Maternal and Child Health Project Abstract

Project Title: Universal Newborn Hearing Screening and Intervention
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ABSTRACT

Problem: Hearing loss at birth is estimated to affect 1 to 3 per thousand newborns. With 26,000 annual births, Nebraska can anticipate identifying up to 75 infants annually through the Newborn Hearing Screening Program and the tracking and follow-up systems. All birthing facilities in Nebraska are conducting newborn hearing screening. Access to audiologists and medical specialists is more limited in the rural areas of the state, where all or part of 73 of the 93 counties are Medically Underserved Areas and Medically Underserved Populations.

Goals: Goal 1 - The hearing of all newborns born in Nebraska will be screened during the birth admission or, if born out-of-hospital, by one month of age. Goal 2 – All newborns who "refer" on the initial outpatient hearing screening during will complete an audiological diagnostic evaluation prior to 3 months of age. Goal 3 – All infants with a confirmed hearing loss will begin receiving early intervention services prior to six months of age Goal 4 – All infants with a confirmed hearing loss will have a medical home. Goal 5 – Families of young children with a confirmed hearing loss will have access to a family-to-family support system. Goal 6 – The hearing of young children in Nebraska will be screened at various times prior to age 3. Goal 7 – Hearing health professionals will increase their capacity to provide appropriate services to young children. Goal 8 – NNHSP will provide an effective structure for the newborn hearing screening and intervention system in Nebraska.

Methodology: Development of the integrated electronic data system, revision of reporting protocols, development of improved referral and tracking systems, promotion of the medical home approach, support for creation of family-driven support systems, professional development activities to include extending otoacoustic emissions hearing screening to Early Head Start programs and possibly community health clinics, partnering with Boys Town National Research Hospital and National Center for Hearing Assessment and Management on research projects.

Coordination: Collaborative partners include the Newborn Screening and Genetics Program, MCHB/Title V, Medically Handicapped Children's Program, Early Development Network (Part C), Office of Programs for Children with Sensory Impairments, Head Start State Collaboration Office, PTI-Nebraska Nebraska Chapter Champion for American Academy of Pediatrics, Boys Town National Research Hospital, Early Childhood Training Center, and Nebraska Hospital Association.

Evaluation: Legislatively-required reporting is the basis for evaluating the effectiveness and timeliness of hearing screening. Evaluation measures will be developed by the Advisory Committee to measure the effectiveness of the early intervention activities.

Key Words: audiology, children with special health care needs, newborn hearing screening, early intervention, family-to-family, medical home, hearing loss

PROGRAM NARRATIVE

PURPOSE OF THE PROJECT

The Nebraska Newborn Hearing Screening Program (NNHSP) was developed to implement the goals of the Infant Hearing Act of 2000 (Nebraska Revised Statute §71-4735):

- "To provide early detection of hearing loss in newborns at the birthing facility, or as soon after birth as possible for those children born outside of a birthing facility
- To enable these children and their families and other caregivers to obtain needed multidisciplinary evaluation, treatment, and intervention services at the earliest opportunity
- To prevent or mitigate the developmental delays and academic failures associated with late detection of hearing loss
- To provide the state with the information necessary to effectively plan, establish, and evaluate a comprehensive system for the identification of newborns and infants who have a hearing loss."

Through the development of a tracking and follow-up system, the support for hospitals in development of their newborn hearing screening programs, the dissemination of educational materials and opportunities, and the engagement of stakeholders in creating the program, Nebraska reached two benchmarks in 2003: 100% of birthing facilities were providing newborn hearing screening and 97% of newborns had their hearing screened during birth admission.

Building on these accomplishments to ensure that infants identified with a hearing loss and their families are receiving appropriate and timely high quality services, the NNHSP has developed eight specific system goals. To reach these goals, the NNHSP will increase the awareness of parents and professionals about the importance of newborn hearing screening and early intervention, will provide linguistically and culturally appropriate educational materials for parents, will develop and access professional development opportunities for professionals who

provide services, will strengthen existing and develop new collaborative approaches to linking the providers of services, and will nurture and expand the opportunities to establish medical homes, family-to-family supports and continuous early childhood hearing screening.

NEEDS ASSESSMENT

Any description of systems in Nebraska must first begin with an overview of the state's geography and its population. Nebraska is a relatively large state with a sparse population. According to the 2000 Census, Nebraska's total population is 1,711,263. Nebraska covers 76,872 square miles. The relatively small population and a large geographic area results in an average population density of 22.3 persons per square mile, with 32 of its 93 counties designated as Frontier (6 or fewer persons per square mile) and 39% of its population living in its two metropolitan population centers, Omaha and Lincoln.

This combination of vast spaces and uneven concentration of population impacts many aspects of systems, such as availability of providers, transportation to services, economic viability of sustaining services in remote communities, and competition between urban and rural interests. For instance, of Nebraska's 93 counties, all or part of 32 are considered Primary Care Health Professional Shortage Areas and all or part of 73 are Medically Under Served Areas and Medically Under Served Populations.

Nebraska has also seen important shifts and trends in its populations, particularly a growing proportion of racial/ethnic minorities. From 1990 to 2000, the minority population rose by 83.5% and now constitutes 12.7% of the total population. The proportion of children under 5 that are racial/ethnic minorities is 21.8%. For this age group, 10.8% are Hispanic, compared to 5.5% of the overall population. In 2003, the number of live births in Nebraska increased for the

ninth straight year, to 26,067. From 1994 to 2003, live births among Hispanic women increased by 150% while live births among non-Hispanic women increased by 3%.

Estimates of uninsured Nebraska children under age 19 range from 7 to 8%, less than the national estimates. These estimates predate changes in Nebraska's Medicaid eligibility criteria implemented late in 2002 that have been projected to result in 15,000 Nebraska children losing health care coverage. A profile of the early childhood population shows that 14% of Nebraska's children age 5 and under live in poverty, compared to 9.7% for the overall Nebraska population.

Specifically related to this grant application is the availability and distribution of audiologists and primary health care providers. Audiologists and medical specialists tend to be disproportionately clustered in the metropolitan areas resulting in decreased availability for diagnostic evaluations and treatment for hearing loss. Over two-thirds of audiologists, pediatric health care providers (physicians, physician assistants, nurse practitioners) and otolaryngologists practice within the Omaha and Lincoln metropolitan areas.

In 2003, Nebraska had 67 birthing facilities, 13% of which accounted for almost 70% of the births. There are 51 hospitals with less than 500 births per year. Sub-grants from the Nebraska Health Care Cash Fund provided $2000 toward the purchase of equipment to 38 small hospitals in 2002 and 2003. The growth of newborn hearing screening has progressed from only 16% of the birthing facilities conducting screenings in 2000 to 100% in 2003.

In 2003, Nebraska was able to screen 97% of the newborns prior to hospital discharge. The overall "refer" (did not pass) rate was 3.6%. Of those that "referred" or were discharged prior to screening, 82% received an outpatient hearing screening. The outpatient hearing screenings occurred at an average of 24 days of age and over 87% of them occurred prior to six weeks of age.

The Infant Hearing Act requires confirmatory testing facilities to report the number of infants who return for a follow-up hearing test and, of those, the numbers with and without a hearing loss. Audiologists reported identifying 58 infants born in 2002 with hearing loss and the NNHSP received individual reports on 44 of those infants. In 2003, 66 infants were reported as having been diagnosed with a hearing loss, 56 of which the NNHSP received individual reports.

Of those infants for whom audiological diagnostic evaluation reports were received in 2003, the average age at confirmation of hearing loss was 81 days and over 2/3 were identified at less than 3 months of age. The rate of identified hearing loss in newborns and infants in Nebraska was 2.3 per thousand in 2002 and 2.5 per thousand in 2003, within the national norms.

The NNHSP has not been systematically collecting child-specific information about referrals to early intervention services or the services actually provided, including the number of infants with hearing loss who have a medical home. Tracking the outcomes for infants identified with a hearing loss has not been consistent beyond the audiological diagnostic evaluation.

All birthing facilities are now conducting newborn hearing screenings and the rate of follow-up outpatient re-screenings is very good. However, Nebraska's geography and population distribution impacts the availability and accessibility of specialty medical and audiologic services for those infants who need diagnostic evaluations. These are factors to be addressed in developing the system linkages needed for effective referral, tracking, and reporting processes for early intervention services.

DATA REQUIREMENTS

The Infant Hearing Act of 2000 requires birthing facilities to report annual aggregate data to the NNHSP, including the number of live births, the number of newborns screened prior to discharge, the number who passed, and the number who "referred." Based on the reporting

protocol established by the NNHSP Advisory Committee, hospitals are to report child-specific information weekly about each newborn who "referred" or was discharged prior to receiving a hearing screening, including transfers to a neonatal intensive care unit. These reporting requirements are the foundation for the manual reporting and tracking system that has been in existence for four years. The development and implementation of an electronic data reporting system that is integrated with the state's new electronic birth certificate registry will provide the opportunity to minimize errors due to duplicate entries because of name changes and newborns who expire prior to screening. Likewise, data about the race and ethnicity of the newborns and infants is not currently being collected but will be more readily available with hearing screening reporting integrated into the birth certificate registry.

Audiologists, though not required by statute to report child-specific diagnostic evaluation results, have increasingly done so, reaching 85% reporting in 2003 compared with the required annual aggregate report. Aggregate data has been received annually from the Early Development Network (EDN) Child Count but only recently has the child-specific information been reported, including information about age of referral and verification as well as information about family-to-family support services and medical homes. To meet the data reporting requirements for MCHB/UNHSI, confidentiality issues will need to be clarified between NNHSP, audiologists, and EDN. Protocols will need to be developed that will facilitate the routine and timely reporting of child-specific information. In addition, strategies will need to be developed with EDN to ensure the reporting of early intervention data for those infants for whom hearing loss is not the only or primary verification.

Approaches of the NNHSP to meet the annual reporting requirements on the five MCHB Performance Measures can be found in Appendix G.

IDENTIFICATION OF TARGET POPULATION

The primary focus of the Nebraska Newborn Hearing Screening system is the more than 26,000 newborns born annually in the birthing facilities in the state and those born out-of-hospital. The purpose of NNHSP is to identify those newborns with permanent childhood hearing loss, estimated at between 25 to 76 annually in Nebraska, and to ensure that appropriate and timely early intervention services are provided.

With 100% of the birthing facilities conducting newborn hearing screening, the initial activity to identify those with a permanent loss is doing quite well. Many birthing facilities in the more rural sections of the state provide the outpatient follow-up screening for those newborns who "referred" during the birth admission screening.

The secondary focus of the NNHSP is the professionals who provide the screenings, audiologic and amplification evaluations, medical evaluations, and early intervention services. By developing capacity-building strategies to better identify and serve those newborns and infants with hearing loss, especially in the more rural areas of the state where vast distances and poverty combine to limit access, more optimal developmental outcomes will be achieved. Through partnerships with Boys Town National Research Hospital and the National Center for Hearing Assessment and Management, among others, professional development activities will be developed and promoted, using distance learning as often as possible, to 1) increase the number of audiologists with expertise serving infants, 2) to better engage family practice physicians in early hearing detection and intervention, establishment of medical homes, access to amplification and referrals to Early Intervention, and 3) develop the capacity of staff in a variety of health and early care and education settings to conduct continuous early childhood hearing screening.

GOALS AND OBJECTIVES 2005-2008

Notes: "Quarters" column indicates the time in which the activity will occur, beginning with Quarter 1 on April 1, 2005. List of Abbreviations in Appendix A

***System Goal 1* - The hearing of all newborns born in Nebraska will be screened during the birth admission or, if born out-of hospital, by one month of age.**	**Healthy People 2010 (28-11)** Increase the proportion of newborns who are screened for hearing loss by age 1 month, have audiologic evaluation by age 3 months, and are enrolled in appropriate intervention services by age 6 months.	
Program Objective 1.1 – ***Birthing facilities will submit hearing screening status reports for 100% of newborns who "refer" during birth admission***	**Measurement –** Number of "refers," timeliness of reporting	
Activities	**Quarters**	**Person(s) Responsible**
Development of integrated electronic data system	[Q1] Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr; QS Tech; Adv Cmte
Beta-testing of integrated electronic data system; Development of final version	Q1 [Q2] Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr; QS Tech; Selected Hosp Staff
Integrated electronic data system available to all birthing facilities	Q1 Q2 [Q3] Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr; QS Tech, Hosp Staff
Training and orientation of hospital staff	Q1 Q2 [Q3] Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr; Adm Assist; QS Tech, Hosp Staff
Individual hearing screening status reports submitted electronically during birth certificate registry process	Q1 Q2 Q3 [Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12]	Adm Assist; Hosp Staff
2004 Excel spreadsheet data exported to integrated system	Q1 Q2 Q3 [Q4] Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr; Adm Assist
Program Objective 1.2 – ***Birthing facilities will submit hearing screening status reports for 100% of newborns who do not receive a hearing screening during birth admission***	**Measurement –** Number of discharges prior to screening, reasons for discharge, timeliness of reporting	
Activities	**Quarters**	**Person(s) Responsible**
Development of integrated electronic data system	[Q1] Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr; QS Tech; Adv Cmte
Beta-testing of integrated electronic data system; Development of final version	Q1 [Q2] Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr; QS Tech; Selected Hosp Staff
Integrated electronic data system available to all birthing facilities	Q1 Q2 [Q3] Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr; QS Tech, Hosp Staff
Training and orientation of hospital staff	Q1 Q2 [Q3] Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr; Adm Assist; QS Tech, Hosp Staff
Individual hearing screening status reports submitted electronically during birth certificate registry process	Q1 Q2 Q3 [Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12]	Adm Assist; Hosp Staff
2004 Excel spreadsheet data exported to integrated system	Q1 Q2 Q3 [Q4] Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr; Adm Assist

Program Objective 1.3 – ***NICU hospitals will submit hearing screening status reports for 100% of newborns transferred to the NICU prior to receiving a hearing screening.***	**Measurement -** Number of passes and "refers," timeliness of reporting	
Activities	**Quarters**	**Person(s) Responsible**
Development of integrated electronic data system	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr; QS Tech; Adv Cmte
Beta-testing of integrated electronic data system; Development of final version	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr; QS Tech; Selected Hosp Staff
Integrated electronic data system available to all birthing facilities	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr; QS Tech, Hosp Staff
Training and orientation of hospital staff	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr; Adm Assist; QS Tech, Hosp Staff
Individual hearing screening status reports submitted electronically during birth certificate registry process	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Adm Assist; Hosp Staff
2004 Excel spreadsheet data exported to integrated system	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr; Adm Assist
Program Objective 1.4 – ***Hearing screening facilities will submit hearing screening status reports for 100% of newborns/infants who received an outpatient hearing screening.***	**Measurement -** Number of passes and "refers," percentage of percentages at hospitals, audiology clinics, medical clinics, timeliness of outpatient screening, timeliness of reporting, number and type of referrals	
Activities	**Quarters**	**Person(s) Responsible**
Revision of outpatient hearing screening reporting process and procedures.	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr; Adm Assist; Adv. Cmte
Orientation of confirmatory testing facility staff, primary health care providers	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr; Adm Assist; Hosp Staff; Auds, PHCP
Hearing screening status reports submitted within 1 week of outpatient screening to primary health care provider and NNHSP	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr; Adm Assist; Hosp Staff; Auds, PHCP
Results will be entered by NNHSP into data system	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Adm Assist
Program Objective 1.5 – ***Birthing facilities will submit the annual aggregate report required by statute.***	**Measurement –** Number born, parents educated, screened, pass, refer, and recommended for follow-up; refer rate by type of screening	
Activities	**Quarters**	**Person(s) Responsible**
Weekly activity report generated at hospital for verification of screenings completed.	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Adm Assist; Hosp Staff
Monthly hearing screening reports generated at hospital for local quality assurance	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Adm Assist; Hosp Staff
Annual hearing screening reports generated for annual legislative report, other reports and surveys, analysis	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr; Adm Assist; Hosp Staff; Aud, Adv Cmte

<u>System Goal 2</u> – All newborns who "refer" on the initial outpatient hearing re-screening will complete an audiologic diagnostic evaluation prior to 3 months of age.	**Healthy People 2010 (28-11)** Increase the proportion of newborns who are screened for hearing loss by age 1 month, have audiologic evaluation by age 3 months, and are enrolled in appropriate intervention services by age 6 months. **Healthy People 2010 (28-15)** Increase the number of persons who are referred by their primary care physician for hearing evaluation and treatment.	
Program Objective 2.1 – ***Confirmatory testing facilities will obtain parental permission to release audiologic reports to NNHSP.***	**Measurement –** Comparison of number of reports received with annual aggregate report	
Activities	**Quarters**	**Person(s) Responsible**
Subcommittee will develop template for release of information to NNHSP.	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr; Adv Cmte, NSLHA
Template will be disseminated to audiologists with orientation provided.	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr; NSLHA, Auds
Audiologists will gain parental permission to submit audiologic reports to NNHSP.	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Auds
Program Objective 2.2 – ***Confirmatory testing facilities will submit individual audiologic diagnostic and amplification reports, including information about referrals.***	**Measurement –** Number of infants evaluated, number with and without hearing loss; type, degree of hearing loss; number evaluated for amplification; number referred to each early intervention provider	
Activities	**Quarters**	**Person(s) Responsible**
Audiologic and amplification reports will be provided to referring primary health care provider and NNHSP.	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Auds, PHCP, Admin Assist
Results will be entered by NNHSP into data system	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Adm Assist
Notification for follow-up reported mailed/e-faxed to referral.	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Adm Assist
Program Objective 2.3 – ***Confirmatory testing facilities will submit the annual aggregate report required by statute.***	**Measurement –** Number evaluated, number with hearing loss, number without hearing loss	
Activities	**Quarters**	**Person(s) Responsible**
Notification of report requirements disseminated to audiologists	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr, Adm Assist, Auds
Audiologists submit annual aggregate report to NNHSP	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Auds, Adm Assist
Reconciliation of aggregate and individual reports	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Adm Assist

<u>System Goal 3</u> – All infants with a confirmed hearing loss will begin receiving early intervention services prior to six months of age	**Healthy People 2010 (28-11)** Increase the proportion of newborns who are screened for hearing loss by age 1 month, have audiologic evaluation by age 3 months, and are enrolled in appropriate intervention services by age 6 months. **Healthy People 2010 (28-13)** Increase access by persons who have hearing impairments to hearing rehabilitation services and adaptive devices, including hearing aids, cochlear implants, or tactile or other assistive or augmentative devices.	
Program Objective 3.1 – ***Health care providers and audiologists will refer all newborns and infants with suspected or confirmed hearing loss to the Early Development Network and/or Medically Handicapped Children's Program for eligibility determination.***	**Measurement –** Number of referrals made to EDN, MHCP	
Activities	**Quarters**	**Person(s) Responsible**
Referral protocols developed with EDN, MHCP, and NNHSP subcommittee	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr; EDN; MHCP, Adv Cmte, EHDI Chapter Champion
Referral protocols, including promotional information, disseminated to primary health care providers and audiologists	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr; EDN and Planning Region Teams, MHCP, NSLHA, EHDI Chapter Champion
Referral reports submitted to NNHSP	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Adm Assist, Auds, PHCP
Program Objective 3.2 – ***Audiologists will refer, as appropriate, all infants with confirmed hearing loss for assistive listening device evaluations, medical evaluations, and genetic evaluations.***	**Measurement –** Number of referrals made, results of referrals (hearing aid fittings, diagnoses, etc)	
Activities	**Quarters**	**Person(s) Responsible**
Referral and reporting protocols developed by subcommittee and identification of sources of payment for amplification.	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr; Adv Cmte, EHDI Chapter Champion
Referral and reporting protocols disseminated to audiologists	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr, NSLHA
Reports of referral results submitted to NNHSP	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Adm Assist, Auds, Med Specialists

Program Objective 3.3 – ***The Early Development Network, Medically Handicapped Children's Program, RPDHH, and other early intervention providers will submit individual and annual aggregate reports of early intervention services.***	**Measurement –** Number of referrals to each program, number eligible, number and types of services provided	
Activities	**Quarters**	**Person(s) Responsible**
Reporting protocols developed with NNHSP subcommittee, EDN, MHCP, Regional Programs and other early intervention providers	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr; EDN; MHCP, Reg Prgm, Adv Cmte, OHS, BTNRH
Reporting protocols disseminated to early intervention providers and orientation completed	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr; EDN and Planning Region Teams, MHCP, OHS, BTNRH
Individual reports of services provided are submitted to NNHSP	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Adm Assist; EDN, MHCP, Reg Prgm, OHS, BTNRH
Annual aggregate reports of referrals, eligibility verifications, and services provided are submitted	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Adm Assist; EDN, MHCP, Reg Prgm, OHS, BTNRH

System Goal 4 – All infants with a confirmed hearing loss will have a medical home.	**Healthy People 2010 (28-12)** Reduce otitis media in children and adolescents. **Healthy People 2010 (28-15)** Increase the number of persons who are referred by their primary care physician for hearing evaluation and treatment.	
Program Objective 4.1 – ***Birthing facilities will identify and report to NNHSP the primary health care provider of each newborn who refers on the initial hearing screening or were discharged/transferred prior to the hearing screening.***	**Measurement –** Accuracy of listing of PHCP on reports	
Activities	**Quarters**	**Person(s) Responsible**
NNHSP orients hospital staff about rationale for accurate PHCP identification	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr; Hosp Staff
Primary health care provider listed on hearing screening status report of electronic data reporting system	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Adm Assist; Hosp Staff
Verification requested through first NNHSP notification of hearing screening results to PHCP	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Adm Assist; PHCP

Program Objective 4.2 – *Primary health care providers will refer, as appropriate, infants with suspected or confirmed hearing loss for otologic, genetic, and audiologic evaluations and for early intervention services.*	**Measurement –** Number of medical homes established, number of referrals, documentation of emerging/best practices	
Activities	**Quarters**	**Person(s) Responsible**
Create medical home task force to examine approaches to establishing a medical home for children with hearing loss, including access to amplification.	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr, BTNRH, AAP EHDI Chapter Champion, NeFPA, NePAA, MHCP, EDN, Adv Cmte
Develop a medical home promotion for primary health care providers (print, CD/DVD, conference workshops, grand rounds, website)	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr, BTNRH, AAP EHDI Chapter Champion, NeFPA, NePAA, MHCP, EDN, Adv Cmte
Implement medical home promotional activities (print, CD/DVD, conference workshops, grand rounds, website)	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr, BTNRH, AAP EHDI Chapter Champion, NeFPA, NePAA, MHCP, EDN, Adv Cmte
Develop local demonstration projects linking the medical home approach with EDN service coordination.	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr, BTNRH, AAP EHDI Chapter Champion, NeFPA, NePAA, MHCP, EDN and Planning Region Team, Adv Cmte
Develop a mentoring component to extend the demonstration project success and provide support and expertise to additional local medical home teams	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr, BTNRH, AAP EHDI Chapter Champion, NeFPA, NePAA, MHCP, EDN and Planning Region Team, Adv Cmte
Program Objective 4.3 – *Primary health care providers will submit individual status reports of children with confirmed hearing loss.*	**Measurement –** Number of children with risk factors being monitored; number of child with risk factors identified with hearing loss	
Activities	**Quarters**	**Person(s) Responsible**
Develop on-going, interactive reporting process based on AAP Patient Checklist for Pediatric Medical Home Providers	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgrm Mgr, Adv Cmte, EHDI Chap Champion, NeFPA, NePAA
Periodic individual status reports will be exchanged between PHCP and NNHSP	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Adm Assist, Prgm Mgr, PHCP

System Goal 5 **– Families of young children with a confirmed hearing loss will have access to a family-to-family support system.**	**Healthy People 2010 (28-11)** Increase the proportion of newborns who are screened for hearing loss by age 1 month, have audiologic evaluation by age 3 months, and are enrolled in appropriate intervention services by age 6 months.	
Program Objective 5.1 – ***Families of young children with a confirmed hearing loss will receive a resource guide of support services.***	**Measurement –** Number of resources available, number of print guides distributed, number of web hits	
Activities	**Quarters**	**Person(s) Responsible**
Conduct inventory of local, state, regional, and national support services	Q1 [Q2] Q3 Q4 Q5 [Q6] Q7 Q8 Q9 [Q10] Q11 Q12	Prgm Mgr; PTI-NE
Develop a print and web-based resource guide of available resources	Q1 Q2 [Q3] Q4 Q5 Q6 [Q7] Q8 Q9 Q10 [Q11] Q12	Admin Assist
Disseminate to families of children with a confirmed hearing loss	Q1 Q2 Q3 [Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12]	Admin Assist
Disseminate to primary health care providers, audiologists, EDN service coordinators	Q1 Q2 Q3 [Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12]	Admin Assist
Program Objective 5.2 – ***Organizational support will be provided for families to organize local support groups.***	**Measurement –** Number of initial sessions held, number of new support groups established	
Activities	**Quarters**	**Person(s) Responsible**
Conduct needs assessment of current family-to-family system and resources in NE	[Q1 Q2] Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	BEGINNINGS, PTI-NE, Prgm Mgr
Identify approaches to strengthening family-to-family network in NE	Q1 [Q2 Q3] Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	BEGINNINGS, PTI-NE, Prgm Mgr
Identify groups of parents interested in organizing a local support group	Q1 Q2 [Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12]	PTI-NE, BTNRH, OHS, Reg Prgm, Prgm Mgr
Organize one or two initial meetings of parents	Q1 Q2 [Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12]	PTI-NE, Prgm Mgr
Workshops to address emotions and to organize local groups provided	Q1 Q2 [Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12]	PTI-NE
Program Objective 5.3 – ***Early intervention providers will submit annual aggregate and individual reports of families participating in family-to-family support activities.***	**Measurement –** Number of families engaged in family-to-family support groups, type of groups	
Activities	**Quarters**	**Person(s) Responsible**
Reporting protocols developed with NNHSP subcommittee, PTI-NE, OHS, EDN, MHCP, Regional Programs and other early intervention providers	[Q1 Q2] Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	PTI-NE, BTNRH, OHS, EDN, MHCP, Reg Prgm, Prgm Mgr, Adv Cmte
Reporting protocols disseminated to early intervention providers; orientation completed	Q1 Q2 [Q3] Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgrm Mgr, Admin Assist
Individual reports of family-to-family support services provided are submitted to NNHSP	Q1 Q2 Q3 [Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12]	PTI-NE, BTNRH, OHS, EDN, MHCP, Reg Prgm, Admin Asst

Annual aggregate reports of family-to-family support services are submitted	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	PTI-NE, BTNRH, OHS, EDN, MHCP, Reg Prgm, Admin Asst

System Goal 6 – The hearing of young children in Nebraska will be screened at various times prior to age 3.	**Healthy People 2010 – (28-12)** Reduce otitis media in children and adolescents. **(28-14)** Increase proportion of persons who have had a hearing examination on schedule.	
Program Objective 6.1 – ***Primary health care providers will refer young children at risk for late-onset hearing loss for audiologic monitoring.***	**Measurement –** Number of infants with risk factors, number of infants at-risk who are monitored, number of infants with confirmed hearing loss	
Activities	**Quarters**	**Person(s) Responsible**
Develop on-going, interactive reporting process based on AAP/NCHAM Patient Checklist for Pediatric Medical Home Providers	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgrm Mgr, Adv Cmte, EHDI Chap Champion, NeFPA, NePAA
Dissemination and orientation to risk factors for later-onset hearing loss and to need for periodic monitoring of hearing	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgrm Mgr, Adv Cmte, EHDI Chap Champion, NeFPA, NePAA, NSLHA
Periodic individual status reports will be exchanged between PHCP and NNHSP	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Adm Assist, Prgm Mgr, PHCP
Program Objective 6.2 – ***Early Head Start programs will conduct OAE hearing screenings of enrolled children aged birth to three years.***	**Measurement –** Number of EHS infants-toddlers screened, number referred, number with hearing loss, number of NNHSP "lost-to-follow-up" screened	
Activities	**Quarters**	**Person(s) Responsible**
Early Head Start (EHS) will conduct semiannual OAE screening of infants-toddlers	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	EHS Prgms
Two additional EHS/Migrant Head Start programs will be trained to conduct OAE screenings by Early Childhood Hearing Outreach (ECHO) team (funded by NCHAM)	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	ECHO team, EHS Prgms
Extend ECHO training to additional EHS/American Indian HS programs (NNHSP contract with ECTC)	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	HSSCO, ECHO team, ECTC
Program Objective 6.3 – ***Community-based health services will conduct OAE hearing screenings.***	**Measurement –** Number of clinics trained, number of partnerships established, number of children screened, number with hearing loss	
Activities	**Quarters**	**Person(s) Responsible**
Determine interest level of each community health clinic to conduct well-child OAE hearing screenings.	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr
Identify EHS programs interested in partnering with community health clinics	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr, HSSCO

Adapt ECHO training package to needs of community health clinic	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	NCHAM, ECHO team, ECTC
Conduct ECHO training with community health clinics (NNHSP contract with ECTC)	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	NCHAM, ECHO team, ECTC
Program Objectives 6.4 – *Hearing screening and monitoring status reports will be submitted to NNHSP.*	**Measurement –** MOU, number of hearing screenings reported, number of NNHSP "lost-to-follow-up" screened	
Activities	**Quarters**	**Person(s) Responsible**
Determine the feasibility of EHS/HS reporting individual hearing screening results to NNHSP	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	HSSCO, Prgm Mgr
If feasible, proceed with developing a MOU between EHS/HS and NNHSP to facilitate reporting process	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	HSSCO, Prgm Mgr, NeHSA
Adapt existing reporting processes to meet needs of EHS/HS and NNHSP	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	HSSCO, Prgm Mgr, NeHSA
Disseminate and orient EHS/HS to reporting process	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	HSSCO, Prgm Mgr, NeHSA, Admin Assist

System Goal 7 – Hearing health professionals will increase their capacity to provide appropriate services to young children.	**Healthy People 2010 –** n/a	
Program Objective 7.1 – *Training needs of hearing health professionals will be assessed.*	**Measurement –** Number of surveys returned, content of surveys	
Activities	**Quarters**	**Person(s) Responsible**
Hospital staff will be surveyed annually as part of required annual report	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr, Admin Assist
The NCHAM/BTNRH research project regarding nurses' knowledge of EHDI will be piloted in Nebraska	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	BTNRH, NCHAM, Prgm Mgr, Hosp Staff
A random sample of 200 physicians will be surveyed through the NCHAM/BTNRH research project regarding physicians' knowledge of EHDI	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	BTNRH, NCHAM, Prgm Mgr, physicians
NNHSP will be represented on audiology education committee of Nebraska Speech Language Hearing Association	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr
Program Objective 7.2 – *Professional development resources will be inventoried annually.*	**Measurement –** Listing of training resources	
Activities	**Quarters**	**Person(s) Responsible**
Educational opportunities will be compiled annually for inclusion on website.	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Admin Assist
New educational opportunities will be listed on website as they become available	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Admin Assist

Program Objective 7.3 – *Professional development opportunities will be promoted to the hearing health professionals.*	**Measurement –** Listing of educational opportunities, level of participation	
Activities	**Quarters**	**Person(s) Responsible**
Four audiologists from the rural part of the state will be sponsored to enroll in NCHAM's Auditory Evaluation for Infants Referred from Newborn Hearing Screening 3-part workshop	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr, NCHAM
Audio conferences and interactive video conferences will be developed for hearing screening staff in birthing facilities.	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr, BTNRH
Workshops will be presented at conferences	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	NHA, NeFPA, NePAA, NeHSA
Implement medical home promotional activities (print, CD/DVD, conference workshops, grand rounds, website)	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr, BTNRH, AAP EHDI Chapter Champion, NeFPA, NePAA, MHCP, EDN, Adv Cmte
Develop local demonstration projects linking the medical home approach with EDN service coordination.	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr, BTNRH, AAP EHDI Chapter Champion, NeFPA, NePAA, MHCP, EDN and Planning Region Team, Adv Cmte
Develop a mentoring component to extend the demonstration project success and provide support and expertise to additional local medical home teams	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr, BTNRH, AAP EHDI Chapter Champion, NeFPA, NePAA, MHCP, EDN and Planning Region Team, Adv Cmte
Staff from Early Head Start/Migrant Head Start, community health clinics, RPDHH, and/or Educational Service Units will be trained using ECHO curriculum.	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	ECHO team, ECTC, NCHAM
Links to on-line educational activities, such as BTNRH's pediatric amplification evaluation training, will be included on NNHSP website	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr
NNHSP newsletter will be developed and disseminated semi-annually.	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 12	Prgm Mgr
Program Objective 7.4 – *The effectiveness of the professional development activities will be monitored.*	**Measurement –** Analysis of evaluations	
Activities	**Quarters**	**Person(s) Responsible**
Evaluations will be included as part of each professional development activity	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Admin Assist
Evaluations will be compiled and analyzed	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Admin Assist, Prgm Mgr, Adv Cmte

System Goal 8 – NNHSP will provide an effective structure for the newborn hearing screening and intervention system in Nebraska.	**Healthy People 2010 –** n/a	
Program Objective 8.1 – ***Internal capacity of NNHSP will be expanded and strengthened.***	**Measurement –** Advisory Committee minutes, staffing pattern, data system, number and type of collaborations, website content, overall effectiveness of each component	
Activities	**Quarters**	**Person(s) Responsible**
Advisory Committee will be revised to include better representation of stakeholders	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr, Adv Cmte
Working subcommittees will be established by Advisory Committee: Protocols, Early Intervention, Professional Development, Linguistic/Cultural Concerns, Planning and Evaluation	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr, Adv Cmte, stakeholders
Administrative Assistant I position will be added to maintain tracking and follow-up aspects of the NNHSP	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr, HHSS
Integrated electronic data reporting system will be developed and implemented	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr, QS Technologies, Hosp Staff
Additional funding opportunities will be pursued, including support for the ECHO training to additional programs	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr
Formal and informal collaborations will be developed to build the capacity of the hearing screening and intervention system	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr, organizations and agencies related to early childhood disabilities, specifically hearing loss
NNHSP information will be added to Office of Family Health website	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr, Admin Assist, HHSS
Program Objective 8.2 – ***Parent education materials will be developed and/or provided for birthing facilities***	**Measurement –** Materials in six primary languages, number of materials sent, survey results and analysis	
Activities	**Quarters**	**Person(s) Responsible**
Parent educational brochures and letters will be translated into Vietnamese, Arabic, Russian, Sudanese, and Chinese	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Prgm Mgr, translator
Print and video educational materials will be provided to all birthing facilities	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12	Admin Assist
Parent survey will be conducted semi-annually of random sample of parents	Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 12	Prgm Mgr, Admin Assist, Adv Cmte

PROJECT METHODOLOGY

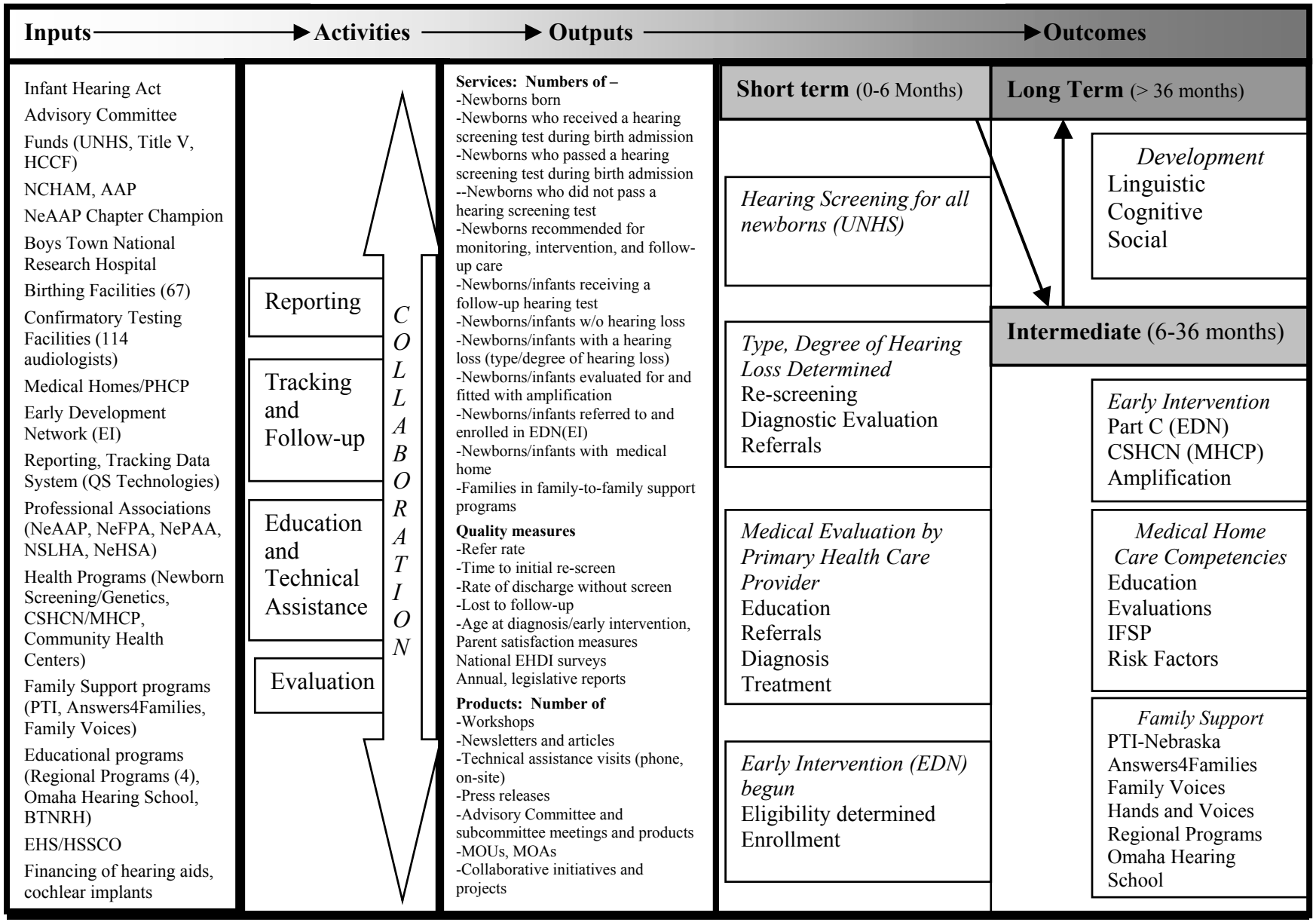
Healthy People 2010 – Public Health Infrastructure 7-11bb. Vision and hearing

The Nebraska Newborn Hearing Screening Program (NNHSP) will build on the accomplishments and resources of the newborn hearing screening system that has been developed in Nebraska and that has resulted in 100% of birthing facilities conducting newborn hearing screenings on 97% of newborns with a follow-up rate of 82%. The infrastructure of the NNHSP will be strengthened to create a more seamless, integrated early hearing detection and intervention (EHDI) system for young children with hearing loss, to support additional follow-up activities and to provide the foundation for ongoing evaluation and continuous improvement. The current NNHSP system will be fine-tuned to improve the efficiency and effectiveness of the newborn hearing screening, follow-up, and reporting processes. The system will be extended to better link audiologic evaluations, medical evaluations and treatment, early intervention services, and family-to-family support services. Evaluation processes will incorporate revised and expanded reporting processes and professional development activities will be more intentional, based on training needs assessments and incorporating available resources. The NNHSP logic model on page 39 depicts the relationship of the resources available, the activities that will be accomplished, the quantification of those activities, and the anticipated short-, intermediate-, and long-term outcomes.

Newborn Hearing Screening (Goal 1)

Reporting. The integrated electronic data system that will be integrated with the State's birth certificate registry will greatly increase the reporting efficiency and accuracy about newborns who "refer" on the hearing screening during birth admission, those discharged or expired prior to screening, and those transferred to a neonatal intensive care unit. The Advisory Committee,

Nebraska Newborn Hearing Screening Program – Logic Model



including representatives from the birthing facilities, will be involved in designing and beta-testing the integrated system.

Tracking and Follow-up. The current protocols developed by the Advisory Committee for the NNHSP identify the newborn's Primary Health Care Provider (PHCP) as the contact for tracking and follow-up activities. This tracking and follow-up protocol has been successful with 82% of the newborns who referred having a follow-up outpatient re-screening at an average age of 24 days. The tracking and follow-up protocols will be reviewed and revised, as necessary, by the Advisory Committee to accommodate the new electronic data system which will automatically generate correspondence.

Education and Technical Assistance. Birthing facilities have been and will continue to be surveyed annually to determine areas for training and technical assistance. The top-ranked issues will be used to determine the focus of professional development activities, such as teleconferences, workshops, links to on-line resources, and newsletter articles. In addition, specific individualized requests will continue to be encouraged, with phone and/or on-site training and/or technical assistance provided.

The NNHSP provides parent education material to the birthing facilities free of charge. Currently available in English and Spanish, the brochure will be translated into Arabic, Vietnamese, Chinese, Russian, and Sudanese. Prior to translation, the health literacy level of the brochure will be assessed and revisions will be made. The educational videotape, Give Your Baby a Sound Beginning, will be purchased and provided free of charge to the birthing facilities.

Evaluation. The Infant Hearing Act requires that each birthing facility have a system for compliance review and to report specific aggregate data to the NNHSP annually. This aggregate data is useful not only to the NNHSP to annually evaluate the percentage of newborns not

screened and the refer rates for those that were screened, but also is used by the birthing facilities as a basic quality assurance measure. The legislatively-required data, which will be cumulatively generated by the integrated reporting system, will continue to assist both the birthing facilities and the NNHSP in monitoring the quality of the programs and the system.

Audiologic Diagnostic Evaluation (Goal 2)

Reporting. The Infant Hearing Act requires that confirmatory testing facilities annually report to the NNHSP the number of newborns and infants who return for a follow-up hearing test, who do not have a hearing loss and the number that are shown to have a hearing loss based upon the follow-up hearing test. The audiologic diagnostic evaluation protocol developed and approved by the Advisory Committee established that, in the interest of reducing costs, the first step in a follow-up hearing test was to be an outpatient re-screening using OAE and/or ABR screening methods within the first six weeks of age rather than proceeding immediately to a comprehensive audiological evaluation. Being a state with the two major population centers being located closely together in the southeastern part of the state with vast expanses of sparcely populated land with few, if any, audiologists within a reasonable driving distance in the middle and western sections, local community health systems have opted to have the outpatient re-screening completed in conjunction with the first well-baby check. This has been a reasonable accommodation for the state and has resulted in a high level of follow-up activities being initiated.

Tracking and Follow-up. Audiologists are not required by statute to report the results of audiological evaluations for individual infants to the NNHSP. Audiologists have increasingly been submitting the individual reports to both the referring PHCP and directly to the NNHSP, resulting in an increase from 39% submission in 2001 to 85% in 2003. This facilitates

determining the type, degree, configuration, and ear-specificity for many more infants while also greatly increasing the number of infants being tracked. During 2005, the reporting protocols for audiological diagnostic evaluations will be reviewed by the Advisory Committee, especially concentrating on ensuring that both the referring PHCP and the NNHSP receive the information needed by each.

Education and Technical Assistance. The NNHSP develops and disseminates a resource directory that has a listing of audiologists who have requested to be included. Information about each provider includes information about the services provided for infants such as re-screening, hearing aid evaluation and fitting, and hearing aid loaners. The information is self-report only; there has been no objective determination of qualifications for providers of infant audiology services. The draft version of the Joint Committee on Infant Hearing (JCIH) Recommendations on Quality Infant Audiology Services (Q*IAS) delineates the knowledge, skills, experience and instrumentation needed to provide infant audiologic services. The JCIH recommendations will be introduced to the professional development sub-committee of the Advisory Committee to be considered in developing an assessment of the educational needs of audiologists, and later to be considered as a template for inclusion into the resource directory. Other audiologic professional development activities of the NNHSP program will be: 1) Sponsoring four audiologists from the rural part of the state to enroll in NCHAM's Auditory Evaluation for Infants Referred from Newborn Hearing Screening workshop. By 2004, nine audiologists from the state had already participated in the extended workshop. 2) BTNRH is developing an on-line class for infant hearing aid evaluation and fitting. This class will be promoted by the NNHSP to audiologists within the state. 3) The NNHSP program manager will serve on the audiology education committee for the Nebraska Speech Language Hearing Association.

Evaluation. The request for follow-up hearing test information, required by statute, is mailed to all licensed audiologists in Nebraska. Since the first step of the follow-up hearing test is an outpatient re-screening and some hospitals are conducting this re-screening, the reporting protocol will be modified to clearly request the number and results of the follow-up re-screening and to include all sites, including birthing hospitals, that conduct follow-up outpatient re-screening. Additional information, including a description of the hearing loss (type, degree, ear-specificity), age of infant at diagnosis, follow-up plans, and referrals made for medical evaluations and to the Early Development Network (EDN) and other support systems, will be requested to better evaluate the effectiveness of this component of Nebraska's EHDI system.

Early Development Network (Goal 3)

Reporting. Tracking of the referrals for early intervention services and follow-up provision of those services has not been consistent during the first four years of the NNHSP. The early intervention and protocol sub-committees of the Advisory Committee will develop a functional, effective referral and reporting protocol, including the need for agreements to address confidentiality issues.

Tracking and Follow-up. The EDN has begun and will continue to submit child-specific reports from the HHS "Connect" database for those verified as hearing impaired. The reports include age at referral and types of services, such as family support and medical home information. The early intervention sub-committee of the Advisory Committee will determine the feasibility of identifying and reporting the services for those children who have hearing loss categorized as a secondary disability. A periodic match of infants in the follow-up section of the NNHSP system and the referral section of the "Connect" system will be conducted to identify instances when referrals may not have been reported or completed.

Education and Technical Assistance. Outreach to audiologists and PHCPs by the EDN's Planning Region Teams (Local Interagency Coordinating Councils) will educate the primary referral sources about the importance of early intervention and the mechanism to refer for services. Staff in the Regional Programs for the Deaf and Hard of Hearing (Regional Programs) and the Educational Service Units will be offered the opportunity to learn to conduct OAE screenings by the ECHO training team.

Evaluation. Evaluation of the effectiveness and timeliness of referrals to the EDN will be studied, along with identification of individual instances when the system did not function as planned. The annual aggregate Child Count report (numbers of children verified with hearing loss being served on December 1) will continue to be submitted as well as child-specific information. The design of an integrated referral and reporting system should result in less children being lost to follow-up and more infants beginning to receive services prior to six months of age.

Medical Home (Goal 4)

Reporting. When an infant has been identified as having a hearing loss, the AAP recommends that the child can best be served within the context of a medical home. The "Connect" system currently tracks which children with a hearing loss have a medical home and this child-specific data has recently begun to be reported to NNHSP. The early intervention sub-committee will determine how to formalize the reporting process to provide consistent and accurate data for annual reporting purposes.

Tracking and Follow-up. Pediatricians participating in focus groups, funded by a mini-grant from the AAP, indicated that the Patient Checklist for Pediatric Medical Home Providers seemed to be a workable format to track the referrals and results for children with a hearing loss. This

checklist, or a modified version, will be incorporated as a coversheet and "at-a-glance" status report to be generated by the new integrated electronic data system and provided to the medical home provider.

Education and Technical Assistance. Opportunities to educate PHCPs about newborn hearing screening will also include information about the medical home concept. A focused and systematic approach will be used to create these opportunities, including the development of "just-in-time" educational materials. For example, as part of the ECHO team's training of Early Head Start staff to conduct OAE hearing screenings, Dr. Donald Uzendoski, the EHDI Chapter Champion, will discuss the importance of establishing a medical home and approaches to encourage that process. The medical home core competencies will be included in educational activities during outreach efforts to family practice physicians, physicians assistants, nurse practitioners and nurses.

Evaluation. The numbers of children who are deaf or hearing impaired with a medical home will be tracked through the "Connect" reports and reported annually. Trends will be monitored over time to determine the effectiveness of outreach efforts to educate the medical community about the medical home approach.

Family-to-Family Support System (Goal 5)

Reporting, Tracking and Follow-up. Until recently, the NNHSP has not been gathering information about the engagement of the families of infants with hearing loss in family-to-family support activities. This child-specific data is available through the HHS "Connect" database and, as part of the EDN system, is now being reported to NNHSP. Discussions have begun with other early intervention providers in the state to develop protocols for reporting of both aggregate and child-specific information. The early intervention subcommittee of the Advisory Committee

will include the reporting, tracking, and follow-up protocols for family-to-family support programs. New subcommittee members include the Supporting Parent Coordinator for PTI-Nebraska and an audiologist from a rural area. Parents will be recruited through the Regional Programs.

Educational and Technical Assistance. The NNHSP will provide support to parents in establishing family-to-family support networks. In June, 2004, the Office of Programs for Children with Sensory Impairments sponsored a workshop for parents on establishing a Hands and Voices chapter in Nebraska. The Office of Programs for Children with Sensory Impairments and NNHSP will partner in providing further opportunities for the parents to develop this chapter. PTI-Nebraska will also offer workshops on establishing support groups to interested parents statewide. NNHSP will also explore creating a section about newborn hearing screening, hearing loss, and support services on the State's on-line information system, Answers4Families.

Evaluation. The NNHSP will work with the early intervention provider systems to determine how best to structure the reporting of family-to-family support services. Particular attention will be paid to developing a system to have unduplicated numbers, although that may occur with the less formal support systems.

Continuous Early Childhood Hearing Screening (Goal 6)

Reporting, Tracking and Follow-up. Initial discussions have occurred with several Early Head Start directors and with the Head Start State Collaboration Office to begin consideration of reporting of the child-specific screening results to NNHSP as part of a longer-term tracking process, to identify those who may have been "lost to follow-up," and to identify those with a later-onset or progressive hearing loss. A memorandum of agreement will be developed to formalize the reporting and tracking process.

Educational and Technical Assistance. To begin the process of implementing continuous early childhood hearing screening in Nebraska, five Early Head Start (EHS) grantees will be trained by Summer, 2005, to conduct OAE hearing screenings. The ECHO project, developed and funded by NCHAM, will be delivered by the ECHO team in Nebraska. OAE screening equipment is provided as part of this project. The ECHO team consists of four audiologists, an educator of the deaf, a training coordinator, and the EHDI Chapter Champion. The NNHSP will contract with the Early Childhood Training Center to conduct one additional training session for staff at community health centers and possibly additional EHS staff. The NNHSP will research funding opportunities to extend this training for additional staff at community health centers, Regional Programs, and Educational Service Units. Options for funding of the screening equipment for these programs is being explored.

Evaluation. NCHAM will be collecting and analyzing anonymous, individual data reports for EHS children screened in the ECHO project up to age 36 months and the results of those screenings. With child-specific information available following appropriate parental release of information, identifying those who had been considered "lost to follow-up" is of primary interest to the NNHSP.

Professional Development (Goal 7)

Educational and Technical Assistance. NNHSP professional development activities in Nebraska will be guided by the professional development subcommittee of the Advisory Committee. To the greatest extent possible, existing resources will be accessed. The specific approaches to be implemented have previously been described in the Education and Technical Assistance sections of Goals 1-6.

Evaluation . Each professional development activity will include an evaluation of the effectiveness of the training, the applicability of the content, and suggestions for continued development.

Infrastructure (Goal 8)

Electronic Data System. During the first six months of 2005, the NNHSP and QS Technologies, Inc., will be designing an electronic newborn hearing screening data reporting system to be integrated with the birth certificate registry of Nebraska's Electronic Vital Statistics System. This will replace the current manual reporting and tracking system that is heavily dependent upon manual processes. The hearing screening module will be developed with input from selected hospital staff. Following beta-testing and refinement, hospital staff will be oriented and trained. It is anticipated that the implementation will begin in June, 2004, and be completed prior to the end of the year.

Advisory Committee. The Nebraska Newborn Hearing Screening Program has been developed based on the requirements identified in the Infant Hearing Act of 2000 and the protocols recommended by the Advisory Committee. The Advisory Committee is currently being revitalized to guide the direction of the NNHSP to create a more integrated and effective EHDI system in the state (see Appendix A for the current membership list). Specific tasks to be accomplished by the Advisory Committee in the next year are 1) to increase the representation of stakeholders, 2) to review and, as necessary, revise the existing protocols to incorporate the electronic data system, 3) to develop new reporting, tracking and follow-up protocols to effectively link the NNHSP and the early intervention systems, 4) to increase the program's responsiveness to the expanding cultural and linguistic communities in the state, 5) to support the development of an effective professional development system, and 6) to guide the long-term

planning and evaluation of the EHDI system in the state. A sub-committee structure will be developed to create functional work groups in each of the areas and to engage a more diverse group of members in the development of the program.

Staffing. A new program manager was hired for the NNHSP effective in February, 2004. The manager's background in audiology, early childhood, family development and management-administration provides the foundation for continuing to develop and grow the NNHSP through collaborative systems. An administrative assistant position will be added to perform the current and additional tracking and follow-up functions.

COLLABORATION AND COORDINATION

The development of more expansive and integrated systems will be based on existing working relationships and the willingness to explore new partnerships to better accomplish additional tasks. In 2004, new collaborative projects have been started with Boys Town National Research Hospital, the Nebraska Chapter of the American Academy of Pediatrics, and Early Head Start grantees through NCHAM's ECHO project (see Appendix D for the Memorandum of Understanding). Initial steps have been taken for new collaborations with Parent Training and Information – Nebraska, the Early Childhood Training Center, the Head Start State Collaboration Office, the Omaha Hearing School, Delta Zeta sorority, and BEGINNINGS. Establishing linkages with the Nebraska Academy of Family Physicians is in process. Relationships and projects are being revitalized with the Early Development Network, the Office of Programs for Children with Sensory Impairments, and the Medically Handicapped Children's Program. And the highly effective day-to-day working relationship with the Newborn Screening and Genetics program continues to contribute enormously to the NNHSP.

Following is a brief description of each organization with existing or emerging collaborations and a listing of the specific activities of the collaborative efforts. These organizations have submitted letters outlining specific areas of collaboration (see Appendix F).

Title V/Maternal and Child Health Block Grant - The Office of Family Health has primary responsibility for the administration of the Title V/MCH Block Grant. The Office Administrator is Nebraska's Title V/MCH Director and guides the needs assessment and planning processes. The Newborn Hearing Screening Program Manager is a member of Nebraska's Title V/MCH 5-year comprehensive needs assessment and part of other Title V-related initiatives and activities within the Office. The Title V/MCH Block Grant supports a wide range of services for the MCH and CSHCN populations in Nebraska, including Newborn Hearing Screening.

Early Development Network (Part C) - The Nebraska Department of Education (NDE) and the Nebraska Department of Health and Human Services (DHHS) are the co-leads for the Early Development Network (EDN), Nebraska's Early Intervention Program, Part C of IDEA. The co-leads work with 29 Early Childhood Regional Planning Teams, the Local Interagency Coordinating Councils. EDN's collaborative support for the NNHSP includes:

- Member of the NNHSP Advisory Committee since its inception in 2000
- Providing annual aggregate data of children with verified hearing loss, based on Child Count
- Providing child-specific follow-up data
- Developing referral and reporting protocols
- Supporting outreach by the Planning Region Teams
- Promoting NNHSP in EDN's 10th Anniversary campaign
- Meeting on a quarterly basis

Office of Programs for Children with Sensory Impairments - The four Regional Programs for the Deaf and Hard of Hearing in Nebraska are administered through the Office of Programs for Children with Sensory Impairments in NDE to assist local school districts in providing full

opportunity for students who are deaf or hearing impaired to participate and communicate and for families to receive support services. The Office of Programs for Children with Sensory Impairments collaborative support for the NNHSP includes:

- Member of the NNHSP Advisory Committee
- Will recruit parents for the Advisory Committee and subcommittees
- Potential funding partner to train RPDHH staff to conduct OAE hearing screenings
- Partner in supporting development a Hands and Voices chapter
- Meeting on a quarterly basis to explore data sharing

Medically Handicapped Children's Program – The Medically Handicapped Children's Program (MHCP), Nebraska's Children with Special Health Care Needs program, provides family-focused services coordination/case management, specialty medical team evaluations for children in local areas, access to specialty physicians, and payment of treatment services. Areas of collaboration between MHCP and NNHSP are:

- Dr. Jeanne Garvin, medical director for MHCP, is a member of the Advisory Committee
- Reporting protocol to be developed to track referrals, eligibility verifications, and services

Nebraska Chapter, American Academy of Pediatrics – Dr. Donald Uzendoski is the EHDI Chapter Champion for the Nebraska AAP chapter. The close working relationship between Dr. Uzendoski and the NNHSP is evidenced by these collaborative efforts:

- Member of the NNHSP Advisory Committee since its inception in 2000
- Secured an AAP mini-grant to 1) conduct focus groups with pediatricians and conference calls with hearing screening coordinators for input about the electronic data system and 2) sponsor EHDI display at Nebraska Family Physicians Preventative Medicine Conference
- Member of the Nebraska Early Childhood Hearing Outreach (ECHO) training team, educating participants about referral processes and establishing a medical home
- Establishing linkages to educate pediatricians, family physicians and other health care professionals about EHDI and about establishing medical homes.

Boys Town National Research Hospital – Boys Town National Research Hospital (BTNRH) has contributed greatly to the development of the NNHSP. Drs. Michael Gorga and Mary Pat Moeller, Advisory Committee members at its inception in 2000, were instrumental in the development of the screening, evaluation, and amplification protocols. Collaborative efforts between BTNRH and NNHSP include:

- Membership of the NNHSP Advisory Committee since its inception in 2000
- Participation in a state-wide study of physicians' perceptions and understanding of EHDI
- Developing a "case study" project to identify issues contributing to "lost to follow-up"
- Member the Nebraska Early Childhood Hearing Outreach (ECHO) training team
- Piloting materials and approaches to study nurses' perceptions and understanding of EHDI
- Pilot projects to establish local medical home teams to engage physicians in IFSPs
- Determining feasibility of a pediatric audiology mentoring system using distance technology

Newborn Screening and Genetics Program (see Appendix D for Declaration of Organizational Structure) **–** The Newborn Screening and Genetics Program (NSP), located in the Department of Health and Human Services, implements the legislated metabolic screening system and administers the Nebraska Newborn Hearing Screening Program. Daily collaboration includes:

- Supervision of the NNHSP program manager
- Access to the metabolic screening database
- NSP reports on birth registration of out-of-hospital births and infant deaths
- Exchange of information about newborn transfers to neonatal intensive care units
- Access to a Health Professions Tracking Center database

Nebraska Hospital Association – The Nebraska Hospital Association (NHA) represents Nebraska's rural and urban hospitals, including data analysis, assistance with community health development, and provision of information and special services. NHA supports NNHSP by:

- Membership of the NNHSP Advisory Committee since its inception in 2000
- Advise development of electronic reporting system

- Recruit representation from birthing hospitals
- Education and promotion activities (newsletter articles, meeting reports, conference displays)

PTI– Nebraska – PTI–Nebraska is Nebraska's Parent Training Center, funded through Part D of IDEA. PTI offers training and information for all families of children with special needs. PTI is also the organizational host for the new Family Voices chapter in Nebraska. Planned collaborative activities to establish and strengthen family-to-family supports include:

- NNHSP promotion of PTI hospitals, audiologists, and health care providers
- Conducting workshops for groups of parents to provide the resources to form and maintain local family-to-family support groups, such as a Hands and Voices chapter
- Membership on the NNHSP Advisory Committee and the early intervention sub-committee

Head Start State Collaboration Office – The Nebraska Head Start State Collaboration Office (HSSCO), located in NDE, is funded by the Head Start Bureau to assist in the development of collaborative early childhood initiatives. Specific collaborative projects include:

- Promotion of ECHO project with the Nebraska Head Start Association
- Explore the development of a Memorandum of Understanding for reporting of EHS/HS hearing screening results
- Determine the feasibility of collaborations between EHS/ECHO programs and local community health centers to provide OAE follow-up screenings
- Membership on the Advisory Committee

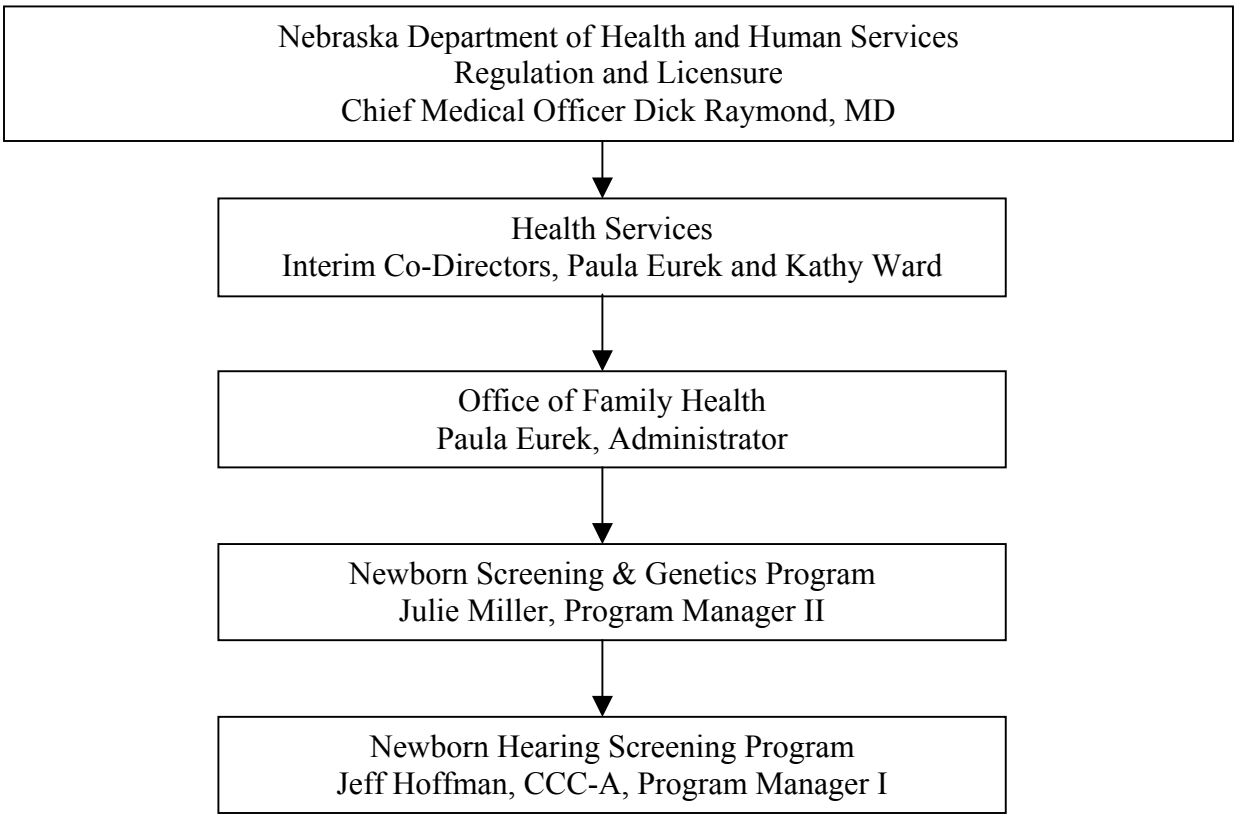
Early Childhood Training Center – The Early Childhood Training Center (ECTC) is a statewide project that provides services designed to support the professional development of early care and education staff, including programs serving young children with disabilities and their families. Collaborations include:

- Member of the Nebraska Early Childhood Hearing Outreach (ECHO) training team
- Potential contract to replicate ECHO training beyond the NCHAM-funded project

ADMINISTRATION AND ORGANIZATION

The Nebraska Newborn Hearing Screening Program is administratively and organizationally placed under the direction of the Newborn Screening and Genetics Program, within the Office of Family Health in the Nebraska Department of Health and Human Services Regulation and Licensure. Other programs in the Office of Family Health are Perinatal, Child, and Adolescent Health; Reproductive Health; Immunization; Nebraska WIC; and Pregnancy Risk Assessment Monitoring System. The NNHSP Program Manager is directly supervised by Julie Miller, Program Manager of the Newborn Screening and Genetics Program. The Administrative Assistant will be supervised by the NNHSP Program Manager.

The chart below depicts the organizational and administrative structure. Please see Appendix E for a graphic that includes the Advisory Committee, state government linkages, collaborative partners, and service providers.



ORGANIZATION EXPERIENCE, CAPACITY, AND AVAILABLE RESOURCES

The Department of Health and Human Services appointed a multi-disciplinary NNHSP Advisory Committee to advise on the implementation of the Infant Hearing Act, to make recommendations regarding newborn hearing screening methods and protocols and to participate in developing consensus on the best practices to promote newborn hearing screening. The Advisory Committee worked closely with the NNHSP staff to develop protocols for newborn hearing screening, referral, audiologic diagnostic evaluation, and amplification assessment.

The extended network of professionals involved with newborn hearing screening, including the staff at birthing facilities, audiologists, and primary health care providers, have done well to implement the protocols. Some of the highlights of the effectiveness of the newborn hearing screening system in Nebraska since its beginning in 2000 include:

- 100% of birthing facilities in Nebraska are conducting newborn hearing screenings
- 97% of births in the state were screened during birth admission in 2003. This is a dramatic increase since 2000, when only slightly more than one third received a hearing screening.
- The refer rate was 3.6% during 2003
- The rate of outpatient re-screening increased from 63% in 2001 to 82% in 2003
- In 2003, the average age of completion of outpatient re-screening 23.8 days
- 87.4% of the outpatient hearing screenings occurred prior to six weeks of age
- Voluntary child-specific reporting by audiologists of individual infants diagnosed with hearing loss has consistently increased from 39% in 2001 to 85% in 2003.
- EDN has begun to provide child-specific data (age of referral, information about family support services and medical homes) for those infants who are verified with hearing loss.

The Advisory Committee is now poised to include a more representative and diverse membership and to guide the development of new areas of responsibility for the NNHSP.

APPENDIX A – TABLES

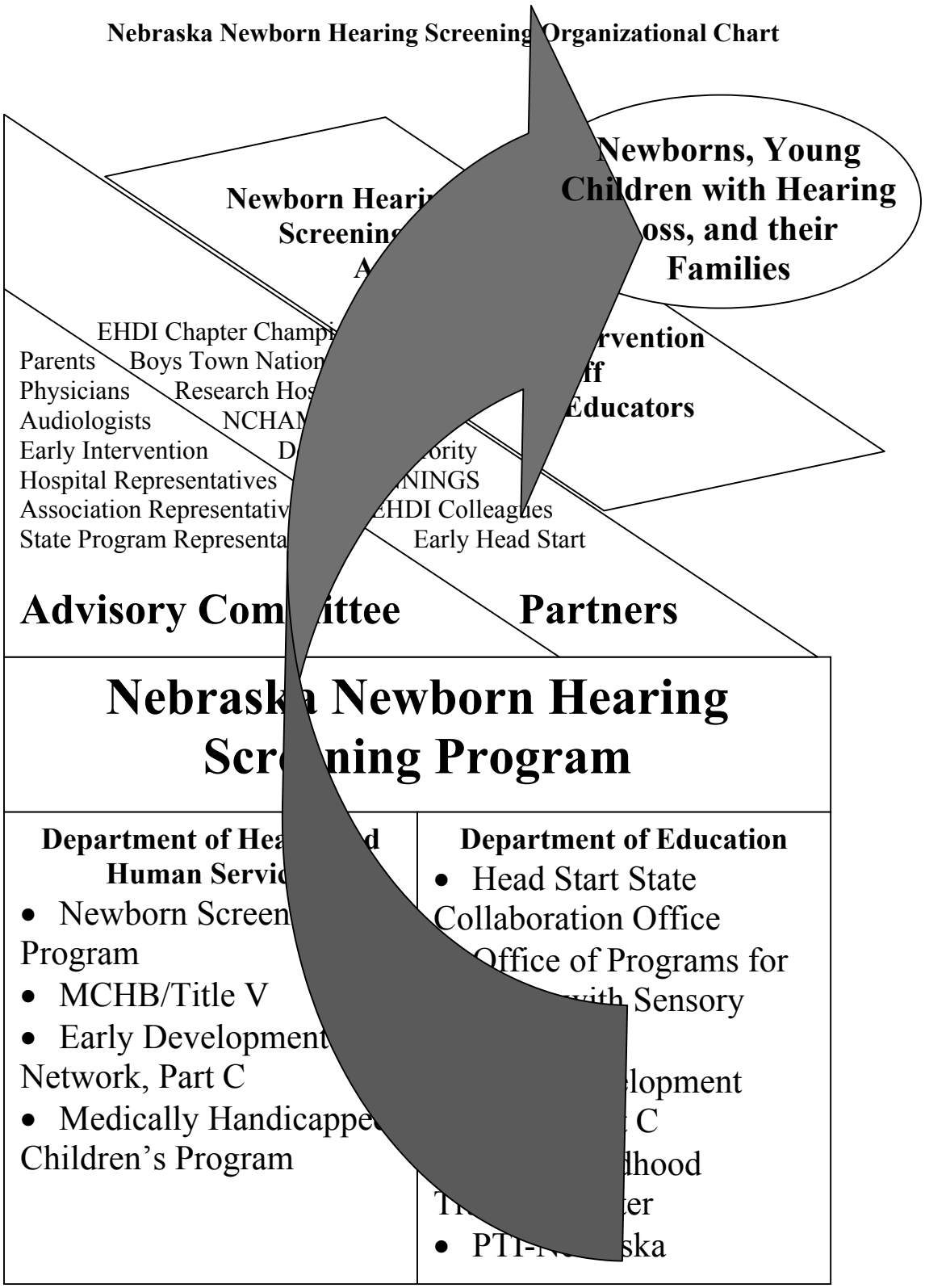
Advisory Committee Members

Committee Member	Group/Facility Represented
Steve Boney, PhD	Barkley Center for Communications University of Nebraska at Lincoln
Margaret A. Coleman	Nebraska Commission for the Deaf and Hard of Hearing
Lora Langley, RN, BSN	Ponca Tribe of Nebraska
Regina Watson, LPN-C	Hearing Screening Coordinator Tri County Area Hospital, Lexington
Mary Pat Moeller, PhD	Director, Center for Deafness Boys Town National Research Hospital
Stacie Mendlik, MS, CCC-A	Parent, Audiologist
J. Bradley Schaefer, MD	Geneticist, Munroe-Meyer Institute, Nebraska Medical Center
Monica Seeland	Nebraska Hospital Association
Britt Thedinger, MD	Otologist, Ear Specialists of Omaha
Donald M. Uzendoski, MD	Nebraska Chapter, American Academy of Pediatrics Early Hearing Detection and Intervention Chapter Champion
Robert Wergin, MD	Nebraska Academy of Family Physicians
Dawn Peterson	Parent Training and Information-Nebraska
Eleanor Kirkland, MA	Head Start State Collaboration Office (NDE)
Robert Hill	Office of Programs for Children with Sensory Impairments (NDE)
Jeanne Garvin, MD	Medical Director Medically Handicapped Children's Program (HHS)
Charlie Lewis	Co-Lead, Early Development Network (Part C) (HHS)
Julie Miller	State Genetics Coordinator, Newborn Screening Program (HHS)
Krystal Baumert	Follow-up Coordinator, Newborn Screening Program (HHS)
Mike Rooney	Administrative Assistant, Newborn Screening Program (HHS)
Jeff Hoffman, CCC-A	Manager, Newborn Hearing Screening Program (HHS)

Listing of Abbreviations in Goals and Objectives

Prgm Mgr	Program Manager
QS Tech	QS Technologies, Inc.
Hosp Staff	Hospital Staff
Adm Assist	Administrative Assistant
Adv Cmte	Advisory Committee
Auds	Audiologists
PHCP	Primary Health Care Provider
NSLHA	NE Speech Language Hearing Association
EDN	Early Development Network
MHCP	Medically Handicapped Children's Program
EHDI Chapter Champion	Dr. Donald Uzendoski
Med Specialists	Medical Specialists
Reg Prgm	Regional Programs for the Deaf or Hard of Hearing
OHS	Omaha Hearing School
BTNRH	Boys Town National Research Hospital
NeFPA	Nebraska Family Physicians Association
NePAA	Nebraksa Physicians Assistant Association
PTI-NE	Parent Training and Information
ECHO team	Early Childhood Hearing Outreach
EHS Prgms	Early Head Start programs
HSSCO	Head Start State Collaboration Office
ECTC	Early Childhood Training Center
NCHAM	National Center for Hearing Assessment and Management
HHSS	Health and Human Services System

APPENDIX E – PROJECT ORGANIZATIONAL CHART



APPENDIX G – PERFORMANCE MEASURES

- *The percent of completed MCHB projects publishing findings in peer-reviewed journals.* The NNHSP is actively participating in several research projects at this time. Nebraska has been selected to participate in a research project of BTNRH and NCHAM to survey physicians about their knowledge and perceptions of early hearing detection and intervention. Nebraska is also currently participating in NCHAM's Early Childhood Hearing Outreach (ECHO) research project to increase the capacity of Early Head Start programs to objectively screen the hearing of children aged birth to three.
- *The percent of MCHB supported projects that are sustained in the community after the federal grant project period is completed.* State general funds have not been available to the program during the current fiscal year nor are they anticipated in the near future. During the current fiscal year the NNHSP is receiving MCHB/Title V funding but that has not been ongoing. The Infant Hearing Act requires the NNHSP to actively seek all available funding.
- *The degree to which MCHB supported programs ensure family participation in program and policy activities.* Semi-annually a random sampling of 10% of the parents of newborns who "referred" during birth admission is surveyed about their experience with the NNHSP. Survey results have been summarized and provided to the Advisory Committee as part of a quality improvement approach. The Advisory Committee and the subcommittees that are being developed currently needs broader representation of families. The NDE Office of Programs for Children with Sensory Impairments has agreed to recruit parents of young children in the Regional Programs to participate in the Advisory Committee process. Also, the two programs will partner in supporting parents to establish a Hands and Voices chapter in Nebraska.
- *The degree to which MCHB supported programs have incorporated cultural competence elements into their policies, guidelines, contracts and training.* Nebraska is becoming more linguistically, culturally, and ethnically diverse. Currently parent educational materials and correspondence are in English and Spanish only. Materials will be translated into five other languages. The Advisory Committee will have a cultural competence subcommittee. As part of the focus on the medical home approach, cultural competence will be highlighted as one of the seven primary care competencies.
- *The degree to which grantees have assisted States in increasing the percentage of children who are screened early and continuously for special health care needs and linked to medical homes, appropriate follow-up and early intervention*. Two initiatives are being developed which will provide the primary basis for reporting on this Performance Measure. The first is implementing NCHAM's ECHO team training project to train Early Head Start staff to conduct OAE hearing screenings. Initial discussions have occurred to begin consideration of reporting of the child-specific screening results to NNHSP as part of a longer-term tracking process, to identify those who may have been "lost to follow-up," and to identify those with a later-onset or progressive hearing loss. The second initiative is one in which NNHSP and BTNRH will support the development of local medical home teams to better link with the Planning Region Teams, the Part C Local Interagency Coordinating Councils.