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Division of Services for Children with Special Health Needs

Early Hearing Detection and Intervention Program

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PROJECT NARRATIVE

INTRODUCTION

With a national incidence of two to three per one thousand births, permanent congenital hearing loss is one of the most common birth defects. The early identification of hearing loss provides opportunities for families to take advantage of support and engage in timely early intervention services for their child. Research shows that children who are deaf or hard of hearing (DHH) and who are enrolled in early intervention by six months of age have the same potential for language development and milestone achievement as typical developing children. The overarching goal of early identification of children who are DHH is to maximize their linguistic competency and literacy development, which in turn supports the overall development of cognition and social emotional development. With a newborn hearing screening rate of 98.6% in 2017, Louisiana has made great strides toward early identification of children who are DHH. The aim of this new project is to grow the capacity of our comprehensive and coordinated statewide Early Hearing Detection and Intervention (EHDI) system of care targeted towards ensuring that newborns and infants are receiving appropriate and timely services, including screening, evaluation, diagnosis and early intervention. This goal will be accomplished by focusing efforts on 1) engaging all EHDI system stakeholders to improve developmental outcomes of children who are DHH 2) improving the coordinated infrastructure to reduce loss to follow-up/loss to documentation, ensuring that newborns are screened by 1 month of age, diagnosed by 3 months of age and enrolled in early intervention by 6 months of age 3) expanding capacity to support hearing screening in young children up to 3 years of age 4) strengthening the capacity to provide family support and engage families with children who are DHH and adults who are DHH throughout the EHDI system, and 5) continuing to facilitate improved coordination of care and services for children who are DHH and ensure timely enrollment in early intervention after diagnosis.

The Louisiana Early Hearing Detection and Intervention (LA EHDI) Program will build upon strategies of existing systems, test change strategies, and spread successful changes throughout the EHDI system. Quality improvement methodologies will be utilized, as we address the activities in the Work Plan (Attachment 1) to follow along with continued networking among teams of stakeholders resulting in the delivery of timely services and improved EHDI systems of care for families and children in Louisiana.

NEEDS ASSESSMENT

State Territory EHDI System

The Louisiana Department of Health has been at the forefront of universal newborn hearing screening and intervention initiatives. In 1994, the state implemented legislatively mandated screening for infants who met criteria for high risk registry. At that time, only 5% of newborns were being screened for hearing loss. In 1999, the state legislature revised the act to mandate that all newborns be screened for hearing loss prior to hospital discharge or within one month of birth if born at an alternate site. Rules and regulations for the revised act were promulgated, and hospitals were mandated to be in compliance by April 2002**.** All state birthing hospitals comply with the mandate, and in 2017, Louisiana has now achieved a screening rate of 98.6%.

As Louisiana began instituting universal newborn hearing screening, the state also began seeking to achieve the national EHDI goals to maximize the outcome of infants who are deaf or hard of hearing. The first three goals are referred to as "The 1~3~6 Plan": all newborns shall be screened no later than 1 month of age, preferably prior to hospital discharge; for those who do not pass screening, audiologic diagnosis shall be completed by 3 months of age; if hearing loss is confirmed, appropriate intervention services shall be received no later than 6 months of age.

In 2017, there were 60,718 live births in Louisiana reported to LA EHDI via Louisiana Early Hearing Detection and Intervention database (LA EHDI-IS); 52% were White, 37% Black, and 11% other races; 8% Hispanic; 51% male and 49% female; and 62% of deliveries paid for by Medicaid. The percent of newborns with hearing screening prior to hospital discharge was 98.6% (99.0% with exclusion of infants died/parents declined). Of those who did not have newborn hearing screening (NHS), besides 'infants died' (30%), 'parents/families declined services' (1%), 'infants were transferred to other facilities' (16%), and 'homebirths' (2%), most (47%) reasons of no NHS were still unknown. Among 2,289 infants who did not pass NHS prior to hospital discharge, 21.8% (500) did not have a hearing diagnosis and were defined as lost to follow-up (LTF) or lost to documentation (LTD) after hearing screening. The percent of diagnosed before 3 months of age among those not passing the initial newborn hearing screening is 66.84% (1530/2289). Of 2,289 children who did not pass NHS, total children confirmed with permanent childhood hearing loss was 83 (1.4 per 1,000 screened, 83/59,867). There were 73 (88%, 73/83) children with hearing loss who were referred to Part C early intervention (EI), and 55 (75% 55/73) of those referred enrolled. 100% of children with hearing loss were referred to Non-Part C EI; however, only 53 (64% 53/83) enrolled. Two (2%) only received monitoring services, 2 (2%) were not Louisiana residents/moved out of jurisdiction, 3 (4%) declined services by parents/families, 1 (1%) was unable to receive EI due to medical reasons, 5 (6%) parents/families were contacted but unresponsive, and 2 (2%) families we were unable to contact.

Disparities

Enrollment in EI by six months of age is still a major problem in Louisiana. A recent analysis using LA EHDI data indicated that there was no trend in EI enrollment by six months of age from 2008 to 2016. Percentage of children enrolled in EI was about 50% each year. Age at diagnosis was an important factor contributing to late enrollment (after six months of age). Of children with permanent hearing loss, 30% of them were diagnosed after six months of age. Children diagnosed with hearing loss between four and six months of age were four times more likely to be enrolled late in EI compared to those who were diagnosed before three months of age. Severity of hearing loss was another factor of late enrollment. Risk of late enrollment was five and three times higher in children with mild and moderate/severe hearing loss, respectively, than in counterparts with profound hearing loss. Statistically, the following study factors were not related to late enrollment: race, ethnicity, gender, birth weight, maternal age, education, geographic living area, number of previous live births, and laterality (right vs. left) and type of hearing loss. LTF/LTD after hearing screening is another problem with evidence of disparity. A recent study using 2015-2016 LA EHDI data showed that LTF/LTD after hearing screening more likely occurred among children with the following maternal characteristics: black, younger age, unmarried, lower education, smoking during pregnancy, born out of the U.S., and having two or more children.

Family Support Needs

The LA EHDI program long ago realized the need for active family engagement and leadership of families of children identified through newborn screening who are DHH. Currently, the LA EHDI program contracts with the LA Hands & Voices (H&V) Guide by Your Side (GBYS) program to provide family-to-family support and engage families with adults who are DHH through the H&V DHH Guide program. In Louisiana, every child who is diagnosed as DHH is referred to H&V GBYS for family-to-family support. A review of the 2017 birth cohort revealed that 72% (73/101) of the families referred to GBYS for family-to-family support received an initial family contact from a Parent Guide. In this cohort, 51 of the 101 babies referred to GBYS were referred by 6 months of age. Among the 51 babies diagnosed and referred by 6 months of age, 86% (44/51) of those families received an initial contact by the time their child was 6 months of age. While a high percentage of families are receiving an initial family contact, there is limited data on the level of family-to-family support and the degree of ongoing support. There is a need to review/revise the performance expectations for Parent Guides, provide ongoing support and training, and facilitate programmatic quality improvement to ensure consistent statewide services based on the needs of the family. Since each of the parent guides work on a part time basis, and there is a continual turnover of Parent Guides, there is a need to determine training needs and ensure that training is received by all Parent Guides.

While there has been a Louisiana chapter of H&V since 2007, the GBYS program was initiated in 2013 and the DHH guide component was initiated in 2018. Since the DHH component of the program is still in the development stages, there is a need to determine training needs, provide training, and review/update performance expectations. There is also a need to promote awareness of the availability of DHH Guides among all EHDI stakeholders, identify opportunities for DHH guides to provide support to families, and develop referral procedures and protocols for reporting data for families receiving support.

There needs to be stronger family driven leadership in the LA EHDI Program. Families need to be provided opportunities to share their stories, voice their concerns, and directly inform EHDI stakeholders of their needs and priorities. One barrier to bringing families into the stakeholder arena is that usually the parent, the most important person in the room, is the only one not being compensated. In an effort to promote family driven leadership, LA EHDI has included stipends for families to attend educational and stakeholder events in our budget.

Families need access to current up-to-date, evidence-based information and resources to help them feel empowered, informed, and knowledgeable so that they can make well-informed decisions for their child and family. LA EHDI will obtain feedback from families of DHH children to improve the family section of our website. Also materials for families will be developed to promote awareness of DHH specific support services and the importance of timely enrollment in intervention.

In May of 2019, a survey was sent to 514 families with children who are DHH. 82 families responded to the survey. Two questions about communication options were included in this survey. The first question was “Were you offered information on the following communication options? (Check all that apply)”. The number of respondents indicating they were offered information on the following communication options was (32) American Sign Language, (31) Listening and spoken language, (22) Total communication, and (12) Cued Speech. Also, (9) families indicated they did not want any information and (23) families indicated they were not offered any information. The second question was “Who shared information with you about different communication methods? (Check all that apply)”. The number of respondents indicating who shared information on communication methods was (45) EarlySteps provider, (38) PPEP teacher, (29) Audiologist, (27) (Speech therapist, (13) Hands & Voices GBYS Parent Guide, (12) my child’s doctor, (10) other, and (1) a deaf person. Also, (17) families indicated that no one shared information. As evidenced in the survey responses, information about all communication options is not consistently being offered to families, and the information is being shared by a variety of sources. There is a need for all families to have an option to receive information about the spectrum of communication options presented to them in a consistent and unbiased manner.

1-3-6 Needs

In Louisiana, when documentation of a child with a permanent childhood hearing loss is received by LA EHDI, a referral is sent to the Parent Pupil Education Program (PPEP), which has been the designated point of entry into intervention for these families since 2009. In an effort to improve the number of children who are DHH enrolled in EI, in May of 2019, a Memorandum of Understanding (MOU) was drafted between LA EHDI and the Louisiana School for the Deaf/Parent-Pupil Education Program (PPEP). In preparing to finalize the MOU, data for referrals to PPEP was reviewed. There were 83 referrals to PPEP for children born in 2017, with 53 (64% 53/83) enrolled in PPEP (Non-Part C services). Preliminary data for children born in 2018 indicates a decline in enrollment into PPEP. Thus far, 49% (47/95) of 2018 births referred to PPEP have enrolled into these services.

When examining each cohort separately, there was a 23% decline in enrollment between the 2017 cohort (64%) and the 2018 cohort (49%). Among children who did not enroll in PPEP, the percentage of families who declined services was roughly equivalent. However, there was a 39% increase in the proportion of families who were reported by PPEP as unable to contact or contacted but unresponsive, (23% vs. 32% for 2017 and 2018 cohorts, respectively). After reviewing the data, a decision was made to delay finalizing the MOU until there is a reduction in the number of families who are reported as unable to contact/contacted but unresponsive, and an improvement in the number of families enrolled in PPEP services.

One barrier to enrollment in EI through PPEP (Non Part C) is program capacity. Any family with a child diagnosed with any degree of bilateral or unilateral hearing loss is eligible for home based services from a PPEP Outreach Teacher from the time the hearing loss is identified until the child successfully transitions into school. Annually, there are approximately 100 children newly identified as DHH in LA. Therefore, at any given time, there are approximately 300 children eligible for PPEP services. Currently there are only five PPEP Outreach Teachers to provide statewide services to this population. One possible strategy to address the limited capacity of PPEP would be to develop a separate unique collaborative procedure between LA EHDI, PPEP and EarlySteps to support the unique needs of children with unilateral hearing loss. Approximately one-third of children with a permanent childhood hearing loss (PCHL) are identified with a unilateral loss. Removing primary responsibility of this population from PPEP would reduce the number of families in need of service, thereby increasing their ability to support the needs of children with bilateral hearing loss.

The data of 2017 birth cohort showed that while 83% of children diagnosed with hearing loss enrolled in EI services, only 48% (40/83) were enrolled before six months of age. Among those enrolled by 6 months of age, 27% (22/83) were enrolled in both Part C and Non-Part C, 10% (8/83) were enrolled in Part C only, and 12% (10/83) were enrolled in Non-Part C only. A study using 2008-2013 LA EHDI data indicates that the main cause of late enrollment in EI is diagnosis made after six months of age. Therefore, in order to improve the number of children enrolled in EI services by 6 months of age, the number of children diagnosed by 3 months of age needs to increase.

Barriers to diagnosis by 3 months of age begins at the hospital with inconsistent verbal and written messaging to families and a low percentage of hospitals scheduling outpatient appointments prior to hospital discharge. To promote consistent messaging, newborn hearing screeners will be required to complete the National Center for Hearing And Management (NCHAM) Newborn Hearing Screening Training Curriculum which includes information on sharing newborn hearing screening results with families in a sensitive manner while conveying the importance of receiving follow-up testing. Also LA EHDI will provide hospitals written materials for families of babies needing outpatient follow-up testing.

Louisiana has achieved much success in reducing the number of infants who become LTF/LTD among infants who do not pass inpatient newborn hearing screening. LA EHDI did not obtain documentation of follow-up for 17.2% of infants born in 2017. Despite this success, significant gaps remain with achieving timely diagnostic audiological evaluation among those infants not passing the final hearing screen (10%, 66/661). For this population, lack of reporting of outpatient testing has resulted in a delay in obtaining further evaluation when a child is referred to a second facility for final diagnosis. This is problematic in many cases because communication between the two facilities may be inadequate, resulting in delayed diagnostic testing. To address the needs of this population, we will consistently share 1-3-6 data with audiologists and involve them in analyzing data for their patients to determine factors contributing to diagnosis after 3 mo. of age, and develop a quality improvement (QI) action plan to identify strategies to improve timely diagnosis. Also, to address the barrier of inconsistent messaging to families of babies requiring diagnostic testing following outpatient rescreen, LA EHDI will develop written materials for families of babies needing diagnostic testing following outpatient rescreen. Materials will be provided to audiology facilities to distribute to families and mailed to families by LA EHDI.

A final barrier is a delay in diagnosis due to the presence of middle ear fluid, and referral to otolaryngology. In many cases, the otolaryngologist recommends delaying diagnostic audiological evaluation until the middle ear fluid clears, which typically is many months later. This has resulted in a delay in diagnosis for many children. A secondary problem is lack of follow-up testing post-medical treatment for children diagnosed with transient conductive hearing loss. We reviewed the records of all children born in 2017 and 2018 who were diagnosed with a permanent hearing loss to determine the proportion that exhibited co-existing middle ear fluid during the screening and diagnosis period. We found that 11% of those children diagnosed with a permanent hearing loss also had middle ear fluid noted in their records (22/196). This number increases to 20% when including those likely to have middle ear fluid due to findings of flat tympanometry and/or transient conductive hearing loss (39/196). In addition, 20 children (10%) from this cohort who were diagnosed late were either confirmed or suspected of having middle ear fluid. Most of these hearing losses were bilateral (17/20) and more than half were bilateral severe to profound (11/20). Nine were diagnosed after 6 months of age. We believe these numbers are likely an underestimation of the problem because the presence of middle ear fluid is not always noted in report submissions to LA EHDI. To overcome the barrier to diagnosis by 3 months of age with this population, LA EHDI is conducting PDSA cycles on the content of faxes to PCPs which includes information specific to timely diagnosis in infants with otologic referrals. We will continue to conduct Plan Do Study Acts (PDSA) cycles to test for successful strategies that can be adapted and spread.

Health Providers and Public Health Programs Needs

A strong EHDI program will have, at its base, strong partnerships and support of Primary Care Providers (PCPs), medical home practices, audiologists, and other public health and/or service programs. PCPs are particularly important in ensuring proper follow-up for children who refer on the newborn hearing screening. Development of new materials for PCPs will increase knowledge of the EHDI system. A hearing screening protocol rack card will be finalized and distributed to PCP offices across the state. This rack card will serve as a quick reference to EHDI 1-3-6 goals and recommended next steps for children at various stages in the EHDI process. We recently began sending letters by fax and mail to PCPs of patients aged 2 ½ years and younger who are newly identified with a permanent hearing loss. These letters include a conversation guide and recommended next steps for their patients, including enrollment into early intervention services. We will expand these letters to include conversation guides and recommendations specific to subgroups of children with permanent hearing loss to include unilateral hearing loss and late-identified hearing loss. To further increase engagement of healthcare providers, it is important that providers are able to access comprehensive and current EHDI program information. This will be accomplished in part by revising the Healthcare Professionals and Providers section of the LA EHDI website. We will form a committee to review our website and offer feedback on desired improvements which will direct revisions to the website.

Other public health programs such as EarlySteps (Part C), the Maternal Infant Early Childhood Home Visiting (MIECHV) and Leadership Education in Neurodevelopmental and Related Disabilities (LEND) programs need more EHDI information to enhance coordinated health care for families with deaf or hard of hearing children. The state Children and Youth with Special Health Care Needs (CYSHCN) has a long history of developing and implementing care coordination policies, procedures and resources in medical home practices throughout the state. An actively-involved partnership between LA EHDI and CYSHCN will be maintained to further efforts in supporting children in the medical home. Periodic presentations will be given to EarlySteps personnel, MIECHV home visitors, CYSHCN personnel, and the Leadership Education in Neurodevelopmental and Related Disabilities (LEND) program participants.

As the healthcare provider responsible for identifying children who are DHH, audiologists are key partners to the EHDI program. We will boost our efforts to engage audiologists by involving them in regional task forces, sharing 1-3-6 statewide progress and LA EHDI diagnosis goals. We will also present EHDI information to audiologists at national and statewide audiology conferences, as well as to audiology graduate students at Louisiana universities.

METHODOLOGY

The ultimate goal of the project is to develop the support of programs and systems of care to ensure that children who are deaf or hard of hearing receive early diagnosis and timely, appropriate intervention in order to optimize language, literacy, and social-emotional development by reaching the recommended JCIH goals of 1-3-6. LA EHDI program goals/aim statements are clear with measurable targets relevant to the four year project period. The goals/aims are based on the program's needs assessment in order to focus on objectives and activities towards 1) leading efforts to engage all EHDI system stakeholders at the state level to improve developmental outcomes of children who are DHH, 2) providing a coordinated infrastructure to reduce loss to follow-up/loss to documentation and ensure that newborns are screened by 1 month of age, diagnosed by 3 months of age, and enrolled in early intervention (EI) by 6 months of age, 3) expanding state capacity to support hearing screening in young children up to 3 years of age, 4) strengthening capacity to provide family support and engage families with children who are DHH and adults who are DHH throughout the EHDI system, and 5) facilitating improved coordination of care and services for children who are DHH and ensure timely enrollment into early intervention after diagnosis. LA EHDI will utilize the medical home and care coordination throughout the objectives and activities of this project. LA EHDI will utilize QI methodologies in our collaborative efforts with EI programs and our initiatives to engage families of deaf and hard of hearing children. When quality improvement intervention strategies, through data analysis, are found to be successful, they will be implemented statewide.

The following goals, objectives and activities will be implemented during this project period.
Goal/Aim 1: Lead efforts to engage all EHDI system stakeholders at the state level to improve developmental outcomes of children who are DHH.

Objective/Aim 1.1: Annually identify one area of the state underserved by the EHDI system and develop a plan for improvement. The LA EHDI program has been steadily improving LTF rates, but further improvements are still needed. To accomplish this, there is a need to identify factors which may contribute to high LTF. This will entail a full analysis of demographic factors of families who are LTF to determine if there are common elements among these families. We are particularly interested in geographic location, as this is a challenge reported to our program frequently. There is a shortage of pediatric audiologists in parts of Louisiana, which presents a barrier to follow-up for some families. Additionally, not all audiologists accept Medicaid. Since the majority of families in need of follow-up have Medicaid, this presents further hardship in locating a testing facility. Our analysis of these factors will help us identify areas of the state that are underserved by the EHDI system. We will use this information to choose one underserved area of the state annually and develop a plan for improvement.

We will continue to hold quarterly Advisory Council meetings for direction on program objectives and strategies. The addition of stipends to families of DHH children to attend Advisory Council meetings to share their stories allows for opportunities for the EHDI program

to learn about challenges and needs in various parts of the state. We will also explore opportunities to partner with the Department of Education to facilitate collaboration around transitional supports and data sharing.
Activities: 1) Hold quarterly EHDI Advisory Council meetings to advise on program objectives and strategies. ***2)*** Utilize statistical data and Geo Mapping to identify geographic areas underserved by the EHDI system, including areas with high loss to follow-up and low achievement of 1-3-6 goals. ***3)*** Annually choose one area of the state identified by Geo Mapping as underserved by the EHDI system, and engage families, local health professionals, MIECHV, WIC, Early Steps, PPEP, service providers, and other stakeholders in an EHDI task force to identify the needs of the diverse population and develop an inclusive plan for improvement within the EHDI system.

Objective/Aim 1.2: By March 31, 2024 increase the number of LA EHDI website hits by 20% of 2018 baseline. 2018 baseline 1717 web page views. In late 2018 we began meeting with the Office of Public Health Communications, Innovation, and Action (CIA) team to update the EHDI program website. The layout of the website has been revised to a more modern aesthetic. New icons were designed with separate sections for families and health care providers. A resources section was added with links to several resources that may be helpful to families. Louisiana’s website was recognized in the top 5 states at the 2019 EHDI conference. We will continue to meet with the CIA team monthly to make further changes. In addition, we have updated our forms to families regarding newborn hearing screening, and we created a new flyer for families with a young child newly identified with permanent hearing loss.

The LA EHDI website received 1717 hits and 976 unique hits in 2018. Several measures will be taken to increase the number of website hits. In the first year, a questionnaire will be developed to obtain feedback from families of children who are DHH on the “Families and Caregivers” section of the LA EHDI website. This section of the website will be revised to reflect this feedback. Likewise, a committee will be formed in the second year to review the “Healthcare Professionals and Providers” section and the website will be revised as needed. Finally, beginning in the second year, video bios for GBYS Parent Guides and DHH Guides will be posted to the website in our efforts to increase traffic.
Activities: 1) Develop a questionnaire to obtain feedback from families of DHH children on the Families and Caregivers section of the LA EHDI website. ***2)*** Provide incentives to families of children who are DHH to obtain feedback and input on the Families and Caregivers section of the LA EHDI website. ***3)*** Review/revise Families and Caregivers section of the LA EHDI website based on family feedback. ***4)*** Post video bios for GBYS parent guides and DHH Guides. ***5)*** Form a stakeholder committee to review the Healthcare Professionals and Providers section of the LA EHDI website to obtain feedback and identify improvement needs. ***6)*** Review/revise the Healthcare Professionals and Providers section of the LA EHDI website.

Objective/Aim 1.3: By March 31, 2024 obtain documentation of developmental outcomes for DHH children receiving early intervention services. Louisiana EHDI data for 2017 show that 82% of children diagnosed with permanent hearing loss enrolled into early intervention services at the time of data submission, an improvement over the 2015 figure of 77%. However, up to this point, there has not been an avenue for the LA EHDI program to collect developmental outcomes on these children. There is a need to assess these outcomes to ensure that early

intervention services received by children who are DHH are supporting development. The EHDI program will begin obtaining documentation of SKI-HI Language Development Scale (LDS) for DHH children receiving Non-Part C services from PPEP and Battelle Developmental Inventory scores from EarlySteps for DHH children enrolled in Part C services. In addition, we will begin obtaining documentation of language development assessment scores from private providers serving DHH children. In our final year of the grant cycle, we will analyze the developmental outcomes of these children and share this information with stakeholders.
Activities: 1) Obtain documentation of SKI-HI Language Development Scale (LDS) for DHH children receiving Non-Part C services from PPEP. ***2)*** Obtain documentation of Battelle Developmental Inventory scores from Early Steps for DHH children enrolled in Part C services. ***3)*** Obtain documentation of language development assessment scores from private providers serving DHH children. ***4)*** Analyze developmental outcomes of children who are DHH and share with stakeholders.

Objective/Aim 1.4: By March 31, 2024 increase by 10% the number of health professionals and service providers trained on key aspects of the EHDI program. For successful fulfillment of EHDI benchmarks, audiologists and other service providers must be aware of the EHDI program and its goals. The LA EHDI program has been working to increase its visibility among service providers and expand the number of service providers who understand EHDI guidelines and can successfully implement them. We will continue to spread awareness through a variety of mechanisms. We will begin by collecting baseline data on the number of health professionals and service providers trained on key aspects of the EHDI program. We will finalize the EHDI PCP hearing screening follow-up protocol rack card and distribute to pediatric and family medicine practices. Over the next 4 years, we will present EHDI information to audiologists, future audiologists, MIECHV personnel, EarlySteps Family Support Coordinators, and intervention providers. We will meet with supervisors of the LEND program to explore potential collaborative opportunities. We will also seek out other service providers who may benefit from knowledge of the EHDI program.
Activities: 1) Collect year one baseline data on number of health professionals and service providers trained on key aspects of the EHDI program. ***2)*** Assess current partnerships and identify key partners who could assist with addressing gaps in the EHDI system. ***3)*** Utilize technical assistance from EHDI NTRC, NRC-PFCMH, and MCHB project officer. ***4)*** Finalize EHDI PCP Hearing Screening follow-up protocol rack card and distribute to pediatric and family medicine practices. ***5)*** Meet with supervisors of LA LEND program to explore potential collaborative opportunities. ***6)*** Present EHDI information to LEND program participants, MIECHV staff, LSU audiology students, AAA & LSHA Conferences. ***7)*** Present EHDI information at regional EarlySteps meetings around the state. ***8)*** Provide opportunity for EHDI team members and one family leader to attend the national annual EHDI meeting

Objective/Aim 1.5: By March 31, 2024 document a written sustainability plan to maintain key program elements beyond federal funding. In the second year of the grant cycle, a hierarchy of the EHDI program functions necessary to maintain key program elements will be identified. This will allow us to explore feasible options for continuation of EHDI program functions within the Bureau of Family Health. In the final year, a written plan for continuation of EHDI program functions beyond federal funding will be completed. ***Activities: 1)*** Identify a hierarchy of the EHDI program functions necessary to maintain key program elements. ***2)*** Explore feasible options for continuation of EHDI program functions within the Bureau of Family Health. ***3)*** Complete a written plan for continuation of EHDI program functions beyond federal funding.

Goal/Aim 2: Provide a coordinated infrastructure to reduce loss to follow-up/loss to documentation, and ensure that newborns are screened by 1 month of age, diagnosed by 3 months of age and enrolled in early intervention by 6 months of age.

Objective/Aim 2.1: By March 31, 2024 achieve at least a 99% screening rate, defined as the number of infants that completed a newborn hearing screen prior to hospital discharge or no later than 1 month of age, among the total number eligible for screen. (2017 Baseline - 98.6%) In 2017, 73%, (237/878) of the babies reported with no initial screen prior to hospital discharge or no later than 1 month of age had no hearing screening data submitted to LA EHDI. A newborn hearing screening report should be submitted for every live birth indicating either hearing screening results or reason not screened. To ensure reporting for every live birth, we will monitor each hospital newborn hearing screening quarterly for each individual hospital quarterly, and notify hospitals with unreported hearing screening results.
Activity: 1) Monitor individual hospital hearing screening data at each birthing facility quarterly and collaborate with hospitals to obtain hearing screening results or reason for no initial screen for all occurrent births.

Objective/Aim 2.2: By March 31, 2024 increase by 10% from baseline, the number of hospitals providing documentation of at least 90% of screeners completing the NCHAM Newborn Hearing Screening Training Curriculum. To optimize developmental outcomes in children who are DHH, it is imperative that a diagnosis is established as early as possible. Historically, many parents of children who are DHH have reported that diagnosis was delayed because health professionals downplayed the importance of receiving follow-up testing after a child refers on the newborn hearing screening. In Louisiana, we have received feedback from parents who did not receive proper follow-up because of inaccurate information they received from the hearing screener in the hospital. Several parents have reported the results were dismissed as fluid in the ears or equipment malfunction, leading them to believe that follow-up was not necessary. This misinformation can result in a delayed diagnosis, thereby defeating the purpose of a newborn hearing screening program which exists to allow for identification in infancy.

It became apparent to the LA EHDI program that training of newborn hearing screeners is necessary to ensure consistent messaging across facilities. NCHAM provides an excellent web-based Newborn Hearing Screening Training Curriculum. This training includes information on delivery of screening results in a sensitive, positive manner, while also conveying the importance of receiving follow-up testing. We will add documentation of screener training to our 2020 hospital scorecards.
Activities: 1) Inform NHS Program Supervisors that screeners completing the NCHAM Newborn Hearing Screening Training Curriculum will be added to the 2020 annual LA EHDI Hearing Screening Program Scorecard. ***2)*** Collect year one baseline data on number of hospitals providing documentation of at least 90% of screeners completing the NCHAM Newborn Hearing Screening Training Curriculum. ***3)*** Add completion of NCHAM Newborn Hearing Screening training curriculum to the 2020 annual LA EHDI Hearing Screening Program Scorecard.

Objective/Aim 2.3: By March 31, 2024 increase by 10% the number of hospitals providing documentation of follow-up appointments for at least 90% of infants who did not pass newborn hearing screening. 2018 baseline: 29/48 (60.4%) For infants who refer on the newborn hearing screening, their families are more likely to return for follow-up if they were given an appointment prior to hospital discharge. A study using 2015-2016 LA EHDI surveillance data in children who failed NHS indicated that a hospital scheduled appointment improved both LTF/LTD and early follow-up initiation. Specifically, the LTF/LTD was 52% higher in children without a hospital scheduled appointment than in children with a scheduled appointment. The rate of early follow-up initiation with hearing screening appointment was 25% higher than if an appointment was not scheduled prior to hospital discharge. In 2018, 60.4% (29/48) of birthing hospitals in Louisiana documented follow-up appointments for at least 90% of infants who did not pass newborn hearing screening. We believe that improving this measure will be an important contributor to improving LTF. For hospitals who are not meeting this goal, we will collaborate with newborn hearing screening supervisors to assist in developing an improvement plan. We will also distribute the recently developed brochure, “Your Baby Needs a Follow-up Hearing Screening-What Parents Need to Know” to hospitals upon request. ***Activities: 1)*** Collaborate with NHS program supervisors at hospitals with less than 90% of appointments scheduled to assist in development of an improvement plan. ***2)*** Provide birthing hospitals with LA EHDI materials for families "Your Baby Needs a Follow-up Hearing Screening - What Parents Need to Know".

Objective/Aim 2.4: By March 31, 2024 increase by 10% from baseline, or achieve a minimum rate of 85%, the number of infants that completed a diagnostic audiological evaluation no later than 3 months of age, defined as percent diagnosed before 3 months of age among those not passing the final outpatient screen. (10% 66/661)

Objective 2.4.A By March 31, 2024 increase by 10% from baseline, or achieve a minimum rate of 85%, the number of infants that completed a diagnostic audiological evaluation no later than 3 months of age, defined as percent diagnosed before 3 months of age among those not passing the initial newborn hearing screening (66.84% 1530/2289)

Objective 2.4.B By March 31, 2024 increase by 10% from baseline, or achieve a minimum rate of 85%, the number of infants that completed a diagnostic audiological evaluation, defined as percent diagnosed among those not passing the initial newborn hearing screening (77.41% 1772/2289) 2017 data showed that 66.84% of infants born in Louisiana who did not pass their newborn hearing screening received a diagnosis by 3 months of age. When examining only those infants who did not pass the final/most recent screening, 24% overall completed a diagnostic audiological evaluation and 10% completed a diagnostic audiological evaluation by 3 months of age. Though these numbers are much improved over 2015 data (15% and 7%, respectively), more improvement is needed to ensure timely early intervention.

A major barrier to timely diagnosis that our program recently identified is children who receive a medical referral due to otologic concerns, most commonly middle ear fluid. We discovered a correlation between otologic referral and delayed or missed diagnostic audiological evaluation. Furthermore, some families and pediatricians have informed us of testing at otolaryngology offices that was not reported to EHDI. Since middle ear fluid is very common in infants and

young children, it will be necessary to address the reasons audiological testing is being deferred in these cases if we are to improve our diagnosis rates.
Activities: 1) Notify audiologists of goal to increase the number of infants diagnosed by 3 months of age and provide LA EHDI 1-3-6 data. ***2)*** Perform an analysis to identify gaps and challenges to diagnosis before 3 months of age***. 3)*** Develop a QI action plan to address the unique needs of this population in meeting diagnosis before 3 months of age. ***4)*** Form a committee to create a document for families with children who need diagnostic testing. ***5)*** Distribute the diagnostic testing document to facilities providing outpatient screening. ***6)*** Utilize PDSAs to address delayed diagnoses in children receiving otologic medical referrals.

Goal/Aim 3: Identify ways to expand state capacity to support hearing screening in young children up to 3 years of age.

Objective/Aim 3.1: Objective 3.1 By March 31, 2024, increase by 10% from year 1 baseline, the number of stakeholders educated on awareness of late-onset childhood hearing loss.. The incidence of permanent childhood hearing loss doubles between birth and 5 years of age, to approximately 6 per 1,000 children. Newborn hearing screening programs are able to identify 2 to 3 per 1,000 children born with permanent hearing loss. However, these programs will miss children who develop hearing loss after birth. Current American Academy of Pediatrics guidelines do not recommend another hearing screening until 4 years of age. This large gap between hearing screenings may lead to developmental delays in children who develop hearing loss after birth. Many of these children are not identified until secondary concerns arise, such as speech or language delays or behavior problems. The implementation of periodic hearing screenings in early childhood supports a prevention model vs. a deficit model for these children. Identifying children at risk for hearing loss before secondary concerns arise may prevent developmental delays associated with hearing loss. There is a lack of knowledge among parents and health care providers surrounding progressive childhood hearing loss. Initial efforts will turn toward raising awareness about the need for periodic hearing screenings in early childhood.
Activities: 1) Identify state and community level partners who provide screening and/or collect screening for children up to 3 years of age. ***2)*** Convene a learning collaborative among state and community level partners providing hearing screening and/or collecting data on children up to 3 years of age. ***3)*** Outline existing systems and determine needs for improvement and collaboration. ***4)*** Develop a written plan and timeline for improvements and collaboration.
5) Review existing materials on late-onset childhood hearing loss. ***6)*** Create/adopt materials on late-onset childhood hearing loss. ***7)*** Update LA EHDI website to include information on late-onset childhood hearing loss***. 8)*** Incorporate information on late-onset childhood hearing loss into existing presentations with all stakeholders. ***9)*** Distribute information to audiologists via a Hot Topics newsletter on late-onset hearing loss and reporting guidelines.

Objective/Aim 3.2: By March 31, 2024, document a written protocol for reporting hearing screening to LA EHDI for children enrolled in EHS. EHS programs screen children for hearing loss within 45 days of enrollment. They are potentially the largest source of hearing screens of preschool-aged children. This agency would therefore be an important collaborator for the EHDI program. Understanding the hearing screening process utilized by EHS will enable the EHDI program to formulate a plan for future collaboration and data sharing.

Development of a data sharing agreement with EHS would facilitate early identification of children with permanent hearing loss. In addition to children who develop late-onset hearing loss, children with congenital hearing loss who were missed by newborn hearing screening or were lost to follow-up may also be identified. Reporting of screening results to EHDI would allow for data tracking and follow-up of children who refer on the screening, similarly to current surveillance of infants.

In the final two years of the grant cycle, we will begin reviewing existing trainings for screeners and identify needs for improvement. We will utilize materials from the ECHO (Early Childhood Hearing Outreach) Initiative to assess training needs. The ECHO Initiative provides technical assistance and training resources for early childhood hearing screening programs. In addition to equipment training, their curriculum provides a protocol for referral of children who do not pass the hearing screening. Once EHS programs are identified, linking them with local audiologists and coordinating a training activity will ensure appropriate hearing screenings and prevention of over-referrals.
Activities: 1) Meet with EHS Coordinator to determine their hearing screening process and plan next steps for collaboration. ***2)*** Collaborate with EHS to develop an EHDI reporting protocol for EHS screenings. ***3)*** Speak at EHS meetings/conference. ***4)*** Provide EHS screeners with local audiology provider contacts. ***5)*** Develop a data sharing agreement with EHS to identify children enrolled in EHS who are in need of follow-up hearing testing. ***6)*** Perform a data match for children enrolled in EHS who are in need of follow-up hearing testing and notify EHS staff.
7 Review existing EHS hearing screening trainings to determine training needs. ***8)*** Collaborate with local audiology providers and universities to identify possible qualified trainers. ***9)*** Coordinate a training activity for EHS screeners.

Goal/Aim 4: Strengthen capacity to provide family support and engage families with children who are DHH and adults who are DHH throughout the EHDI system.
Objective/Aim 4.1: By March 31, 2024, training will be provided for 100% of members of GBYS Parent Guides and DHH Guides. Families with children who are DHH benefit from both family-to-family support, and access to support, mentorship, and guidance from adults who are DHH. Family-to-family support has been provided by H&V GBYS Parent Guides since 2007, and in 2018, LA H&V added DHH Guides to their program. H&V national leaders have been to Louisiana several times to provide training to GBYS Parent Guides and in 2018 Louisiana hosted a training with H&V national leaders for both GBYS Parent Guides and DHH Guides. In order to ensure continual quality improvement, Parent Guides and DHH Guides will each complete a self-assessment to determine their training needs, and quarterly trainings will be provided based on the results of the self-assessments. Additionally, to promote unity and opportunities for peer-to-peer sharing, monthly zoom calls will be held with Parent Guides, DHH Guides & EHDI staff.
Activities: 1) Collaborate with GBYS Program Managers to create a self-assessment checklist for each guide to indicate areas of strengths and weaknesses to determine training needs. ***2)*** Survey Parent Guides & DHH Guides to determine training needs and availability. ***3)*** Develop a training plan and schedule. ***4)*** Provide quarterly training to Parent Guides & DHH Guides.
5) Hold monthly zoom meetings with Parent Guides & DHH Guides.

Objective/Aim 4.2: By March 31, 2024 100% of facilities diagnosing young children with hearing loss and PPEP are informed of the status of family support services for newly

identified DHH children. When a child is newly identified as DHH, there are a number of individuals contacting and/or attempting to contact the family. Collaboration and coordination among professionals, parent guides, and DHH guides facilitates partnerships centered on ensuring providers understand the best strategies to engage families. To initiate the collaborative efforts, a presentation will be created to inform audiologists about family-to-family support, DHH adult to family support and PPEP. During the course of the four year project, local parent guides and DHH guides, in collaboration with PPEP teachers, will meet with audiologists at each pediatric diagnostic facility in the state to share information and develop rapport.
Activities: 1) Create a presentation to inform audiologists about family-to-family support and DHH guide support. ***2)*** Develop a schedule to plan meetings with each diagnosing audiology facility statewide. ***3)*** Collaborate with PPEP to meet with each diagnosing audiology facility statewide. ***4)*** Inform audiologists and PPEP of the status of family support services for newly identified DHH children.

Objective/Aim 4.3: By March 31, 2024 increase by 20% from baseline the number of families enrolled in family-to-family support services, by no later than 6 months of age, among children diagnosed as DHH before 6 months of age. 2017 Baseline (55% 36/66). In an effort to provide timely family-to-family support, when a child is identified as DHH, the GBYS program is sent a referral within 2 days of EHDI receiving documentation of hearing loss. For infants born in 2017, data indicates that 69% (57/83) of families with a child newly identified as DHH received an initial contact from a GBYS Parent Guide. There is a need to improve the number of families enrolled in family-to-family support, increase the timeliness of initial family contacts, and to improve continued ongoing family support. In order to monitor and improve the timeliness of family contact, and increase the level of family-to-family support, each guide will report monthly to LA EHDI on the status of referrals. In addition, in an effort to ensure continual quality improvement, each DHH guide will develop individual quality improvement goals.
Activities: 1) Consult with the HRSA Family Leadership in Language and Learning (FL3 Center) for resources, technical assistance, and training to strengthen the capacity for family engagement and family support. ***2)*** Create a form to collect documentation of information and materials shared with each family, and level of ongoing support. ***3)*** Collaborate with GBYS to develop a written QI plan to improve family-to-family support and family connections.
4) Review and revise GBYS family materials and website. ***5)*** Create video bios for GBYS parent guides. ***6)*** Obtain documentation of GBYS monthly family events for families of DHH children. ***7)*** Conduct outreach and education to inform families about opportunities to be involved in the Louisiana EHDI system through quarterly newsletter. ***8)*** Provide stipends to families of children who are DHH to participate in EHDI activities. ***9)*** Review and update GBYS Parent Guide performance expectations. ***10)*** Perform a quarterly performance expectation review with each Parent Guide, and create individual QI goals. ***11)*** Obtain monthly updates on status of referrals, and documentation of levels of family support for each family served, and activities and events held/attended.

Objective/Aim 4.4: By March 31, 2024 increase by 10% the number of families referred to DHH adult-to-family support services by no later than 9 months of age among children diagnosed as DHH before 9 months of age receiving information about DHH adult-to family support. Currently DHH Guides are connecting with families at family events hosted by H&V,

PPEP and other community events. However, there is no formal procedure in place to share information with families about the availability of support from DHH Guides. Data will be collected on information shared about support from DHH guides, referral procedures will be developed, and monthly documentation will be obtained from DHH guides on the status of each referral.
Activities: 1) Identify all opportunities for DHH guides to provide adult-to-family support. ***2)*** Collect baseline data on number of families receiving information about DHH adult-to-family support services. ***3)*** Develop a procedure for referrals to DHH guides. ***4)*** Obtain monthly documentation of status of all new referrals for DHH adult-to-family support services (date of initial contact or reason for no contact) within 1 month of referral. ***5)*** Collect baseline data on number of families referred to DHH adult-to-family support services by 9 months of age.

Objective/Aim 4.5: By March 31, 2024 increase by 10% the number of families enrolled in DHH adult-to-family support services by no later than 9 months of age among children diagnosed as DHH before 9 months of age. There is a need to promote awareness of DHH guides among both stakeholders and families. With the assistance of our communications team, written materials will be developed and video bios created for each DHH guide. Procedures and protocols for initial family contacts and ongoing services will also be developed. Additionally, in an effort to ensure continual quality improvement, each DHH guide will develop individual quality improvement goals.
Activities: 1) Review and revise DHH Guide written materials. ***2)*** Create video bios for DHH guides. ***3)*** Develop procedures and protocols for initial family contacts and visits with DHH guides. ***4)*** Review and update DHH Guide performance expectations. ***5)*** Perform quarterly performance expectations review with each DHH Guide, and create individual QI goals. ***6)*** Collect baseline data on number of families enrolled in DHH adult-to-family support services by 9 months of age. ***7)*** Obtain monthly updates of status of family support, referrals, documentation of levels of support, and other events and activities held/attended.

Objective/Aim 4.6: By March 31, 2024, complete four trainings for parents of DHH children in areas identified in the needs assessment. In collaboration with H&V, Louisiana has historically offered annual training to families. A needs assessment will be developed and conducted with families to determine family training needs. Additionally, annual training will be offered to families and trainings will be modified based on family feedback.
Activities: 1) Develop a training needs assessment for families of DHH children. ***2)*** Distribute needs assessment to families of DHH children to determine training needs. ***3)*** Analyze needs assessment and develop a training plan and schedule. ***4)*** Coordinate training for families of DHH children. ***5)*** Survey training participants. ***6)*** Modify trainings as needed based on survey results.

Goal/Aim 5: Facilitate improved coordination of care and services for children who are DHH and ensure timely enrollment in early intervention after diagnosis.

Objective/Aim 5.1: By March 31, 2024, 100% of families with a child newly diagnosed as DHH are sent information on what families need to know. The LA EHDI program, in collaboration with the CIA team, developed a new flyer, “Your Baby has been Diagnosed as Deaf or Hard of Hearing-What Families Need to Know”. This flyer was created to provide families with important information and resources to render guidance in the days after their child is identified as DHH. The flyers were designed to be reassuring while imparting a sense of urgency to encourage parents to act fast. Parents are provided information on early intervention services (both Part C and Non-Part C) and family-to-family support. They are introduced to various communication options and hearing devices, with brief descriptions of each. Resources of organizations they can visit to learn more, as well as a contact number to the LA EHDI program, are included.

This flyer was finalized after several rounds of editing and levels of approval within the BFH. We began mailing the flyers in August 2019 to parents of children aged birth to 3 years who are newly identified as DHH. We will survey families in the next few years to determine any changes that need to be made to the flyer. We are also planning two additional versions of this document to address the needs of specific groups of children. First, we have begun revising the flyer for children ages 3 years and up because the current flyer was designed for infants and very young children. This revision will replace information about Part C services with contact information for the child's local school district. It will also change the language to reflect the appropriate age category. Second, we plan to develop a version of this flyer for children with unilateral hearing loss to focus on the unique needs of these children. This version will be distributed in the final two years of the grant cycle.
Activities: 1) Mail each family with a child under 2 1/2 years of age, newly diagnosed as DHH "Your Child has Been Identified as DHH - What Families Need to Know". ***2)*** Survey families who received the "Your Child has Been Identified as DHH - What Families Need to Know" document on the usefulness of the document. ***3)*** Review and revise the "Your Child has Been Identified as DHH - What Families Need to Know" document if needed based on survey results. ***4)*** Provide incentives to obtain input from families of children with unilateral hearing loss to determine the needs of families of a child newly diagnosed with a unilateral hearing loss. ***5)*** Create a document "Your Child has Been Identified with a Unilateral Hearing Loss - What Families Need to Know". ***6)*** Distribute the document "Your Child has Been Identified with a Unilateral Hearing Loss - What Families Need to Know". ***7)*** Survey families who received the "Your Child has Been Identified with a Unilateral Hearing Loss - What Families Need to Know" document on the usefulness of the document. ***8)*** Review and revise the "Your Child has Been Identified with a Unilateral Hearing Loss - What Families Need to Know" document if needed. ***9)*** Survey families with a child diagnosed as DHH after 2 years of age who received the "Your Child has Been Identified with DHH - What Families Need to Know" (Version 2) document on the usefulness of the document. ***10)*** Review and revise the "Your Child has Been Identified with DHH - What Families Need to Know" (Version 2) document if needed.

Objective 5.2 By March 31, 2024 increase by 10% from baseline, the number of families provided information on Communication Options. LA EHDI surveyed families of children who are DHH from birth to five years of age back in May of 2019. Results of that survey indicated a need for families to receive information about communication options in an unbiased and consistent manner. In October 2019, LA EHDI hosted a training for GBYS, PPEP and EarlySteps staff members to learn more about the strategies and processes involved in providing this information to families. Next steps will involve the development of communication materials to be used in Louisiana as well as identifying a method to ensure consistent delivery of this information to all families of children who are DHH.

Activities: 1) Form a committee including families to review resources available about all communication options. ***2)*** Develop or adopt materials for families with information about all communication options. ***3)*** Determine providers responsible for providing families with unbiased information about all communication options. ***4)*** Utilize PDSA cycles to determine effective strategies for sharing communication information with families. ***5)*** Obtain feedback from families on materials and information shared about communication options. ***6)*** Modify materials based on family feedback as needed.

Objective/Aim 5.3: By March 31, 2024, 100% of PCPs with a patient newly diagnosed as DHH are sent a conversation guide with next steps. The LA EHDI program convened Learning Community meetings for guidance on developing materials for PCPs with a patient newly diagnosed as DHH. The final product includes a conversation guide using preferred language of members of the DHH community, as well as talking points to encourage immediate action. We began sending this information to PCPs by mail and fax in August 2019. PCPs are also sent a copy of the parent flyer, "Your Baby has been Diagnosed as Deaf or Hard of Hearing-What Families Need to Know". In the coming years, this process will be repeated to create new guides specifically for children late identified as DHH and children diagnosed with a unilateral hearing loss.
Activities: 1) Form a committee to develop a conversation guide and next steps for PCPs with a patient late identified as DHH. ***2)*** Fax/Mail each PCP with a patient late identified as DHH a conversation guide and next steps. ***3)*** Fax/Mail each PCP with a patient under 2 1/2 years of age newly identified as DHH a conversation guide and next steps***. 4)*** Form a committee to develop a conversation guide and next steps for PCPs with a patient newly identified with a unilateral hearing loss. ***5)*** Fax/Mail each PCP with a patient identified with a unilateral hearing loss a conversation guide and next steps.

Objective/Aim 5.4: By March 31, 2024, increase by 20% the number of infants identified to be DHH that enroll in Non-Part C services within 15 days of referral to Non-Part C, defined as number of children enrolled in Non-Part C within 15 days, among number of children referred to Non-Part C (excluding medically fragile, moved out of state, and parents/family declined). (28%, 20/72) Over the last two years, enrollment into PPEP (Non-Part C) services has declined. To date, 196 referrals have been made to PPEP for children born in 2017 and 2018. Of those referrals, 56% enrolled in Non-Part C services. When examining each cohort separately, there was a decline in enrollment between the 2017 cohort (61%) and the 2018 cohort (49%). Among children who did not enroll in PPEP, the percentage of families who declined services and families who could not be contacted were roughly equivalent. However, there was a significant increase in the proportion of families who were contacted but unresponsive (15% vs. 23% for 2017 and 2018 cohorts, respectively). The reasons for this decline in enrollment are not clear, but timeliness of initial contact may be a contributing factor. Among children born in 2017 and 2018 who were referred to PPEP, only 42% enrolled within 2 weeks of referral, and 25% enrolled more than 8 weeks after referral.

We have already begun meeting with PPEP to identify causes and possible solutions to the low enrollment rates for children newly diagnosed as DHH. In the next year, we will analyze data and work with PPEP to determine possible barriers for achievement of this objective. We will develop a QI action plan to address barriers and support efforts to ensure children who are DHH

receive appropriate services.
Activities: 1) Meet with PPEP to review expectations for a designated single point of entry into early intervention to determine feasibility of PPEP serving the entire state for every child who is DHH. ***2)*** Analyze data and meet with PPEP to determine possible barriers for achievement of enrollment by 6 months of age. ***3)*** Develop a QI action plan to address barriers identified and support efforts toward appropriate and timely services.

Objective/Aim 5.5: By March 31, 2024, increase by 20% from baseline, or achieve a minimum rate of 80%, the number of infants identified as DHH that are enrolled in EI services no later than 6 months of age, defined as number enrolled by 6 mo. among total number did not pass newborn hearing screening diagnosed as DHH. (2017 HSFS baseline: 58%, 48/83). To date, there are 106 children born in Louisiana in 2017 who have been identified with permanent hearing loss. Though 79 of these children (75%) were enrolled into early intervention services, only 46 of these children were enrolled by 6 months of age (43%). Of the 27 children who did not enroll into early intervention services, the following were reasons for no enrollment: 22% parents/family contacted but unresponsive (6), 22% parents/family declined (6), 15% unable to contact (4), 7% moved out of state (2), 4% medically fragile (1), and 30% reasons unknown (8). There were 33 children who enrolled after 6 months of age. Most of these children (20/33=61%) were diagnosed after 6 months of age. Two additional children were diagnosed too close to 6 months of age to allow enrollment to occur on time. Five more children did not enroll into services at initial contact: two families could not be contacted, one family was contacted but unresponsive, and one family declined services. These four children all enrolled into early intervention at a later age. Two children were reported late, and therefore referred for services after 6 months of age. For the remaining five children who were diagnosed by 6 months of age but enrolled into intervention after 6 months of age, the reasons for late enrollment are unknown.

There is a need to increase early intervention enrollment rates for children who are DHH, as well as to increase the proportion who enroll by 6 months of age. The most common reason for late enrollment into early intervention is late diagnosis. Activities in Objective/Aim 2.4 strive to address this issue. Additional late or no enrollments arise from families who are unresponsive, cannot be contacted, or decline services. Improving coordination of services is a goal to help address this problem. We will also work toward determining contributing factors for late/no EI enrollment and test possible solutions to address this problem.
Activities: 1) Analyze data to identify areas of the state with a large percentage of children who are not enrolled in EI. ***2)*** Form regional committees of local stakeholders in areas with high LTF for EI to identify contributing factors and identify possible solutions. ***3)*** Develop a QI action plan to test possible solutions to improve the number of DHH children enrolled in EI. ***4)*** Review/revise survey to families of DHH children. ***5)*** Provide incentives to families of DHH children to obtain feedback on early intervention. ***6)*** Analyze survey data to identify change strategies to improve family satisfaction. ***7)*** Develop a method to notify audiologists of the early intervention status of their newly identified patients.

WORK PLAN

The LA EHDI Work Plan (*Attachment 1*) describes the aims, activities, responsible lead staff and partners, performance measures and specific timelines to achieve the goals and objectives explained in greater detail in the Methodology section.

RESOLUTION OF CHALLENGES

Challenge 1: *There is a need to obtain feedback from families on the family and caregiver section of the LA EHDI website.* Resolutions: 1) Provide incentives to families to participate in providing feedback, 2) Utilize on-line meeting portal to engage families statewide, and 3) Keep data collection tool short

Challenge 2: *There is a need to increase the number of infants diagnosed by 3 months of age.* Resolutions: 1) Meet with hospital staff to review protocol for infants in need of outpatient follow-up, 2) Share research supporting scheduling outpatient appointments prior to hospital discharge improves follow-up, 3) Monitor hospitals' progress and provide feedback, 4) Require completion of the NCHAM Newborn Hearing Screening Training Curriculum by all screeners

Challenge 3: *There is no formal procedure for reporting hearing screenings completed by Early Head Start.* Resolutions: 1) Review EHS hearing screening and reporting procedures, 2) Collaborate with EHS to develop an EHDI reporting protocol

Challenge 4: *There is a lack of awareness about the availability of DHH Guides.* Resolutions: 1) Develop and distribute informational materials, 2) Create DHH Guide video bios, 3) Develop a procedure for referrals to DHH Guides

Challenge 5: *LA EHDI needs to increase family-driven leadership.* Resolutions 1) Inform families of opportunities to be involved with LA EHDI through quarterly newsletter, 2) Provide stipends to families to participate in LA EHDI activities

Challenge 6: *LA EHDI needs to increase enrollment in EI by 6 months of age.* Resolutions: 1) Facilitate coordination among those providing support to the family, 2) Send PCPs conversation guides and next steps for their patients, 3) Send families an information guide and next steps 4) Improve the timeliness of initial family contacts for children who are newly diagnosed as DHH

EVALUATION AND TECHNICAL SUPPORT CAPACITY

LA EHDI will conduct program monitoring as a method of program evaluation to track activities of the project and assess if goals and objectives of the project are being achieved. Program monitoring is the ongoing monitoring and reporting of program accomplishments, particularly progress towards pre-established objectives and goals. Specifically, program monitoring is expected to help LA EHDI effectively monitor changes in project performance measures and achievement of desired results. Performance measures considered as keys to evaluating success are created based upon detailed outcomes and activities to be measured through data analyses using multiple data sources from LA EHDI and state partners. Major project inputs, activities, outputs, and outcomes are described in detail in the Logic Model (Attachment 1), which presents interrelations of key components of the evaluation and pathways to reach project goals and objectives.

Assessment will be a joint effort between LA EHDI key staff, program managers of early intervention programs (EarlySteps and PPEP), and members of the Louisiana State Advisory Council for the Early Identification of Deaf and Hard of Hearing Infants. LA EHDI key staff include the LA EHDI Program Manager, Program Coordinator, Epidemiologist, System Development Coordinator, Intervention Outreach Coordinator, and Data Coordinator. The 14 member Advisory Council is composed of an otolaryngologist or otologist, an audiologist with extensive experience in evaluating infants, a neonatologist, a pediatrician, a deaf person, a hospital administrator, a speech and language pathologist, a school teacher or administrator certified in education of the deaf, a parent of an oral deaf or hard of hearing child, a parent of a deaf or hard of hearing child utilizing total communication, a representative of the State Department of Education designated by the Superintendent of Education, a representative of the Office of Public Health (OPH), a representative from the Louisiana Commission for the Deaf (LCD), and a representative from the Louisiana Association of the Deaf (LAD).

The LA EHDI Program Manager, who will be assisted by the Epidemiologist and other LA EHDI key staff, will direct evaluation activities. The Epidemiologist is a former evaluation leader of Louisiana Medicaid Family Planning Waiver Program, and is currently the lead evaluator of the Louisiana Birth Defects Monitoring Network. He is well trained in program evaluation and public health surveillance system. He has participated in the EHDI and birth defects surveillance program, as well as evaluation trainings by CDC, and presented results of the program evaluation at several state and national meetings. Data sources used for the program evaluation and program performance will include data collected by LA EHDI and other programs, team meeting minutes, interviews, presentations, and surveys when needed. LA EHDI key staff will interface with birth hospitals, audiology facilities, early intervention programs, Medicaid, MIECHV, and Vital Records to facilitate data collection. Currently, LA EHDI is using a web-based database integrated with vital records (LA EHDI-IS). The database includes all data of screening, follow-up/diagnosis, and early intervention. Data of newborn hearing screening prior to hospital discharge are automatically imported into the database within 24 hours after a birth certificate is registered. Follow-up/diagnosis data are directly electronically imported into the system from audiology facilities or manually entered by LA EHDI staff. Early intervention data are collected through the Parent Pupil Education Program (PPEP) and EarlySteps (Part C) and manually entered by the Program Assistant. All LA-EHDI key staff can access the database anytime when needed. The Epidemiologist receives data of vital records, MIECHV, and Medicaid data monthly; and EarlySteps quarterly. He conducts linkages of those data to LA EHDI data and sends needed information to the Program Assistant and System Development Coordinator to follow-up with providers to obtain needed data. The Epidemiologist will conduct both linkages, when needed, and analyses using Linkpro and Statistical Analysis System (SAS). To enhance data accuracy, a probabilistic records linkage method coupled with manual case review is used for the data linkages. Data from the 2017 Centers for Disease Control and Prevention (CDC) EHDI Hearing Screening and Follow-up Survey (HSFS) will be used as baseline for outcomes of 1-3-6 EHDI recommendations. Data collected from year one will be used as baseline for the following outcomes: families enrolled in family-to-family support services by no later than 6 months of age; families enrolled in DHH adult-to-family support services by no later than 9 months of age; and health professionals and service providers trained on key aspects of the EHDI Program. Trend analyses will be conducted to evaluate changes after each PDSA cycle, quarter, and year. Statewide trends will be evaluated by birthing hospital, region or parish of residence, and subpopulations such as race and ethnicity. Additionally, all performance measures indicated in project goals and objectives will be included in trend analyses. Moreover, analyses evaluating risk factors and high-risk populations for late diagnosis, loss to follow-up after screening or diagnosis, and late early intervention enrollment will be conducted. Results of analyses will be disseminated to stakeholders for review and presented at quarterly Advisory Council meetings.

The timeline stated in the Work Plan (Attachment 1) is used to track deadlines for each activity that support a specific objective. Within the 30 days of the project, LA EHDI key staff will engage evaluation partners to gain support and involvement in the evaluation process by presenting the evaluation plan for input. The Epidemiologist will work closely with representatives of the partner programs to collect and track performance measures data. Results of performance measures will be reported in LA EHDI key staff meetings and the Advisory Council meetings. The LA EHDI key staff will meet every month to track progress and discuss efficient ways to meet scheduled activity deadlines. Every quarter, the LA EHDI key staff and members of the Louisiana Advisory Council will meet to discuss progress toward meeting objectives. At the meetings, the LA EHDI Program Coordinator and Epidemiologist will present results of analyses to assess changes in performance measures, identify barriers of data collection and program performance, and adopt inputs from meeting participants to develop strategies to enhance performance measure data collection and program quality. Additional individual meetings within LA EHDI key staff or with other programs will be held at any time to develop quick resolutions for problems regarding performance measure data collection or program quality. An annual evaluation report will be created and disseminated to stakeholders and Advisory Council members.

As listed in the Logic Model (Attachment 1), project outcomes have been identified to accomplish within the grant period. Outcomes will be achieved through strategy and activity implementation to strengthen capacities of (1) engagement of EHDI system stakeholders to improve developmental outcomes of DHH children; (2) infrastructure to reduce LTF/LTD and improve 1-3-6 EHDI goals; (3) hearing screening in young children up to 3 years of age; (4) provision of family support and engagement of families with DHH children as well as DHH adults throughout the EHDI system; and (5) coordination of care and services for DHH children and timely EI enrollment. The project has developed performance measures consistent with strategies/activities and outcomes by which success will be measured. Ongoing monitoring of performance measure progression is useful in determining necessary refinements, which ensures outcome achievement and efficacy by measuring resultant changes of implementation of strategies and activities. Thus, processes and outcomes will be monitored closely to ensure the system is meeting standards and expectations within the EHDI system. See the attached Logic Model in detail (Attachment 1). The following outlines key evaluation questions, performance measures, and data sources used to conduct evaluation during the project period.

Goal 1: Lead efforts to engage all EHDI system stakeholders to improve developmental outcomes of children who are DHH. Evaluation Question 1: To what extent do children who are D/HH improve developmental outcomes? **Performance Measures:** 1) Number and percent of DHH children with language on level with their hearing peers 2) Documentation of SKI-HI Language Development Scale (LDS) for DHH children receiving Non-Part C services from PPEP 3) Documentation of language development assessment scores from private providers serving DHH children 4) Documentation of Battelle Developmental Inventory scores from Early Steps for DHH children enrolled in Part C services. **Evaluation Question 2:** How successfully does LA EHDI engage health professionals within the EHDI system? **Performance Measures:** 1) Number of EHDI PCP Hearing Screening follow-up protocol rack cards distributed to pediatric and family medicine practices 2) Number of presentations/trainings by LA EHDI at local, regional, and state meetings/conferences on key aspects of the EHDI program 3) Number of health professionals and service providers trained on key aspects of the EHDI program. **Evaluation Question 3:** How successfully does LA EHDI engage stakeholders within the EHDI system? **Performance Measures:** 1) Number of EHDI Advisory Council meetings 2) Number of families of DHH children to attend Advisory Council meetings to share their story 3) Results of feedback from families of DHH children on the Families and Caregivers section of the LA EHDI website 4) Results of review of the Healthcare Professionals and Providers section of the LA EHDI website by the committee 5) Number of LA EHDI website hits

Goal 2: Provide a coordinated infrastructure to reduce loss to follow-up/loss to documentation, and ensure that newborns are screened by 1 month of age, diagnosed by 3 months of age, and enrolled in early intervention by 6 months of age. Evaluation Question 1: To what extent do children receive a timely hearing screening? **Performance Measures:** 1) Number and percent of newborns and infants who receive newborn hearing screening (NHS) 2) Number and percent of newborns and infants who receive newborn hearing screening by one month of age. **Evaluation Question 2:** How successfully does LA EHDI engage birthing hospitals in improving loss to follow-up after newborn hearing screening? **Performance Measures:** 1) Number and percent of hospitals providing documentation of at least 90% of screeners completing the NCHAM NHS Training Curriculum 2) Number and percent of hospitals providing documentation of follow-up appointments for at least 90% of infants who did not pass newborn hearing screening. **Evaluation Question 3:** To what extent do children complete a timely diagnostic audiological evaluation? **Performance Measures:** 1) Number and percent of children who complete a diagnostic audiological evaluation 2) Number and percent of children who complete a diagnostic audiological evaluation by three months of age 3) Documentation of results of analysis of determining factors contributing to a diagnostic audiological evaluation completed after three months of age 4) Documentation of QI action plan and implementation to improve timely diagnosis

Goal 3: Expand capacity to support hearing screening in young children up to 3 years of age. Evaluation Question 1: How successfully does LA EHDI improve health professionals' and stakeholders' awareness and implementation of hearing screening in children up to three years of age? **Performance Measures:** 1) List of state and community partners who provide screening and/or collect screening data for children up to 3 years old 2) Documentation of a plan and timeline for improvement and collaboration among state and community partners providing hearing screening and/or collecting data for children up to 3 years of age. 3) Collection of materials on late-onset childhood hearing loss 4) Website updated with information on late-onset childhood hearing loss 5) An awareness campaign on late-onset childhood hearing loss 6)

Number of presentations with stakeholders on information on late-onset childhood hearing loss 7) Number of audiologists who receive information on late-onset hearing loss and reporting guidelines via a Hot Topics newsletter. **Evaluation Question 2:** How successfully does LA EHDI cooperate with Head Start Program to improve hearing screening in children up to three years of age? **Performance Measures:** 1) Documentation of hearing screening process and plan developed by Early Head Start Program (EHS) and LA EHDI 2) Documentation of EHDI reporting protocol for EHS screenings developed by EHS and LA EHDI 3) Documentation of data sharing agreement with EHS to identify children enrolled in EHS who are in need of follow-up hearing testing 4) Number of children enrolled in EHS who are in need of follow-up hearing testing 5) Number of EHS screeners attending a training on hearing screening for children up to 3 years of age.

Goal 4: Strengthen capacity to provide family support and engage families with adults who are DHH. Evaluation Question 1: To what extent does LA EHDI provide information to families with children who are DHH about opportunities for support from adults who are DHH? **Performance Measures:** 1) Number of trainings to Parent Guides and DHH Guides 2) Number of audiologists and PPEP service providers informed of family-to-family support and DHH guide support 3) Number and percent of families of children who are DHH receiving information **Evaluation Question 2:** How well does LA EHDI refer families with children who are DHH to family-to-family support services and to adults who are DHH in a timely manner? **Performance Measures:** 1) Number and percent of families of newly identified DHH children contacted for family-to-family support within 1 week of referral 2) Number and percent of families referred to DHH adult-to-family support services by no later than 9 months of age among children diagnosed as DHH before 9 months of age 3) Number and percent of families with children and adults who are DHH enrolled in family-to-family support services by no later than 6 months of age among children diagnosed as DHH before 6 months of age 4) Number and percent of families enrolled in DHH adult-to-family support services by no later than 9 months of age among children diagnosed as DHH before 9 months of age

Goal 5: Facilitate improved coordination of care and services for children who are DHH & ensure timely enrollment in early intervention after diagnosis.
Evaluation Question 1: How successfully does LA EHDI improve knowledge of parents about needs for a child diagnosed as DHH? **Performance Measures:** 1) Number and percent of families with a child under 2 1/2 years of age, newly diagnosed as DHH receiving a document "Your Child has Been Identified as DHH - What Families Need to Know" 2) Documentation of the brochure “Your Child has Been Identified with a Unilateral Hearing Loss - What Families Need to Know” 3) Number and percent of families who were sent the "Your Child has Been Identified with a Unilateral Hearing Loss - What Families Need to Know" brochure 4) Documentation of the brochure “Your Child has Been Identified with a Unilateral Hearing Loss - What Families Need to Know” for families with children with a unilateral hearing loss 5) Number and percent of families with children who were late diagnosed as DHH who were sent "Your Child has Been Identified as DHH - What Families Need to Know" 6) Results of surveys evaluating usefulness of brochures. **Evaluation Question 2:** How well does LA EHDI engage PCPs in communicating with parents of DHH children to ensure timely EI enrollment services? **Performance Measures:** 1) Number of PCPs with a patient under 2 1/2 years of age newly identified as DHH who were sent a conversation guide and next steps 2) Number of PCPs with a

patient identified with a unilateral hearing loss who were sent a conversation guide and next steps 3) Number of PCPs with a patient late identified as DHH who were sent a conversation guide and next steps. **Evaluation Question 3:** To what extent are children enrolled in EI services in a timely manner? P**erformance Measures:** 1) Number and percent of families of children referred to PPEP for Non-Part C services that receive an initial family contact within 5 days of referral 2) Number and percent of infants identified as DHH that enroll in Non-Part C services within 15 days of referral to Non-Part C 3) Number and percent of infants identified as DHH that are enrolled in EI services no later than 6 months of age

Data Sources to be used to evaluate the above Performance Measures include: LA EHDI-IS, Vital Records, PPEP, EarlySteps, Medicaid, LA EHDI website, Language development guidelines, Family surveys, Committee review, Meeting minutes, Presentations, PDSA/Data analysis reports, Hospital reports, Screening training curriculum, Hospital scorecards, Education materials, Meeting minutes, Training materials, Campaign reports, Surveys among Parent Guides and DHH Guides, Review reports, and Data agreement/MOU.

ORGANIZATIONAL INFORMATION

The mission of LA EHDI is to support the early identification of infants who are deaf or hard of hearing through screening, audiological evaluation, enrollment in early intervention and family-to-family support services. The overarching goal of the support provided through the LA EHDI program is to improve developmental outcomes for children who are deaf or hard of hearing. The structure of the LA EHDI program provides many opportunities for timely and appropriate EHDI systems of care and support for families in Louisiana of children who are DHH. The LA EHDI team includes individuals with backgrounds concentrated in providing services to DHH children, including audiology and deaf education. The Program Manager, Program Coordinator and Early Intervention Coordinator all have backgrounds in Deaf Education totaling over 80 years field experience in working with families of young children who are DHH. The EHDI System Development Coordinator, an Au.D with genetics certification, has published in the fields of genetics and audiology. The Epidemiologist, an MD/MPH, has published extensively in the fields of EHDI, newborn screening and data linkages between public health programs. LA EHDI also has an MOU with Hands & Voices, Guide By Your Side (GBYS) program for the purpose of providing family-to-family support as well as DHH adult support. GBYS has eight Parent Guides who are parents of DHH children and four DHH Guides who are DHH adults. Each Guide is trained extensively in the Hands & Voices curriculum and brings their lived experience to the level of support they offer to families of children who are newly diagnosed as DHH. The Guides also participate in the development of LA EHDI materials and provide input on program processes, goals, and objectives and keep the program grounded in family focus. LA EHDI has a 14 member Advisory Council that advises on program objectives and strategies. We also have team support from the medical home and care coordination training staff of Children and Youth with Special Health Care Needs (CYSHCN)/LDH and the Family and Community Systems (FCS) team under the Bureau of Family Health (BFH). The FCS team developed over the course of this past year as a result of an internal reorganization within the BFH under which all programs that offer health supports and have direct interactions with communities were placed. LA EHDI additionally collaborates with a variety of partners including Women Infants Children (WIC) Program, Maternal, Infant and Early Childhood Home Visiting Program (MIECHV), EarlySteps (Louisiana's Part C Program), the Department of Education, DHH adults and other stakeholders. The LA EHDI program collaborates regularly with other State EHDI programs through conference calls and webinars and has regularly attended the National EHDI meeting for many years. The support of our partners at the local, state and national level in combination with our comprehensive, web-based LA EHDI information system (LA EHDI-IS) allow us to make great strides in supporting EHDI project goals and activities. The LA EHDI-IS includes screening results for every LA birth, follow-up audiological testing results, and the early intervention status of children who are DHH. Recent enhancements to the database now allow us to begin collecting developmental outcomes. We anticipate being able to analyze this data for the purpose of identifying systemic trends and areas of need within the unique population of children who are DHH.

The LA EHDI Work Plan (Attachment 1) describes the methods that will be used to address the stated needs and meet each of the previously described program goals, responsible lead staff and partners, as well as performance measures and specific timelines forecasted for the achievement of the goals for this project. LA EHDI will conduct program monitoring as a method of program evaluation to track activities of the project and assess if goals and objectives of the project are being achieved. Specifically, program monitoring is expected to help LA EHDI effectively monitor changes in project performance measures and achievement of desired results. Performance measures considered as keys to evaluating success have been created based upon detailed outcomes and activities to be measured through data analyses using multiple data sources from LA EHDI and state partners. Through continued program monitoring accompanied by the support of BFH Business staff, LA EHDI will be able to properly account for and document the spending of federal funds with fidelity and avoid audit findings.

The history of networking and collaborative successes of the LA EHDI program have laid the foundation for continued work in engaging, educating and training families, health professionals and service providers on key program goals and unique needs of the communities served. We acknowledge and are committed to the belief that a collaborative public health approach can improve and protect community health and well-being while allowing opportunities to utilize crosscutting content expertise in providing timely and appropriate EHDI systems of care and support for all families in Louisiana.

<u>**CRITERION**</u>		**Page Number**
1: NEED	a) Describe the state/territory EHDI system, stakeholders, and target populations, including an overview of how the state/territory is performing with regard to the 1-3-6 recommendations.	2-3,5
	b) Describe the needs of the population and barriers to receiving hearing screening and intervention for newborns, infants, and children and up to age 3 and their families.	4-7
	c) Describe disparities based on race, ethnicity, gender identity, sexual orientation, geography, socio-economic status, disability status, primary language, health literacy, and other relevant dimensions.	3
	d) Discuss relevant barriers and gaps in service areas this project aims to address.	5-7
	e) Uses data to support the information provided.	2-7
<u>**2: RESPONSE**</u>	<u>**A: METHODOLOGY**</u>	8
Stakeholder and Professional Engagement	a) Propose plans to lead efforts to engage all stakeholders in the state/territory EHDI system to improve developmental outcomes for children who are DHH.	8-11
	b) Propose strategies for engaging, educating, and training health professionals and service providers in the EHDI system about the activities described in the Program Description section.	10,11-13
Family Engagement and Early Childhood Coordination	c) Propose strategies to strengthen the capacity to provide family support and engage families with children who are DHH as well adults who are DHH throughout the EHDI system. This should include a description of how the applicant intends to engage families throughout all project levels, involving family partners in the development, implementation, and evaluation of the EHDI Program.	14-16
	d) Describe methodologies to assess the current status of coordination across early childhood programs and proposed plan to improve coordination of care and services for families and children who are DHH.	16-19
Collaboration	e) Propose plans for participating in the Annual Early Hearing Detection and Intervention (EHDI) Meeting: budget may include one or two staff and one family leader to attend the Annual EHDI Meeting.	10, Budget , Work Plan ATT 1
	f) Propose plans to work with the HRSA-20-051 (FL3 Center), HRSA-20-048 (EHDI NTRC), HRSA-16-190 (LEND), and HRSA-18-069 (NRC-PFCMH) recipients to implement the various initiatives that are listed in this NOFO.	10,15, Work Plan ATT 1
	<u>**B: WORKPLAN**</u> Describe plans to work with:	
	MCHB project officer	10,Work Plan ATT 1
	HRSA 20-051 (FL3 Center)	15, Work Plan ATT 1
	HRSA-20-48 (EHDI NTRC)	10,Work Plan ATT 1
	HRSA-16-190 (Pediatric Audiology Competitive Supplement to LEND)	10,Work Plan ATT 1
	HRSA-18-069 (NRC-PFCMH) recipients	10,Work Plan ATT 1
	<u>**C: RESOLUTION OF CHALLENGES**</u>	20

	a) Respond to the Purpose and Program Description	20
	b) Discuss challenges likely to be encountered in designing and implementing the activities described in the work plan and approaches to resolve such challenges.	20
3) EVALUATIVE MEASURES	Evidence that the evaluative measures will be able to assess:	20-22
	a) The program objectives have been met	20-22
	b) Progress or achievements can be attributed to the project	22-25
4) IMPACT	a) Demonstrate public health impact	2
	b) Demonstrate proposed project will be effective, if funded	20-25
5) RESOURCES/ CAPABILITIES	a) Describe the organization's current mission and structure, scope of current activities, existing available resources, and how these elements all contribute to the organization's ability to conduct the program requirements and meet program expectations.	25-26
	b) Describe the organization's capacity to engage families, health professionals, and service providers.	25-26
	c) Discuss how the organization will follow the methodology and plan, as outlined in the application, properly account for federal funds, and document all costs to avoid audit findings.	8, Contractual Funds ATT 1, Time Keeping ATT 2
	d) Describe how the organization will routinely assess and improve the unique needs of the target populations of the communities served.	20-25
	e) Describe the organization's experience working with the EHDI system.	25-26
6: SUPPORT REQUESTED	a) Outline a reasonable budget and required resources, given the scope of work.	Budget Narrative, Job Desc. ATT 2
	b) Identify key personnel and allocates adequate time to the project to achieve project objectives.	Job Desc. ATT 2, Budget Narrative
	c) Describe funding to support at least one, but no more than two, staff and one family leader to attend the Annual EHDI meeting. States/territories have the option of including a representative from the IDEA Part C Program as the second staff person to attend the Annual EHDI Meeting.	10, Budget Narrative, Work Plan ATT 1
	d) Allocate at least 25% of the awarded budget to statewide family engagement and family support activities.	Budget Narrative

	ACRONYMS
AAA	American Academy of Audiology
AAP	American Academy of Pediatrics
BFH	Bureau of Family Health
CDC	Centers for Disease Control and Prevention
CIA	Communications, Innovation, and Action team
CYSHCN	Children and Youth with Special Health Care Needs program
DHH	Deaf or Hard of Hearing

ECHO	Early Childhood Hearing Outreach
EHDI	Early Hearing Detection and Intervention
EHS	Early Head Start program
EI	Early Intervention
FCS	Family Community Systems
GBYS	Guide by Your Side
H&V	Hands & Voices
HSFS	Hearing Screening and Follow-up Survey
JCIH	Joint Committee on Infant Hearing
LA EHDI-IS	Louisiana Early Hearing Detection and Intervention-Information System
LA EHDI	Louisiana Early Hearing Detection and Intervention program
LBDMN	Louisiana Birth Defects Monitoring Network
LDH	Louisiana Department of Health
LDH-IT	Louisiana Department of Health-Information Technology
LDS	Language Development Scale
LEND	Leadership Education in Neurodevelopmental and Related Disabilities program
LSHA	Louisiana Speech, Language, and Hearing Association
LSU	Louisiana State University
LTD	Loss to documentation
LTF	Loss to follow-up
MIECHV	Maternal Infant Early Childhood Home Visiting program
MOU	Memorandum of Understanding
NCHAM	National Center for Hearing Assessment and Management
NFP	Nurse Family Partnership program
NHS	Newborn Hearing Screening
OPH	Office of Public Health
PAT	Parents As Teachers program
PCHL	Permanent Childhood Hearing Loss
PCP	Primary Care Provider
PDSA	Plan-Do-Study-Act
PPEP	Parent-Pupil Education Program
QI	Quality Improvement
SAS	Statistical Analysis Software
WIC	Women Infant & Children’s Nutritional program