CNMI Accomplishment Summary
Project Period September 2011 – August 2014

The CNMI Early Hearing Detection and Intervention (EHDI) program was implemented in July 2001 with the goal to improve the health and quality of life of children with hearing loss and their families. This program has proven to be a successful collaboration between the Division of Public Health and the Public School System Early Intervention Program

Goal 1: All infants born in the CNMI will receive newborn hearing screening by 1 month of age.

Year	Total Births	Total Screened	Screen Rate
2010	1075	1053	98%
2011	1029	1013	98%
2012	1126	1101	98%

Objective 1.1: Reduce the nursery refer rate.
Objective 1.2: Increase the percentage of families who follow-up for the outpatient hearing.

Accomplishments:
Newborn hearing screening is not mandated in the CNMI, but rather was adopted as a standard of care at Commonwealth Heath Center. The CNMI has consistently screened 98% of infants prior to hospital discharge. The quality of the screening and the refer rates have been closely monitored by the EHDI team and quality improvement initiatives have been implemented and proven successful. In review of the CNMI data the nursery refer rate has bounced between 4% and 21% averaging11 % in 2012. This is significant on many levels; reducing the number of infants that need to return directly reduced the risk of losing infants at the point of outpatient rescreening in addition to the reduced cost of rescreening.

Highlights of activities:
- Prior to discharge parents are given an appointment card with the outpatient instruction, time and date
- Nurses are supported by the medical home providers and have been provided scripts for sharing screening results and facts about the program with families
- Appointment cards are translated in Tagalog, Chinese and Korean
- Provide parents a Hearing Developmental Checklist
- Provide parents with Hearing Developmental Checklist for High Risk Infants.
- Outpatient rescreens are conducted every week
- 2nd reminder of appointment is given to Health and Vital Statistics Office
- Nursery nurses are provided with a list of appointment dates for the year
- Nursery nurses are provided feedback on the overall screening refer rate as well as their individual refer rates.

- Results are inputted in the DPH yellow immunization card
- An newborn hearing sticker is place in the infant's medical record used to flag babies that need rescreen
- Education and training was conducted with Children's Clinic nurses to look at patient's chart to identify if newborn hearing sticker is marked or unmarked.

Goal 2: All infants have a confirmed hearing loss by 3 months of age and are referred to early intervention and if the family elects will be fit with amplification within 1 month of diagnosis.

Year	Total number of births	Identified with hearing loss	Average diagnostic age
2010	1075	6	2 months 3 weeks
2011	1029	3	1 month 2 weeks
2012	1126	3	1 month 2 weeks

Objective 2.1: Reduce loss to follow-up through partnering with the Home Visiting to provide targeted screening in conjunction with the families scheduled appointments.
Objective 2.2: Track early intervention services and outcomes of children identified with hearing loss.
Objective 2.3: The CNMI will build capacity to follow infants that are at high risks for late onset or progressive hearing loss.

Accomplishments:
When an infant refers on an outpatient screening the audiologist is immediately contacted by EHDI Follow up Coordinator and a diagnostic evaluation appointment is scheduled generally within a week. Infants therefore receive their diagnostic evaluations in a timely manner even sooner than the recommended goal of three months of age. In review of the data infants for 2011 and 2012 had diagnostic testing completed by a month and a half. It is also noteworthy that even thou we have a small birth population the CNMI clearly falls within the national statistic, potentially having a higher rate of occurrence based on the statistic that 1-3 babies per thousand will be born with significant hearing loss each year as indicated above. Also due to the collaborative relationship between the Division of Public Health and the Public Schools System's Early Intervention Program the program is delighted to report that at least the past 3 years 100% of infants identified with a hearing loss are enrolled in intervention by 6 months of age.

Highlights of activities:
- Implemented high risk hearing rescreen on January 2014. High risk outpatient are contacted and an appointment is set to screen these infants as an outpatient.
- For children enrolled in EI and are on Rota and Tinian, service coordinators travel to the neighboring islands to do the hearing screen.
- For families with disconnected or unknown phone number the UNHS Program will work with H.O.M.E. Visiting and WIC Program to identify if the family is enrolled in their

program. If the families are enrolled in either program a reminder for the appointment will be given.

- UNHS works closely with the Early Interventionist to support families enrolled in the EI Program such as Audiologist doing home visits jointly with the Early Interventionist, hearing aid adjustments and making new ear molds.
- Early Interventionist assist and observe audiological testing for DHH children enrolled in the program.
- Babies identified with any degree of hearing loss including unilateral losses are eligible to receive Early Intervention Services.
- Assist in the development of the Early Intervention data/outcomes database system.

Goal 3: Improve the skill levels of nursery staff, physicians, audiology, EI providers, and other professionals who work with children identified with hearing loss.

Objective 3.1 The CNMI EHDI staff will educate and expand the knowledge of the EHDI program with parents and providers in the community.

Accomplishments and Highlighted Activities:

- Brought out Hearts for Hearing Founder, Ms. Teresa Caraway to facilitate training on Listening and Spoken Language. The course consists of 1 week instructional and 1 week hands on training with combined home visits with Early Intervention and Early Childhood Programs.
    - Evaluation: There were a total of 41 participants.
    - Workshop was well organized: 90%
    - Facilitators were clear in sharing the information: 90%
    - Facilitators knew the information well: 90%
    - I understand the information on brain development & 6 strategies: 90%
    - Comments: Hands-on activities were fun and creative
      Presenters were interactive; we are looking forward to more trainings like these.
      Collaboration was great and we learned a lot from each other
- Brought out a Family Health Therapist, Ms. Marlyn Minkin to facilitate a parent event that focuses support for families with DHH children.
    - Evaluation: There were a total of 19 parents that attended.
    - The information presented to me was useful: 90%
    - The speaker was clear and easy to understand: 90%
    - I learned how to better support my child with hearing loss: 80%
    - Comments: We got to meet other families with who have children with hearing loss.

I appreciate the Deaf & Hard of Hearing program more.
I want to see more get together with families.
I like meeting new families and gathering information for the future of my baby.

- Do a yearly nurses training utilizing the NCHAM: Newborn Hearing Screening Training Curriculum. We included a pre and posttest. Pretest results were 71% and post test results were 92%.
- This year we included NMC Nursing students in the training because we have only 1 community college and 1 birthing hospital. Most likely these studentS will be employed at the CHCC.
- Nurses from our Kagman Community Health Center (KCHC) attended the training as well. We have on-going discussion with the Director of KCHC to include Outpatient Newborn Hearing Screening Follow-up care at the center.
- Continue with our public awareness campaign by doing advertisements using all kinds of avenues such as newspaper, television news spots, radio spots, health care magazines and flyers. We recently rephrase our message to focus on the importance of follow up care when a baby didn't pass their newborn hearing test. The advertisement also included a hearing developmental checklist and the contact number to call and where to make an appointment.
- Continue participating in local community outreach events especially with the themes focus on babies, families and health.
- We have a laptop that is hooked on a baby doll that displays how an ABR is performed.
- During outreach events we distribute a NBHS brochure that explains about the program and how a hearing screening is performed.
- Present and participate at the annual National EHDI Conference. Team includes Audiologist, Pediatrician, MCH Program Coordinator, Special Education Coordinator, EHDI Follow-Up Coordinator, EHDI Data Specialist and Early Interventionist.
- Collaborate with the Hawaii Deaf-Blind Project to create a DHH Family Directory that will serve as a resource for our CNMI families and for newly identified families.
- Pediatric Audiologist facilitated a DHH Parent Night that focus on the importance of amplification and teaching parents simple troubleshooting for their child's hearing aids.

Goal 4: Establish an EHDI workgroup dedicated to the continuous quality improvement of the CNMI EHDI System.

Objective 4.1: Bi-annual Quality Improvement reports will be provided to the EHDI workgroup to elicit guidance around improvement activities.

Accomplishments and Highlighted Activities:

The EHDI team consistently reviews the data and conducts both quality improvement and quality assurance checks for the various stages of the EHDI program. In August of 2013 the EHDI Program under the Division of Public Health's quality improvement initiative formally participated in a basic quality improvement training and then conducted a mini project related to this data component. The EHDI program reviewed the various components of the program and choose to focus on the nursery refer rate. Baseline data was calculated revealing a screening refer rate of 11% or greater for 2012. The EHDI team then discussed the potential factors and brainstormed possible solutions to address the high refer rate. Small steps of change were implemented. The screening refer rate from September when the project was implemented dropped with a small spike in November. After further conversation with the nursery it was discovered that they had some technical challenges with the equipment that were addressed, but did factor in on the overall refer rate. This mini QI project was successful during the project period and continues to be monitored by the EHDI data manager. Other quality assurance activities have included a parent survey for families that return for the outpatient rescreen. This data is then compared the demographic data collect by the Health and Vital Statistics Office to assure accuracy of the systems. The EHDI data manager has also conducted quality assurance check on the nurses in respect to how accurate and consistently they are recording the newborn hearing results.