



# Virginia Early Hearing Detection and Intervention Program 2005 Annual Report

## Background

Hearing loss is an unseen birth defect. If undetected in a newborn, the child is hampered with severe difficulty in developing language, learning and social skills. The diagnosis of hearing loss is sometimes delayed, with milder losses often not identified until a child enters school. To ensure that all children with hearing loss are recognized as early as possible and provided with the correct audiological, educational and medical intervention, Virginia's Early Hearing Detection and Intervention (EHDI) Program includes the basic components of newborn hearing screening, audiological diagnosis and early intervention.

The Code of Virginia requires all hospitals to screen newborns prior to discharge. Hospitals also are required to identify children at risk for developing hearing loss in childhood and report these results to the Virginia Department of Health (VDH). In addition, audiologists are required to send reports to VDH on infants and toddlers seen for audiological follow up. VDH collects, maintains, and evaluates these data. VDH also provides training and technical assistance to the hospitals and makes available follow-up information and services to parents.

## Collaboration is the key to success

Through the collaborative efforts of hospitals, audiologists, PCPs and VDH, every infant born in Virginia will be screened for hearing loss before 1 month of age and monitored for appropriate follow up—which may include a diagnostic audiological evaluation before 3 months of age and early intervention services before 6 months of age.

The Virginia Early Hearing Detection and Intervention (VEHDI) Program's mission is being accomplished in part by implementing the Centers for Disease Control and Prevention (CDC) EHDI recommendations, often referred to as the "**1-3-6 Plan.**"



All infants will be screened for hearing loss prior to hospital discharge or before **1** month of age



All infants who do not pass their hearing screening will have a diagnosis before **3** months of age.



All infants with a confirmed hearing loss will receive early intervention services before **6** months of age.

Virginia's comprehensive EHDI tracking and surveillance goes beyond the **1-3-6** plan. It identifies and tracks infants and toddlers who were not screened at birth or who are at risk for delayed-onset hearing loss. Primary care providers (PCPs), parents/guardians, and other care providers are urged to refer an infant for screening any time they suspect a hearing loss. Also, audiologists who identify infants and children with a hearing loss are required to report such losses to the VEHDI program.

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hearing screening outcome, and provide information to assist caregivers in accessing additional support and services.

Audiologists screen or re-test infants who were missed or failed the hospital screening and conduct diagnostic audiological evaluations. They report the outcomes to VDH, PCPs and families within two weeks of the screening.

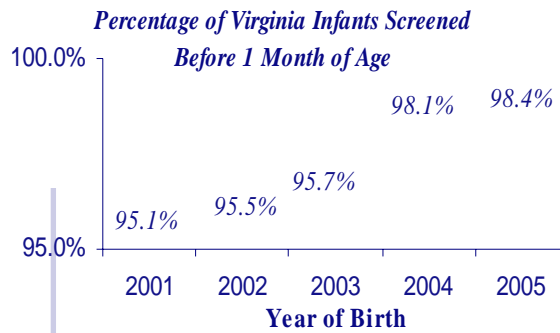
The role of the PCP is to facilitate referrals for audiological evaluations, conduct overall assessment of the

child's healthcare and coordinate appropriate care among the various services and supports provided to the child and family.

VDH provides feedback and training to the hospitals and audiologists. VDH contacts parents of babies who failed the initial screening to remind them of the importance of follow-up testing. In order to inform the families of available resources, VDH also contacts parents of the infants who have been identified with hearing loss.



### 98.4 percent of infants received hearing screening prior to 1 month of age



The rate of infants screened for hearing loss before 1 month of age in Virginia has steadily increased over the last five years from 95.1 percent in 2001 to 98.4 percent in 2005.

Most hospitals in Virginia screen more than 99 percent of the infants

born in their facility. Very few newborns are missed in the hospital (less than 0.3 percent), and almost no parents refuse the screening (less than 0.1 percent). The disparity between the hospital screening rate (99.6 percent) and the overall statewide screening rate (98.4 percent) is explained by births at military hospitals, birthing centers and home births, which are not required by law to be reported to VDH. Babies born at military hospitals, birthing centers and homes accounted for 6.6 percent of the 2005 births. While all military hospitals report that they screen infants for hearing loss, VDH does not receive all of the data.



### 62.3 percent of infants who failed their hearing screening received a diagnostic evaluation that either confirmed or ruled out hearing loss before 3 months of age

The diagnostic evaluation should occur before the age of 3 months

for infants who did not pass their hearing screening. Of the infants who failed their initial hearing

screening, 83.1 percent received audiologic assessment and 76.2 percent received a diagnostic evaluation. 72.1 percent received audiologic assessment, and 62.3 percent received the diagnostic evaluation before 3 months of age.

One of the goals of a newborn hearing screening program is to decrease the average age at which children with congenital hearing loss are identified. The table below illustrates the number of infants reported to VDH who were born in a given year and have been identified with a hearing loss, as well as the average and median age at diagnosis. Median age is defined as the age at which half of all cases were diagnosed earlier and half later and is generally a more accurate indicator of the “typical” age. The median and average ages

at diagnosis are expected to increase because children diagnosed with hearing loss after the publication of this report will be older than those already identified. The number of infants reported to VDH falls short of the 300 expected cases annually. VDH is tracking more aggressively all infants who have not passed their follow-up hearing screening.

Infants who have been identified with permanent hearing loss can be fit with amplification before they reach 1 month of age. These infants, with the appropriate family-centered intervention, are more likely to have normal language, cognitive, and social development. Of the infants born in 2005 and reported with permanent hearing loss, 34.6 percent were identified before 3 months of age.

Year of Birth	Diagnosed with Hearing Loss	Median Age at Diagnosis (in months)	Average Age at Diagnosis (in months)
2001	95	9.9	17.2
2002	92	5.2	14.0
2003	91	5.4	9.8
2004	101	4.2	6.6
2005	107	3.8	5.2

**82.7 percent of infants with a confirmed hearing loss received early intervention services before 6 months of age**

Research and studies have made comparisons between those infants with a confirmed hearing loss who received early intervention and amplification before 6 months of age and those who received intervention and amplification after 6 months of age. Children identified before 6 months of age are 1-2 years ahead of the later-

identified children in language, cognitive and social skills by the time they enter first grade.

In Virginia, 82.7 percent of the 107 infants born in 2005, who have been identified with hearing loss, are enrolled in early intervention services. Of these infants, 70.2 percent began early intervention services before 6 months of age.



**Mission Statement**  
*The mission of the Virginia Department of Health Early Hearing Detection and Intervention (VEHDI) Program is to minimize or eliminate communication disorders resulting from hearing loss.*





## 2005 Program Highlights

*The second round of Sensory Impaired Home Intervention (SKI-HI) training was completed in January and March. Eighteen early intervention providers and early educators were trained in this model of supports and services in the natural environment for families of children, aged birth to 5, who are deaf or hard of hearing. SKI-HI training materials were disseminated to each of the 40 local Infant & Toddler Connection of Virginia (Virginia's early intervention system) councils and to the Virginia Department of Education Training and Technical Assistance Centers, which provide support to local educational agencies for professional development.*

*Certificates of Excellence were issued to eight hospitals who met all the reporting requirements for infants born in 2005. They are Carilion New River Valley Medical Center, Riverside Regional Medical Center, Sentara CarePlex, Sentara Leigh Hospital, Shore Memorial Hospital, Southside Community Hospital, Twin County Regional Hospital, and Warren Memorial Hospital. In addition, Memorial Hospital of Martinsville and Henry County received recognition as the most Improved Reporting Hospital and the three military hospitals (DeWitt Army Community Hospital, 1st Medical Group at Langley Air Force Base, and Naval Medical Center Portsmouth) received Certificates of Appreciation from VDH.*

*The Virginia Hearing Aid Loan Bank, supported by federal grant funds, began operations in February. Blue Ridge Care Connection for Children in Charlottesville is managing the program.*

*Packets of training resource materials were distributed to 64 hospital newborn hearing screening programs. Materials included Power Point presentations, handouts, and Frequently Asked Questions and covered topics that included communicating with families and reporting to VDH.*

*The 1st annual hospital status report was sent to the chief executive officers of birthing hospitals in July.*

*Grant funds were used to bring an audiology workshop to Virginia in collaboration with the National Center for Hearing Assessment and Management at Utah State University, the national EHDI technical assistance center. The funds also paid for registration for 15 Virginia audiologists to participate. The three-part workshop was composed of an on-line preparation that included reading lists, chat rooms, and exam; two days of on-site workshop with hands-on equipment training and case history discussions; and practicum experience that included completion of three infant diagnostic evaluations and written reports.*

*In collaboration with the American Academy of Pediatrics (AAP), the Virginia Chapter of the AAP, and the Partnership for People with Disabilities, an affiliate of the School of Education at Virginia Commonwealth University, the VEHDI Program conducted two teleconferences on the role of the primary care provider in early hearing detection and intervention, practice implications, early intervention, and parent issues.*

*EHDI posters and reference materials produced by CDC were distributed to audiologists along with folders (marked with the VDH logo) that provided a place to collect reports as well as a reminder that reports should be submitted to the program. As a result, the number of follow-up reports received increased by more than 5 percent.*

*The U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau, awarded a three-year grant in the amount of \$125,000 per year to the VEHDI Program. Grant funds were made available in order to assist states in achieving full implementation of sustainable statewide, population-based newborn hearing screening and intervention programs. This is the second HRSA grant that the VEHDI Program has received.*

*CDC approved funding for a three-year cooperative agreement with VDH for the Virginia Child Health Information System Integration Project (VaCHISIP). The purpose of the project is to enhance the capability of the VEHDI Program's tracking and surveillance system and to expand the integration of the tracking and surveillance system with similar programs that identify children with special health care needs in Virginia.*

**For more information, please visit our Web site at <http://www.vahealth.org/hearing>.**

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