If the child has had a full audiological evaluation within the past 6 months and there are no current reasons for concern about the child’s hearing based on medical/health and developmental screening information, then only Sections 1 and 5 of the *Virginia Part C Hearing Screening* form must be completed.

### **Section 2: Review of Medical and/or Family History**

This section must be completed for all children proceeding to eligibility determination, unless a full audiological evaluation has been completed within the past 6 months.

The purpose of reviewing the child’s medical and/or case history is to identify any factors that may place the child at high risk for a hearing impairment and that might warrant a referral for more in-depth testing (particularly if more than one risk factor is present or if there are a risk factor plus other indicators of possible hearing loss as detected through the other screening procedures described on the *Virginia Part C Hearing Screening* form).

The review of medical and/or case history can be accomplished by review of medical records and/or through an interview with the parent. On the form, please check all risk factors that apply.

For infants birth through 28 days who have not had a newborn hearing screening, watch closely for risk factors present during the neonatal period. The second set of risk factors,

those that may develop as a result of certain conditions or essential medical interventions in the treatment of an ill child, increase the risk for progressive or delayed hearing loss. Watch for this second group of risk factors in infants and toddlers 29 days through two years of age.

### **Section 3: Behavioral Observations**

This section must be completed for all children proceeding to eligibility determination, unless a full audiological evaluation has been completed within the past 6 months.

Informal observations related to the child's hearing status are made during performance of developmental screening and any assessment procedures necessary for eligibility determination and/or service planning. Parent report may also be used to assist in determining what hearing-related behaviors are or are not typically observed with the child.

On the form, mark those skills that are present by using a P in the box to indicate parent report or an O to indicate observation. For those skills that are neither observed nor reported the box should be left blank.

### **Section 4: Hearing Screening Procedures**

This section of the form must be completed only for those children who have had no newborn hearing screening (unless they have had a full audiological evaluation within the past 6 months). For children who require Section 4, please note that the screening procedure(s) selected from below must be completed within 45 days of referral to the Part C system.

Selection of the appropriate hearing screening procedure(s) will be based on the child's age, developmental status and unique needs. The screening should result in ear-specific information for both ears (please note that this may require the use of more than one screening procedure as discussed below). The categories of hearing screenings considered acceptable and reliable for infants and toddlers are described below:

#### **Electrophysiological Testing:**

Electrophysiological procedures are objective measures of hearing. There are two categories of electrophysiological screenings, as described below:

*1. Auditory Brain-Stem Response (ABR), Automated Auditory Brain-Stem Response (AABR), Brain-Stem Auditory Evoked Response (BAER), or Evoked Response Audiometry (ERA):* These screening tests measure the auditory system's response to sound. A soft click is presented to the ear via earphones or a probe, and electrodes record the response as the sound travels from the ear through the auditory nervous system to the brain. The ABR and related screening procedures listed above are appropriate for infants younger than 6 months as well as for older infants and toddlers who are difficult to test or have developmental

impairments. These tests require the child to be very still during testing (either sleeping or possibly sedated). When a child fails an ABR screening, referral to an audiologist for diagnostic testing is indicated.

2. *Otoacoustic Emission Response*: Screening procedures in this category may be called otoacoustic emissions (OAE), distortion product otoacoustic emissions (DPOAE), or transient evoked otoacoustic emissions (TEOAE). In OAE testing, a soft click is presented and a small microphone, placed in the child's ear canal, measures the echo that is returned from the baby's ear. The echo is analyzed to determine how well the inner ear is working. The child must sit quietly and tolerate a probe in the ear canal. This type of screening is fast and simple and requires minimal interpretation to determine a pass or refer result. OAE testing is appropriate for children of all ages. When a child fails an OAE screening, a referral for a complete audiological evaluation must be made.

### **Behavioral Screening Measures:**

Behavioral screenings include visual reinforcement audiometry (VRA) and conditioned play audiometry (CPA). These screening procedures are subjective measures of hearing and are the most appropriate tools for children who are functioning at 7 months – 3 years developmental age. For children 6 months through two years of age, VRA is the recognized method of choice; as children mature beyond this age, CPA may be attempted.

*Visual reinforcement audiometry*: Testing is performed in a sound booth or very quiet room with the child seated on an adult's lap between two loudspeakers. Sounds are presented together with a visual reinforcement so that the child becomes conditioned to turn toward the sound in anticipation of the visual reinforcer (thus indicating a response to the emitted sound). In order to obtain ear-specific information, VRA should be accompanied by OAE.

*Conditioned play audiometry*: Pure tone sounds are usually used (but other sounds, such as speech sounds, spoken words, warble tones, or narrow band noises, can also be used). The child places a block or other small toy in a container every time he or she hears a sound. Conditioned play audiometry should be conducted using ear phones to obtain ear-specific results.

**NOTE:** Although not required, tympanometry may be used to augment the screening procedures listed above. Tympanometry results indicate the medical condition/status of the middle ear, **not** hearing status. These results may assist in making a decision regarding the need for referral for full audiological evaluation.

Please note that when a child fails a hearing screening procedure and is referred for a full audiological evaluation, the same tests described here in Section 4 of the *Virginia Part C Hearing Screening* form may be used for that full evaluation. These testing procedures can be used as a screening tool or as a more in-depth evaluation tool (for those children

identified through screening as needing a full audiological evaluation). When used by a licensed audiologist for a full diagnostic evaluation, these procedures include more in-depth testing under more tightly controlled sound field parameters than are used in screening.

[Information for the above summary of screening procedures was gathered primarily from the Colorado Early Childhood Hearing Screening Guidelines and Ear-Resistible: Hearing Test Procedures for Infants, Toddlers, and Preschoolers, Birth Through Five Years of Age (from California)]

## **Section 5: Findings**

This section must be completed for all children proceeding to eligibility determination.

Check the appropriate box, indicating the screener's recommendations to the IFSP team.





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Name of Child: \_\_\_\_\_ Date of Birth: \_\_\_\_\_  
 Name of Person \_\_\_\_\_ Date Form \_\_\_\_\_  
 Completing Screening: \_\_\_\_\_ Date Completed: \_\_\_\_\_

## SECTION 1: PRIOR HEARING SCREENING OR AUDIOLOGICAL EVALUATION

### Newborn Hearing Screening Results:

- Pass    Pass but at-risk    Refer    Missed    Born outside Virginia, no newborn hearing screening or unknown results

### Other Hearing Screening Results (e.g. well-child check):

Date of Screening: \_\_\_\_\_  
 Conducted By: \_\_\_\_\_  
 Screening Procedure Used: \_\_\_\_\_  
 Results (including recommendations for follow-up): \_\_\_\_\_

### Full Audiological Evaluation:

Date: \_\_\_\_\_  
 Conducted By: \_\_\_\_\_  
 Type of Testing Completed: \_\_\_\_\_  
 Results (including recommendations for follow-up): \_\_\_\_\_

## SECTION 2: REVIEW OF MEDICAL AND/OR FAMILY HISTORY

Risk factors present during the neonatal period:

- An illness or condition requiring admission of 48 hours or greater to a NICU;
- Stigmata or other findings associated with a syndrome known to include a sensorineural and/or conductive hearing loss;
- Family history of permanent childhood sensorineural hearing loss;
- Craniofacial anomalies, including those with morphological abnormalities of the pinna and ear canal;
- In-utero infection such as cytomegalovirus, herpes, toxoplasmosis, or rubella

Risk Factors that may develop as a result of certain conditions or essential medical interventions in the treatment of an ill child:

- Family history of permanent childhood hearing loss;
- In-utero infections including cytomegalovirus, herpes, toxoplasmosis, or rubella;
- Craniofacial or external ear anomalies
- Postnatal infections associated with sensorineural hearing loss including bacterial meningitis



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## **SECTION 2: REVIEW OF MEDICAL AND/OR FAMILY HISTORY**

- Stigmata of syndromes known to have sensorineural or conductive hearing loss
- Neurofibromatosis Type II
- Persistent pulmonary hypertension associated with mechanical ventilation, hyperbilirubinemia requiring exchange transfusion, or conditions requiring extracorporeal membrane oxygenation (ECMO);
- Neurodegenerative disorders including Hunter Syndrome, Friedreich’s ataxia and Charcot-Marie-Tooth Syndrome;
- Head trauma
- Recurrent or persistent otitis media with effusion for at least 3 months
- Syndromes associated with progressive hearing loss including neurofibromatosis, osteopetrosis, Usher’s Syndrome, Goldenhar Syndrome, Branchio-Oto-Renal Syndrome, CHARGE Association, Pendred Syndrome, Pierre Robin Syndrome, Trisomy 21 (Down) Syndrome, Waardenburg Syndrome, choanal atresia, Stickler Syndrome and Rubinstein-Taybi Syndrome;
- Parental or caregiver concerns about speech, language or hearing

## **SECTION 3: BEHAVIORAL OBSERVATIONS** *(Mark those skills present with a P for parental report or O for observation)*

<p><b>By 6 months:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Startles or cries at loud, sudden noises</li> <li><input type="checkbox"/> Quiets when talked to or with soothing sounds</li> <li><input type="checkbox"/> Coos</li> <li><input type="checkbox"/> Makes some sounds</li> <li><input type="checkbox"/> Turns eyes or head toward source of sound</li> </ul>	<p><b>By 9 months:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Attends to music or singing</li> <li><input type="checkbox"/> Makes strings of sounds; babbles (ba-ba-ba, ga-ga-ga)</li> <li><input type="checkbox"/> Turns head when called from behind</li> <li><input type="checkbox"/> Stops or pays attention when told “no” or name called</li> </ul>
<p><b>By 12 months:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Begins to repeat some of the sounds others make</li> <li><input type="checkbox"/> Responds to own name</li> <li><input type="checkbox"/> Babbles using variety of sounds and intonation patterns</li> </ul>	<p><b>By 18 months:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Uses 3 –20 or more words</li> <li><input type="checkbox"/> Follows simple commands (e.g. “Come here.”)</li> <li><input type="checkbox"/> Indicates wants/needs with words/vocalizations &amp; gestures</li> </ul>
<p><b>By 24 months:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Points to some body parts</li> <li><input type="checkbox"/> Uses 50 – 100 or more words</li> <li><input type="checkbox"/> Understands 300 or more words</li> <li><input type="checkbox"/> Enjoys listening to stories</li> <li><input type="checkbox"/> Begins using 2-word “sentences”</li> </ul>	<p><b>By 36 months:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Uses 3 to 4-word phrases</li> <li><input type="checkbox"/> Speaks so understood 50 –75% of time</li> <li><input type="checkbox"/> Follows 2-stage commands</li> <li><input type="checkbox"/> Uses 50 – 250 or more words</li> <li><input type="checkbox"/> Understands most things that are said to him/her</li> <li><input type="checkbox"/> Notices different sounds (doorbell, phone, etc.)</li> </ul>



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## SECTION 4: HEARING SCREENING PROCEDURES

**OAE:** Left Ear  Pass  Refer || Right Ear  Pass  Refer

Conducted by: \_\_\_\_\_ Date: \_\_\_\_\_

**ABR:** Left Ear  Pass  Refer || Right Ear  Pass  Refer

Conducted by: \_\_\_\_\_ Date: \_\_\_\_\_

**Visual Reinforcement Audiometry:** Must be conducted in conjunction with OAE in order to obtain ear-specific results

Conducted by: \_\_\_\_\_ Date: \_\_\_\_\_

Results:

**Conditioned Play Audiometry:** Must be conducted using earphones to obtain ear-specific results.

Conducted by: \_\_\_\_\_ Date: \_\_\_\_\_

Results:

## SECTION 5: FINDINGS *(Please check one.)*

- There are no components of the Virginia Part C Hearing Screening that would indicate the need for referral for full audiological evaluation.
- One or more of the components of the Virginia Part C Hearing Screening indicate the need for monitoring of the child's hearing status (please describe recommended frequency and type of monitoring).
- One or more of the components of the Virginia Part C Hearing Screening indicate the need for referral for a full audiological evaluation.



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If applicable, complete the information under “Other Hearing Screening Results” and/or “Full Audiological Evaluation”

#### **Section 2: Review of Medical and/or Family History**

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The purpose of reviewing the child’s medical and/or case history is to identify any factors that may place the child at high risk for a hearing impairment and that might warrant a referral for more in-depth testing (particularly if more than one risk factor is present or if there are a risk factor plus other indicators of possible hearing loss as detected through the other screening procedures described on the *Virginia Part C Hearing Screening* form).

The review of medical and/or case history can be accomplished by review of medical records and/or through an interview with the parent. On the form, please check all risk factors that apply.

For infants birth through 28 days who have not had a newborn hearing screening, watch closely for risk factors present during the neonatal period. The second set of risk factors, those that may develop as a result of certain conditions or essential medical interventions in the treatment of an ill child, increase the risk for progressive or delayed hearing loss. Watch for this second group of risk factors in infants and toddlers 29 days through two years of age.

The list of risk factors used on the *Virginia Part C Hearing Screening* form is based on the criteria established in 2000 by the Joint Committee on Infant Hearing, which is composed of representatives from the American Academy of Pediatrics, American Academy of Audiology, American Academy of Otolaryngology – Head and Neck Surgery, American Speech-Language-Hearing Association, and the Council on Education of the Deaf.



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## Section 3: Behavioral Observations

This section must be completed for all children receiving a Part C evaluation and assessment.

Part C evaluation and assessment team members are expected to make informal observations related to the child's hearing status during performance of other evaluation and assessment procedures. Parent report may also be used to assist other team members in determining what hearing-related behaviors are or are not typically observed with the child.

On the form, mark those skills that are present by using a P in the box to indicate parent report or an O to indicate observation. For those skills that are neither observed nor reported, the box should be left blank.

## Section 4: Hearing Screening Procedures

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who are difficult to test or have developmental impairments. These tests require the child to be very still during testing (either sleeping or possibly sedated). Equipment for this type of screening is very expensive (\$10,000 or more), is not very portable and requires a high degree of training for implementation. When a child fails an ABR screening, referral to an audiologist for diagnostic testing is indicated.

2. *Otoacoustic Emission Response*: Screening procedures in this category may be called otoacoustic emissions (OAE), distortion product otoacoustic emissions (DPOAE), or transient evoked otoacoustic emissions (TEOAE). In OAE testing, a soft click is presented and a small microphone, placed in the child's ear canal, measures the echo that is returned from the baby's ear. The echo is analyzed to determine how well the inner ear is working. The child must sit quietly and tolerate a probe in the ear canal. This type of screening is fast and simple and requires minimal interpretation to determine a pass or refer result. OAE testing is appropriate for children of all ages. Equipment for OAE testing is moderately priced (about \$4,000), varies in portability, and requires moderate training to implement. When a child fails an OAE screening, a referral for a complete audiological evaluation must be made.

### **Behavioral Screening Measures:**

Behavioral screenings include visual reinforcement audiometry (VRA) and conditioned play audiometry (CPA). These screening procedures are subjective measures of hearing and are the most appropriate tools for children who are functioning at 7 months – 3 years developmental age. For children 6 months through two years of age, VRA is the recognized method of choice; as children mature beyond this age, CPA may be attempted.

*Visual reinforcement audiometry*: Testing is performed in a sound booth or very quiet room with the child seated on an adult's lap between two loudspeakers. Sounds are presented together with a visual reinforcement so that the child becomes conditioned to turn toward the sound in anticipation of the visual reinforcer (thus indicating a response to the emitted sound). In order to obtain ear-specific information, VRA should be accompanied by OAE.

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Please note that when a child fails a hearing screening procedure and is referred for a full audiological evaluation, the same tests described here in Section 4 of the *Virginia Part C Hearing Screening* form may be used for that full evaluation. These testing procedures can be used as a screening tool (as needed as a component of the Part C evaluation and assessment) or as a more in-depth evaluation tool (for those children identified through screening as needing a full audiological evaluation). When used by a licensed audiologist for a full diagnostic evaluation, these procedures include more in-depth testing under more tightly controlled sound field parameters than are used in screening.

[Information for the above summary of screening procedures was gathered primarily from the Colorado Early Childhood Hearing Screening Guidelines and Ear-Resistible: Hearing Test Procedures for Infants, Toddlers, and Preschoolers, Birth Through Five Years of Age (from California), as listed in Sources for this document]

## Section 5: Findings

This section must be completed for all children receiving a Part C evaluation and assessment.

**Check the appropriate box, indicating the screener's recommendations to the IFSP team.**



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