



# Newborn Hearing At-A-Glance Guam EHD Progress Report

January - December 2012



## Håfa Ådai!

The Guam Early Hearing Detection and Intervention (Guam EHD) Project staff are excited to provide you with this Newborn Hearing At-A-Glance Guam EHD Progress Report January to December 2012. The purpose of this publication is to provide parents, health care professionals, policy makers, and other community partners with a status report 2009 to 2012 of newborn hearing screening, early hearing detection, and intervention services on Guam as well as other areas of the Guam EHD Project, including public awareness & training activities.

Guam EHD is 100% federally funded through grants and cooperative agreements with the U.S. Department of Health & Human Services (HHS), Health Resources & Services Administration (HRSA) and the Center for Disease Control & Prevention (CDC).

We look forward to continuing to ensure that all infants have access to newborn hearing screening and intervention services through strengthened partnerships with our community! Please feel free to contact Guam EHD Project staff at 735-2466 for more information or visit us online at [www.guamehdi.org](http://www.guamehdi.org).



# About Guam EHDI

The Guam EHDI Project was established in 2002 through a federal grant awarded to the University of Guam Center for Excellence in Developmental Disabilities Education, Research, & Service (Guam CEDDERS).

The grant was awarded by the U.S. HHS, HRSA to establish Guam's Newborn Hearing Screening and Intervention Program. In 2003, Guam CEDDERS also applied for and received funding through a Cooperative Agreement with the U.S. HHS, Centers for Disease Control and Prevention (CDC) to establish an integrated data, tracking, and surveillance system to support the Guam EHDI Project. Guam received training and technical assistance from the University of Maine to develop the data system, known as Guam ChildLink. Guam CEDDERS continues to submit

applications to the U.S. HHS HRSA and CDC for continued funding support for the Guam EHDI Project.

Through the efforts of the Guam EHDI Project, Universal Newborn Hearing Screening and Intervention is a law on Guam! The Universal Newborn Hearing Screening and Intervention Act (Public Law 27-150) became law in December 2004. Guam's local legislation aligns with national goals and assures an upgraded standard of care for all babies born on Guam.

The goal of the Guam EHDI Project is to ensure that all babies born on Guam are screened for hearing loss by 1 month of age, diagnosed with a hearing loss by 3 months of age, and begin quality early intervention services by 6 months of age (known as the 1-3-6 plan).



*Hearing screening is performed on a newborn infant.*

## Types of Hearing Loss Identified from 2002-2012

<b>Conductive<sup>1</sup></b>	<b>36</b>
<b>Sensorineural<sup>2</sup></b>	<b>16</b>
<b>Mixed<sup>3</sup></b>	<b>4</b>

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**Total:** **56**

<sup>1</sup>Conductive Hearing Loss - Type of hearing loss where sound is not conducted efficiently through the outer ear canal to the eardrum and can often be medically or surgically corrected.

<sup>2</sup>Sensorineural Hearing Loss - Type of hearing loss when there is damage to the inner ear or to the nerve pathways from the inner ear to the brain.

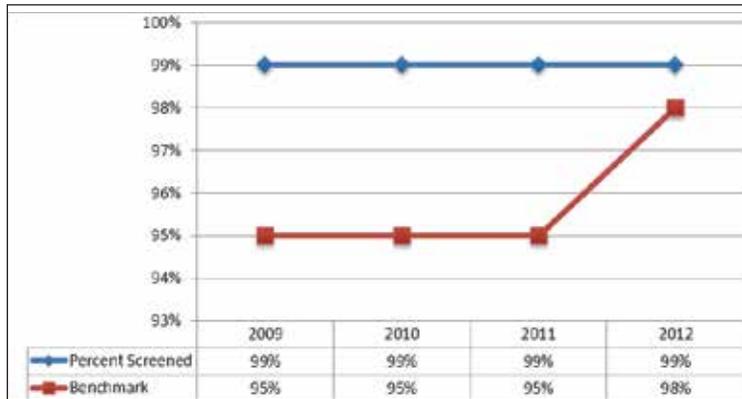
<sup>3</sup>Mixed Hearing Loss - Type of hearing loss that is a combination of conductive hearing loss and sensorineural hearing loss.

Note: Data is from 2 of 3 birthing sites: Guam Memorial Hospital Authority and Sagua Mañagu Birthing Center.

There were **56** children **that were diagnosed with hearing loss from November 2002 – 2012**. These children were all identified and received early intervention services through the Guam Department of Education, Division of Special Education, Guam Early Intervention System (DOE-GEIS).

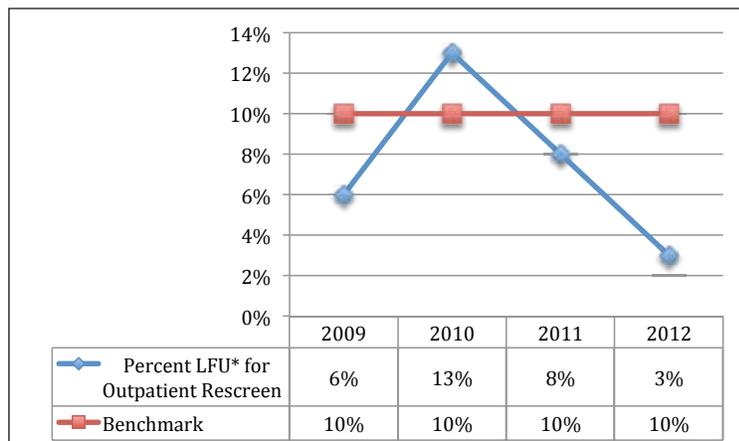
Figures 1 thru 3 (below) highlight Guam’s performance since 2009 in the 1-3-6 plan of infant hearing screening, diagnosis of hearing loss, and receipt of early intervention services. The data includes infants born at GMHA & Sagua Mañagu.

**Figure 1 - Initial Screen 2009 to 2012**



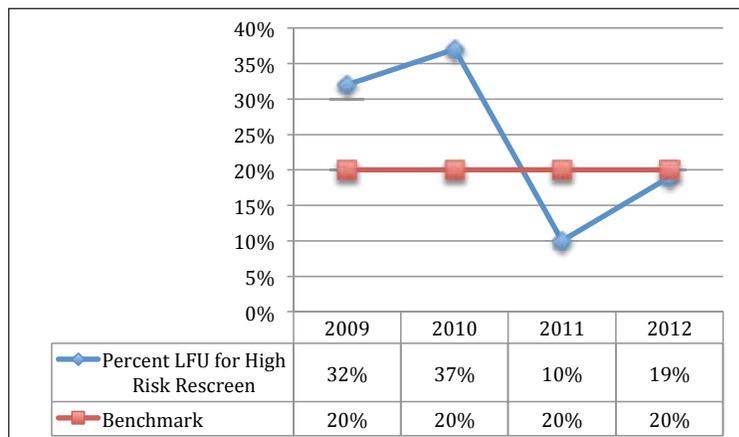
As noted in Figure 1, a small percentage of the infants did not have their hearing screened before discharge every year, due to being medically evacuated to an off-island facility for further treatment, or the infants expired before hearing screening could be performed.

**Figure 2: Outpatient Rescreen 2009 to 2012**



\*LFU - Lost to follow up

**Figure 3: High Risk Rescreen**



In 2012, there were no infants lost to follow-up for a hearing test or diagnostic audiological evaluation (DAE). This accomplishment has been due to the implementation of the Teleaudiology project that began in November 2011 in response to the lack of a pediatric audiologist available to service very young infants on Guam. This project involved the successful collaboration between Guam EHDI, the Children’s Hospital – Colorado, DOE Audiology Department, and GEIS.

# Boys Town - Hearing Loss 101 Video Conference



*Katie Brennan (on screen), Speech-Language Pathologist, with The Center for Childhood Deafness at Boys Town National Research Hospital presents to Guam Early Intervention System (GEIS), Early Childhood Special Education Pre-School (ECSE), & Guam Early Hearing Detection & Intervention (EHD) staff.*

Guam CEDDERS in collaboration with the DOE - GEIS and the Guam EHD Project sponsored a two day professional development training with the Center for Deafness from Boys Town National Research Hospital. The training was conducted in September 2011 & February 2012 via a Polycom Video Teleconferencing system at the University of Guam Science building and was the first time Guam CEDDERS has ventured into this type of distance learning.

Cathy Carotta, Ph.D, and her colleagues at Boys Town National Research Hospital were the lead trainers for this Webinar series entitled "Hearing Loss 101" and "Hearing Loss 201 and Beyond." Participants included staff from GEIS, Early Childhood Special Education, and Guam EHD staff. The training focused on the different areas of hearing loss, testing & assessment, and the different technologies available to the deaf or hard-of-hearing children. Participants also learned different communication approaches and educational settings, auditory learning strategies, and a routine based intervention that was centered on family outcomes for their child or children. Participants were observed in their educational settings and received hands-on training from Dr. Carotta and her colleagues.



# Tele-Audiology on Guam



*Venerannda Leon Guerrero (right) holds her infant prior to undergoing teleaudiology testing to determine whether or not her infant has a hearing loss. Technology enabled Dr. Erica Schicke (on computer screen upper left) at Children's Hospital-Colorado to operate the diagnostic audiological equipment remotely from Colorado, after Bobbie Maguadog (center), audiometrist, Department of Education and Dr. Susan Dreith (left), audiologist, Children's Hospital-Colorado prepared the parent and infant for testing on Guam.*

In an historic occasion, the first-ever diagnostic testing for hearing loss via teleaudiology was performed on an infant just under three months old at the University of Guam on October 19, 2011. The use of this new technology to test hearing abilities of very young infants was prompted by a lack of pediatric audiologist on Guam. Beta testing of the teleaudiology system began in June 2011 and “went live” with the first actual diagnostic test on an infant being conducted in October. The pilot teleaudiology project was a 20-month partnership between the Bill Daniels Center for Children’s Hearing at the Children’s Hospital-Colorado, and the Guam EHDI Project at Guam CEDDERS, with support from the DOE - GEIS. The tele-audiology project ended in June 2013. Twenty-five young children were tested during the pilot period, and of those children tested, thirteen children were diagnosed with hearing loss.

Through specialized equipment and software and a dedicated broadband connection, audiologists at the Children’s Hospital-Colorado operate the Guam-based audiological equipment remotely from Colorado to diagnose patients for a hearing loss. An audiometrist on Guam prepares the parent and infant for the tests and assists the audiologists as they conduct the evaluations via web conferencing software. The two audiologists from the Children’s Hospital-Colorado, Dr. Susan Dreith and Dr. Ericka Schicke, were licensed to practice audiology in Guam.

The pilot teleaudiology project addresses the critical need for pediatric audiologist services in the Pacific. Because of the project, infants on Guam who do not pass their newborn hearing screening can now be evaluated for a hearing loss before 3 months of age. This allows the necessary early intervention services to be initiated by the time the infant reaches 6 months of age, providing the infant and family the greatest opportunity for the child to develop speech and language in a timely manner for life-long success. Families will no longer have to travel off-island to obtain diagnostic audiological evaluations (DAE) for their infants.

Venerannda Leon Guerrero, mother of the first baby to have DAE performed on Guam via teleaudiology, describes her experience. She says, “My son was born with microtia/atresia of the right ear. I was worried about whether my son could hear me. Guam Early Intervention System referred my son to Guam EHDI for a diagnostic hearing test through teleaudiology to find out how well he can hear in both his ears. Right after the evaluation, I felt very relieved because the audiologist told me my son had normal hearing in his left ear, and his right ear could also hear sounds. She made recommendations that GEIS and I could follow to help my son learn language and speech. She talked to me about what should happen next for my son, and to be careful to keep his left ear in good shape. I would recommend any baby get this service done if there is no audiologist on island that can test babies and they need to find out how well their baby can hear.”

# Guam EHD Community of Learners

In order to develop, implement, advance and sustain cultural and linguistic competency within the Guam EHD project, the Guam EHD Community of Learners (COL) was added to the Project in 2012. On December 3rd, 2012 the COL collaborated with Project Kariñu, Guam's Early Childhood System of Care, to provide training for six language interpreters. The purpose of the training was to create a pool of knowledgeable and trained language interpreters in various languages, and to establish a list that was published in the Nene Directory of Services, of these interpreters who may be used as a resource when language interpretation services or translations are needed for the Guam EHD Project.



*The Guam EHD Community of Learners project conducts training for language interpreters on December 3, 2012.*



*Language interpreters pose for a photo after receiving training sponsored by the Guam EHD Community of Learners project.*

For more information contact:

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