ABSTRACT

Project Title: Maine Newborn Hearing Program – LFU/D
Applicant Names: Maine Department of Health and Human Services
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PROBLEM: Since 2004, MNHP has become a model for success, with over 98% of infants being screened. Data from 2012 tells us that 173 (1.3%) of infants were LFU/D at screening. MNHP knows that 76.5% of those infants were born at home and did not have access to a well-established system for screening infants outside of a hospital setting; a total of 208 infants failed the newborn hearing screening, with 16.34% (35) being LFU/D for audiologic evaluation. MNHP knows that hospitals do not refer infants to audiologists prior to discharge, families move, change healthcare providers and sometimes audiologists do not report to MNHP leaving an incomplete loop and possibly leading to poor outcomes when hearing loss is left undetected. Finally, of the 23 children with confirmed hearing loss 8 (34.7%) were LFU/D.

- AIM 1: By August 31, 2017, MNHP will decrease the percentage of Maine infants who are LFU/D for screening from 1.3% to 1% of the births.
  - Improve the percentage of screening of home births by 10% each year.
- AIM 2: By August 31, 2017, MNHP will decrease the percentage of Maine infants who are LFU/D for evaluation from 16.3% to 10%.
  - Improve the percentage of infants who complete an audiological evaluation by 3-months of age by 3% each year.
- AIM 3: By August 31, 2017, MNHP will increase the percentage of Maine infants with a confirmed hearing loss who are receiving early intervention services by 6-months of age from 57% to 75%.
  - Improve the percentage of infants with a confirmed hearing loss who are receiving early intervention services by 6-months of age by 5% each year.
- AIM 4: By August 31, 2017, MNHP will increase the percentage of primary care providers who feel confident explaining the causes of hearing loss from 30% to 60%.
  - Improve the percentage of PCPs who feel comfortable explaining hearing loss by 10% each year.

METHODOLOGY: The MNHP Quality Improvement Team will use continuous quality improvement techniques as the primary tool to problem solving focusing attention on whether or not the strategies that have been used are successful. Using the PDSA cycle as an improvement process MNHP will continue to achieve measurable improvements in the LFU/D.

COORDINATION: The project will be led by MNHP Coordinator and the CSHN Director in partnership with the MNHP Advisory Board, the MAA, the ME Chapter of AAP/AAFP, Maine Association of Certified Midwives, DOE/CDS/Part C, University of Maine CEDH, Maine Education for the Deaf and Hard of Hearing – ECFS, and families.

EVALUATION: Evaluation methods used to assess program goals and objectives include: a) CSHN Director and the MNHP Coordinator monitoring the progress and timeliness of completing activities as outlined in the work plan; b) MNHP Advisory Board will review (1/4ly) LFU/D, and the 1,3,6 data, trends and progress of implementing activities; c) the MNHP will provide data annually to the Maternal and Child Health Block Grant (Federal Performance #12), the CDC Federal EHDI Program, and the Legislature as required by statute; and d) the epidemiologist will analyze data and determine to what extent progress has been made toward reducing LFU/D.

ANNOTATION: The purpose of the project is to reduce the LFU/D for screening, diagnosis, and intervention. The project will implement a quality improvement process that describes the current system, identifies potential Quality improvement projects; develops an action plan and implements improvements.
Project Narrative

SECTION I: INTRODUCTION

The Maine Department of Health and Human Services (DHHS), Maine Center for Disease Control and Prevention (MBCDC), Division of Population Health (DPH), Children with Special Health Needs Program (CSHN), Newborn Hearing Program (MNHP) request funding to reduce the loss to follow-up using continuous quality improvement techniques to achieve measurable improvements in the number of infants who receive appropriate and timely follow-up. In order to fulfill the purpose of the grant the Maine Newborn Hearing Program (MNHP) must ensure that infants are not only screened but diagnosed and have access to early intervention services.

Since 2004, MNHP has become a model for success, with over 98% of infants being screened. Data from 2012 tells us that 173 (1.3%) of infants were LFU/D. MNHP knows that 76.5% of those infants were born at home and did not have access to a well-established system for screening infants outside of a hospital setting; a total of 208 infants failed the newborn hearing screening, with 16.3% (35) being LFU/D for audiologic evaluation. MNHP knows that hospitals fail to notify MNHP of a scheduled audiological appointment as mandated by statute, families move, they change healthcare providers and often audiologists do not file a report MNHP leaving an incomplete loop and possibly leading to poor outcomes when hearing loss is left undetected. Finally, of the 23 children with confirmed hearing loss 8 (34.7%) were LFU/D. MNHP was unable to confirm if they were receiving early intervention services.

Maine’s project will work toward achieving the Healthy People 2020 Objective for newborn hearing screening by “increasing the proportion of newborns who are screened for hearing loss by no later than age 1 month, have audiologic evaluation by age 3 months, and are enrolled in appropriate intervention services no later than age 6 months”.

This project will use continuous quality improvement; Plan, Do, Study, Act (PDSA) cycle as the primary tool to problem solving. The MNHP Quality Improvement Team has been meeting since June 2013 and meets every two weeks. The QI Team is developing flowcharts (current process) and identifying quality improvement projects. The QI Team has developed a draft team charter (Attachment 9) which provides the members an official document that will guide us throughout the project period.

SECTION II: NEEDS ASSESSMENT

This section provides information from the 2012 Maine CDC State Health Assessment and Maine’s Newborn Hearing 2012 EHDI Data Summary giving the reviewer a broad understanding of Maine strengths and challenges to reducing the LTFU/D.

Demographics

Maine’s population is growing at a slower rate than most of the U.S. but aging at a faster rate. The majority of residents reside in rural towns and small cities. There are 1.32 million people residing in Maine. According to the 2010 Census estimates, Maine’s population is 95.3% white, 0.7% American Indian or Alaska Native, 1.3% black or African American, 1.1% Asian, and 1.6% two or more races.

2 http://quickfacts.census.gov/qfd/states/20000.html
The Hispanic population is about 1.4%. Of Maine’s children under the age of 18, 95.2% are non-Hispanic white and 1.3% Hispanic. There are five federally recognized Indian tribes in Maine: Aroostook Band of Micmacs; Houlton Band of Maliseet Indians; Passamaquoddy Tribe of Indian Township; Passamaquoddy Tribe at Pleasant Point, and the Penobscot Indian Nation.

Although Maine’s population is predominately white, the state is gradually becoming more racially diverse. Emerging populations include people of Somali, Sudanese, and Iraqi ancestry arriving in Maine as primary refugees or secondary migrants.

Geography
Maine is the northernmost and largest state in New England and the easternmost state in the United States. New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut fit into the 35,385 square miles occupied by the state of Maine. Statewide, 61% of the population lives in rural areas. More than one-third of the population lives in the two southernmost counties (Cumberland and York), which accounts for only 6% of the state’s land area. Maine has three major cities: Portland (pop. 66,363); Lewiston (pop. 36,460); and Bangor (pop. 32,817). Augusta, the state capital has a population of 18,946.

Income and Poverty
Based on ACS data, the median household income in Maine (2008-2012) is approximately $5,000 less than in the U.S. ($48,219 vs. $53,046) with considerable variation in income across Maine counties. The median household income ranged from $36,486 in Washington County to $57,159 in Cumberland County. Across Maine, 13.3% of residents and 18.1% of children under the age of 18 years lived below the FPL 2008-2012.

Health Insurance and Access to Medical Care
Maine’s uninsured rates among children are lower than the national average. However, according to 2008-2012 estimates, 5.2% (14,195) of Maine children, age 0-18 do not have health insurance compared to 8.1% of children nationally. MaineCare (Medicaid) provides health coverage to nearly one third of all children living in Maine (about 110,000 children) and nearly half (47%) of all births in Maine are financed by MaineCare. Currently, 46.1% of Maine children under the age of 18 participate in MaineCare.

Based on survey data collected in 2008 by the Office of Data, Research and Vital Statistics, which counts the number of providers in active practice, there were nearly 3,000 allopathic (MD) and osteopathic (DO) physicians practicing in Maine. The 2008 survey found that 407 active physicians (MD/DO) listed family practice as their primary specialty, 189 active physicians listed pediatrics as their primary specialty. Nearly 33% of all physicians, 29.3% of primary care providers, and 40.7% of pediatricians are located in Cumberland County.

These factors along with the current economy, high unemployment, as well as high heat, gas, and food prices are major issues facing Maine’s most vulnerable. These factors create complex challenges for Maine Department of Health and Human Services, as well as Maine’s Newborn Hearing Program as we strive to improve health outcomes for children with hearing loss.

http://quickfacts.census.gov/qfd/states/23000.html
4 http://quickfacts.census.gov/qfd/states/23/2302100.html
5 http://quickfacts.census.gov/qfd/states/23/230305.html
6 http://factfinder2.census.gov/clinicalservices/qs/pages/productview.xhtml?src=blnk
7 http://factfinder2.census.gov/clinicalservices/qs/pages/productview.xhtml?src=blnk
Maine CDC Newborn Hearing Data
The Maine CDC Newborn Hearing Screening data for 2012 (Attachment 6) indicates that the maternal age at the time of birth in Maine ranged from <15 years to >50 years of age. Ninety-two percent of Maine births were to mothers with at least a high school education; 98.3% of births were to non-Hispanic whites; and, 1.5% of births were among Hispanic women.

The 2012 EHDI data indicates that Maine continues to maintain a 98% screening rate. Of the 260 infants with a missed screen (Figure1) 173 or 1.3% are considered LTFU/D; home births represent 91% of those infants. During 2012, there were a total of 208 infants who did not pass screening; 151 (73%) completed an audiologic evaluation and 34 (16.3%) are considered LTFU/D. MNHP received 23 confirmed reports of a hearing loss from audiologists; 100% of those children were referred to Part C - early intervention services. MNHP received information confirming that 13 (56.5%) are enrolled in Part C and/or other non-Part C programs. The remaining 10 children are not confirmed as receiving early intervention services; 8 of whom are considered LTFU/D.

The following information is based on EHDI 2012 Data Summary for Screening, Diagnostic Evaluation and Early Intervention Services

Screening
Currently, there are 28 hospitals in Maine with obstetrical service, two of these facilities Maine Medical Center in Portland and Eastern Maine Medical Center in Bangor are designated as Level III neonatal intensive care units which have the staffing and technical capability to manage high-risk obstetric and complex neonatal patients. All birthing facilities have the ability to monitor and review newborn screen submissions to ensure that all babies born at the facility receive a screen for hearing loss prior to discharge. There are two free standing birth centers in Maine; the Birth House in Bridgton and Northern Sun in Topsham. MNHP has provided Northern Sun equipment to provide newborn hearing screenings. It is estimated that this birth center can provide hearing screening to at least a third of the home births.

Finally, for families who choose a home birth accessing outpatient screening can be difficult. A physician or other licensed health professional must order the screen/lab work. In most cases a physician will require that the infant become a patient of record which the family may or may not want to do.

Screening and LTFU/D 2012 Data
◊ Of the 12,590 infants screened, 98% (12,086) were screened by age 1 month; 1.5% (192) screened after 1 month of age but before 3-months age; and .38% (48) screened after 6-months of age.
◊ A total of 260 (2.06%) were not screened. Of those 67 infants died and 20 parents refused/declined the screen.

Strengths
◊ All 28 birthing facilities in Maine screen infants prior to discharge using Auditory Brainstem Response (ABR) screening equipment.
◊ All birthing facilities licensed in Maine are required to report hearing screening results to MNHP, at least monthly.
◊ All birthing facilities upload hearing screening data electronically to ChildLINK.
All hearing screening results are linked electronically with birth and death certificates, metabolic (bloodspot), and birth defects.

All birthing facilities are required by P.L. 2295 to schedule an audiological evaluation prior to hospital discharge and notify MNHP and the child’s PCP of the appointment. MNHP and the PCP are notified by FAX.

All birthing facilities are able to review their own submissions through ChildLINK.

One Midwifery practice uses an ABR screener.

ChildLINK and MNHP provide technical assistance to birthing facilities on screening, equipment, follow-up and uploading data to ChildLINK.

A representative of the Maine Hospital Association sits on the Maine Newborn Hearing Advisory Board.

CSHN has a contract with Maine Medical Center for Perinatal Outreach Education which provides MNHP access to Perinatal Nurse Managers throughout the state.

ME CDC Strengthening the Continuum of Care Committee with its mission to improve birth outcomes has provided an opportunity to build a solid relationship with the Maine Association of Certified Professional Midwives to improve birth outcomes for all mothers and infants.

**Opportunities for Improvement**

- Partner with the Maine Association of Certified Professional Midwives (MACPM) to improve the system for screening infants when they are born outside of the hospital system.
- Purchase several portable screeners for MACPM to expand access to screening outside of the hospital setting.
- Work with Birth Wise Midwifery School to present information to students on the importance of newborn hearing screening.

Currently, there are five Category A Facilities with 14 pediatric prepared audiologists. A Category A facility is a facility that provides full audiological diagnostic evaluations (this includes ABR with frequency specific results). There are a total of twenty-eight Category B Facilities with a total of 30 audiologists. A Category B facility is a facility that provides pediatric audiological testing procedures for children over 6 months of age with services including but not limited to, soundfield testing, screening prior to electrophysiologic, otoacoustic emission testing, and support service for hearing aid fitting. The Maine Academy of Audiologists (MAA) is represented on the MNHP Advisory Board and has been an integral partner in the design and implementation of the on-line reporting form.

**Diagnostic Evaluation and LTFU/D Data**

- Of 208 infants that did not pass screening, 108 (52%) were evaluated by 3 months of age, 16 (8%) were evaluated after 3 months of age but before 6 months of age; and 27 (13%) were evaluated after 6-months of age.
- A total of 57 infants did not receive an audiology evaluation of those 2 died; 10 parents declined further services; 9 families moved out of state and 1 infant was in progress leaving a total of 35 (16.34%) LTFU/D.
- Twenty-three infants where diagnosed with hearing loss.
Strengths
◊ There are 30 audiologists practicing in 28 facilities serving infants and young children.
◊ The Pediatric Audiology listing is updated annually and mailed to all birthing facilities and primary care providers.
◊ P.L. 1142 mandates that all providers of hearing diagnostic procedures report the results of the evaluation and diagnosis of children up until the age of 3-years to MNHP.
◊ All audiologists have access to on-line reporting through ChildLINK.

Opportunities for Improvement
◊ Work with audiologists to encourage the use of the on-line reporting form.
◊ Monitor audiological referrals/FAXs from birthing facilities via ChildLINK.
◊ Educate and encourage all birthing centers to make audiological referrals for infants who do not pass their newborn hearing screening.
◊ Request newborn screening policies from hospitals to ensure that the policy states making referrals to audiologists prior to discharge for infants who do not pass their newborn hearing screening.
◊ Work with hospitals and ChildLINK to improve timeliness of reported equipment failures and data errors.
◊ Survey hospitals to determine if barriers exist that prohibit them from scheduling audiological appointments and notifying MNHP and the child’s PCP.
◊ ChildLINK automatically notify EHDI Coordinator when audiology report is received.
◊ Review “at risk” children and recommended follow-up diagnostic evaluations.
◊ Collaborate with the other New England states to develop a quality improvement project that improves early access to border babies thereby decreasing LFU/D.
◊ Encourage audiologists to register with the EHDI-PALS website (Pediatric Audiology Links to Services). This is a web-based link to a national directory of facilities offering pediatric audiology services to children under the age of five.

Early Intervention

Effective March 1, 2014, the State Intermediate Educational Unit -- Child Development Services (CDS), the Governor Baxter School for the Deaf/Maine Educational Center for the Deaf and Hard of Hearing (MBCDHH) -- Early Child and Family Services signed a memorandum of understanding to improve early intervention services to the deaf and hard of hearing (Attachment 10). Early Child and Family Services (ECFS) consultants for MBCDHH will become Early Intervention Specialists and be integrated members of the CDS Early Intervention teams. The purpose of the MOU is to develop a collaborative approach between CDS and MBCDHH/ECFS to enhance and expedite the provision of early intervention services as it relates to children who are deaf or hard of hearing. MNHP should see a decrease in the number of children who are LFU/D.

Early Intervention and LTFU/D Data
◊ In 2012 there were a total of 23 infants who were diagnosed with hearing loss. All 23 (100%) were referred to Child Development Services (CDS).
◊ Of those 23, MNHP received confirmation that 13 were receiving early intervention services from either CDS or ECFS. Ten (77%) were enrolled by 6-months of age.
◊ MNHP was unable to confirm early intervention services on the remaining 10 children. However, for 2 of those children, the family declined any further services, leaving 8 (34.7%) LFU/D.
Strengths
◊ MNHP is required to refer all children with a confirmed hearing loss to CDS.
◊ MNHP refers 100% of infants with a confirmed hearing loss to CDS.

Opportunities for Improvement
◊ Provide outreach and education to all CDS site Directors to increase knowledge and awareness of MNHP.
◊ Establish regular meetings with MECDHHD staff to improve outcomes for children.
◊ Work with MECDHHD to ensure that MNHP is included on the release of information form.

In 2012, Maine participated in the National Center for Hearing Assessment and Management Survey: Knowledge, Attitudes, and Practices of Physicians Regarding Newborn Hearing Screening. Unfortunately, only 59 providers responded. The majority of respondents (52.5%) were family physicians; 30.9% were between the ages of 50 – 60 years; 36.9% had been in practice between 201-30 years; and, 74.6% were either in private practice or a community setting. Although, the (n) was small MNHP did note that 74% reported that they never connected with the state EHDI Program; 50% felt very confident explaining the newborn hearing screening process; they were less confident (60.3%) explaining the causes of hearing loss; and; 78.9% report that they never do hearing screening in their offices.

Ms. Glencross, the Newborn Hearing Coordinator, has met with representatives from Maine Medical Association and have discussed some potentially good opportunities for MNHP to reach a wide number of PCPs and their office staff. These include but are not limited to 1) attending the Practice Managers Conference in June 2014; 2) attending the Fall Conference of the Maine Chapter of the Academy of Pediatrics; and; 3) MMA promoting MNHP and being placed on the agendas at state conferences.

Strengths
◊ Maine Chapter of American Academy of Pediatrics appointed Dr. Christopher Pezzullo as the Chapter Champion to increase the involvement of primary care providers in improving health outcomes for children with hearing loss.
◊ The Maine Academy of Family Physicians as well as the Maine Chapter Champion sit on the Maine Newborn Hearing Advisory Board.

Opportunities for Improvement
◊ Provide outreach and education to physicians to increase knowledge in the areas of diagnostic evaluations, early intervention services and at risk conditions.
◊ Continue to develop and maintain an updated physician database.

ChildLINK (MNHP tracking and surveillance system) tracks the approximate 12,500 infants born in Maine in a web-based system that seamlessly integrates data into a single user-friendly interface; all infants/children receive a unique identifier. ChildLINK links hearing screen data with multiple data sources including the electronic birth and death registry, metabolic (blood) screen data, audiology evaluation reports, birth defects and other CSHN programs such as the Cleft Lip and Palate and Partners in Care Coordination Programs. All records are linked using a cascading series of probabilistic linkage algorithms specifically designed for each
input source, thus minimizing manual data matching and increasing the accuracy of individual level information across reporting sources. A key feature of ChildLINK is its ability to record all information on an individual child, including logging phone calls and correspondences. ChildLINK is able to organize individual contact information like mother’s name, address, phone and infant’s primary care provider, allowing MNHP to conduct follow-up on those infants who “refer”. Identification of high-risk infants is made automatically through data included in the hearing screen these infants are tracked closely to assess the degree to which high-risk infants develop hearing loss.

Strengths
- Birth and death certificates uploaded on a weekly basis
- Bloodspot, birth defects and newborn hearing are all linked at the individual level
- Evaluated the effectiveness of ChildLINK using the CDC’s Guidelines for Evaluating Public Health Surveillance Systems.

Opportunities for Improvement
- Electronic birth/death registry will be enhanced to National Center Health Statistics 2003 standards.
- Direct access to newborn hearing and newborn bloodspot extraction files “real time” data.
- Establish Standard Operating Procedures to clarify the data reporting process and improve timeliness of data reporting.
- Decrease the number of records requiring manual linkage.

March 1999, Public Law 647, 22 M.R.S.A. c. 1686, establishes the Maine Newborn Hearing Program (MNHP) within the Department of Health and Human Services. The intent of the legislation was “to enable children and their families and caregivers to obtain information regarding hearing screening and evaluation and to learn about treatment and intervention services at the earliest opportunity in order to prevent or mitigate developmental delays and academic failures associated with undetected hearing loss.” The primary goals of the Newborn Hearing Screening Program are to ensure that: a) Every newborn in Maine receives a hearing screening prior to hospital discharge or by 1-month of age; b) Infants not passing the hearing screening receive an appropriate audiological diagnostic evaluation by three months of age; and c) Infants diagnosed with a hearing loss as a result of the newborn hearing screening program are referred to appropriate early intervention resources by six months of age. Program rules were adopted January 2004 defining the responsibilities of birthing facilities, primary healthcare providers, audiologists, and MNHP.

September 2007, P.L. 1142, “An Act to Enhance the Newborn Hearing Program” mandates that all providers of hearing diagnostic procedures report the results of their evaluation and diagnosis to the MNHP.

July 2008, P.L. 2106 “An Act to Enhance the Newborn Hearing Program” allows the MNHP to participate in a regional database with the other New England states to share hearing screening, evaluation and intervention data for those children who did not receive those services in their birth state.

July 2008, P.L. 2295, “An Act to Implement the Recommendations of the Working Group to Study the Effectiveness and Timeliness of Early Identification and Intervention for Children with Hearing Loss in Maine” requires that when a newborn receives a newborn hearing screen result of “refer,” the facility that performed the screen is mandated to schedule the newborn for a follow-up appointment with an audiologist.
September 2009, P.L. 450, "An Act to Improve Efficiency and Effectiveness of Early Intervention and Early Childhood Special Education for Children Birth to Eight Years of Age Through Improved Oversight, Accountability and Interagency Coordination" which requires MNHP to refer all children identified with a confirmed hearing to Part C - Child Development Services.

Based on Maine’s birth rate is estimated that 30 - 40 children will be identified with hearing loss.
SECTION III: METHODOLOGY

The Maine Center for Disease Control and Prevention (MECDC) is in the process of becoming accredited by Public Health Accreditation Board (PHAB). As part of those efforts the MECDC identified the implementation of continuous quality improvement (CQI) as an essential component. MECDC is in the process of changing the culture of the organization to adopt quality improvement initiatives to improve business and program processes and outcomes, including project management and the application of CQI tools and techniques. In 2010, the MECDC and the University of Southern Maine won a federal grant to develop and implement an overall performance improvement plan. On July 12, 2011, Dr. Jack Mann of the Public Health Foundation introduced quality improvement covering the various tools available and identifying traits of a good project.

October 2012, the Quality Improvement Council was formed to be responsive to the needs of the organization. The Team Charter states that the QI Council is charged with embedding a culture of quality at all levels of the organization and that the 39 programs within the Maine CDC will benefit from a performance management system that will 1) increase the knowledge and application of QI tools; 2) create a system that identifies QI opportunities; and, 3) implements processes that create a more efficient and effective Maine CDC. Ms. Wall has been a member since 2013 (Attachment 8).

Finally, the MECDC participated in a 4-part web-based training presented by the Institute for Healthcare Improvement entitled “Applying Rapid Cycle Evaluations to Quality Improvement“. This training provided MECDC employees the tools to develop effective quality improvement strategies. At the end of the four-part series participants had a better understanding of how to 1) outline the importance of applying formative evaluation approaches; 2) describe the program theory of an improvement project; 3) tailor evaluation designs to improvement projects at the innovation, testing or spread; and, 4) Develop rapid cycle learning and evaluation systems.

MNHP will use the following approach to continuous quality improvement.

- Assemble the team — designate the team leader and team members and address the following questions
  - Do we have the right people — those involved with the area in which we want to make the improvement?
  - Does the team need any training?
  - Who will facilitate the team and the process?
  - Develop a team charter.

- Communication Plan
  - Develop storyboards to communicate progress on a regular basis.

- Implement the phases of the PDCA
  - Plan — explore the current situation in order to understand barriers and develop possible solutions.
    - Identify and prioritize quality improvement opportunities.
    - Develop an AIM statement — answer the following questions a) what are we trying to accomplish; b) who is our target population; c) What numeric measures do we want to achieve; and, d) refine AIM statement as needed.
    - Describe the current process through the use of flowcharts.
    - Collect data on the current process — use baseline data that describes the current state, make sure that the data collected aligns with the AIM statement.
    - Identify all possible causes of a problem to determine its root cause, use a fishbone if needed.
    - Identify potential improvements to the problem and agree on one to test.
Discuss any potential problems that might arise if we engage in this particular improvement activity.

- Develop an improvement theory – what is it that we expect to happen if we initiate this particular improvement activity.
- Develop and action plan – specify what needs to be done, who is responsible and when it should be completed.

  - **Do** – implement the action plan
    - Implement the improvement.
    - Collect and document data.
    - Document problems, lessons learned etc.
  
  - **Check** – analyze the effect of implementing the improvement
    - Compare results with measurable objectives.
    - Document lessons learned.
  
  - **Act** – was the improvement achieved
    - **Adapt** – spread.
    - **Adapt** – revise intervention, if appropriate.
    - **Abandon** – solution did not work return the Plan Phase.

The MNHP Quality Improvement Team was established in June 2013 and has since developed a draft Team Charter (Attachment 8). To date, the QI Team has developed 4 draft flowcharts (Attachment 11) on the current state they include 1) high level overview of the MECDC MNHP process; 2) the hearing screening process; 3) creating the individual tracking and surveillance record; 4) MNHP referral process; and, 5) MNHP Audiologist sub-process. This process has resulted in the team identifying quality improvement projects with an overall aim statement - By August 31, 2017, the Maine Newborn Hearing Program (MNHP) will have decreased the LFU/D at each stage of the BHDI process (screen by 1-month; diagnostic evaluation by 3-months; and, early intervention by 6-months) using continuous quality improvement techniques to achieve measurable improvements in LFU/D. Specifically, the MNHP will:

1. Ensure screening of all newborns regardless if they are born at a birthing facility or at home by one-month of age.
2. Rule out or confirm hearing loss in infants who “did not pass” the newborn hearing screening by 3-months of age.
3. Ensure that all infants with a confirmed hearing loss are entered into an early intervention program by 6-months of age.

The Quality Improvement Team for MNHP has chosen to describe the methodology using storyboards. Storyboards can provide a visual description of Maine’s quality improvement process that is organized around the PDSA cycle. The MNHP QI Team will continue to build the storyboard as we move through the improvement process. This will provide the QI Team a visual description of our journey from start to finish and assist us as we describe our project to our stakeholders and the Maine Newborn Hearing Advisory Board. The storyboards provided in this application are not complete as MNHP has not implemented the activities.
**MAINE CDC QUALITY IMPROVEMENT PROJECT STORYBOARD 1**

**Project Title:** Improving loss to follow-up at screening

**Team Members:**
- Betsy Glencross
- Anne Bangor
- Cindy Mervis
- Teni Wall
- Chris Pezzullo
- MACPM - TBA
- Darlene Freeman
- Jennifer Pratt
- Bethany Gallagher
- Valerie Ricker

**PLAN**
Identify an opportunity and plan for improvement

1. **Problem Statement**
Maine Newborn Hearing Program is charged with monitoring the health status of infants with respect to hearing loss. Maine has a well-established newborn hearing screening system for those infants born in a hospital setting. However, access to newborn hearing screening outside of a hospital is non-existent and unequitable for those families who chose to deliver at home.

2. **Rationale for Selecting Team Members**
The team members are members of the MNHP GI Team with expertise provided by the Maine Association of Certified Professional Midwives (MACPM).

**AIM Statement:** By August 31, 2017, MNHP will decrease the percentage of Maine infants who are LFUD for screening from 1.3% to 1% of the births (2012 data).

3. **Examine the Current Approach**
The current approach of offering newborn hearing screening in a hospital setting is unequitable for those families choosing to deliver at home. These families tend to choose non-traditional healthcare and are less apt to seek out screening options on their own and therefore become LFUD.

4. **Identify Potential Solutions**
   1) Improve access to out-of-hospital screening
   2) Enhance the skills and competencies of CPMs in Maine to promote hearing screening in the home birth population
   3) Increase the knowledge of families to make informed decisions about hearing screening.

**Insert Driver Diagram #1:**
(driver diagram will be added once it is completed)

5. **Develop an Improvement Theory**
If CPMs offer newborn hearing screening in the home it will increase the number of infants within the home birth community who are screened before one-month of age and reduce the LFU/D.

**DO**
Test the Theory for Improvement

6. **Test the Theory** (will be added once it is completed)
(Describe how you tested "If we do ______ then ______ will happen.")

**CHECK**
Use Data to Study Results of the Test

7. **Check the Results** (will be added once it is completed)
(Use data to show the improvement: ie. Money saved, time saved, costs avoided, reduced steps in the process, customer service, customer satisfaction. You could also insert graphs or charts here to demonstrate measurement in a visual way)

**Lessons Learned:** (will be added once it is completed)
(Insert a bulleted list of what you learned here)

**ACT**
Standardize the Improvement and Establish future Plans

8. **Standardize the Improvement or Develop New Theory** (will be added once it is completed)
(Justify if you will standardize the Improvement. If not perhaps go back to the Plan phase and revisit the theory.)

9. **Establish Future Plans** (will be added once it is completed)
(Describe the sustainability, or what the future holds for the improvement.)
Maine CDC Quality Improvement Project Storyboard 2

Project Title:
Improving loss to follow-up at evaluation

Team Members:
Betsy Glencross
Anne Bangor
Cindy Mervis
Toni Wall
Chris Pezzullo
Valerie Ricker
Darlene Freeman
Jennifer Pratt
Bethany Galligher
Nurse Manager - TBA

PLAN

Identify an opportunity and
Plan for Improvement

1. Problem Statement
Malhe has a statute that mandates that birthing facilities schedule the
newborn for a diagnostic evaluation prior to discharge. MNHP requires
that hospitals FAX the scheduled appointment to MNHP and the PCP.
A small percentage of birthing centers either forget to send in the
FAX or rely on the PCP to make the appointment.

Secondly, audiologists are required
to report all diagnostic evaluations to MNHP for children up to the age
of 3. MNHP has developed on-line reporting which most audiologists
use with the exception of two centers who continue to either send
in written or no reports.

2. Rationale for Selecting Team Members
The team members are members of the MNHP QI Team with expertise
from a representative of hospital nurse managers screening
programs and audiology.

AIM Statement: By
August 31, 2017, MNHP will
decrease the percentage of Maine
infants who are LFU/D for
evaluation from 16.3% to 10%
(2012 data).

3. Examine the Current Approach
Since 2008, birthing centers have been required to schedule the
newborn for a follow-up appointment with an audiologist.
Birthing centers send FAXes notifying MNHP and PCP of appointment. It
is unknown if birthing centers have

written policy reflecting this
mandate.

Since 2007, all providers of hearing
diagnostic procedures must report
results to MNHP. MNHP believes
that the statute is known to
providers but issues still exist with
two diagnostic facilities reporting in
a timely fashion.

Driver diagram:
(cause and effect diagram will
be added once it is completed)

4. Identify Potential Solutions

1) Communicate the critical role of
birthing centers to schedule
diagnostic evaluations by
engaging nurse managers.

2) Collaborate with other New
England States to improve
identification of border babies.

3) Communicate the critical role of
audiologists about reporting
results of diagnostic evaluations
to MNHP.

5. Develop an Improvement
Theory
If hospitals and audiologists are
aware of the statues and have
adopted policies and procedures
that reflect those statues, they will
begin to see the critical need to
send the information to MNHP. In
addition, if we engage both
audiologists and hospital personnel
in the discussions they will begin to
see the vital role they play in
ensuring they play in the newborn
hearing screening system.

CHECK

Use Data to Study Results
of the Test

6. Test the Theory (will be added
once it is completed)
(Describe how you tested "If we do
then _____ will happen.)

7. Check the Results (will be
added once it is completed)
(Use data to show the
Improvement: ie. Money saved, time
saved, costs avoided, reduced steps
in the process, customer service,
customer satisfaction. You could
also Insert graphs or charts here to
demonstrate measurement in a
visual way)

Lessons Learned: (will be
added once it is completed)
(Inset a bulleted list of what you
learned here)

ACT

Standardize the Improvement and
Establish Future Plans

8. Standardize the Improvement
or Develop New Theory
(will be added once it is completed)
(Justify if you will
standardize the Improvement. If not
perhaps go back to the Plan phase
and revisit the theory.)

9. Establish Future Plans (will be
added once it is completed)
(Describe the sustainability, or what
the future holds for the
Improvement.)
**MAINE CDC QUALITY IMPROVEMENT PROJECT STORYBOARD 3**

**Project Title:**
Improving loss to follow-up at early intervention

**Team Members:**
- Betsy Glencross
- Toni Wall
- Anna Bangor
- Chris Pezzullo
- Cindy Mervis
- Kim Appleby - CDS
- Karen Hopkins - ECFS
- Valerie Ricker
- Darlene Freeman
- Jennifer Pratt
- Bethany Gallagher

---

**PLAN**
Identify an opportunity and plan for improvement

1. **Problem Statement**
MNHP is unable to get confirmation on children who are receiving early intervention services from the Part-C Child Development System. FERPA prohibits them from sharing data on individual children. Numerous attempts have been made to include MNHP on the consent form all to no avail. Information that we do receive is from the Maine Education for the Deaf and Hard of Hearing, Early Child and Family Services.

2. **Rationale for Selecting Team Members**
The team members are members of the MNHP QI Team with expertise from representatives from the DOE/Part-C and Early Child and Family Services.

**AIM Statement:** By August 31, 2017, MNHP will increase by 50% the percentage of Maine Infants with a confirmed hearing loss who are receiving intervention services by 6-months of age from 57% to 75% (2012 data).

3. **Examine the Current Approach**
MNHP is responsible for ensuring that children with a confirmed hearing loss are receiving early intervention services. The current approach does not allow us to acquire that information and therefore children are LFU/D.

**Driver Diagram:**
*(will be added once it is completed)*

---

4. **Identify Potential Solutions**
   1. Increase knowledge of CDS Directors
   2. Communicate critical role of CDS and ECFS

5. **Develop an Improvement Theory**

**DO**
Test the Theory for Improvement

**ACT**
Standardize the Improvement and Establish Future Plans

6. **Test the Theory** - If ECFS coordinators become IEP Coordinators for the Part-C system and assume responsibility for all children with a confirmed hearing loss, MNHP will receive confirmation that children who are deaf or hard of hearing are receiving early intervention services.

7. **Check the Results** *(will be added once it is completed)*
(Use data to show the improvement: i.e., money saved, time saved, costs avoided, reduced steps in the process, customer service, customer satisfaction. You could also insert graphs or charts here to demonstrate measurement in a visual way)

8. **Standardize the Improvement or Develop New Theory** *(will be added once it is completed)*
(Justify if you will standardize the improvement. If not perhaps go back to the Plan phase and revisit the theory.)

9. **Establish Future Plans** *(will be added once it is completed)*
(Describe the sustainability, or what the future holds for the Improvement.)

**Lessons Learned:**
*(will be added once it is completed)* *(Insert a bulleted list of what you learned here)*
MAINE CDC QUALITY IMPROVEMENT PROJECT STORYBOARD 4

Increasing the confidence of PCPs to explain hearing loss

Betsy Glencross
Anne Bangor
Cindy Mervis
Toni Wall
Chris Pezzullo
Valerie Ricker
Darlene Freeman
Jennifer Pratt
Bethany Gellagher
AAP Rep.
AAFP Rep.

PLANNING
Identify an opportunity and plan for improvement.

1. Problem Statement
A 2012, NCHAM survey of Maine providers showed that 74% had never connected with the state's EHDI Program. Sixty percent of respondents also indicated that they were less than confident explaining the causes of hearing loss to a family.

2. Rationale for Selecting Team Members
The team members are members of the MNHP QI Team with expertise from the Maine Chapters of the AAP and AAFP.

AIM Statement: By August 31, 2017, MNHP will increase the percentage of primary care providers who feel confident explaining the causes of hearing loss from 30% to 50%.

3. Examine the Current Apporach
Since 2008, birthing centers have been required to schedule the newborn for a follow-up appointment with an audiologist. Birthing centers send FAXs notifying MNHP and PCP of appointment. It is unknown if birthing centers have written policy reflecting this mandate.

Since 2007, all providers of hearing diagnostic procedures must report results to MNHP. MNHP believes that the statute is known to providers but issues still exist with two diagnostic facilities reporting in a timely fashion.

Driver diagram:
(driver diagram will be added once it is completed)

LESSON LEARNED
(will be added once it is completed)
(insert a bulleted list of what you learned here)

DO
Test the Theory for Improvement

6. Test the Theory (will be added once it is completed)
(Describe how you tested "if we do ___ then ___ will happen.)

CHECK
Use Data to Study Results of the Test

7. Check the Results (will be added once it is completed)
(Use data to show the improvement: ie. Money saved, time saved, costs avoided, reduced steps in the process, customer service, customer satisfaction. You could also insert graphs or charts here to demonstrate measurement in a visual way)

ACT
Standardize the Improvement and Establish Future Plans

8. Standardize the Improvement or Develop New Theory (will be added once it is completed) (Justify if you will standardize the improvement. If not perhaps go back to the Plan phase and revisit the theory.)

9. Establish Future Plans (will be added once it is completed) (Describe the sustainability, or what the future holds for the improvement.)
Maine Newborn Hearing Advisory Board
The Maine Newborn Hearing Advisory Board was created by the 119th Maine State Legislature through the enactment of Public Law 1999, c. 647, 22 M.R.S.A. c. 1686.

The Board consists of an odd number of members, appointed by the Governor, including but not limited to: an audiologist, a physician, a speech-language pathologist, a nurse, a certified teacher of the deaf, a person who provides early intervention services to children who are deaf or hard of hearing through the Maine Educational Center for the Deaf and Hard of Hearing, a person who is culturally deaf, a person who is hard-of-hearing or deaf, a parent of a child who is culturally deaf, a parent of child who is hard-of-hearing or deaf, a parent of a hearing child and a representative of each of the following: hospitals, health carriers, early childhood special education program under Title 20-A, Chapter 303, and the Department. The MNHP Advisory Board meets at least three times per year. The Education, Membership, Quality Improvement and Rules committee meet sporadically throughout the year.

The purpose and duties of the Board, as set forth in statute, are to:

- Provide oversight and advice to the Maine CDC Newborn Hearing Program;
- Advise the Commissioner of the Department of Health and Human Services on issues relating to the Program;
- Make recommendations on the procedures for hearing screening, evaluation, treatment and intervention services; and,
- Submit an annual report on the percentages of children being screened and evaluated and those children being offered and receiving intervention and treatment services to the Joint Committee on Health and Human Services.

MNHP Advisory Board Members - February 2014

<table>
<thead>
<tr>
<th>Category</th>
<th>Name</th>
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<tr>
<td>Audiologist</td>
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<td>Speech-Language Pathologist</td>
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<td>Certified teacher of the deaf</td>
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<td>Culturally deaf person</td>
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<tr>
<td>Parent of a child who is culturally deaf</td>
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<td>Parent of a hearing child</td>
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<td>Representative of health insurance carriers</td>
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<td>Representative of DHHS</td>
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<td>Hard of hearing or deaf person</td>
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<td>Parent of a hard of hearing or deaf child</td>
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<td>Representative of hospitals</td>
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<td>Representative of CDS</td>
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In 2013, the Maine Newborn Hearing Screening Advisory Board formed a Quality Improvement Subcommittee whose mission is “to support the goal of eliminating all barriers to successful outcomes for children with hearing loss”. The goals of the QI subcommittee include: 1) review data at regular intervals; 2) develop strategies to evaluate data; 3) review barriers to success; and, 4) implement PDSA cycles to monitor improvement strategies. As of March 2013, the QI subcommittee has collaborated with MNHP QI team to develop flowcharts and provided comment on the development of a dashboard that will provide real time data addressing goals 1 and 2 above.

Collaborations/Partnerships
Maine Chapter of Hands and Voices meets on a quarterly basis and has representation from the MNHP Advisory Board, MNHP, the DHH community and families. They meet quarterly.

Maine Families (Maine’s home visiting program) is a statewide network of community teams serving the needs of pregnant women and parent with newborns. As an affiliate of Parents As Teachers Maine Families is required to screen all participants for hearing loss. MNHP has worked with Maine Families over the last 1.5 years to establish a hearing screening program by educating home visitors on the importance of screening and how to use the equipment.

Sustainability
The Division of Population Health, Children with Special Health Needs (CSHN) Program is in the beginning stages of developing a comprehensive newborn screening program that would house the following programs: Newborn Hearing, Newborn Bloodspot and Birth Defects. These three programs currently utilize the same integrated tracking and surveillance system – ChildLINK. The Newborn Bloodspot and Hearing Screening Programs have similar charges – ensure that every infant is screened and provide timely follow-up and access to treatment.

Creating a comprehensive screening program will require the Division to first identify components that will lead to a public health program that employs the 10 essentials of public health. Questions to be considered include: What are the fiscal and staffing resources both current and future? Are there statutes that need to be amended to create a comprehensive screening program? Will we have support from stakeholders including the 3 separate advisory boards and the Department? What structural changes need to take place?

Chapter 22§1531 - §1533”Prevention of Handicapping Conditions” authorizes the Newborn Bloodspot Program to charge for filter papers. If CSHN is successful in their efforts to create a “Comprehensive Newborn Screening Program” current staff paid under this grant and other initiatives would be covered using the newborn bloodspot screening fees.
SECTION IV: Work Plan

AIM 1 -- By August 31, 2017, MNHP will decrease the percentage of Maine infants who are LFU/D for screening from 1.3% to 1%.

MNHP reached out to the Maine Association of Certified Midwives to begin discussions on how to improve access to the out-of-hospital newborn hearing screening. MACPMs acknowledge the importance of newborn hearing screening and stated that they would like to assist MNHP in improving screening rates for babies who are born at home. They indicated that a few strategically placed portable screeners that could be shared among several CPMs would improve access.

**Primary Driver 1.1:** By August 31, 2015, improve access to out-of-hospital hearing screening.

**Secondary Driver 1.1.1:** By December 31, 2104, MACPM purchases 1 ABR Hearing Screener
- Develop insert MNN stuff here

**Secondary Driver 1.1.2:** By January 31, 2015, Educate CPMs on equipment
- MNHP schedules trainings for CPMs on equipment
- MNHP develops pre and post-test to survey knowledge
- Access training and revise as appropriate

**Secondary Driver 1.1.3:** By March 31, 2015, manual/electronic log created
- MNHP, and CPMs develop manual log to track home birth screens
- Test new log (manual) with 2-3 CPMs
- Revise as appropriate
- Spread to other CPMs
- MNHP and ChildLINK staff develop on-line version of the manual log
- Test new log (electronic) with 2-3 CPMs
- Spread to other CPMs

**Primary Driver 1.2:** By August 31, 2105, enhance the skills and competencies of CPMs in Maine to promote newborn hearing screening in the home birth population.

**Secondary Driver 1.2.1:** By September 30, 2014 a CPM is a member of the MNHP QI team
- CPM is considered the expert on the home birth population
- CPM shares knowledge and experiences of the home birth population with QI team
- Team charter is revised

**Secondary Driver 1.2.2:** By March 31, 2015 Community-based education program is developed
- MNHP QI Team develops curriculum for instruction at Birth Wise Midwifery School and for other CPMs
- MNHP contacts Birth Wise Midwifery School to instruct during next semester
- Pre/Post curriculum surveys are developed to test knowledge, attitudes and believes

**Primary Driver 1.3:** Increase the knowledge of home birth families to make informed decisions about newborn hearing screening.

**Secondary Driver 1.3.1:** Develop a script for CPMs to use when discussing newborn hearing screening with parents.

**Secondary Driver 1.3.2:** Develop brochure for families and others in the home birth community.

**Secondary Driver 1.3.3:** Develop report in ChildLINK to track families who opt to or decline the newborn hearing screening.

**Secondary Driver 1.3.4:** Develop a survey for CPMs to use if families decline the screen.

**Secondary Driver 1.3.5:** Review results of screen and revise strategies as needed.
Maine CDC Newborn Hearing #1 – Improving loss to follow-up at screening – Story Board 1
AIM 2 -- By August 31, 2017, decrease the percentage of Maine infants who are LFU/D for evaluation from 16.3% to 10%.

**Primary Driver 2.1:** By August 31, 2016, collaborate with the other New England States to improve identification of border babies.

Families who live near the New Hampshire border or children who are transferred to Boston Children’s Hospital are often LFU/D because information is not readily shared across states. The MA Newborn Hearing Program initiated the agreement and it has taken years for all of the New England states to sign. In 2013, CT became the final state to sign the agreement. Babies born out of state can become LFU/D.

**Secondary Driver 2.1.1:** Share P.L. 2106 with the other New England states, especially NH and MA that allows MNHP to share hearing screening, evaluation and intervention data for those children who did not receive those services in their birth state.

- Identify New England states that currently have legislation allowing them to share hearing screening, evaluation and intervention data on children who did not receive those services in their birth state.

**Secondary Driver 2.1.2:** Develop reporting mechanism to share screening, evaluation and intervention data.

**Primary Driver 2.2:** By August 31, 2016, communicate the critical role of birthing centers to schedule diagnostic evaluations by engaging nurse managers.

Infants born in either Eastern Maine Medical Center or Maine Medical Center who refer are usually referred to the hospital’s audiology department. Often times hospital personnel do not FAX MNHP the scheduled evaluation. These children refer at screening and then access services in the hospital setting can be LFU/D.

**Secondary Driver 2.2.1:** Request newborn hearing screening policies and procedures from each of the 28 birthing centers.

- Identify the birthing centers with low rates of notifying MNHP of a scheduled diagnostic evaluation compare with policies and procedures received.

**Secondary Driver 2.2.2:** MNHP develops standardized policies and procedures.

- MNHP works with 2-3 hospitals to adopt new policy and review changes in number of FAXs received.
- Revise as needed and spread to other hospitals.

**Primary Driver 2.3:** By August 31, 2016, communicate the critical role of audiologists to report diagnostic results to MNHP.

Birthing Centers with their own audiology departments (Eastern Maine Medical Center and Maine Medical Center) do not readily send diagnostic information to MNHP. If these children refer at screening and then access services in the hospital setting can be LFU/D.

**Secondary Driver 2.3.1:** Collaborate with EMMC and MMC Audiology Departments to determine barriers to reporting diagnostic evaluations.

- Discuss barriers and identify solutions
- Review options for reporting on-line reporting form in ChildLINK or using manual reporting form.
Maine CDC Newborn Hearing #2 – Improving loss to follow-up at evaluation – Story Board 2

Primary Driver 2.2: Develop process CD staff with specific needs.

Secondary Driver 2.2.1: Develop CD specific training.
Secondary Driver 2.2.2: Identify hospitals that are up-to-date.
Secondary Driver 2.2.3: Identify hospitals that don't report.

Secondary Driver 2.1.1: Develop QI project.
Secondary Driver 2.1.2: Identify sites with approval.
Secondary Driver 2.1.3: Request policies.
AIM 3 – By August 31, 2017, MNHP will increase the percentage of Maine infants with a confirmed hearing loss who are receiving early intervention services by 6-months of age from 57% to 75%.

**Primary Driver 3.1:** By August 31, 2017, increase the knowledge of CDS site directors on screening, evaluation and intervention.

**Secondary Driver 3.1.1:** Schedule trainings with the 9 site directors and their staff.

**Secondary Driver 3.1.2:** Develop training curriculum.

**Secondary Driver 3.1.3:** Develop pre/post surveys

Primary Driver 3.2: By August 31, 2017, communicate the critical role that CDS, ECFS and MNHP play in ensuring that children with confirmed hearing loss have access to EI services.

**Secondary Driver 3.2.1:** Re-establish 1/4ly meeting with CDS and ECFS

- Discuss barriers and challenges
- Review data on referrals and eligibility
- Review if data matches ChildLINK (number of referrals) vs. DOE CDS system (# of referrals received and those receiving services)
Maine CDC Newborn Hearing #3 – Improving loss to follow-up at intervention – Story Board 3
AIM 4 – By August 31, 2017, MNHP will increase the percentage of primary care providers who feel confident explaining the causes of hearing loss from 30% to 60%.

Primary Driver 4.1: Collaborate with the AAP and AAFP Chapters to increase awareness of MNHP and hearing loss.

Secondary Driver 4.1.1: Use AAP/AAFP websites to increase awareness of MNHP

Secondary Driver 4.1.2: Post AAP newsletter on website.

Secondary Driver 4.1.3: Use website to post any upcoming trainings

Primary Driver 4.2: Increase availability of and access to tools and resources

Secondary Driver 4.2.1: Post AAP Chapter tools and resources on website

Secondary Driver 4.2.2: Attend annual meetings of AAP and AAFP bring tools and resources for display

Primary Driver 4.3: Collaborate with Maine Medical Association to access training schedule

Secondary Driver 4.3.1: Develop training plan and implement

Secondary Driver 4.3.2: Develop pre and post surveys to measure confidence in communicating reasons for hearing loss.
Maine CDC Newborn Hearing #4 – increasing confidence in PCPs to explain hearing loss – Story Board

Primary Driver 4.1: Collaboration with local and state partners, NPHR and AAP.

Secondary Driver 4.1.1: Webinars enhanced.

Secondary Driver 4.1.2: AAP newsletter & posted.

Secondary Driver 4.1.3: Post training.

Secondary Driver 4.1.4.1: AAP tools and resources are posted.

Secondary Driver 4.1.4.2: Number of hits or downloads.

Secondary Driver 4.1.4.3: Annual meeting and regional meetings.

Secondary Driver 4.1.5.1: Training plan developed.

Secondary Driver 4.1.5.2: Curriculum developed.

Secondary Driver 4.1.5.3: Pre/post survey developed.
SECTION V: RESOLUTION OF CHALLENGES

The State of Maine continues to face budgetary challenges and has been under a hiring freeze for several years. Since 2005, the CSHN Program has seen ½ million dollars cut from its budget which has limited our capacity to serve children and youth with special health care needs. The Division of Administrative and Financial Services has directed the CSHN program to develop contracts for all of our expenditures. This has reduced staff time on new initiatives as we meet this priority. The Governor’s Executive Order requiring agencies to go through the competitive bidding process may hamper MNHP’s ability to sole source contracts with existing agencies. MNHP may need to develop Request for Proposals for the Follow-up Coordinator, the Parent Consultant, and the Audiologist. This would delay implementation of many of the objectives listed in this application by 3 – 6 months. MNHP will work with the Division of Administrative and Financial Services to lessen the burden of developing RFPs. Finally, 2014 is Maine’s gubernatorial election which may result in a new administration, new policies, rules and regulations.

AIM 1 – MNHP will decrease the percentage of Maine infants who are LFU/D. The home birth population maybe resistant to screening however, the Maine Association of Certified midwives has committed to assisting MNHP to creating a system that is accessible to the home birth population. Once several ABR screeners are purchased and dispersed strategically among the CPM community rates of screening should increase substantially. The other issue that arises is linking the screens to birth certificates. Often, this population delays in getting birth certificates for their children. ChildLINK is being modified so MNHP staff will be able to monitor and track children through the process.

AIM 2 – MNHP will decrease the percentage of Maine infants who are LFU/D at evaluation. Eastern Maine Medical Center (EMMC) and Maine Medical Center (MMC) are two of Maine’s largest tertiary hospitals with an annual birth rate of 1,600 and 2,500 births each year. MMC has a policy that all babies who “refer” are immediately referred to Maine Medical Partners Otolaryngology. MNHP doesn’t expect to change this practice only to be notified in a more timely fashion. EMMC has a similar practice however it is the audiology department that tends to lag behind in notifying MNHP of results. The Chapter Champion and the Audiology Consultant will be instrumental in assisting MNHP as we work with both centers.

AIM 3 – MNHP will increase the percentage of Maine infants with a confirmed hearing loss who are receiving services from early intervention. The signed MOU between the Department of Education, Child Development Services and the Maine Center for the Education of the Deaf and Hard of Hearing (MECDHH) will improve MNHP’s ability to confirm if an infant is receiving services from Part-C. MECDHH is committed to ensuring that MNHP is included on the release of information form.

AIM 4 – MNHP will decrease the percentage of primary care providers who have never heard of MNHP. The NCHAM survey provided MNHP with information of PCPs knowledge, attitudes and believes. Developing a training plan based on the survey results has been completed and MNHP, the Advisory Board and the Chapter Champion are working with Maine Medical Association to design a training plan.
SECTION VI: Evaluation and Technical Capacity

The primary purpose of evaluation is to measure to what extent the program goals, strategies and activities were met. Through the three years of the project the MNHP QI Team will continually answer the following questions:

- Have the activities been effective in reducing the LFU/D at screening? Specifically, does MNHP on an annual basis see an increase in the number of families who chose to give birth at home have their baby screened for hearing loss?
- Have the activities been effective in reducing LFU/D at diagnosis. Specifically, does MNHP see an increase in the percentage of hospitals that schedule diagnostic evaluations for infants who refer prior to discharge and does MNHP see an increase in the percentage of audiologist who report diagnostic evaluations to MNHP.
- Have the activities been effective in reducing LFU/D at intervention. Specifically, does MNHP see an increase in the percentage of infants for whom it receives confirmation that they are receiving early intervention services.

MNHP staff meet twice a month to review current program activities, review and monitor data. The QI Team anticipates meeting twice a month to continue to develop and refine flowcharts and prioritize quality improvement projects.

Data will be collected in ChildLINK, Maine’s surveillance and tracking system, and submitted annually to the CDC and the Maternal and Child Health Block Grant. The newborn hearing screening data is integrated with the birth and death certificate data, birth defects and newborn bloodspot data.

MNHP Coordinator and other staff will monitor the following measures.

- Number of infants screened.
- Number of infants who “passed”.
- Number of infants who missed screens, excluding those who died and those whose parents declined screening.
- Number of infants LFU/D that includes number of home births, parents who are unresponsive and those infants transferred out of state and MNHP unable to get results.
- Number of infants who “referred”, excluding those who died, parent declined, moved out of state, and those with a diagnosis in progress.
- Number of infants with a completed diagnosis
- Number of infants LFU/D at diagnosis.
- Number of infants with a confirmed hearing loss.
- Number of infants referred to Part-C early intervention.
- Number of infants receiving Part-C and/or non- Part-C services (ECFS).
- Number of infants for whom MNHP can’t confirm that they are receiving no early intervention, excluding those parents that have refused services.
- Number of infants LFU/D.

The grant application will be presented to the MNHP Advisory Board so they are aware of the grant activities. Thereafter, the Board will be regularly updated on accomplishments through the Story Boards and data dashboard. A member of the Advisory Board’s QI subcommittee will also be a member of the MNHP QI Team.
AIM 1 — MNHP will decrease the percentage of Maine infants who are LFU/D. Our evaluation strategy for this AIM involves the use of pre and post surveys of CPMs receiving training on equipment and increase in knowledge of newborn hearing screening.

- A pre-test survey will measure basic knowledge of hearing screening, diagnosis and early intervention services and CPMs comfort level addressing families concerns with hearing screening.
- A post-survey will evaluate the effectiveness of the training.
- The ultimate measure of the success of AIM 1 will be the increase in the percentage of home birth families who choose to have their infant screened for hearing loss.

AIM 2 — MNHP will decrease the percentage of Maine infants who are LFU/D at evaluation. The success of this AIM will be monitored through ChildLINK and measure the increase in the # of FAXs received from birthing centers and the number of audiology reports received. In addition, we will count the number of birthing centers who have adopted MNHP standard operating procedures by requesting from each birthing center their newborn hearing screening policy 1-year after MNHP standard policy has been implemented.

AIM 3 — MNHP will increase the percentage of Maine infants with a confirmed hearing loss who are receiving services from early intervention. MOUs are only effective if each party adheres to the deliverables that are stated in the agreement. Therefore, MNHP will use ChildLINK to measure how many infants with a confirmed hearing loss are receiving early intervention services.

AIM 4 — MNHP will decrease the percentage of primary care providers who have never heard of MNHP. Measuring the success of this AIM will ultimately be through another NCHAM Provider Survey. In the interim MNHP will conduct pre and post-test of providers at each of the workshops. Surveys will be analyzed and trainings will be revised if appropriate.
SECTION VII: ORGANIZATIONAL INFORMATION

Applicant Experience and Structure
The Maine CDC Newborn Hearing Program is a program within the Maine Department of Health and Human Services (DHHS), whose mission is to "assist individuals in meeting their needs, while respecting the rights and preferences of the individual and family, within available resources". The Maine Center for Disease Control and Prevention (MDHHS), Division of Population Health (DPH) oversees the project through the Children with Special Health Needs Program (CSHN), which ensures "the health and well-being of the CSHN population by developing and sustaining community-based systems of care".

CSHN is a multi-faceted children's public health program that includes Newborn Hearing; Newborn Bloodspot (metabolic); Birth Defects; Comprehensive Genetics; Perinatal Outreach and Education; Maternal Fetal and Infant Mortality Review Panel; Partners in Care Coordination; Cleft Lip/Palate; and, MaineCare (Medicaid) Member Services (EPSDT). DHHS, MDHHS/DPH and CSHN organizational charts are located in Attachment 5.

The ME CDC CSHN Program is guided by the following six strategies that maximize systems integration:

1. Build, enhance and maximize partnerships;
2. Engage families and youth as partners;
3. Use continuous quality improvement (CQI);
4. Use data to build capacity and measure impact;
5. Provide technical assistance, resources and supports; and,
6. Promote policy and legislative changes.

The CSHN Program is a highly specialized team of 12 individuals (nurses, social workers, benefits specialists, and administrative and fiscal support personnel). Several advisory boards provide access to a multitude of private and public health care professionals, including parents that help guide the program; these boards include the Birth Defects, Newborn Bloodspot and Newborn Hearing Advisory Boards. In addition, the CSHN Program maintains several contracts with hospitals to ensure that infants and children have access to clinical services these include Genetics, Cleft Lip and Palate, and Perinatal Outreach and one cooperative agreement with the University of Maine College of Education and Human Development (CEDH). CSHN maintains a management team that includes the Director, Assistant Director for CSHN and the Director of Genetic Services.

Personnel Resources
The Maine Newborn Hearing Program (MNHP) has been in existence since 1999 and Betsy Glencross, the current coordinator has been with MNHP since 2006 and is supervised by Toni G. Wall, MPA the Director of CSHN Program. Ms. Wall is nationally known and has participated on many committees and workgroups that focus on improving the system of care for children and youth with special health care needs through the implementation of the following six core outcomes:

1. Families with CYSCHN will partner in decision making at all levels and are satisfied with the services they receive;
2. CYSCHN will receive regular ongoing care within a medical home;
3. Children will be screened early and continuously for special health care needs;
4. Community based services will be organized so that families can use them easily;
5. Families of CYSCHN will have adequate insurance to pay for the needed services; and,

---

6. YSHCN will receive the necessary services to make the transition to all aspects of adult life.

MNHP works toward increasing the number of infants that are screened no later than 1-month of age; have an audiologic evaluation by 3-months of age; and are enrolled in appropriate early intervention services by 6-months of age. MNHP provides education to health professionals, EI providers, and others; provides training and technical assistance to birthing facilities on screening procedures; assistance with follow-up for diagnostic evaluation; referral to EI services (Part C -- CDS); and, promotes family choice through education on available options. Staff pertinent to the Maine CDC Newborn Hearing Screening Program include the following:

<table>
<thead>
<tr>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newborn Hearing Coordinator</td>
</tr>
<tr>
<td>Chapter Champion</td>
</tr>
<tr>
<td>Follow-up Coordinator</td>
</tr>
<tr>
<td>Parent Consultant</td>
</tr>
<tr>
<td>Audiology Consultant</td>
</tr>
<tr>
<td>Quality Improvement Specialist</td>
</tr>
<tr>
<td>Epidemiology</td>
</tr>
<tr>
<td>Newborn Hearing Advisory Board</td>
</tr>
</tbody>
</table>

See Attachment 2: Staffing Plan and Job Descriptions and Attachment 3: Biographical Sketches for Key Personnel

MNHP staff regularly collaborates with individuals from the Birth Defects Program, Cleft Lip and Palate Program, Newborn Bloodspot Program, Public Health Nursing, Date, Research and Vital Statistics, Department of Education -- Part-C, Maine Families - Maine's Home Visiting Program and others.

Experience Executing QI Projects

Improving CSHNs understanding of how infants with developmental delays are referred to Part-C prior to hospital discharge. The ME CDC/CSHN works with hospitals to screen newborn babies for developmental delays. Babies with abnormalities and babies who are at high risk of developing disabilities later in life are referred to the Department of Education/Part-C/Child Development Services (CDS) Program. The CSHN Program was unable to track how well the program was doing to ensure that babies with or at risk of developmental disabilities were provided appropriate services. This prompted the need for a formal QI process. With the assistance of the MECDC's Office of Performance Improvement the MECDC CSHN Program embarked on its first QI project. The CSHN QI team went through the process of developing a shared understanding of the steps in the program from the time a baby is screened to the time the baby receives services from Part-C. After mapping the current state, the team identified points where problems occurred and selected goals for improvement. The team then developed action steps to resolve identified problems. Some of the steps included:

- Hospitals will adjust their referral systems and how they document the number of referrals made (and to where).
- A letter was developed to improve communication with parents of affected babies and to encourage them to go for follow-up evaluations.
- Standardized forms were developed to capture all the information required by all parties in a single referral.
- ME CSHN will work with IT to enhance the electronic transmission data between the ME CDC and its partners.
Dr. Stephen Meister, former MCH Medical Director stated “What I liked most about the formal QI process was that we were able to discuss the problem without pointing fingers at anyone. That way, nobody was defensive. We all participated in coming up with ideas for improvement.”

**Improving Access to Medical Food for Maine’s with Inborn Errors of Metabolism (IEM)**

The problem -- medical food is the evidence-based treatment for people with IEM. Going untreated or undertreated can cause a spectrum of mental disabilities for the individual as well as challenges and economic problems for the family and the community. Access and healthcare coverage is neither equitable nor consistent. Maine mandates screening for IEM. **AIM Statement** -- By November 2011, an action plan will be in place to ensure that all individuals with IEM in the State of Maine will receive the necessary food and formula needed to have healthy and productive lives. The QI Team used a fishbone diagram to analyze the problem of pharmacies/pharmacists reluctance to carry IEM formula. Possible solutions were identified as well as an improvement theory. The QI team theorized that if collaboration between pharmacies, families, clinics, and payers was enhanced and there was a clear understanding of roles and responsibilities that barriers to access would be reduced. ME CSHN conducted surveys of pharmacists and families to gather qualitative and quantitative data to assess the current state. The QI team developed tip sheets for both families and pharmacies. As a result of this QI project families of children with IEM have reported an easier time accessing foods and formulas. This team continues to meet on a monthly basis to review and initiate new QI projects.

**Improving the inter-rater reliability of the birth defects abstractors** -- This QI project is focusing on inter-rater reliability in the collection of data from electronic medical records.
## Work Plan

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<tr>
<th>What We Will Do</th>
<th>Who's Responsible</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>How to Evaluate</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AIM 1</strong> - By August 31, 2017, MNHP will decrease the percentage of Maine infants who are LFU/D for screening from 1.3% to 1%.</td>
<td>QI Team Story Board 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Primary Driver 1.1:</strong> By August 31, 2015, improve access to out-of-hospital hearing screening.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| **Secondary Driver 1.1.1:** By December 31, 2014, MACPM purchases 1 ABR Hearing Screener  
  • Develop Contract for MACPM  
  • MACPM purchases equipment | Wall | x | x |        |        | Equipment purchased | Invoice and contract |
| **Secondary Driver 1.1.2:** By January 31, 2015, Educate CPMs on equipment  
  • MNHP schedules trainings for CPMs on equipment  
  • MNHP develops pre and post-test to survey knowledge  
  • Access training and revise as appropriate | Giencross | | | x | x | Pre and post surveys | Analysis of surveys |
| **Secondary Driver 1.1.3:** By March 31, 2015, manual/electronic log created  
  • MNHP, and CPMs develop manual log to track home birth screens  
  • Test new log (manual) with 2-3 CPMs  
  • Revise as appropriate  
  • Spread to other CPMs  
  • MNHP and ChildLINK staff develop on-line version of the manual log  
  • Test new log (electronic) with 2-3 CPMs  
  • Spread to other CPMs | QI team | |  | x | x | x | ChildLINK and manual logs received | Number of home births screened for hearing loss |
| **Primary Driver 1.2:** By August 31, 2015, enhance the skills and competencies of CPMs in Maine to promote newborn hearing screening in the home birth population. | QI Team | | | | | | |
## Work Plan

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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Secondary Driver 1.2.1:</strong> By September 30, 2014 a CPM is a member of the MNHP QI team&lt;br&gt;  - CPM is considered the expert on the home birth population&lt;br&gt;  - CPM shares knowledge and experiences of the home birth population with QI team&lt;br&gt;  - Team charter is revised</td>
<td>QI Team</td>
<td>x x x</td>
<td>x x x</td>
<td></td>
<td>Meeting Minutes</td>
<td>Meeting minutes</td>
</tr>
<tr>
<td><strong>Secondary Driver 1.2.2:</strong> By March 31, 2015 Community-based education program is developed&lt;br&gt;  - MNHP QI Team develops curriculum for instruction at Birth Wise Midwifery School and for other CPMs&lt;br&gt;  - MNHP contacts Birth Wise Midwifery School to instruct during next semester&lt;br&gt;  - Pre/Post curriculum surveys are developed to test knowledge, attitudes and believes</td>
<td>QI Team</td>
<td>x x</td>
<td></td>
<td></td>
<td>Pre/post surveys</td>
<td>Surveys</td>
</tr>
<tr>
<td><strong>Primary Driver 1.3</strong> Increase the knowledge of home birth families to make informed decisions about newborn hearing screening.</td>
<td>QI Team</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Secondary Driver 1.3.1</strong> – Develop script for CPM's to use when discussing newborn hearing screening</td>
<td>QI Team</td>
<td>x x x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Secondary Driver 1.3.2</strong> – Develop brochure for families and others in the home birth community.</td>
<td>MNHP Advisory Board – Education Committee</td>
<td>x x x</td>
<td></td>
<td></td>
<td>Brochure is developed and approved</td>
<td></td>
</tr>
<tr>
<td><strong>Secondary Driver 1.3.3</strong> – Develop report in ChildLINK to track families who opt to or decline the newborn hearing screening.</td>
<td>QI team and ChildLINK staff</td>
<td>x x x</td>
<td></td>
<td></td>
<td>Module is developed and working</td>
<td>ChildLINK</td>
</tr>
</tbody>
</table>
## Work Plan

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</tr>
</thead>
<tbody>
<tr>
<td><strong>Secondary Driver 1.3.4</strong> — Develop Survey for CPMs to use if families decline screen — assess reasons why</td>
<td>QI Team</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>Survey developed</td>
<td>Survey</td>
</tr>
<tr>
<td><strong>AIM 2</strong> — By August 31, 2017, decrease the percentage of Maine infants who are LFU/D for evaluation from 16.3% to 10%.</td>
<td>QI Team — Story Board 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Primary Driver 2.1:</strong> By August 31, 2016, collaborate with the other New England States to improve identification of border babies.</td>
<td>QI Team</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Secondary Driver 2.1.1:</strong> Share P.L. 2106 with the other New England states, especially NH and MA that allows MNHP to share hearing screening, evaluation and intervention data for those children who did not receive those services in their birth state.</td>
<td>QI Team</td>
<td></td>
<td></td>
<td></td>
<td>P.L. 2106</td>
<td>Number of statutes sent</td>
</tr>
<tr>
<td><strong>Secondary Driver 2.1.2:</strong> Develop reporting mechanism to share screening, evaluation and intervention data.</td>
<td>QI Teams from New England</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>Reporting form developed</td>
<td>ChildLINK</td>
</tr>
<tr>
<td><strong>Primary Driver 2.2:</strong> By August 31, 2016, communicate the critical role of birthing centers to schedule diagnostic evaluations by engaging nurse managers.</td>
<td>QI Team</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Secondary Driver 2.2.1:</strong> Request newborn hearing screening policies and procedures from each of the 28 birthing centers.</td>
<td>QI Team</td>
<td></td>
<td></td>
<td></td>
<td>Number of policies received</td>
<td>Hospitals</td>
</tr>
<tr>
<td><strong>Secondary Driver 2.2.2:</strong> MNHP develops standardized policies and procedures.</td>
<td>QI Team</td>
<td>x</td>
<td>x</td>
<td></td>
<td>Policy Developed/Revised</td>
<td>Policy</td>
</tr>
<tr>
<td><strong>Primary Driver 2.3:</strong> By August 31, 2016, communicate the critical role of audiologists to report diagnostic results to MNHP.</td>
<td>QI Team</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Work Plan

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<th>How to Evaluate</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Secondary Driver 2.3.1:</strong> Collaborate with EMMC and MMC Audiology Departments to determine barriers to reporting diagnostic evaluations.</td>
<td>QI Team</td>
<td></td>
<td>x</td>
<td>x</td>
<td>Use Root Cause Chart to identify barriers and opportunities</td>
<td>Root Cause chart</td>
</tr>
<tr>
<td><strong>AIM 3 -- By August 31, 2017, MNHP will increase the percentage of Maine infants with a confirmed hearing loss who are receiving early intervention services by 6-months of age from 57% to 75%</strong></td>
<td>QI Team -- Story Board 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Primary Driver 3.1:</strong> By August 31, 2017, increase the knowledge of CDS site directors on screening, evaluation and intervention.</td>
<td>QI Team</td>
<td></td>
<td>x</td>
<td>x</td>
<td>Trainings</td>
<td>Trainings Scheduled</td>
</tr>
<tr>
<td><strong>Secondary Driver 3.1.1:</strong> Schedule trainings with the 9 site directors and their staff.</td>
<td>QI Team</td>
<td></td>
<td>x</td>
<td>x</td>
<td>Trainings</td>
<td></td>
</tr>
<tr>
<td><strong>Secondary Driver 3.1.2:</strong> Develop training curriculum.</td>
<td>QI Team</td>
<td></td>
<td>x</td>
<td>x</td>
<td>Curriculum</td>
<td>Curriculum developed</td>
</tr>
<tr>
<td><strong>Secondary Driver 3.1.3:</strong> Develop pre/post surveys</td>
<td>QI Team</td>
<td></td>
<td>x</td>
<td>x</td>
<td>Pre/post surveys</td>
<td></td>
</tr>
<tr>
<td><strong>Primary Driver 3.2:</strong> By August 31, 2017, communicate the critical role that CDS, ECFS and MNHP play in ensuring that children with confirmed hearing loss have access to EI services.</td>
<td>QI Team</td>
<td></td>
<td>x</td>
<td>x</td>
<td>Analysis of surveys</td>
<td></td>
</tr>
<tr>
<td><strong>Secondary Driver 3.2.1:</strong> Re-establish 1/4ly meeting with CDS and ECFS</td>
<td>QI Team</td>
<td></td>
<td>x</td>
<td>x</td>
<td>1/4ly meetings</td>
<td>Minutes of meetings</td>
</tr>
<tr>
<td><strong>AIM 4 -- By August 31, 2017, MNHP will increase the percentage of primary care providers who feel confident explaining the causes of hearing loss from 30% to 60%</strong></td>
<td>QI Team -- Story Board 4</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
## Work Plan

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<tr>
<th>What We Will Do</th>
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<th>Year 2 Quarter</th>
<th>Year 3 Quarter</th>
<th>How to Evaluate</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary Driver 4.1:</strong> Collaborate with the AAP and AAFP Chapters to increase awareness of MNHIP and hearing loss.</td>
<td>QI Team</td>
<td>x x x x x x x x x</td>
<td>x x x x x x x x</td>
<td>x x x x x x x x x</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Secondary Driver 4.1.1:</strong> Use AAP/AAFP websites to increase awareness of MNHIP</td>
<td>QI Team</td>
<td>x x x x x x x x x</td>
<td>x x x x x x x x</td>
<td></td>
<td>Website hits</td>
<td>Website hits</td>
</tr>
<tr>
<td><strong>Secondary Driver 4.1.2:</strong> Post AAP newsletter on websites.</td>
<td>QI Team</td>
<td>x x x x x x x x x</td>
<td></td>
<td></td>
<td>Posted newsletter</td>
<td>Website hits</td>
</tr>
<tr>
<td><strong>Secondary Driver 4.1.3:</strong> Use website to post any upcoming trainings</td>
<td>QI Team</td>
<td>x x x x x x x x x</td>
<td></td>
<td></td>
<td></td>
<td>Number of providers who indicate website as information source</td>
</tr>
<tr>
<td><strong>Primary Driver 4.2:</strong> Increase availability of and access to tools and resources.</td>
<td>QI Team</td>
<td>x x x x x x x x x</td>
<td></td>
<td></td>
<td>Tools and resources posted</td>
<td>Website hits</td>
</tr>
<tr>
<td><strong>Secondary Driver 4.2.1:</strong> Post AAP Chapter tools and resources on website</td>
<td>QI Team</td>
<td>x x x x x x x x x</td>
<td></td>
<td></td>
<td>Annual and regional meetings attended</td>
<td>Meeting schedule</td>
</tr>
<tr>
<td><strong>Secondary Driver 4.2.2:</strong> Attend annual meetings of AAP and AAFP bring tools and resources for display</td>
<td>QI Team</td>
<td>x x x x x x x x x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Primary Driver 4.3:</strong> Collaborate with Maine Medical Association to access training schedule.</td>
<td>QI Team</td>
<td>x x x x x x x x x</td>
<td></td>
<td></td>
<td>Training plan developed</td>
<td>curriculum</td>
</tr>
<tr>
<td><strong>Secondary Driver 4.3.1:</strong> Develop training plan and implement</td>
<td>QI Team</td>
<td>x x x x x x x x x</td>
<td></td>
<td></td>
<td>Pre and post survey developed</td>
<td>Analysis of responses</td>
</tr>
<tr>
<td><strong>Secondary Driver 4.3.2:</strong> Develop pre and post surveys to measure confidence in communicating reasons for hearing loss.</td>
<td>QI Team</td>
<td>x x x x x x x x x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Professional Profile

Public Health Professional with over 30 years success in the development, implementation, and management of programs with extensive knowledge of public health related programs. Wide-range experience in developing training materials, coordinating and conducting training and educational opportunities for adults.

Extremely organized with outstanding written and oral presentation skills. Highly motivated professional focused on improving program effectiveness with the help of automation to increase operational efficiency and client satisfaction.

Professional Experience

July 2006 – present – Newborn Hearing Coordinator, Maine Newborn Hearing Program, Division of Population Health, ME CDC, DHHS – Responsible for all aspects of the statewide Newborn Hearing Program: including the development, implementation, tracking and follow-up care for children identified through hearing screening and diagnostics. Responsible for collecting complex medical information to improve access to services for children identified with a hearing loss and their families. Consults with hospitals, primary care providers, audiologists and others in order to provide technical assistance on program issues and procedures related to the Program.

2002 - July 2006 – Computer Trainer II MACWIS (Maine Automated Child Welfare Information System) IPSI/USM Muskie School of Public Health


1992 – 1996 WIC Clinic Coordinator – HealthReach Network, Augusta, Maine

Education

1978 B.S. Food and Nutrition, University of Maine, Orono Maine
Professional Experience

Department of Health and Human Services, ME CDC (formerly the Bureau of Health), Children with Special Health Needs Program
May 1999 - Present
Director
The Children with Special Health Needs (CSHN) Program promotes an integrated system of services for infants, children and youth with special health care needs up to the age of 21 years who have or are at risk for chronic physical, developmental, behavioral, or emotional conditions. The CSHN Program exists to eliminate or reduce mortality, morbidity and disabilities through screening and early detection.

Responsibilities:
Leads a team of 11 health professionals, including 6 direct reports, in the implementation of 8 program areas that include Newborn Hearing, Newborn Bloodspot, Birth Defects, Perinatal Outreach, Genetics, Partners in Care Coordination, MaineCare Member Services and Maternal Infant Fetal and Mortality Review.
Manages a budget of more than 3M. Allocates resources to achieving programs goals and objectives.
Successfully merged the Genetics Program with the Children with Special Health Needs Program.
Develops and implements policies related to the CYSHCNs population
Develops and oversees federal grants
Maintains collaborative partnerships at the state and community level
Represents the Department and the CYSHCN Program at the state and federal level

Department of Health and Human Services, ME CDC (formerly the Bureau of Health), Children with Special Health Needs Program
December 1994 – November 1998
Assistant Director

Department of Health and Human Services, ME CDC (formerly the Bureau of Health), Oral Health Program
September 1987 – December 1994
Planning and Research Assistant upgraded to Public Health Educator II

Education
M.P.A., Public Administration – University of Maine, Orono, Maine – 2004
B.S., Environmental Science and Wildlife Biology – Unity College, Unity, Maine – 1982
Profile

- Practicing pediatrician in Maine for 18 years
- Committed to health promotion, disease prevention and public health
- Special interests in access to care and health outcomes research

Education and Medical Training

Bachelor of Arts, Psychology (1987)
Stony Brook University, Stony Brook, NY

Doctor of Osteopathy (1993)
University of New England College of Osteopathic Medicine, Biddeford, ME

Barbara Bush Children's Hospital Maine Medical Center, Portland, ME

Certifications and Licensure

- Diplomate of the American Board of Pediatrics (1998 to 2015)
- Maine Board of Osteopathic Licensure #1605 (1996 to present)
- Diplomate of the National Board of Osteopathic Medical Examiners (1995 to present)
- Basic Life Support (current)

Professional Experience

Medical Director, Division of Population Health
Maine CDC (present)
Responsible for medical direction of the division that includes: maternal and child health, chronic disease, cancer, school based health centers and the Partnership for a Tobacco-free Maine

Chief Medical Officer (2008-2012)
University Health Care, Saco/Biddeford/Portland, ME

Pediatric Medicine (2012-present)
Bayview Pediatrics, Yarmouth, ME

Pediatric Medicine (2002 – 2012)/ Department Chair (2010-2012)
University Health Care for Kids Portland, ME

Neonatal Pediatric Medicine (1996 – 2012)
Mercy Core Group Mercy Hospital, Portland, ME

Mercy Primary Care Associates Portland, ME

Academic Appointments

MMC-Tufts LIC Preceptor, Pediatrics Core Rotation (2011-present)
Assistant Professor of Pediatrics (2000 – 2012)
University of New England College of Osteopathic Medicine

Clinical Assistant Professor of Pediatrics (1996 – 2001)
University of New England College of Osteopathic Medicine
Work Experience

Follow-Up Coordinator March 2012 - Present
Maine Department of Health and Human Services, Maine Center for Disease Control and Prevention, Division of Population Health, Children with Special Health Needs Program, Newborn Hearing Program, HRSA -14-104 C.F.D.A. 93.351

March 20, 2014

Email

Work Experience

Follow-Up Coordinator March 2012 - Present
Maine Educational Center for the Deaf and Hard of Hearing, Falmouth, ME
The Follow-Up Coordinator provides guidance and expertise in all areas associated with lost to follow-up for the Maine Newborn Hearing Program as well as support of families of children with suspected or diagnosed hearing loss.
- Coordinate and develop processes, documents, and reporting techniques to assess, monitor and improve the effectiveness of follow-up strategies.
- Serve as the liaison between the Maine Newborn Hearing Program, Birthing Facilities, Medical Homes, Community Resources and Child Development Services.

Director of Membership Services December 2009 - March 2012
Bath Area Family YMCA, Bath, ME
The Bath Area Family YMCA is a 58,000 square foot facility that has more than 120,000 visitors a year. The Director of Membership Services is responsible for ensuring that members feel a sense of belonging, ownership and involvement within the organization.
- Build member and community relationships.
- Implement strategies and programs to promote membership growth and program participation in a family oriented organization.
- Responsible for overseeing member sales, membership campaigns and functions, and services for existing members.
- Supervise front desk and membership staff.

Project Manager January 2007 - September 2009
E-Pro Engineering/IRC, Augusta, Maine
The Project Manager leads project teams and manages projects directly. The Manager ensures all financial, scheduling, contract and communication expectations of the Client, Company and other stakeholders are met.
- Manage project resources including design engineering, subcontractors, material suppliers and construction contractors.
- Ensure the project's budgeted costs are met, prepare and manage change orders when necessary and complete project billing.
- Prepare and monitor project schedule using scheduling tools such as Microsoft Project and/or Primavera.
- Oversee the administration of all project documentation, prepare and present status reports.

Customer Service Center Representative July 2005 - July 2007
L.L. Bean, Freeport Main Street Retail Store
This is a part-time position in the Customer Service Center in the Main Street Freeport Retail Store. The Representative is responsible for providing World Class Customer Service to every customer.

Assistant Codes Enforcement Officer May 2001 - July 2007
City of Bath, Maine
The Assistant Codes Enforcement Officer position is a part-time position. The Codes Enforcement Office administers local and State codes/laws relating to construction and development activities, as well as other activities requiring City approvals or licenses.
Objective

To update my resume for the purpose of a grant continuation for the Maine Newborn Hearing Program.

Education

Old Town High School
Graduated June 1984
High School diploma

Work Experience

Maine Newborn Hearing Program, Parent Consultant  April 2011 to present
  • Provide follow-up contact with families of a child who referred on their newborn hearing screen, did not receive a newborn hearing screen, or has been diagnosed with a hearing loss.
  • Provide expertise in all areas associated with parent support for families of children with suspected or diagnosed hearing loss.
  • Document all contacts with families in the ChildLINK tracking log.

Alliance Healthcare Documentation, Medical Transcriptionist  July 2013 to present

Medical Transcribers, Inc, II, Medical Transcriptionist  March 2004 to July 2013

Special training/experience

• September 2013, November 2013  SKI-HI certified
• Parent of a child who is deaf
OBJECTIVE: To act as a resource and asset to the community by providing high quality care to patients and their families, be a source of information and support for colleagues, and provide information and insight into the field of audiology to outside agencies and professionals.

PROFESSIONAL EMPLOYMENT

Togus VAMC, Augusta, ME 06/2009-Present
Clinical Audiologist
- Completes audiological evaluations of United States Veterans and dispenses amplification as necessary.
- Counsels veterans and their families on available assistive devices and compensatory listening strategies.
- Opines on diagnostic evaluations and their relationship to disability and the veteran's time in service.
- Evaluation of veterans for retro-cochlear pathologies via Auditory Brainstem Response (ABR).
- Worked jointly with colleagues to develop a Progressive Tinnitus Management group and continues to provide administrative support in its ongoing sessions.
- Fits amplification to veterans via tele-health technology as part of a national pilot program.
- Inspects and reports as part of the Narcotics Inspection Team for the Maine VA Health System.

Maine Newborn Hearing Program, Augusta, ME 06/2009-Present
Audiologist Consultant
- Interprets and inputs audiological data from facilities into the State's Childlink database, and assists MNHP director with audiology related concerns.
- Collaborative work to promote education in the audiology community with conferences and learning sessions as needed.
- Provide support to colleagues with questions regarding pediatric testing and reporting to MNHP.

Head and Neck Surgical Associates, Portland, ME 06/2009
Clinical Audiologist

Ashbrook Audiology, Martinsville, VA 2003
Dispensing Audiologist

ACADEMIC BACKGROUND

Doctor of Audiology, Salus University, Elkins Park, PA 2009
Master of Arts in Audiology, University of Massachusetts, Amherst, MA 2003
Bachelor of Arts in Communication Disorders, Ithaca College, Ithaca, NY 2001
**BIOGRAPHICAL SKETCH**

Provide the following information for the key personnel in the order listed on Form Page 2. Follow this format for each person. DO NOT EXCEED FOUR PAGES.

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<th>POSITION TITLE</th>
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**EDUCATION/TRAINING** (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)

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<td>AA</td>
<td>2013</td>
<td>Liberal Studies</td>
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**Professional Experiences:**

03/01-Present

Project Assistant II

Muskkie School of Public Service, University of Southern Maine, Portland: ME

**Experience**

2012 - present

Maine Families Home Visiting

2010 - present

HRSA Personal and Home Care Aide Training Program Grant

2010 - present

National Public Health Improvement Initiative

2010 - present

Maine Partners in Education

2009 - 2011

RWJF A Multi-State Learning Collaborative

2009 - 2011

RWJF National Demonstration of Early Detection, Intervention and Prevention of Psychosis

2007 - 2009

Child Care Research and Capacity, DHHS Quality Rating System

2005-2007

Creating Adoption Placement Through Relationships

**Selected Publications:** (Present)


Fralich, J., Richards, M., Olsen, L., Bell, V. & Pratt, J. (2012). Personal Experiences with Long Term Care Services and Supports

Fralich, J., Rosingana, K., Richards, M., Olsen, L., Bell, V. & Pratt, J. (2012). Personal Experiences with MaineCare Services
EDUCATION

M.P.H. Emory University, December 1992, specialization in Epidemiology (Master's thesis: An Investigation of Low Birth Weight as a Potential Risk Factor for Mental Retardation)

M.Ed. University of Illinois at Urbana-Champaign, January 1983, specialization in Special Education (Early Childhood Special Education; Moderate and Severe Handicaps: K-12)

A.B. Cornell University, Ithaca, New York, May 1978, specialization in Linguistics

WORK EXPERIENCE

6/07 - present
Research Associate II: Epidemiology, University of Southern Maine (working with the Division of Population Health, Maine Center for Disease Control and Prevention).

Responsible for designing and maintaining public health surveillance systems that include information on morbidity, mortality, health services, and risk factors; analyzing birth, death, hospital discharge, emergency department, survey, and other datasets; evaluating the quality of existing data sources, surveillance systems, and programs; developing and implementing dataset linkage strategies; conducting needs assessments for home visiting and other programs; writing reports; working with Maine Center for Disease Control and Prevention staff to identify data needs and develop study protocols and data collection and analysis plans; providing leadership to program managers on the use of data for program planning, program evaluation, and policy development; developing training materials; training and providing technical oversight of staff responsible for data management and basic data analysis; building epidemiologic capacity in multiple programs in the Division of Population Health (formerly the Divisions of Family Health and Chronic Disease); fiscal management of cooperative agreement.

6/04 - 5/07
Research Associate I: Epidemiology, University of Southern Maine (based in the Divisions of Family Health and Chronic Disease, Maine Center for Disease Control and Prevention).

7/01 - 6/04
Epidemiologist / Consultant, self-employed, Three Moon Productions, LLC

1/97 - 7/01
Epidemiologist, National Center on Birth Defects and Developmental Disabilities, U.S. Centers for Disease Control and Prevention (CDC)

9/94 - 1/97
Epidemiologist, Epidemiology and Surveillance Research Department, American Cancer Society
8/93 - 9/94  Epidemiologist, Office of Disability Prevention, Arkansas Department of Health

2/93 - 7/93  Researcher, Battelle Memorial Institute (contract position with the Developmental Disabilities Branch, Centers for Disease Control)

6/92 - 1/93  Epidemiology Consultant, Developmental Disabilities Branch, Centers for Disease Control

Experience prior to 6/92 was primarily on research projects studying early language and cognitive development and in programs for children with disabilities; details available upon request.

SOFTWARE KNOWLEDGE / CERTIFICATION

SAS, SUDAAN, EpInfo, Microsoft Office (Word, Excel, Access, PowerPoint, Outlook), SNAP Survey Software, EndNote

SAS® Certified Base Programmer for SAS®9
SAS® Certified Advanced Programmer for SAS®9

PUBLICATIONS (1995 to present)


Attachment 2 – Staffing Plan and Job Descriptions

**EHDI Program Coordinator**  
* Betsy Gleneros  
* 1 FTE Employee

- Member Quality Improvement Team.
- Provides guidance to ensure that the statewide Newborn Hearing Program adheres to EHDI protocols with regards to screening, evaluation and early intervention.
- Responsible for collecting and reviewing complex medical information to improve access to services for children identified with hearing loss.
- Consults with hospitals, primary care providers, audiologists and others in order to provide technical assistance on program issues and procedures related to the Program.
- Coordinates with other programs to enhance the Maine Newborn Hearing Program included but not limited to certified professional midwives, WIC, Home visitors etc.
- Assist in the development of brochures, outreach and other educational efforts.
- Participate in the Federal CDC annual survey.
- Liaison with the Maine Newborn Hearing Advisory Board.

**Follow-up Coordinator**  
* Anne Bangor  
* 1 FTE Employee

- Member Quality Improvement Team.
- Consults with the Maine Newborn Hearing Program to review achievement of recommended goals of EHDI (referred to as EHDI 1,3,6).
- Develop effective strategies to decrease the number of children who are lost to follow-up at the EHDI 1,3,6 including coordinating efforts with the Parent Consultant.
- Serve as liaison between the Maine Newborn Hearing Program and birthing facilities, medical homes, community resources and Part-C Child Development Services.
- Review materials such as brochures, surveys and other family related materials.
- Participate in planning of workshops, trainings and conferences.
- Participate in monthly meetings with the Maine Newborn Hearing Program.
- Participate in the analysis of data in an effort to decrease LFU/D and ensure that all children screened, evaluated and enrolled in early intervention services.
- Document and maintain records of all calls to families, providers and others.
- Maintain confidentiality and integrity.

**Parent Consultant**  
* Darlene Freeman  
* .50 FTE Employee

- Member Quality Improvement Team
- Provide follow-up contact to families of children, who have referred on their newborn hearing screening, did not receive a newborn hearing screen and/or has been diagnosed with a hearing loss.
- Document all contact with families, providers and others in the ChildLINK tracking log.
- Maintain a record of all calls to families, providers and others.
- Maintain confidentiality and integrity.

**Pediatric Audiology Consultant**  
* Bethany Galligher, AuD  
* .05 FTE Employee

- Member Quality Improvement Team
- Interpret infant audiological diagnostic reports.
- Develop and recommend standard protocols regarding appropriate diagnostic audiological evaluations including the promotion of P.L. 2007, Chapter 236 – mandated reporting.
Serve as a liaison to the Department of Health and Human Services and the Maine Academy of Audiology.
Review MNHP’s achievement toward screen by 1-month and diagnostic evaluation by 3-months ensuring compliance with Federal CDC EHDI standards.
Review materials such as brochures, surveys, and other documents related to audiology.
Provide trainings to hospitals and others on the use of newborn hearing screening equipment.
Educate primary care providers on the importance of newborn hearing screening, follow-up and entrance to early intervention services.

**EHDI Champion**

Member Quality Improvement Team.
Collaborate with the state on EHDI activities and initiatives.
Provide leadership, guidance and education to pediatricians and other pediatric health care providers in the state on EHDI issues and activities.
Provide education to members of their respective AAP/AAFP chapters and others in the state on EHDI activities.
Participate in topic-specific educational conference calls offered by various agencies, organizations and the AAP/AAFP to further their own EHDI knowledge and education.
Attend and participate in the Maine Newborn Hearing Advisory Board.
Collaborate with peers to influence state-level policy and programs related to children who are identified with hearing loss.

**CSHN Senior Health Program Manager**

Member Quality Improvement Team
Provides general oversight of the Children with Special Health Needs Program (CSHN).
Provides direct oversight of the Maine Newborn Hearing Program.
Assists with grant applications, progress reports, data review and fiscal issues related to the HRSA and Federal CDC grants.
Assists with policy and program development.
Reviews materials for adherence to state standards.
The CSHN Program partners with many state and private agency in an effort to improve the system of services for children and youth with special health care needs in Maine.

**Quality Improvement Specialist**

Member Quality Improvement Team
Assists in the planning, coordination, facilitation and evaluation of QI initiatives related to the Maine Newborn Hearing Program.
Provide technical assistance in the development of team charters, AIM statements and the use of a variety of tools to assist the team in meeting the goals of quality improvement.
Assist with meeting project deliverables and goals.
Assist with planning, scheduling and tracking project timelines and milestones.

**Epidemiologist**

Member Quality Improvement Team, as appropriate.
Develop multi-year epidemiology plan for newborn hearing, including identification of quality improvement activities.
Assists in the development, maintenance and analysis of data.
March 12, 2014

Rockville, MD 20857

Dear Ms. Forsman,

The Maine Association of Certified Professional Midwives (MACPM) has been working with the Maine CDC to provide our members with information about the Newborn Hearing Program. We have worked hard to forge this relationship because we have noted that babies born out-of-hospital were often not being screened, even when the parents desire screening. We are aware that the Maine CDC is seeking funding from the “Reducing Loss to Follow-up to Pass Newborn Hearing Screening, HRSA 14-014, CFDA 93.251” grant to help increase screening rates in Maine and would like to offer our unique perspective in support of the application.

We have discussed with the director of the Newborn Hearing Program what we perceive to be barriers to testing. Because the majority of babies are born are born in the hospital, there is not a well-established system for screening babies when they are outside of the hospital system. When a baby is born out-of-hospital, they require a physician order to have the hearing screening done. Many physicians are not accustomed to this request and are confused about how to access hospital-based screening.

Other times families are interested in the screening, but it requires extra steps: seeing a physician for an order, making an appointment for the screening, and arriving with a quiet baby. These extra steps can be too much for new parents to manage, and as a result they don’t bother to have the baby screened.

We acknowledge the importance of the Newborn Hearing Program and would like to do what we can to increase the rates of screening for babies born in our care. The number of midwifery practices and relatively low practice volume make supplying each practice with a screening machine impractical. We believe, however, that a few strategically located machines could be shared effectively by several practices and would allow newborns to be screened by their midwives in their offices and eliminate the extra steps. It is our belief that two additional screening machines, one shared by midwives within a one-hour radius of Portland and one shared by midwives within a one-hour radius of Belfast, would allow midwives to offer screening to about half of the babies born at home in Maine. Four machines could likely be shared among midwives and allow nearly all of the babies born at home to be offered screening by their midwives.

MACPM is committed to providing the best care for the babies we serve and would be eager to do what we can to increase screening rates among home-born babies. We believe funding from the “Reducing Loss to Follow-up to Pass Newborn Hearing Screening, HRSA 14-014, CFDA 93.251” grant would make a significant difference in the rates of screening among babies born out-of-hospital in Maine.

Thank you,

holly@birchmoonnmidwifery.com
3/18/2014

Dear Ms. Forsman:

As current President of the Maine Academy of Audiology, I am writing in support of Maine CDC Newborn Hearing Program’s grant application for HRSA 14-104:M Reducing Loss to Follow-up after Failure to Pass Newborn Hearing Screening; C.F.D.A. 93251.

The Maine Academy of Audiology strongly supports and values the work of MNHP. Maine is a State with many rural areas. Although there are 28 facilities in Maine serving infants and children, only 8 provide full services. This makes it difficult to follow children who failed hearing screenings at birth and provide their families with education, support and resources. Without MNHP services, intervention for many of these children could be delayed. The work of the MNHP has helped reduced the loss of follow-up on newborn hearing screening significantly over the past 6 years, but as of 2012 27% were still loss to follow-up. One of MNHP goals is to reduce this to less than 10%. Audiologists in the State are thrilled to support this.

Please don’t hesitate to call me if you have any questions.

Sincerely,

[Signature]

Bath, ME  04530
March 7, 2014

Dear Ms. Forsman,

On behalf of the Maine Hands & Voices chapter, I am writing to support the Maine Newborn Hearing Program’s application for the Health Resources and Services Administration grant to reduce loss to follow up for infants who do not pass their newborn hearing screen. We have been working with the Maine CDC to implement a Guide By Your Side program in Maine to support families at the time of diagnosis from trained, non-biased parents who have also “been there”. As a parent of a deaf child, I can personally attest to the importance of those conversations with parents who have had similar experiences. It reduces the unknowns, validates feelings and lessens the feeling of being overwhelmed. This support is vital at the time of diagnosis and would help parents stay connected with the system to ensure better outcomes for their children.

Although Maine is a small state from a population standpoint, it is geographically large with a significant rural population. Reaching parents in all corners of the state can be a challenge and there needs to be continued efforts at innovative ways to partner with parents and professionals to get this need met. The Maine Newborn Hearing Program has been committed to this goal and having this grant will allow them to continue this vital work.

If I can offer any more information or answer any further questions, I would be happy to do so.

Sincerely,
Re: HRSA 14-104:M Reducing Loss to Follow-up after Failure to pass Newborn Hearing Screening; C.F.D.A 93.251

Dear Director Forsman,

I am writing to offer my support of the Maine Newborn Hearing Program's (MNHP) application to the Health Resources and Services Administration, Maternal and Child grant opportunity to "Reduce Loss to Follow-up after Failure to pass Newborn Hearing Screening".

As the Consultant contracted to provide information and resources on hearing loss and communication to Maine's Department of Health and Human Services, I recognize the importance of early detection and intervention. Children with cognitive or physical disabilities served by this department have a substantially higher incidence of hearing loss but are often lost to follow-up while family members cope with equally pressing health issues. MNHP's continued efforts to reduce the loss to follow-up from its current rate of 41% to less than 10% is very necessary. From a State Office perspective, MNHP's role in detection and intervention for hearing loss early in the lives of these children will result in reduced need for DHHS habilitative services later on. From a personal perspective as a private practice assessor for deaf and hard-of-hearing children who utilize American Sign Language and Visual Gestural Communication, I am starkly aware of the impact that non-remediated hearing loss can have on a child's linguistic and educational experience. Hearing loss is the only disability with a detrimental impact on language that can be completely eradicated through timely and appropriate early intervention.

As both a consultant to Maine DHHS and as a member of Maine's Deaf Community, I am committed to working together with Maine CDC: MNHP to ensure that all children receive timely screening for hearing loss and receive necessary and appropriate early intervention services with the 1-3-6 model.

I strongly support the MNHP application so that together we can continue to build upon the existing strengths of that program and better serve children and families with hearing loss in Maine.

Sincerely,
Dear Ms. Forsman:

This is regarding the RFP titled HRSA 14-104:M Reducing Loss to Follow-up after Failure to Pass Newborn Hearing Screening; C.F.D.A. 93.251. It is with great pleasure I am writing this letter of support for the proposal submitted by Maine Center for Disease Control and Prevention, Children with Special Health Needs (CSHN) Program. I have read the proposal written by Toni Wall, CSHN Director. I believe this will be a very important project for serving children with, or at risk of, hearing loss in Maine and their families. It will enhance the capacity of Maine Newborn Hearing Program (MNHP) to perform early identification and intervention, ensuring timely referral to needed services.

Since 2001, I have overseen the design and management of Maine’s Newborn Hearing Screening database and Maine’s Electronic Birth Defects Registry. Our research team developed the ChildLINK informatics system, which links Maine’s electronic birth certificates with data from the Maine Newborn Hearing Program (MNHP), Maine Birth Defects Program, Maine Newborn Bloodspot Screening Program, and Maine Cleft Lip & Palate Program, all housed within the Maine Children with Special Health Needs Program. Birthing facilities throughout the state upload screening data to ChildLINK on a regular basis through secure 128 bit encrypted Internet connections. ChildLINK is also accessed by other providers, such as audiologists who enter diagnostic and evaluation information, and hospitals that upload discharge records for the birth defects program.

We will continue to enhance ChildLINK and assist MNHP in reducing loss to follow up. If you have any question regarding ChildLINK or our role in MNHP, please feel free to contact me via phone (207-531-9064) or e-mail (shihfen.lu@maine.edu).

Sincerely,

[Signature]

Maine’s Land Grant and Sea Grant University
A Member of the University of Maine System
Dear Ms. Forsman:

As co-chairs of the Maine Newborn Hearing Program (MNHP) Advisory Board, we are pleased to write this letter of support for MNHP's application for funding from the Health Resources and Services Administration, Maternal and Child Health Bureau, Division of Children with Special Health Needs Program for HRSA 14-104: Reducing Loss to Follow-up after Failure to Pass Newborn Hearing Screening: C.F.D.A. 93.251.

The MNHP Advisory Board oversees the administration of MNHP, advises the Commissioner of the Department of Health and Human Services on issues relating to MNHP, and recommends procedures for hearing screening, evaluation, treatment and services. In recent years, we have seen MNHP achieve a successful screening rate of 98%. Over the last year, the board has created a Quality Improvement (QI) Committee to focus appropriate resources on QI initiatives. This includes working with MNHP staff and consultants to achieve a significant reduction in loss to follow-up, with a goal of 10% or less over the next several years.

The MNHP Advisory Board looks forward to the successful implementation of the proposed grant.

Yours truly,
March 20, 2014

Dear Ms. Wall:

I am writing to offer my support of the Maine Newborn Hearing Program’s supplication to the Health Resources and Services Administration, Maternal and Child Health Bureau, Division of Children with Special Health Care Needs, Reducing the Loss to Follow-up after Failure to Pass a Newborn Hearing Screening.

The Maine Educational Center for the Deaf and Hard of Hearing and the Governor Baxter School for the Deaf (MECDHH/OBSD) has had a long-standing commitment to working with the Maine Newborn Hearing Program. As a statewide educational agency, it is both our responsibility and our firm commitment to provide a continuum of services, including programs that serve families and their deaf or hard of hearing infants. Early intervention and newborn hearing screening go hand in hand. We at MECDHH/OBSD fully recognize that timing is critical and that infants cannot wait when it comes to the acquisition of language. It is a key to their success as young language learners and as learners in general.

The MECDHH/OBSD Early Childhood and Family Services Program is committed to collaborating with the Maine Newborn Hearing Program (MNHP) to serve this population of infants and their families. Grant funding, via DHHS and the MNHP helps us employ a full time Follow-Up Coordinator and a part-time Parent Consultant. These professionals have assisted in significantly reducing the number of infants who are not early identified. Additionally, crucial follow-up is provided to ensure ongoing support and education of families. There is still more work to be done to ensure that all infants, upon discharge from the hospital, are referred for an evaluation and subsequently receive early intervention services.

MECDHH/OBSD will continue to provide Early Childhood Family Services to aid families in learning about their newborn infant’s developmental needs, especially in regards to hearing loss. We will continue to serve families through our Parent Infant Toddler Program so that they have the additional benefit of an Educational Audiologist and Speech and Language Therapist.

I strongly support continued funding for the Maine Newborn Hearing Program. This will allow us to continue to build upon existing partnerships and better serve children with hearing loss in Maine.

I look forward to our continued partnership, the success of your application and the resulting high quality services for deaf and hard of hearing infants/children and their families.

Respectfully,
March 24, 2014

RE: HRSA-14-104 - Reducing the Loss to Follow-up after Failure to Pass newborn Hearing Screening,

Dear Ms. Forsman:

As President of the Maine Chapter of the American Academy of Pediatrics (Maine AAP), I am writing to support the grant proposal to improve the processes for newborn hearing screening and follow-up in Maine. We share the concerns about the number of newborns who could benefit from timely follow-up and applaud the Maine CDC for developing a program to address this issue.

Given Maine’s large geography and limited number of specialists, we are pleased to be part of a collaborative network to promote the health of all children in Maine. The Maine AAP’s 200 members represent nearly 90 percent of the pediatricians in our State. We are a non-profit organization with a mission “To Improve the Lives of Children and Adolescents in Maine.”

The Maine AAP is fortunate to have the trust and loyal participation of pediatric practices, as well as good the relationships with many pediatric leaders in the non-profit and government sectors. We will use our resources and relationships to publicize all the trainings on newborn hearing screening, diagnosis and early intervention. We will advise our members and other clinicians who care for children to be sure they are aware of these educational opportunities. We will also be pleased to publicize that the trainings will be presented by well-respected experts, Drs. Christopher Pezzullo and Bethany Picker.

If you would like additional information, please contact me (steven.feder@lebcare.org) or our Executive Director, Leslie Goode (ldgoode@aap.org).

Sincerely yours,
## 2012 Screening Data

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Data Source: CDC/NCBDDD/EHDI 2012
## 2012 Demographics - Diagnostic Data

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Data Source: CDONC/BD/HH/IDH 2012
## 2012 Demographic - Early Intervention Data

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Data Source: CDC/NCDDD/DHHS 2012
ATTACHMENT 7

As required by FOA, the Maine Department of Health and Human Services (DHHS), Maine Center for Disease Control and Prevention (MECDC), Division of Population Health (DPH), Maternal and Child Health (MCH) Unit, Children with Special health Needs (CSHN) Program, Newborn Hearing Program (NHP) is pleased to submit this progress report for continued funding for the reporting period September 1, 2013 – August 31, 2014.

Goal 1: Enhance EHDI 1, 3, 6 goals to reduce the LTFU/D

Objective 1.1: By August 2014, reduce the LTFU/D to 1% at screening (2009 data, 2.4%)

- LFU/D for screening decreased from 2.4% in 2009 to 1.3% in 2012. Ninety percent of the missed screens continue to be a result of the home birth population. The LFU/D rate will decrease when we partner with the Maine Association of Certified Professional Midwives and in partnership implement a hearing screening system outside of birth facilities. CPMs continue to express their desire to improve access to both newborn hearing and bloodspot screening.
- MNHP continued to provide technical assistance to birthing facilities.
- MNHP Coordinator monitored missed screens on a weekly/monthly basis and the Follow-up Consultant continued to contact birthing facilities to reconcile any missed results. These results were entered into ChildLINK and linked to existing birth certificates.
- The Office of Data, Research and Vital Statistics implemented a new birth certificate system in August 2013. The MNHP Coordinator worked with Vital Statistics to reconcile many issues with the new system, specifically missed birth certificates and unlinked records. Those issues have been resolved.
- MNHP created a draft flowchart of the current screening process identifying quality improvement activities to improve screening rates.
- Best Practice Protocols for Pediatric Assessment: A guide for infants who refer on their newborn screening or have a risk factor for hearing loss.
- MNHP maintains a working relationship with midwives at Northern Sun.

Objective 1.2: By August 2014, reduce the LTFU/D to 10% or less at diagnosis (2009 data, 66.2%)

- LFU/D for evaluation decreased from 66.2% in 2009 to 16.3% in 2012.
- Revised on-line audiology reporting form was implemented in January 2012.
- MNHP Coordinator monitors missed evaluations on a weekly basis and the Follow-up Consultant continues to contact birthing facilities to inquire if a diagnostic appointment was scheduled and MNHP wasn’t notified as mandated by statute.
- Follow-up Consultant contacted PCP’s to ensure that the “referred” child received appropriate diagnostic services.
- The Parent Consultant continued to work with families to ensure that appointments were kept, calling families several days prior to an appointment.
- MNHP is working with ChildLINK staff to develop an internal email system that allows users to be prompted when work has been dropped into their queue and EXCEL spreadsheet allowing the Follow-Up Coordinator to manage those infants due for audiology appointments.
Objective 1.3: By August 2014, reduce the LTFU/D to 10% or less at intervention (2009 data, 85.7%)
- LFU/D for early intervention decreased from 85.7% in 2009 to 34.7% in 2012.
- MNHP continues to refer 100% of the confirmed babies to the Department of Education, Part C – Child Development Services (CDS).
- CDS is prohibited by FERPA to report to MNHP on individual children. However, MNHP does receive aggregate data.
- MNHP receives information on eligibility from Governor Baxter School for the Deaf, Maine Center for the Deaf and Hard of Hearing, Early Child and Family Services. ECFS includes MNHP on their release of information allowing staff to report directly to MNHP.
- In March 2014, ECFS and CDS signed an MOU. ECFS staff will become IEP Coordinators for the CDS system working exclusively with children who are deaf or hard of hearing.

Goal 2: Enhance the system by improving the capabilities of partners to provide education to families on the EHDI process, specifically LTFU/D

Objective 2.1: By August 2014, Guide-By-Your-Side is institutionalized in Maine and providing support to families.
- The Maine Chapter of Hands and Voices is established in Maine.
- 501 3 status acquired July 2012.
- A Request for Proposal (RFP) was released in February 2014 with an anticipated start date of July 1, 2014.
- Continued support for parent to parent program for children who are deaf and hard of hearing will be discussed when a vendor is selected.

Objective 2.2: By August 2014, the LTFU/D for MaineCare children has been reduced to less than 10% (Baseline: 2009 data 52.4%)
- The MOU between MaineCare and the MBCDC Children with Special Health Needs Program remains in the Attorney General’s Office and in all likelihood will not be signed.
- MBCDC has pursued the opportunity from CMS to have training on linking Medicaid claims with vital statistics data. This 10-month project is designed to assist states in surveillance, performance monitoring, and quality improvement. MaineCare (Medicaid) and the University of Southern Maine will lead the endeavor. Once this is completed we anticipate linking the MaineCare data with ChildLINK.
- Provider Relations Specialist hired in June 2012. The position is funded by MaineCare (Medicaid) and staff have requested that this position work exclusively on MaineCare related issues.

Objective 2.3: By August 2014, Early Head Start, WIC and Home Visitors are collaborating with MNHP to reduce the LTFU/D.
- Maine Families (Maine’s Home Visiting Program) screens clients for hearing loss using OAE portable equipment.
- MNHP provides training and provides technical assistance as appropriate.
- MNHP provides screening information to Maine Families after receipt of signed release of information from family.
Maine Families sends screening results to MNHP.

Goal 3: Implement a continuous quality improvement process to decrease the LTFU/D
- June 2013 the Maine Newborn Hearing Advisory Board creates a quality improvement committee.
- Mission - “support the goal of eliminating all barriers to successful outcomes for children with hearing loss”
- QI committee members assist MNHP in the development of flowcharts and identify QI projects.
- QI committee meets with MECDC Epidemiology and MNHP staff to discuss the creation of a Dashboard. The Dashboard will consist of real time for review of all members of the MNHP Advisory Board. Dashboard design is completed by June 2014. ChildLINK personnel will then work to populate fields.
- MNHP creates QI committee in June 2013 to begin the development of flowcharts on the current process.
- March 2014 MNHP QI Committee creates Team Charter
- Beginning in July 2014 MNHP and Advisory Board will work with MECDC epidemiologist to develop a multi-year epidemiology plan that includes QI activities.
- MNHP coordinator meets on a regular basis to review and implement past recommendations.

Goal 4: Enhance provider knowledge on the EHDI process to assure the infants receive the necessary follow-up services

Objective 4.1: By November 2011, the Chapter Champion web page is established on the Maine Chapter of AAPs website
- Dr. Christopher Pezzullo is appointed by the Maine Chapter of the AAP as the Chapter Champion.
- Maine participates in NCHAMs provider survey, although the number of respondents is small.
- MNHP notes that 74% of providers never connected with the State EHDI program.
- MNHP Coordinator, Chapter Champion and Advisory Board design power point presentation on NCHAM results.
- MNHP Coordinator meets with the Maine Medical Association on efforts to reach provider community.

Objective 4.2: By November 2011, physician database is current
- Physician database has not been established.

Objective 4.3: By August 2013, physicians have increased knowledge on the importance of newborn screening, diagnosis, and early intervention.
- See objective 4.1
**TEAM CHARTER**

**Maine CDC Quality Improvement Council**

<table>
<thead>
<tr>
<th>Team Name: Maine CDC Quality Improvement (QI) Council</th>
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**Opportunity Statement:**

The Maine CDC is charged with embedding a culture of quality at all levels of the organization. The 39 programs within the Maine CDC will benefit from a performance management system that (1) increases the knowledge and application of QI tools; (2) creates a system that identifies QI opportunities; and (3) implements processes that create a more efficient and effective Maine CDC. To ensure collaboration and input from key stakeholders, a Council will be developed to respond to the needs of the organization.

Good Governance + Good Evidence + Modest Resources from Leverage and/or Appropriations = A Quality Council that can Accelerate Effectiveness, Efficiency, and Quality Improvement.

| Team Sponsor: Christine Zukas | Team Facilitator: Anne Conners |

<table>
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<th>8. Team Members:</th>
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<td>• Infectious Disease – Epidemiology</td>
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**Process Improvement Aim (Mission):**

The QI Council’s mission is to provide leadership for and to foster engagement in continuous organizational quality improvement efforts at all levels of the Maine CDC, thereby advancing efficiencies and effectiveness within the organization.

**Council Justification:**

The Council is responding to an organizational need for guidance in Quality Improvement efforts by building a quality improvement culture, identifying needs, determining improvement priorities, and evaluating progress. The Council will manage support for QI projects that require funding in order to succeed.

The grant for Strengthening Public Health Infrastructure for Improved Health Outcomes was awarded to the Maine CDC in 2010. The purpose of this grant is to build an infrastructure of quality improvement, develop performance management systems, and support the efforts of accreditation to public health departments across the country. While the core mission of the Council is to build and sustain a culture of quality, the grant will provide additional support as available to ensure the success of quality improvement projects that align with the Council’s objectives.

While the Council provides the framework to support the organization-wide goal of continuous quality improvement, the Maine CDC is also pursuing National Accreditation through the Public Health Accreditation Board (PHAB). This Council is further responsible for supporting the accreditation initiative, specifically PHAB standard 9.1.

**Scope (Boundaries):** Roles, responsibilities, accountabilities, and activities of the team members

- The Council will be composed of Maine CDC staff.
- Council size should be between 8 – 10 members.
- Members of the Council will have staggered terms. Terms are for two years. For continuity purposes, no more than five members will rotate off the council in one calendar year.
during the SMT meetings.
- SMT will provide ongoing support to the Council by keeping the Council apprised, in advance, of issues or opportunities that may impact the role of the Council as they become aware of them.
- SMT will attend the QI Council meetings as appropriate.
- SMT will approve membership on the Council.

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Objectives: (includes a timeline, as well as specific, measurable, realistic, and achievable QI goals)

Planning:
- Annually reviews the Maine CDC-wide outcomes of QI initiatives.
- Annually reviews and updates the Maine CDC QI Plan.

Data Collection Functions:
- Based on results and feedback, takes immediate action or makes recommendations for future quality improvements.
- Collects appropriate data, reviews assessment results, and suggests changes to the QI program.

Professional Development Objectives:
- Strengthens knowledge of quality improvement principles and practices through promotion of and participation in available free training events.
- Monitors for continual improvement, offering training specifically identified and endorsed by the Council.

Communication Objectives:
- For each program that has regular staff meetings, a QI Council member will attend program staff meetings once per quarter for the purposes of (1) communicating Council initiatives and activities, and (2) learning about and responding to QI opportunities.
- Maintains an environment conducive to change by providing the Maine CDC community with quality improvement awareness activities and formal communications relating to quality initiatives. This goal can be accomplished through e-mails, newsletters, team storyboards, case studies, articles, etc.

Employee Recognition Objectives:
- Establishes and oversees a system of employee recognition for quality improvement, including recognition of individuals, work groups, and divisions.
- Recognition methods will be reviewed and revised at least annually. Methods can include (but are not limited to) team progress presentations, the bi-weekly QI newsletter, the DHHS In Focus newsletter, awards or certificates, and personal thank yous from leadership.

13. Success Metrics for the QI Council (Measures):

| 1. Meet milestones by the designated dates |
| 2. # of QI projects identified and brought to the Council |
| 3. % of attendance at Council meetings |
| 4. Documented activities that occur between meetings (attending staff meetings, subcommittee meeting summaries, e-mails between Council members, etc.) |
| 5. Documented success stories in QI/Accreditation Newsletter and in Year End Report provided to SMT. |


Assumptions
- There is a business need to improve Maine CDC efficiencies and effectiveness.
- Divisions will incorporate process improvement into existing programs and procedures.
The Council shall align activities with the State Health Improvement Plan, Maine CDC's strategic priorities, Healthy Maine 2020 goals, and/or current program functions.

- The Council will strive to sustain a culture of quality within Maine CDC. Council members will lead by example and will model behaviors that foster QI within Maine CDC.
- Council membership should include at least one member from each division and one from support staff, when possible.

Roles and Responsibilities:

Quality Council:
- The Council's role includes coordinating, launching, and institutionalizing the quality improvement process within the organization by developing and articulating a clear vision for quality improvement.
- The Council serves as a review board and technical support for project teams' interim and final projects.
- The Council reviews and communicates approval for the quality improvement projects that require additional support to remove barriers to success.
- The Council shall support QI Project Team Leaders when problems/issues require resolution.
- Members provide some administrative support to the Council -- minutes, agendas, data analysis, archiving reports, scheduling meetings and sending meeting notices, etc.
- Members will function as a communication conduit, sharing quality improvement training opportunities identified at various organizational levels:
  - Introductory;
  - Tools and techniques;
  - Teaming

Council's Team Sponsor:
- The Team Sponsor attends the meetings as necessary and is available both for guidance and to remove barriers to success.

Council's Team Facilitator:
- The Team Facilitator will organize and facilitate Council meetings, is responsible for communications, and ensures that timelines are met, as well as offering expertise and guidance to the Council. The Team Facilitator documents and coordinates existing internal efforts and external performance management initiatives and facilitates Council meetings.

Council Membership:
- The Council will play an active role from initial discussions to implementation for a period of one year. Council members will meet monthly, on the first Monday of each month, providing input on QI directions; offering subject matter expertise as needed; and developing, reviewing, and providing feedback on draft documents related to the objectives (Council deliverables).
- Council members will be expected to attend nine of the 12 scheduled Council meetings and not miss more than two meetings in a row.
- Council members are responsible for being prepared for the meetings and for bringing the printed materials to the meetings.
- Council members will become familiar with performance improvement systems, will promote and sponsor initiatives approved by the Council, and will provide a communications link between the represented stakeholders and the Council.
- Council members will provide insight and a perspective that—while representing their stakeholders—will contribute potential solutions and strategies to improve the quality of processes within Maine CDC as a whole.
- Council members will represent the organization as a whole and will maintain a systems perspective, thereby promoting QI efforts that lead to the ultimate Maine CDC goal which is efficient and effective services that improve the health of Maine people.
- New members do not need to have QI experience, but they must show a genuine interest in QI and continuous learning.

Senior Management Team:
- SMT may review QI initiatives the Council undertakes to support, and will have final approval authority on additional support applications.
- SMT meets weekly and will provide sufficient time during the SMT meetings for a Council representative to provide the information regarding QI supplemental support. Decisions, including, but not limited to, supplemental support, will be made.
• Work product will be evidence based. The purpose of this initiative is to improve the effective and efficient use of Maine CDC resources. The Council agrees to maintain an inventory of evidence-based quality improvement tools.

Constraints
• There is a pre-defined additional support mechanism and a schedule by which to administer it.
• The Council will need to meet its goals while members still meet other responsibilities.

Obstacles
• The QI Council will be functioning within the boundaries of a governmental system.

Risks
• The work plan will take longer than the time allotted;
• Supplemental support may change from year to year, requiring the Council to be flexible and to keep in mind long-term goals.

<table>
<thead>
<tr>
<th>15. Available Resources:</th>
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<tbody>
<tr>
<td>Maine CDC Deputy Director</td>
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<tr>
<td>Performance Improvement Manager</td>
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<tr>
<td>Performance Improvement Coordinator</td>
</tr>
<tr>
<td>SMT</td>
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<tr>
<td>Newsletter</td>
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<tr>
<td>PDCA-Manual</td>
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<tr>
<td>NPHII support</td>
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</tbody>
</table>

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<thead>
<tr>
<th>16. Additional Resources Required:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date:</td>
</tr>
<tr>
<td>First Monday of each month Sept 2013 to October 2014</td>
</tr>
<tr>
<td>October 2013</td>
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<tr>
<td>October 2013</td>
</tr>
<tr>
<td>November 2013</td>
</tr>
<tr>
<td>Ongoing</td>
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</tbody>
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<thead>
<tr>
<th>17. Key Milestones:</th>
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<tbody>
<tr>
<td>The QI Council meets six times per year.</td>
</tr>
<tr>
<td>The Council reviews and updates its Team Charter as needed.</td>
</tr>
<tr>
<td>The Council reviews and reports on QI initiatives throughout the organization annually.</td>
</tr>
<tr>
<td>The Council reviews and updates the Maine CDC QI Plan annually.</td>
</tr>
<tr>
<td>The Council identifies barriers and promotes solutions.</td>
</tr>
<tr>
<td>The Council documents QI projects occurring throughout the organization.</td>
</tr>
<tr>
<td>Date:</td>
</tr>
<tr>
<td>First Monday of each month Sept 2013 to October 2014</td>
</tr>
<tr>
<td>October 2013</td>
</tr>
<tr>
<td>October 2013</td>
</tr>
<tr>
<td>November 2013</td>
</tr>
<tr>
<td>Ongoing</td>
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</tbody>
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<tr>
<th>18. Communication Plan (Who, How, and When):</th>
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<tbody>
<tr>
<td>• The biweekly QI/Accreditation Newsletter can be used as one of the mechanisms by which to reach Maine CDC staff. Council members will provide input to Newsletter articles and will discuss Newsletter content and design once a quarter.</td>
</tr>
<tr>
<td>• Council Members and PICs will be responsible for communicating the Council’s agenda at their own staff meetings.</td>
</tr>
<tr>
<td>• Council members will attend staff meetings of programs within their division, in partnership with the PIC, for the purpose of communicating Council initiatives and activities as well as to learn and respond to QI opportunities. Council members will strive to attend all program staff meetings once per quarter.</td>
</tr>
<tr>
<td>• The Intranet will include (1) Council members’ names, roles, and contact information; and (2) Council-related material such as the charter, application, application criteria, etc.</td>
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<thead>
<tr>
<th>19. Key Stakeholders:</th>
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</thead>
<tbody>
<tr>
<td>Area of Concern (as it relates to the Charter):</td>
</tr>
<tr>
<td>Maine CDC staff</td>
</tr>
<tr>
<td>It is understood that not all programs have staff meetings; thus the Council will work toward a solution to identify another method of communication for programs or staff groups that do not hold regular meetings.</td>
</tr>
<tr>
<td>It is understood that not all staff members will be immediately engaged in QI, and the Council will partner with the Innovators and early adopters while striving to reach the late adopters over time.</td>
</tr>
<tr>
<td>SMT</td>
</tr>
</tbody>
</table>

4
1. **Team Charter:** Implementation of a CQI process to decrease the LFU/D at 1, 3, 6 stage of EHDI

2. **Team Name:** Maine Newborn Hearing Program

3. **Version:** #2, March 20, 2014

4. **Subject:** Reducing the LFU/D in the 3 stages of the EDHI process

5. **Opportunity Statement:** The Maine CDC Newborn Hearing Program is charged with 1) increasing the percentage of newborns who are screened for hearing loss by 1-month of age; 2) increasing the percentage of newborns with have completed an audiological evaluation by 3-months of age; and, 3) increasing the proportion of infants who are enrolled in appropriate early intervention services by 6-months of age.

6. **Team Sponsor:** Toni G. Wall, CSHN Sr. Health Program Manager

7. **Team Leader:** Betsy Glencross, MNHP Coordinator

8. **Team Members:**

<table>
<thead>
<tr>
<th></th>
<th>Area of Expertise:</th>
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<tbody>
<tr>
<td>1.</td>
<td>MNHP Coordinator</td>
</tr>
<tr>
<td>2.</td>
<td>CSHN Sr. Health Program Manager</td>
</tr>
<tr>
<td>3.</td>
<td>MNHP Parent Consultant</td>
</tr>
<tr>
<td>4.</td>
<td>MNHP Follow-up Consultant</td>
</tr>
<tr>
<td>5.</td>
<td>QI Coordinator</td>
</tr>
<tr>
<td>6.</td>
<td>BDHI Chapter Chair</td>
</tr>
<tr>
<td>7.</td>
<td>Certified Professional Midwife</td>
</tr>
<tr>
<td>8.</td>
<td>Epidemiologist</td>
</tr>
<tr>
<td>9.</td>
<td>Audiology Consultant</td>
</tr>
<tr>
<td>10.</td>
<td>Title V MCH Director</td>
</tr>
<tr>
<td>11.</td>
<td>Certified professional midwives, nurse managers, early intervention specialists</td>
</tr>
</tbody>
</table>

9. **Performance Improvement AIM (Mission):** The Maine CDC Newborn Hearing Program’s aim is to reduce the loss to follow-up after failure to pass a newborn hearing screening.

10. **Scope (Boundaries):** To become a program within the MECDC that continuously measures and improved screening by 1-month, evaluation by 3-months and intervention by 6-months.

11. **Customers (primary and other):**

<table>
<thead>
<tr>
<th></th>
<th>Customer Needs Addressed:</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Maine families and their children</td>
</tr>
</tbody>
</table>

12. **Objectives: SMART Specific, Measurable, Achievable, Realistic, Time Frame:**

   - By August 31, 2017, MNHP will decrease the percentage of Maine infants who are LFU/D for screening from 1.3% to 1%.
   - By August 31, 2017, MNHP will decrease the percentage of Maine infants who are LFU/D for evaluation from 16.3% to 10%.
   - By August 31, 2017, MNHP will increase the percentage of Maine infants who are LFU/D for early intervention from 57% to 75%.
   - By August 31, 2017, MNHP will decrease the percentage of primary care providers who have never heard of MNHP from 74% to 50%.

13. **Success Metrics (Measures):**

   - Improve the percentage of screening of home births by 10% each year.
• Improve the percentage of infants who complete an audiological evaluation by 3-months of age by 3% each year.
• Improve the percentage of infants with a confirmed hearing loss who are receiving early intervention services by 6-months of age by 5% each year.
• Improve the percentage of PCPs who have heard about MNHP by 5% each year.


15. Available Resources:
- Maine CDC NHP QI Team
- MNHP Advisory Board
- HRSA/CDC funding
- ChildLINK

16. Additional Resources Required:

17. Key Milestones:

18. Communication Plan (Who, How and When): The QI Team will create storyboards to communicate our progress to our stakeholders. The storyboards will be an agenda item at the MNHP Advisory Board meetings to show progress.

19. Key Stakeholders:

<table>
<thead>
<tr>
<th>Area of Concern (as it relates to the Charter):</th>
</tr>
</thead>
<tbody>
<tr>
<td>ChildLINK Staff</td>
</tr>
<tr>
<td>MACPM</td>
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</tbody>
</table>

MNHP Advisory Board
Memorandum of Understanding
BETWEEN
THE STATE INTERMEDIATE EDUCATIONAL UNIT
CHILD DEVELOPMENT SERVICES

and

THE MAINE EDUCATIONAL CENTER
FOR THE DEAF AND HARD OF HEARING

and

THE GOVERNOR BAXTER SCHOOL FOR THE DEAF

Effective: March 1, 2014
Maine CDC
Maine CDC Newborn Hearing Program – Creating Individual Tracking and Surveillance Record - DRAFT

[Diagram of the process flow]

Quality Improvement, Evaluation and SOP Suggestions
- Literature & SOP CI generates weekly screening facility report with dates of last data upload
- SOP Development & QI Opportunity (Manual/UOM)
- Data upload is not consistent and no one person in CI/BI to check on process
- No portal provider
- No portal provider
- No data portal and data upload implemented
- No Point Person
- No Point Person

March 1, 2014
Maine CDC
Maine CDC Newborn Hearing Program - Referral Process - DRAFT

[Flowchart diagram]

- Hearing screen process
  - No
    - MHP asks for audiogram
    - [Decision point]
  - Yes
    - MHP contacts family
    - [Decision point]
- MHP contacts family for appointments
  - No
    - [Decision point]
  - Yes
    - MHP contacts family
    - [Decision point]

[Further decision points and actions related to the referral process]

[End of flowchart diagram]
Maine CDC
Maine CDC Newborn Hearing Program – Audiolist Sub-Process - DRAFT

Hearing Screener Process

No
Yes

MNHIP receives Audiolight Report

Web bombed and completed by Audio - MNHIP enters into web interface

Yes

MNHIP sends report via fax or mail

MNHIP Coordinator receives and creates secure fax and forwards to consultant

MNHIP Consultant interprets the report to complete the online form

MNHIP Consultant calls the Audiolight to clarify questions and concerns

MNHIP Consultant completes the online form

MNHIP receives online
web upload

Mobile NHIP manually fills the Audiolight report to the child's record in CHILDS

MNHIP Staff and Consultant discuss report Impediments or concerns

Report Findings

Normal Hearing

Hearing Loss

Undetermined

Not Tested

Case Closed

Temporary

Permanent

Report to CHILDS

Pass newborn screen closed

MNHIP refers to CDS and or CSHCN Intervention

Refer newborn screen

MNHIP consults family to offer guidance and support

MNHIP confirms appointment is scheduled

MNHIP consults PCP and family to confirm appointment

March 20, 2014