Attachment 1
Universal Newborn Hearing Screening and Intervention Work Plan
Project Period: 04/01/2014 – 03/31/2017

Year One Aims and Strategies (04/01/2014 - 03/31/2015)

Aim One: Educational Outreach Initiatives. In an effort to improve health care providers' knowledge about universal newborn screening, by March 31, 2015, the Texas Early Hearing Detection and Intervention (TEHDI) Program will expand its educational outreach initiative to providers in the healthcare and early intervention networks by 20%. (Baseline: From April 2012 to March 2013 over 900,000 educational materials were distributed, the TEHDI Program exhibited at two state conferences, and *Medical Home* presentations were provided to 61 providers.)

Strategy 1.1: Educational Materials Development. By March 31, 2015, QR coded materials will be developed, printed and distributed to stakeholders on 20% of the marketing materials available for distribution; development of webpage to which QR code will be directed (Baseline: As of SFY 2013, there are 20 different materials available for marketing).

Activities:	Develop strategies to distribute newly developed and updated products; develop strategies to direct providers and stakeholders to specific webpages; and develop strategies on how to manage educational information through the monitoring of website traffic data.
Timeframe:	April 1, 2014 to September 30, 2014
Responsibility:	TEHDI Program Educator, TEHDI Program Team

Activities:	Distribute product to identified stakeholders.
Timeframe:	October 1, 2014 to January 31, 2015
Responsibility:	Program Specialist

Activities:	Start initial data collection and quality improvement review.
Timeframe:	February 1, 2015 to March 31, 2015
Responsibility:	Quality Assurance Specialist, TEHDI Coordinator

Strategy 1.2: Texas EHDI Regional Summit. By March 31, 2015, the first in a series of Texas Regional Summit conferences will be implemented allowing the program to identify regional stakeholders' barriers to reporting into the TEHDI MIS system.

Activities:	The TEHDI Program will work with stakeholders to co-sponsor development of a plan to implement a Texas EHDI Regional Summit.
Timeframe:	April 1, 2014 to August 31, 2014
Responsibility:	TEHDI Coordinator, TEHDI Program Team, EHDI Stakeholders

Activities:	Provide the co-sponsored Texas EHDI Summits.

Timeframe:	April 2, 2014 to March 31, 2015
Responsibility:	TEHDI Coordinator, TEHDI Program Team, EHDI Stakeholders

Strategy 1.3: Medical Home Education. By March 31, 2015, a SME will present a minimum of three *Medical Home* presentations to educate stakeholders about the needs of hearing loss follow-up within the continuum of care.

Activities:	Develop a process for a SME to conduct three or more *Medical Home* presentations.
Timeframe:	April 1, 2014 to June 30, 2014
Responsibility:	TEHDI Coordinator, SME Presenter, EHDI state champions

Activities:	Provide three *Medical Home* presentations.
Timeframe:	April 1, 2014 to March 31, 2015
Responsibility:	TEHDI Coordinator, SME Presenter, EHDI state champions

Strategy 1.4: Early Head Start Training. By November 15, 2014, a minimum of one presentation will be provided in a pilot region to train Early Head Start program personnel on Advanced Otoacoustic (OAE) screening and reporting to the TEHDI MIS.

Activities:	Partner with Head Start Association and ECHO to begin planning meetings and strategize locations to pilot the screening and reporting system program.
Timeframe:	April 1, 2014 to August 31, 2014
Responsibility:	TEHDI Coordinator, Program Educator, Program Specialist

Activities:	A service vendor contract will be developed to facilitate ECHO audiologists to present in the Head Start program partnership outreach. The vendor will facilitate the meeting rooms, and travel for the presenters. Training will be provided on how Head Start personnel can input the hearing screening information into the TEHDI MIS.
Timeframe:	April 1, 2014 to August 31, 2014
Responsibility:	TEHDI Coordinator, Program Educator, Program Specialist

Activities:	The contractor will manage the provision of a Training Conference which will provide training to the Early Head Start personnel.
Timeframe:	November 15, 2014
Responsibility:	TEHDI Coordinator, Stakeholders

Activities:	Acquire data provided by the Head Start personnel to determine a measurement of reporting and determine if newborn and infants are "captured" in the loss to follow-up/loss to documentation.
Timeframe:	March 31, 2015
Responsibility:	TEHDI Coordinator, Quality Assurance Specialist, EHDI stakeholders

Strategy 1.5: Early Intervention Outreach. By March 31, 2015, a minimum of two presentations will be provided to EI Specialists on reporting to the TEHDI MIS.

Activities:	Develop improvement strategies through a PDSA Model of Improvement to implement quality educational initiatives to improve LTF/LTD and TEHDI MIS data.
Timeframe:	April 1, 2014 to June 30, 2014
Responsibility:	Program Educator, TEHDI Program Team, EHDI stakeholders

Activities:	Develop a process for a SME to provide presentations to EI Specialists.
Timeframe:	April 1, 2014 to June 30, 2014
Responsibility:	Program Educator, TEHDI Program Team

Activities:	Provide up to three early intervention presentations.
Timeframe:	April 1, 2014 to March 31, 2015
Responsibility:	Program Educator, TEHDI Program Team

Strategy 1.6: Consent Presentations. By March 31, 2015, the TEHDI Program will educate a minimum of 100 providers and/or audiologists on the consent options available to encourage information exchange in the continuum of care with parents.

Activities:	Through an interagency cooperative agreement, consent form options will be developed so all agencies can cooperate in data sharing information on newborns and infants relating to loss to follow-up.
Timeframe:	April 1, 2014 to June 30, 2014
Responsibility:	NBS Support Group Manager, TEHDI Coordinator, Interagency Council

Activities:	Develop a process to provide presentations providers and/or audiologists
Timeframe:	April 1, 2014 to March 31, 2015
Responsibility:	NBS Support Group Manager, TEHDI Coordinator, Interagency Council

Activities:	Provide consent option presentations.
Timeframe:	June 30, 2014 to March 31, 2015
Responsibility:	NBS Support Group Manager, TEHDI Coordinator, Interagency Council

Aim Two: Parent Support Groups Engagement. By March 31, 2015, the TEHDI Program will expand its partnership with contracted parent support groups (pilot project initiated during the current HRSA Grant cycle) to evaluate lessons learned and implement best practices to increase the amount and integrity of TEHDI-MIS data. (Baseline: Data pending outcome of the pilot project.)

Activities:	Contractors will participate in one (1) meeting with DSHS for an orientation and clarification of the project scope, billing and payment process, and to discuss the expected timeline for deliverables.
Timeframe:	April 1, 2014 to May 15, 2014

Responsibility:	TEHDI Coordinator, NBS Support Group Manager

Activities:	Contractor will electronically submit to DSHS, a list of assigned project staff to serve as advocate/educators Responsibility: for conducting project activities and deliverables outlined in the RFP and agreed upon in this contract.
Timeframe:	May 15, 2014 to May 30, 2014
Responsibility:	TEHDI Coordinator, NBS Support Group Manager

Activities:	Contractor will electronically submit to DSHS for approval, a list of local providers to be targeted for the scope of the project.
Timeframe:	May 30, 2014
Responsibility:	TEHDI Coordinator

Activities:	Contractor will electronically submit to DSHS, the final list of the providers (minimum of 3) that are assigned to the advocate/educators from the DSHS approved list.
Timeframe:	June 1, 2014 to July 31, 2014
Responsibility:	TEHDI Coordinator

Strategy 2.1: LTF/LTD Improvement Strategies. By August 31, 2014, the TEHDI Program will identify and implement a minimum of one strategy from the contracted parent support groups to address LTF/LTD by provider use of TEHDI MIS.

Activities:	Contractor will electronically submit to DSHS for approval, an implementation plan of the strategies to be conducted by the advocate/educator team for each of the provider locations, to address LTF/LTD to improve the hearing services continuum of care.
Timeframe:	June 1, 2014 to July 31, 2014
Responsibility:	TEHDI Coordinator, NBS Support Group Manager

Activities:	The TEHDI Program will implement a minimum of one strategy identified by the contractor.
Timeframe:	August 31, 2014 to March 31, 2015
Responsibility:	TEHDI Coordinator, Program Specialist

Strategy 2.2: Outreach Activities Report. By September 30, 2014, the contracted parent support groups will report on onsite technical assistance, education, and outreach activities provided (frequency to be determined by the pilot project).

Activities:	Contractor will conduct weekly on-site technical assistance, education, and outreach activities to providers at each of the designated provider locations over the course of 12 weeks. Advocate/educators will compile data, meeting notes and activity details for reporting to DSHS.
Timeframe:	July 1, 2014 to September 30, 2014

Responsibility:	TEHDI Coordinator, Program Specialist

Strategy 2.3: Summary of Parent Support Project. By March 31, 2015, the TEHDI Program will receive a summary of the entire project from the contracted parent support group(s) to analyze the efficacy of the project using QI methodology.

Activities:	Contractor will compile a progress report summarizing all project activities and a final report which will include a narrative on project activities, accomplishments and recommendations for next steps. Contractor will submit progress reports in a format provided by DSHS.
Timeframe:	March 31, 2015
Responsibility:	TEHDI Coordinator, Program Educator, Program Specialist

Aim Three: Audiologist Outreach. By March 31, 2015, the TEHDI Program will partner with audiologists and DARS-ECI to increase the referral rate by 2%. (Baseline: From April 2012 to March 2013, the referral rate was 96.8%.)

Strategy 3.1: Audiologist Engagement. The TEHDI Program will initiate an outreach program to licensed audiologists in Texas (per DSHS licensing in 2013 there were 1183 audiologists) to increase the number of facilities that have participated in the EHDI-PALS by a minimum of 10 additional facilities by October 31, 2014. (Baseline: As of November 2013, 32 facilities have participated in the EHDI-PALS.)

Activities:	Develop a process to provide for Audiology SMEs to engage audiologists in partnering with the TEHDI Program. Secure contract and begin implementation.
Timeframe:	April 1, 2014 to August 31, 2014
Responsibility:	Program Educator, Quality Assurance Specialist, EHDI stakeholders.

Activities:	The SMEs will encourage pediatric audiologists to use the TEHDI MIS, and to complete the Early Hearing Detection and Intervention-Pediatric Audiology Links to Services (EHDI-PALS) survey (http://www.ehdipals.org/).
Timeframe:	October 31, 2014
Responsibility:	Program Educator, Quality Assurance Specialist, EHDI stakeholders.

Strategy 3.2: EHDI-PALS Survey. By November 30, 2014, OZ Systems will provide the TEHDI Program with a list Texas pediatric audiologists practicing at each facility that completed the EDHI-PALS survey.

Activities:	The contractor will provide one or more audiology SMEs to compile a comprehensive list of pediatric audiologists licensed in Texas. The SMEs will contact current audiologists in Texas to determine if they provide pediatric services. Using the audiologist list, the contractor will develop strategies for engaging audiologists in partnering with the TEHDI

	Program and becoming TEHDI MIS users.
Timeframe:	September 1, 2014 to November 30, 2014
Responsibility:	Program Educator, Quality Assurance Specialist, EHDI stakeholders.

Strategy 3.3: Provide Mini-Presentations. By March 31, 2015, a minimum of two mini-presentations will be held with audiologists to identify barriers to reporting in the TEHDI MIS and to partner with the TEHDI Program, DARS-ECI, and other stakeholders to better serve newborns and infants diagnosed with hearing loss.

Activities:	The SMEs will update the current DSHS audiology presentation module to be used for speaking at state conferences.
Timeframe:	July 31, 2014
Responsibility:	TEHDI Coordinator, TEHDI Program Team, EHDI stakeholders.

Activities:	The contractor shall provide coordination for two (2) TEHDI Program mini-presentations with the intention of providing face-to-face contact with audiologists and the DARS-ECI personnel.
Timeframe:	August 1, 2014 to March 31, 2015
Responsibility:	TEHDI Coordinator, TEHDI Program Team, EHDI

Year Two Aims and Strategies (04/01/2015 - 03/31/2016)

Aim One: Educational Outreach Initiatives. In an effort to improve health care providers' knowledge about universal newborn screening, by March 31, 2016, the TEHDI Program will expand its educational outreach initiative to providers in the healthcare and early intervention networks by 20%. (Baseline: Data will be gathered upon completion of Year One.)

Strategy 1.1: Educational Materials Development. By March 31, 2016, QR coded materials will be developed, printed and distributed to on 50% of the marketing materials available for distribution. (Baseline: As of SFY 2013, there are 20 different materials available for marketing.)

Activities:	Using the PDSA Model of Improvement to develop strategies to update current products, and develop new products; develop strategies to direct providers and stakeholders to specific webpages; and develop strategies on how to manage educational information through the monitoring of website traffic data.
Timeframe:	April 1, 2015 to September 30, 2015
Responsibility:	TEHDI Program Educator, TEHDI Program Team

Activities:	Produce the developed products and distribute products to specific stakeholders.
Timeframe:	October 1, 2015 to January 31, 2016

Responsibility:	Program Educator

Activities:	Start data collection and quality improvement review.
Timeframe:	February 1, 2016 to March 31, 2016
Responsibility:	Quality Assurance Specialist, TEHDI Coordinator

Strategy 1.2: Texas EHDI Regional Summit. By March 31, 2016, a minimum of three Texas Regional Summit conferences will be implemented allowing the TEHDI Program to identify regional stakeholders' barriers to reporting into the TEHDI MIS system.

Activities:	Using the PDSA Model of Improvement to develop best practice strategies on how to most effectively provide the co-sponsored Texas EHDI Summit.
Timeframe:	April 1, 2015 to June 30, 2015
Responsibility:	NBS Support Group Manager, TEHDI Coordinator, Interagency council, EHDI Stakeholders

Activities:	Provide the co-sponsored Texas EHDI Summits.
Timeframe:	April 1, 2015 to March 31, 2016
Responsibility:	TEHDI Coordinator, TEHDI Program Team, EHDI Stakeholders

Strategy 1.3: Medical Home Education. By March 31, 2016, a SME will present a minimum of three *Medical Home* presentations to educate stakeholders about the needs of hearing loss follow-up within the continuum of care process.

Activities:	Using the PDSA Model of Improvement to develop best practice strategies on how to provide the most effective presentations to stakeholders.
Timeframe:	April 1, 2015 to June 30, 2015
Responsibility:	TEHDI Coordinator, SME Presenter, EHDI state champions

Activities:	Provide a minimum of three *Medical Home* presentations.
Timeframe:	April 1, 2015 to March 31, 2016
Responsibility:	TEHDI Coordinator, SME Presenter, EHDI state champions

Strategy 1.4: Early Head Start Training. Pending the results of the pilot presentation conducted in the first year, the TEHDI Program predicts that by March 31, 2016, a minimum of two presentations will be provided to train Early Head Start program personnel on Advanced OAE screening and reporting to the TEHDI MIS.

Activities:	Utilize the PDSA Model of Improvement to develop best practice strategies on how to provide the most effective presentation to the Early Head Start program personnel.
Timeframe:	April 1, 2015 to May 31, 2015
Responsibility:	TEHDI Coordinator, TEHDI Program Team, EHDI Stakeholders

Activities:	Provide a minimum of two presentations.
Timeframe:	April 1, 2015 to March 31, 2016
Responsibility:	TEHDI Coordinator, EHDI stakeholders

Strategy 1.5: Early Intervention Outreach. By March 31, 2016, a minimum of two presentations will be provided to EI Specialists on reporting to the TEHDI MIS.

Activities:	Utilize the PDSA Model of Improvement to develop best practice strategies on how to provide the most effective presentation to the EI Specialists.
Timeframe:	April 1, 2015 to June 30, 2015
Responsibility:	Program Educator, TEHDI Program Team, Stakeholders

Activities:	Provide two or more presentations to EI Specialist.
Timeframe:	April 1, 2015 to March 31, 2016
Responsibility:	Program Educator, SME Presenter, EHDI state champions

Strategy 1.6: Consent Presentations. By March 31, 2016, the TEHDI Program will educate a minimum of 100 providers and/or audiologists on the consent options available to encourage information exchange in the continuum of care with parents.

Activities:	Utilize the PDSA Model of Improvement to develop best practice strategies on how to provide the most effective presentation providers and/or audiologists.
Timeframe:	April 1, 2015 to June 30, 2015
Responsibility:	NBS Support Group Manager, TEHDI Coordinator, Interagency Council

Activities:	Develop a process to provide presentations providers and/or audiologists
Timeframe:	April 1, 2015 to March 31, 2016
Responsibility:	NBS Support Group Manager, TEHDI Coordinator, Interagency Council

Activities:	Provide consent option presentations.
Timeframe:	June 30, 2015 to March 31, 2016
Responsibility:	NBS Support Group Manager, TEHDI Coordinator, Interagency Council

Aim Two: Parent Support Groups Engagement. Pending the outcome of the project completed in the first year of the grant cycle the TEHDI Program predicts an increase in the project size by 25% by March 31, 2016. (Baseline: Data pending outcome of the pilot project initiated during the current HRSA grant cycle.)

Strategy 2.1: LTF/LTD Improvement Strategies. By August 31, 2015, the TEHDI Program will identify and implement a minimum of one strategy from the contracted parent support groups to address LTF/LTD.

Activities:	Utilizing the PDSA Model of Improvement, the efficacy of the strategies adopted during the previous year to reduce the LTF/LTD will be evaluated.
Timeframe:	April 1, 2015 to July 31, 2015
Responsibility:	TEHDI Coordinator, NBS Support Group Manager

Activities:	The TEHDI Program will implement a minimum of one strategy identified by the stakeholder meeting and the Plan-Do-Study-Act method.
Timeframe:	August 31, 2015 to March 31, 2016
Responsibility:	TEHDI Coordinator, NBS Support Group Manager

Strategy 2.2: Outreach Activities Report. By March 31, 2016, the contracted parent support groups will report on onsite technical assistance, education, and outreach activities provided (frequency to be determined by the pilot project).

Activities:	Contractor will conduct weekly on-site technical assistance, education, and outreach activities to providers at each of the designated provider locations. Advocate/educators will compile data, meeting notes and activity details for reporting to DSHS.
Timeframe:	April 1, 2015 to March 31, 2016
Responsibility:	TEHDI Coordinator, NBS Support Group Manager

Strategy 2.3: Summary of Parent Support Project. By March 31, 2016, the TEHDI Program will receive a summary of the entire project from the contracted parent support group(s) to analyze the efficacy of the project using QI methodology.

Activities:	Contractor will compile a progress report summarizing all project activities and a final report which will include a narrative on project activities, accomplishments and recommendations for next steps. Contractor will submit progress reports in a format provided by DSHS
Timeframe:	March 31, 2016
Responsibility:	TEHDI Coordinator, Program Specialist

Aim Three: Audiologist Outreach. By March 31, 2016, the TEHDI Program will partner with audiologists and DARS-ECI to increase the referral rate to ECI by 1% (baseline data to be determined following completion of the first year in the grant cycle).

Strategy 3.1: Audiologist Engagement. The TEHDI Program will initiate an outreach program to licensed audiologists in Texas (per DSHS licensing in 2013 there were 1183 audiologists) to increase the number of facilities that have participated in the EHDI-PALS by a minimum of 10 additional facilities by October 31, 2015. (Baseline: As of November 2013, 32 facilities have participated in the EHDI-PALS.)

Activities:	Utilizing the PDSA Model of Improvement, the efficacy of the strategies adopted during the previous year to encourage pediatric

	audiologists' partnership.
Timeframe:	April 1, 2015 to May 31, 2015
Responsibility:	Program Educator, Quality Assurance Specialist, EHDI stakeholders

Activities:	The SMEs will encourage pediatric audiologists to use the TEHDI MIS, and to complete the Early Hearing Detection and Intervention-Pediatric Audiology Links to Services (EHDI-PALS) survey (http://www.ehdipals.org/).
Timeframe:	October 31, 2015
Responsibility:	Program Educator, Quality Assurance Specialist, EHDI stakeholders

Strategy 3.2: EHDI-PALS Survey. By November 30, 2015, OZ Systems will provide the TEHDI Program with a list Texas pediatric audiologists practicing at each facility that completed the EDHI-PALS survey.

Activities:	The contractor will provide one or more audiology SMEs to compile a comprehensive list of pediatric audiologists licensed in Texas. The SMEs will contact current audiologists in Texas to determine if they provide pediatric services. Using the audiologist list, the contractor will develop strategies for engaging audiologists in partnering with the TEHDI Program and becoming TEHDI MIS users.
Timeframe:	September 1, 2015 to November 30, 2015
Responsibility:	Program Educator, Quality Assurance Specialist, EHDI stakeholders

Strategy 3.3: Provide Mini-Presentations. By March 31, 2016, a minimum of two mini-presentations will be held to invite audiologists to identify barriers to reporting in the TEHDI MIS and to partner with the TEHDI Program, DARS-ECI, and other stakeholders to better serve newborns and infants diagnosed with hearing loss.

Activities:	Using the information learned in the PDSA Model of Improvement the SMEs will update the current DSHS audiology presentation module as needed.
Timeframe:	July 31, 2015
Responsibility:	TEHDI Coordinator, TEHDI Program Team, EHDI stakeholders

Activities:	The contractor shall provide coordination for two (2) TEHDI Program mini-presentations with the intention of providing face-to-face contact with audiologists and the DARS-ECI personnel.
Timeframe:	August 1, 2015 to March 31, 2016
Responsibility:	TEHDI Coordinator, TEHDI Program Team, EHDI stakeholders

Year Three Aims and Strategies
(04/01/2016 - 03/31/2017)

Aim One: Educational Outreach Initiatives. In an effort to improve health care providers' knowledge about universal newborn screening, by March 31, 2017, the TEHDI Program will expand its educational outreach initiative to providers in the healthcare and early intervention networks by 20%. (Baseline: Data will be gathered upon completion of Year Two.)

Strategy 1.1: Educational Materials Development. By March 31, 2017, QR coded materials will be developed, printed and distributed to stakeholders on 100% of the marketing materials available for distribution. (Baseline: As of SFY 2013, there are 20 different materials available for marketing.)

Activities:	Using the PDSA Model of Improvement to develop strategies to update current products, and develop new products; develop strategies to direct providers and stakeholders to specific webpages; and develop strategies on how to manage educational information through the monitoring of website traffic data.
Timeframe:	April 1, 2016 to September 30, 2016
Responsibility:	Program Educator, TEHDI Program Team

Activities:	Produce the developed products and distribute products to specific stakeholders.
Timeframe:	October 1, 2016 to January 31, 2017
Responsibility:	Program Educator, TEHDI Program Team

Activities:	Start data collection and quality improvement review.
Timeframe:	February 1, 2017 to March 31, 2017
Responsibility:	Program Educator, TEHDI Program Team

Strategy 1.2: Texas EHDI Regional Summit. By March 31, 2017, a minimum of three Texas Regional Summit conferences will be implemented allowing the TEHDI Program to identify regional stakeholders' barriers to reporting into the TEHDI MIS system.

Activities:	Using the PDSA Model of Improvement to develop best practice strategies on how to most effectively provide the co-sponsored Texas EHDI Summit.
Timeframe:	April 1, 2016 to June 30, 2016
Responsibility:	TEHDI Coordinator, TEHDI Program Team, EHDI Stakeholders

Activities:	Provide the co-sponsored Texas EHDI Summits
Timeframe:	April 1, 2016 to March 31, 2017
Responsibility:	TEHDI Coordinator, TEHDI Program Team, EHDI Stakeholders

Strategy 1.3: Medical Home Education. By March 31, 2017, a SME will present a minimum of three *Medical Home* presentations to educate stakeholders about the needs of hearing loss follow-up within the continuum of care process.

Activities:	Using the PDSA Model of Improvement to develop best practice strategies on how to provide the most effective presentations to stakeholders.
Timeframe:	April 1, 2016 to June 30, 2016
Responsibility:	TEHDI Coordinator, TEHDI Program Team, SME Presenter

Activities:	Conduct a minimum of three early intervention presentations.
Timeframe:	April 1, 2016 to March 31, 2017
Responsibility:	TEHDI Coordinator, SME Presenter, EHDI state champions

Strategy 1.4: Early Head Start Training. Pending the results of the pilot presentation conducted in the first and second year, the TEHDI Program predicts that by March 31, 2017, a minimum of two presentations will be provided to train Early Head Start program personnel on Advanced OAE screening and reporting to the TEHDI MIS.

Activities:	Utilize the PDSA Model of Improvement to develop best practice strategies on how to provide the most effective presentation to the Early Head Start program personnel.
Timeframe:	April 1, 2016 to May 31, 2016
Responsibility:	TEHDI Coordinator, TEHDI Program Team, Stakeholders

Activities:	Provide a minimum of two presentations.
Timeframe:	April 1, 2016 to March 31, 2017
Responsibility:	TEHDI Coordinator, SME Presenter, EHDI state champions

Strategy 1.5: Early Intervention Outreach. By March 31, 2017, a minimum of two presentations will be provided to EI Specialists on reporting to the TEHDI MIS.

Activities:	Utilize the PDSA Model of Improvement to develop best practice strategies on how to provide the most effective presentation to the EI Specialists.
Timeframe:	April 1, 2016 to June 30, 2016
Responsibility:	TEHDI Coordinator, TEHDI Program Team, SME Presenter

Activities:	Provide two or more presentations to EI Specialists.
Timeframe:	April 1, 2016 to March 31, 2017
Responsibility:	TEHDI Coordinator, SME Presenter, EHDI state champions

Strategy 1.6: Consent Presentations. By March 31, 2017, the TEHDI Program will educate a minimum of 100 providers and/or audiologists on the consent options available to encourage information exchange in the continuum of care with parents.

Activities:	Utilize the PDSA Model of Improvement to develop best practice strategies on how to provide the most effective presentation providers and/or audiologists.

Timeframe:	April 1, 2016 to March 31, 2017
Responsibility:	NBS Support Group Manager, TEHDI Coordinator, Interagency council, EHDI Stakeholders

Activities:	Develop a process to provide presentations providers and/or audiologists
Timeframe:	April 1, 2016 to March 31, 2017
Responsibility:	NBS Support Group Manager, TEHDI Coordinator, Interagency council, EHDI Stakeholders

Activities:	Provide consent option presentations.
Timeframe:	June 30, 2016 to March 31, 2017
Responsibility:	TEHDI Coordinator, SME Presenter, EHDI state champions

Aim Two: Parent Support Groups Engagement. Pending the outcome of the project completed in the first two years of the grant cycle the TEHDI Program predicts to increase the project size by 25% by March 31, 2017. (Baseline: Data pending outcome of the pilot project initiated during the current HRSA grant cycle.)

Strategy 2.1: LTF/LTD Improvement Strategies. By August 31, 2016, the TEHDI Program will identify and implement a minimum of one strategy from the contracted parent support groups to address LTF/LTD.

Activities:	Utilizing the PDSA Model of Improvement the efficacy of the strategies adopted during the previous year to reduce the LTF/LTD will be evaluated.
Timeframe:	April 1, 2016 to July 31, 2016
Responsibility:	TEHDI Coordinator, TEHDI Program Team, SME Presenter

Activities:	The TEHDI Program will implement a minimum of one strategy identified by the stakeholder meeting and the Plan-Do-Study-Act method.
Timeframe:	August 31, 2016 to March 31, 2017
Responsibility:	TEHDI Coordinator, TEHDI Program Team, SME Presenter

Strategy 2.2: Outreach Activities Report. By March 31, 2017, the contracted parent support groups will report on onsite technical assistance, education, and outreach activities provided (frequency to be determined by the pilot project).

Activities:	Contractor will conduct weekly on-site technical assistance, education, and outreach activities to providers at each of the designated provider locations. Advocate/educators will compile data, meeting notes and activity details for reporting to DSHS.
Timeframe:	April 1, 2016 to March 31, 2017
Responsibility:	TEHDI Coordinator, TEHDI Program Team, SME Presenter

Strategy 2.3: Summary of Parent Support Project. By March 31, 2017, the TEHDI Program will receive a summary of the entire project from the contracted parent support group(s) to analyze the efficacy of the project using QI methodology.

Activities:	Contractor will compile a progress report summarizing all project activities and a final report which will include a narrative on project activities, accomplishments and recommendations for next steps. Contractor will submit progress reports in a format provided by DSHS
Timeframe:	March 31, 2017
Responsibility:	TEHDI Coordinator, SME Presenter

Aim Three: Audiologist Outreach. By March 31, 2017, the TEHDI Program will partner with audiologists and DARS-ECI to increase the referral rate to ECI by 1% (baseline data to be determined following completion of the previous grant cycle year).

Strategy 3.1: Audiologists Engagement. The TEHDI Program will initiate an outreach program to licensed audiologists in Texas (per DSHS licensing in 2013 there were 1183 audiologists) to increase the number of facilities that have participated in the EHDI-PALS by a minimum of 10 additional facilities by October 31, 2016. (Baseline: As of November 2013, 32 facilities have participated in the EHDI-PALS.)

Activities:	Utilizing the PDSA Model of Improvement the efficacy of the strategies adopted during the previous year to encourage pediatric audiologists' partnership.
Timeframe:	April 1, 2016 to May 31, 2016
Responsibility:	TEHDI Coordinator, TEHDI Program Team, EHDI stakeholders

Activities:	The SMEs will encourage pediatric audiologists to use the TEHDI MIS, and to complete the Early Hearing Detection and Intervention-Pediatric Audiology Links to Services (EHDI-PALS) survey (http://www.ehdipals.org/).
Timeframe:	October 31, 2016
Responsibility:	TEHDI Coordinator, TEHDI Program Team, SME Presenter

Strategy 3.2: EHDI-PALS Survey. By November 30, 2016, OZ Systems will provide the TEHDI Program with a list Texas pediatric audiologists practicing at each facility that completed the EDHI-PALS survey.

Activities:	The contractor will provide one or more audiology SMEs to compile a comprehensive list of pediatric audiologists licensed in Texas. The SMEs will contact current audiologists in Texas to determine if they provide pediatric services. Using the audiologist list, the contractor will develop strategies for engaging audiologists in partnering with the TEHDI Program and becoming TEHDI MIS users.

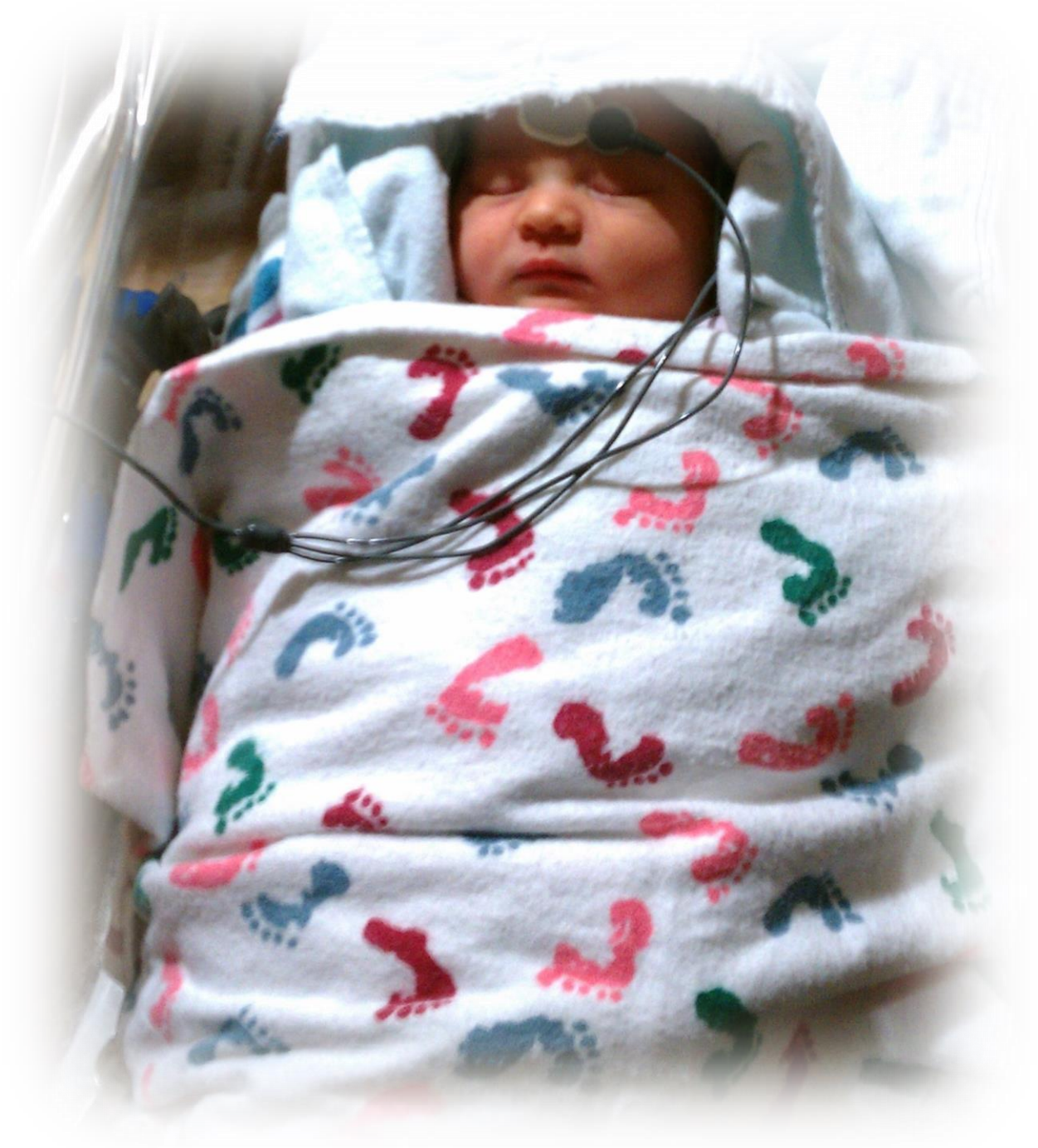
Timeframe:	September 1, 2016 to November 30, 2016
Responsibility:	TEHDI Coordinator, TEHDI Program Team, SME Presenter

Strategy 3.3: Provide Mini-Presentations. By March 31, 2017, a minimum of two mini-presentations will be held to invite audiologists to identify barriers to reporting in the TEHDI MIS and to partner with the TEHDI Program, DARS-ECI, and other stakeholders to better serve newborns and infants diagnosed with hearing loss.

Activities:	Using the information learned in the PDSA Model of Improvement the SMEs will update the current DSHS audiology presentation module as needed.
Timeframe:	July 31, 2016
Responsibility:	TEHDI Coordinator, TEHDI Program Team, SME Presenter

Activities:	The contractor shall provide coordination for two (2) TEHDI Program mini-presentations with the intention of providing face-to-face contact with audiologists and the DARS-ECI personnel.
Timeframe:	August 1, 2016 to March 31, 2017
Responsibility:	TEHDI Coordinator, SME Presenter

Texas Early Hearing Detection and Intervention (TEHDI) Program
2014 EHDI Conference Document



Texas Department of State Health Services
H61MC09033

NARRATIVE

INTRODUCTION

Newborn hearing screening is internationally recognized as an essential function to identify hearing loss in newborns. Left undetected, hearing loss can negatively impact language acquisition, communication options, social and emotional development and academic achievement. Prior to the implementation of newborn hearing screening in Texas, only those children with identified risk factors were screened for hearing loss and were typically identified after two years of age, delaying critically needed early intervention.[1] From 1996 to 1999, through a pilot program of the Texas Commission for the Deaf and Hard of Hearing (now the Office for Deaf and Hard of Hearing Services within the Department of Assistive and Rehabilitative Services - DARS/DHHS), 80,000 newborns were screened for hearing loss at 30 Texas hospitals. The pilot became a national model when a greater than anticipated number of newborns were identified prior to their discharge. The pilot's findings were the impetus for the passage of House Bill (HB) 714, 76th Legislature, 1999, mandating newborn hearing screening programs at Texas birth facilities and designating the Texas Department of State Health Services (DSHS) as the oversight agency.

Since 2000, DSHS has collaborated with a diverse group of stakeholders to address improving outcomes for newborns, infants, and children with hearing loss/deafness and their families. These include state agency representatives, community partner organizations, early intervention service experts, parents of children with hearing loss/deafness and members of the deaf and hard of hearing community. DSHS has placed a major emphasis on improving the hearing screening process by educating birthing facilities on how to improve their newborn hearing screening programs. This collaboration is reflected today with 99 percent of newborns being screened for hearing loss and reported into the TEDHI Management Information System (MIS) by certified facilities.

Starting in 2008, the major focus has been to determine how to improve accurate loss to follow-up (LTF) rates while breaching diverse cultural barriers and providing education to stakeholders and the families they support. Since 2008, funding support from the Heath Resources and Services Administration (HRSA) has assisted in carrying out the educational outreach initiatives of the TEHDI Program.

During the first HRSA funding cycle, the TEHDI Program was able to develop and revitalize brochures, other printed media and website pages with updated information, including development of a TEHDI educational curriculum and a corresponding provider toolkit. During that timeframe, the program rebranded their materials and developed the highly recognizable TEHDI bear logo, with sound wave ears, which won an international creative arts award. Additionally, multiple face-to-face presentations and mini-conferences were provided for stakeholders across the TEHDI continuum of care.

[1] University of North Carolina; Harrison, M., Roush, J., & Wallace, J. (2003) *Trends in the age of identification and intervention for deaf and hard of hearing infants*. Ear and Hearing, 24, 89-95.

In the second funding cycle, the TEHDI Program focused on presenting *Prenatal, Universal Newborn Hearing Screening,* and *Medical Home* presentations to health care providers. The program also established quality improvement initiatives by instituting the Plan-Do-Study-Act (PDSA) *Model of Improvement* used in the National Initiative for Children's Healthcare Quality (NICHQ) regional learning collaborative and by partnering with Texas Head Start, Early Childhood Health Outreach (ECHO), and early intervention service providers.

HB 411, 82nd Legislature, 2011, positively impacted the TEHDI Program by amending Chapter 47, Texas Health and Safety Code, Hearing Loss in Newborns, including but not limited to, changing to an opt-out program for hearing screening; expanding the definition of a birthing facility; removing exemptions for birthing facilities located in counties that met specific population sizes and number of births; and requiring DSHS to maintain data on each newborn or infant who receives a hearing screening. The bill also required all birthing facilities, as newly defined, to perform hearing screenings, either directly or through a transfer agreement, on all newborns unless the family declined the hearing screen. However, the statute did not clearly define transfer agreement and issues arose regarding interpretations and intent of what constituted a transfer agreement. HB 793, 83rd Legislative Session, 2013, amended the language in the Chapter 47.003(d), Texas Health and Safety Code:

- from "…shall perform, either directly or through a transfer agreement…"
- to "…shall perform, either directly or through a referral to another program certified under this section…"

Texas still experiences a significant LTF from TEHDI MIS statistics. It is unclear whether the issue is due to LTF services or loss to documentation (LTD) and how great each loss point plays in the general loss rate. The program's overall goals are to:

- continue to improve parent and provider understanding of the importance of early diagnosis and referrals;
- increase the amount of follow-up data in the TEHDI MIS to better identify newborns, infants, and children who need further follow-up care; and
- improve the quality of the data in the TEHDI MIS to successfully connect providers with parents of newborns, infants and children in a timely manner for an optimal outcome.

Improving communication among early intervention providers and between providers and families can ensure a sound beginning for infants with hearing loss/deafness and their families in Texas while reducing LTF/LTD.

NEEDS ASSESSMENT

As has been evidenced, more initiatives can be taken to determine the specific factors that impact the LTF/LTD rate in Texas. The TEHDI Program and its collaborators continue to work diligently to identify solutions to these challenges through quality improvement methods and analysis of state and national trends. In 2010, a contractor identified 30 possible loss points in the TEHDI continuum of care. One loss point was removed in 2011 when the exemption for birthing facilities in counties that met specific population sizes and number of births was eliminated, expanding hearing screening into the most rural areas of Texas (which also have higher risk factors). Major military facilities, another loss point, although not required, have begun to screen and report into the TEHDI MIS through vigorous educational outreach activities.

Target Population and Community Served

In state fiscal year (SFY) 2013, approximately 386,600 children were born in Texas, according to the DSHS Vital Statistics Unit.[2] Of those births, 377,040 had hearing screens before leaving the birth facility.

It is generally expected that two or three out of 1,000 babies are born with hearing loss/deafness. This translates to approximately 1,200 babies born in Texas each year with some level of hearing loss. However, in SFY 2012, there were only 796 infants with a *diagnosed* hearing loss reported to the TEHDI MIS. This is an indication that although birth screening reporting has increased significantly since 2008, there needs to be significant improvement in the area of audiology and early intervention provider participation in reporting follow-up, diagnostic and intervention services.

Demographic Data

The demographics of Texas have a huge impact on the ability of the TEHDI Program to serve the citizens of Texas, the second most populous state. The 2012 census data indicates there are over 26,059,203 people in Texas which is 8.3% of the nation's population.[3] Below is a representation of the most current Texas ethnicity demographic and growth rate:

People Quick Facts	**Texas**	**USA**
Population, 2012 estimate	26,059,203	313,914,040
Population, percent change, April 1, 2010 to July 1, 2012	3.6%	1.7%
Population, 2010	25,145,561	308,745,538
Persons under 5 years, percent, 2012	7.5%	6.4%
Persons under 18 years, percent, 2012	26.8%	23.5%
Persons 65 years and over, percent, 2012	10.9%	13.7%
Female persons, percent, 2012	50.3%	50.8%
White alone, percent, 2012 (a)	80.6%	77.9%
Black or African American alone, percent, 2012 (a)	12.3%	13.1%
American Indian and Alaska Native alone, percent, 2012 (a)	1.0%	1.2%
Asian alone, percent, 2012 (a)	4.2%	5.1%
Native Hawaiian and Other Pacific Islander alone, percent, 2012 (a)	0.1%	0.2%
Two or More Races, percent, 2012	1.7%	2.4%
Hispanic or Latino, percent, 2012 (b)	38.2%	16.9%
White alone, not Hispanic or Latino, percent, 2012	44.5%	63.0%
(a) Includes persons reporting only one race		
(b) Hispanics may be of any race, so also are included in applicable race categories		
Source: US Census Bureau State & County Quick Facts		

[2] Texas DSHS Vital Statistics Unit: http://www.dshs.state.tx.us/vs/
[3] United States Census Bureau: http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml

Language Demographics

Below is information from April, 2010 detailing the languages spoken in homes for populations five and over in Texas, compared to the United States:

	United States		Texas	
	Totals	**%**	**Totals**	**%**
Total Population 5 years and over	**280,564,877**	**100.00%**	**21,869,156**	**100.00%**
Spoke only English at home	225,488,799	80.37%	14,500,388	66.31%
Spoke a language other than English at home	55,076,078	19.63%	7,368,768	33.69%
Spanish and Spanish Creole	34,183,747	12.18%	6,338,224	28.98%
Other Indo-European Languages	10,347,377	3.69%	413,977	1.89%
Asian and Pacific Island Languages	8,267,977	2.95%	493,497	2.26%
All Other Languages	2,276,977	0.81%	123,070	0.56%
Source: U.S. Census Bureau, 2006-2008 American Community Survey				

Demographics

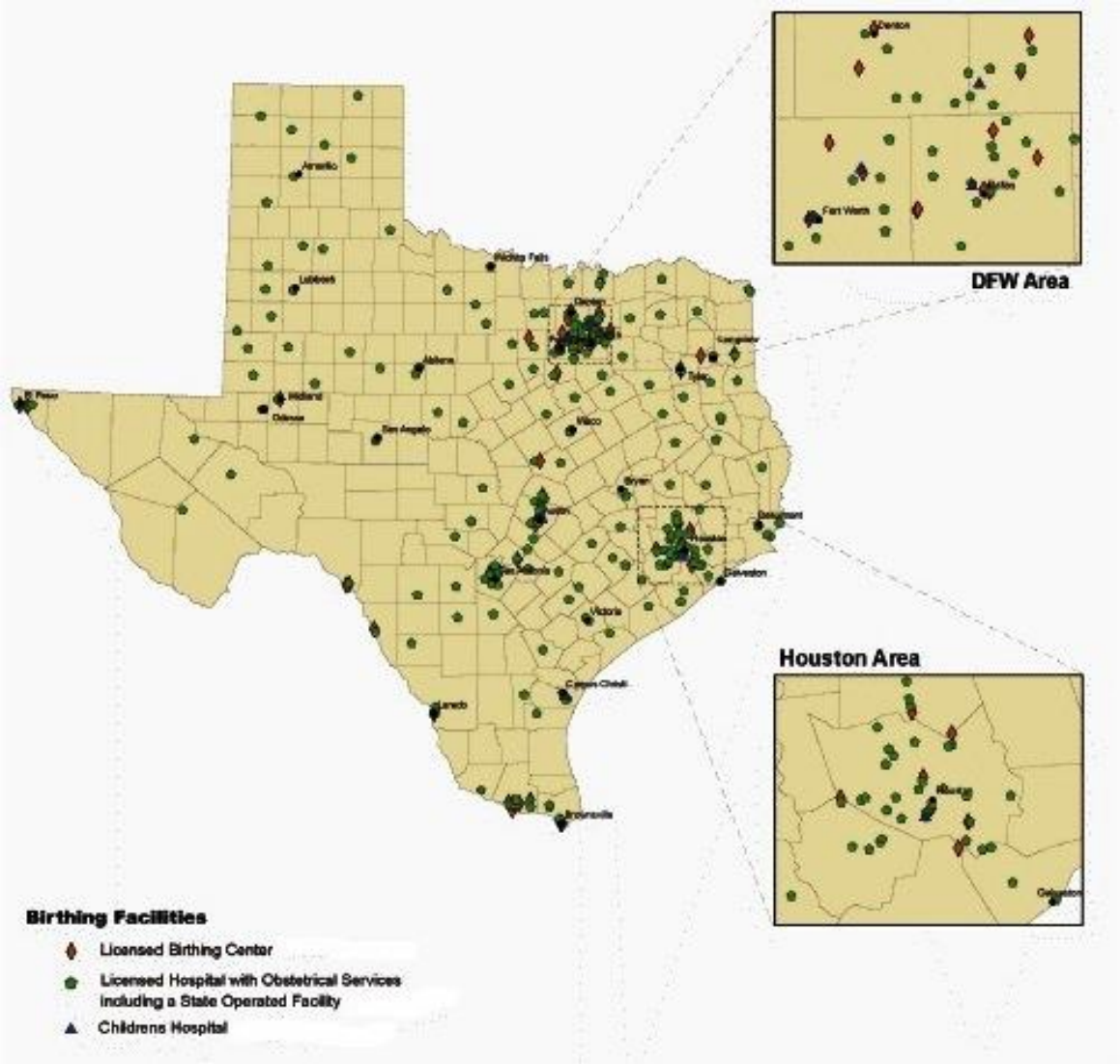
Texas' poverty rate as of 2010 was 17.0% compared to the national average of 14.3%.[4] Not only is Texas challenged by diversity in population and economic factors, its geographical size further impacts newborn screening follow-up. Texas is divided into 254 counties ranging in population from 71 to over three million per county. Over 51% of the state's population resides in three counties: Dallas (Dallas, Texas), Tarrant (Fort Worth, Texas) and Harris (Houston, Texas). The remaining 49% reside in the remaining 251 counties which include large metropolitan areas such as San Antonio (Bexar County), El Paso (El Paso County), and Lubbock (Lubbock County). The majority of Texas is rural and this presents major challenges in LTF/LTD.

There are currently 237 certified birth facilities licensed in Texas. Access to providers specializing in pediatric audiology also continues to be a challenge. There is regional disparity in the distribution of pediatric specialists to meet the needs for outpatient screening and audiological evaluation causing a delay in diagnosis and intervention in some regions of the state. The program will continue to address the challenges by providing educational support to providers and families, continuing to develop quality improvement methodology that meets the needs of its diverse population and improving networking connections throughout Texas communities and agencies.

DSHS divides Texas into 8 Health Service Regions. The 237 birthing facilities tracked by the TEHDI Program are distributed throughout these regions. The following map, created by DSHS Center for Health Statistics, October 2011, shows the distribution of birthing facilities across the state. As is clearly demonstrated by the distribution of birthing facilities in rural, less populated areas of Texas, such as in the west and south, access to providers is limited and therefore, meeting the needs of these populations remains a challenge. There are numerous counties which do not have a birthing facility and sometimes in the more rural areas of Texas several counties must be traveled through to arrive at a birthing facility.

[4] US Census Bureau: http://factfinder2.census.gov/faces/nav/jsf/pages/community_facts.xhtml

Licensed Birthing Centers, Hospitals with Obstetrical Services and Childrens Hospitals

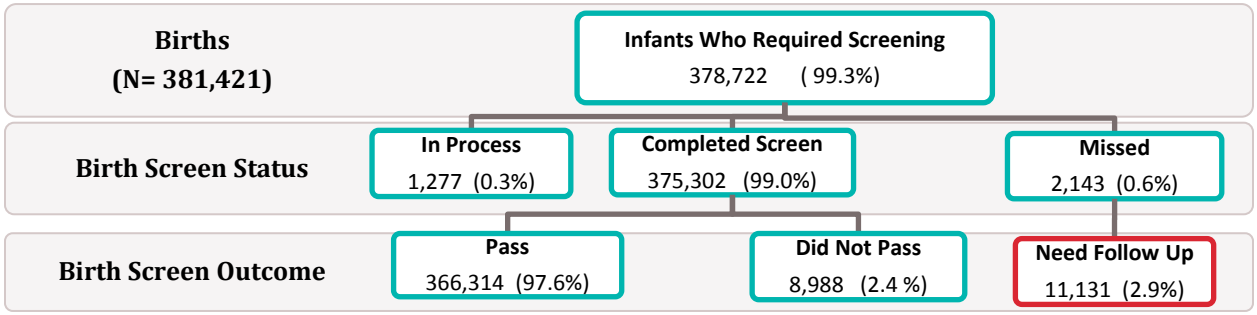


The aggregate data report below shows total births requiring a screening (not including deceased, very ill, refusal of hearing screen, etc.) and who have a current birth screen status (i.e., In Process, Birth Screen Complete, Missed Birth Screen and Infant Needs Follow-Up Services). Those infants with a status of "In Process" typically reflect neonatal intensive care unit babies who are still in the hospital at the time of data gathering. Infants with a status of "Infant Needs Follow-Up Services" include those whose birth screen status was missed or a unilateral/bilateral referral.

Birth Admissions Screening Reports – Fiscal Year 2013

Quarter	Total Births	Infants Who Required a Screen	Status		Status		Outcome		Outcome		Status		Status	
			In Process		Birth Screen Complete		Pass		Did Not Pass		Missed		Needs Follow-Up Care	
			#	%	#	%	#	%	#	%	#	%	#	%
Q1	99,413	98,683	249	0.3	97,975	99.3	95,664	97.6	2,311	2.4	459	0.5	2,770	2.8
Q2	91,917	91,253	136	0.1	90,571	99.3	88,414	97.6	2,157	2.4	546	0.6	2,703	3.0
Q3	91,640	90,947	202	0.2	90,285	99.3	88,149	97.6	2,136	2.4	460	0.5	2,596	2.9
Q4	98,451	97,839	690	0.7	96,471	98.6	94,087	97.5	2,384	2.5	678	0.7	3,062	3.1
Total	381,421	378,722	1,277	0.3	375,302	99.1	366,314	97.6	8,988	2.4	2,143	0.6	11,131	2.9

The TEHDI MIS tracking process can narrowly gage the number of infants needing follow-up as shown for SFY13.



Barriers and Obstacles

Texas has done a commendable job over the last decade providing training to screening programs in birthing facilities and improving reporting in the TEDHI MIS. Additional quality improvement is required to capture follow up information from audiologists and early intervention specialists and reduce LTF/LTD. From July 2012 through August 2013, the state NICHQ learning collaborative team worked to identify multiple barriers. Many of these barriers were also indicated in a report conducted by an independent contractor and presented to DSHS on possible gaps on early intervention. The primary barriers identified were:

1. Lack of insurance and the cost of services
2. Health literacy issues (e.g., consistency of information, language barriers)

3. Shortages of audiologists and pediatric audiologists in Texas
4. Need for quality data (e.g., updated contact information)
5. Limited provider use of the TEHDI MIS (e.g., outpatient follow-up services) system
6. Limited or lack of parent support groups at each care process point
7. Inconsistent methodology used by ECI to refer children with suspected or confirmed hearing loss (e.g., TEHDI MIS and fax/phone)
8. Lack of access to relevant assistance and appropriate educational/informational materials as families navigate the continuum of care
9. Provider bias at all service levels significantly impeding the service delivery infrastructure by compromising families' access to meaningful, relevant information, services and support
10. Lack of pediatrician engagement
11. Lack in understanding ECI/Deaf Education Early Intervention (EI) protocols
12. Lack of interoperability between facility systems
13. Lack of understanding and messaging about the "opt out" vs. "consent" for hearing screen

The NICHQ Learning Collaborative also identified information about the level of follow-up during the educational enrollment process. The Texas Education Agency (TEA) annual enrollment data (December 2012) provides preliminary indications that a high percentage of the estimated population who are in need are not receiving early intervention services. [5] The TEHDI Program is committed to developing quality improvement strategies during this funding phase to affirm these barriers and help resolve the issues surrounding LTF/LTD in the continuum of care.

Programmatic Needs

There is a commitment by the TEHDI Program to develop strategies to assess organizational and program readiness in assuring more effective quality improvements in program practices. The key drivers in these areas are:

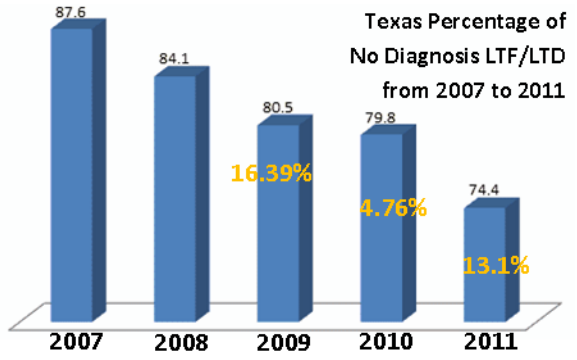
TEHDI Educational Materials and Training Development

Over the last two HRSA funding cycles, over a dozen brochures, pamphlets and booklets were developed and distributed allowing health care providers, early invention providers, and families to learn about the TEHDI Program and hearing loss. During this process, the TEHDI *Curriculum* and *Provider Toolkit* was developed and delivered through a train-the-trainer concept. Additionally, accredited education presentations and education was provided through speaker presentations and a display booth at annual professional events such as the Texas Speech-Language Hearing Association and Texas Academy of Audiology (TAA) conferences to bring greater awareness to the community about the program and the roles the provider community plays in reducing LTF/LTD. The TEHDI Program is continuing to update the curriculum and develop culturally-diverse brochures with Quick Response (QR) coding that direct stakeholders to TEHDI web-links through a mobile phone QR app. Funds will be needed to support continuing education efforts, keep brochures relevant to current trends and programmatic changes and print new stock.

[5] Texas Education Agency – Enrollment Trends: http://www.tea.state.tx.us/acctres/enroll_index.html

Audiologists Engagement

The TEHDI Program has determined that one of the major obstacles in decreasing the LTF/LTD rate is increasing the number of audiology providers reporting in the TEHDI MIS. Texas has approximately 1,186 licensed audiologists, with an undetermined number who primarily work as pediatric audiologists.[6] At this time, only a minimal number of audiologists are using the TEHDI MIS to enter diagnostic results. Many choose to fax results to the vendor of the TEHDI MIS for manual entry, as they report that they do not have time to document their findings into their own computer logs and again into the TEDHI MIS.A high percentage of diagnostics performed by audiologists are considered LTD as their services are not being reported.[7] Since 2007, Texas has steadily made progress in decreasing its LTF/LTD rate as in shown in the graph below.[8]



LTF/LTD decreased in Texas from 87.6% statewide in 2007 to 74.4% in 2011. The percentage of change from 2008 to 2009 was 16.39% and the rate from 2010 to 2011 reflected a percentage of change of 13.1 in the state LTF/LTD rate. Even with the state's rapidly growing population, ethnic diversity, largest rural geographic areas in the nation and soaring teen pregnancy rates, Texas continues to decrease LTF/LTD.

The TEHDI Program has engaged subject matter experts (audiologists) to compile an active list of pediatric audiologists and educate them on the importance of reporting to the TEHDI MIS and encouraging them to register with the Early Hearing Detection & Intervention – Pediatric Audiology Links to Services (EHDI-PALS) which is a national project. The TEHDI Program will require funding to continue a dialog with Texas audiologists and determine what is needed to further reduce LTF/LTD.

Parent Support Group Engagement

The TEHDI Program is currently initiating parent support group pilot projects to engage parents of children with hearing loss/deafness in addressing areas of LTF/LTD. Studies have shown that direct face-to-face engagement with parents by parents who have experience with a child who has hearing loss significantly improves the outcome for

[6] State Board of Examiners for Speech-Language Pathology and Audiology: http://www.dshs.state.tx.us/speech/sp_roster.shtm
[7] Centers for Disease Control and Prevention: http://www.cdc.gov/ncbddd/hearingloss/ehdi-data.html
[8] ditto

those families. Parent advocates will inform health care providers about the TEDHI continuum and the importance of using the TEHDI MIS to report, track progress and assist the continuity of care activities and provide technical assistance, education and outreach. Funding is necessary to continue expansion of the parent support group project using successful techniques from the initial pilot.

Texas Early Head Start Engagement

The TEHDI Program has discussed a partnership with the Texas Head Start State Collaborative Office to begin a pilot project to expand hearing screening and reporting into the TEHDI MIS. In the previous funding cycle, the program worked with both Texas Early Head Start Programs and the ECHO Initiative to facilitate an advanced training workshop where Head Start personnel could learn about how to provide and report hearing screenings. In order to expand this initiative, funding will be needed to facilitate more interactive meetings and trainings so that programs statewide can assist with hearing screening and reporting to reduce LTF/LTD.

Early Intervention Engagement

It is imperative the TEHDI Program develop quality improvements in the area of early intervention with state, non-profit, and private services. The program is currently working with DARS – Early Childhood Intervention (DARS-ECI) and TEA to develop and implement a multi-agency consent form to encourage more parents to allow information sharing. There are also efforts underway to improve reporting of early intervention services into the TEHDI MIS. Currently, the CDC has estimated that 69.7% of early intervention services enrollment are either not being completed or is considered LTD, which indicates a high number of LTF in providing newborns, infants, and children timely services.[9] Funding will support efforts to find effective solutions through the PDSA *Model of Improvement* in the area of early intervention services.

Medical Home Outreach

Another important factor in the continuum of care with newborn hearing loss is pediatrician involvement in the coordination of services. Funding will allow the program to continue to educate health care providers on following through with patients by coordinating audiologist appointments and early intervention services with the program's *Medical Home* curriculum. Efforts are underway to include subject matter experts within the Children with Special Health Care Needs Program to facilitate inclusion of LTF/LTD in their medical home outreach.

METHODOLOGY

During the 2nd cycle of HRSA funding, the TEHDI Program joined Texas stakeholders and the NICHQ to develop strategies for improving screening, diagnosing, and establishing intervention plans by 1, 3, and 6 months, respectively. The NICHQ team developed a PDSA *Model of Improvement* to set goals and identify activities that would reduce LTF/LTD. The team created over a dozen PDSAs, with three showing immediate results toward improving the TEHDI continuum of care:

[9] Centers for Disease Control and Prevention: http://www.cdc.gov/ncbddd/hearingloss/ehdi-data.html

Audiology Survey: The NICHQ team designed a small web-based survey to assess provider awareness of the TEHDI MIS. The survey was distributed to approximately 300 audiologists. The response rate was 30% and provided confirmation that audiologists were unaware of the reporting requirements for the TEHDI MIS; the importance of referring to ECI; and the free training/resources available to them from the TEHDI Program. During the 3rd Cycle (April 2013 – March 2014), the program is developing an informational brochure focused on the TEHDI MIS reporting process to increase provider participation in reporting and documenting outcomes in the TEDHI MIS.

Early Childhood Intervention: NICHQ team members from both TEHDI and DARS ECI are working closely to improve the communication between ECI program staff and families needing follow-up care. To that end, each of the 59 contracted ECI providers has a designated "TEHDI Referral Manager." In addition, new resources and training materials were designed and tested as NICHQ PDSAs and will be distributed to all ECI programs in 2014. DARS ECI is also working closely with TEHDI staff on individual record reviews to assure consistency of care.

Quick Reference Guide for Providers: NICHQ team members designed three targeted motivational resource sheets for use by screeners; primary care providers/ear, nose, and throat specialists; and audiologists. The content was designed to be a "1-2-3" simplified version of the best practices (e.g., reporting, referral and family support) used across the care continuum. Plans are in place to print and distribute this resource across the continuum of care network, as well as post a downloadable format on the TEHDI website.

The TEHDI Program is also in the process of procuring contractors to implement parent pilot projects. The contractors are expected to have experience providing services to families and their children who are deaf/hard of hearing and will have parents as staff members who are peers to the families they serve. They will establish relationships with various providers and stakeholders involved in the hearing screening process by providing technical assistance, education, and outreach to improve the role of the early hearing intervention process in Texas and the importance of using the TEDHI MIS to report and track records. In addition, the contractors may work directly with families of newborns/infants who do not pass the hearing screening by providing education and outreach regarding the importance of receiving early intervention services and consenting to information sharing for the continuity of care.

Quality Improvement Team

As stated in the purpose of the funding opportunity, the TEHDI Program will continue to use methodologies that include a team to assist in the development and continuation of quality improvement.

The TEHDI Quality Improvement Team includes the following positions:

- TEHDI Coordinator (program lead);
- Program Educator (HRSA-supported);
- Data analyst (CDC-supported);
- Pediatric audiologist (HRSA-supported);

- Early intervention program representative (DARS-ECI supported);
- Parent of a child with a hearing loss (HRSA-supported); and
- Children with Special Health Care Needs (CSHCN) representative (DSHS supported).

Quality Improvement Strategies
The strategy will be to use the TEHDI QI Team to further develop and enhance improvements in the areas of most need and will focus on these areas (i.e., as stated in the needs assessment):

- TEHDI Educational Materials and Training Development
- Audiologists Engagement
- Parent Support Group Engagement
- Texas Head Start Engagement
- Early Intervention Engagement
- Medical Home Outreach

DSHS is legislatively-mandated to establish certification criteria for hearing screening programs. The TEHDI Program provides birthing facilities an electronic report card every two months on the facilities' reporting efforts, including performance metrics and a certification level (i.e., Distinguished, Standard or Provisional) based on the level of information being provided into the TEHDI MIS over a six-month period. Based on the "report card," birthing facilities can request additional technical assistance and/or training to raise their quality of reporting and certification level. A similar system needs to be implemented for both audiologists and early intervention providers in order to align quality reporting and reduce LTF/LTD within the current TEHDI MIS.

Program Aims Statement
The TEHDI Program has established the following aims which addresses the needs of newborns, infants and children who have hearing loss:

By March 31, 2017, the program will reduce LTF/LTD, as reported through the CDC annual EDHI survey, for babies born at birthing facilities in Texas by 15%.

Year One of Grant Cycle (April 1, 2014 – March 31, 2015)

Aim 1: **Educational Outreach Initiatives.** In an effort to improve health care providers' knowledge about newborn hearing screening, by March 31, 2015, the TEDHI Program will expand its educational outreach initiative to providers in the healthcare and early intervention networks by 20%.
Baseline: From April 2012 to March 2013 over 900,000 educational materials were distributed, the TEHDI Program exhibited at two state conferences and *Medical Home* presentations were provided to 61 providers.

> **Strategy 1.1: Educational Material Development**
> By March 31, 2015, QR coded materials will be developed, printed and distributed to stakeholders on 20% of the marketing materials available for distribution; development of webpage to which QR code will be directed.
> Baseline: As of SFY 2013, there are 20 different materials available for marketing.

Strategy 1.2: Texas EHDI Regional Summit
By March 31, 2015, the first in a series of Texas Regional Summit conferences will be implemented, allowing the program to identify regional stakeholders' barriers to reporting into the TEHDI MIS.

Strategy 1.3: Medical Home Education
By March 31, 2015, a subject matter expert will present a minimum of three *Medical Home* presentations to educate stakeholders about the TEHDI continuum of care.

Strategy 1.4: Early Head Start Training
By November 15, 2014, a minimum of one presentation will be provided in a pilot region to train Early Head Start program personnel on Advanced Otoacoustic (OAE) screening and reporting into the TEDHI MIS.

Strategy 1.5: Early Intervention Outreach
By March 31, 2015, a minimum of two presentations will be provided to EI Specialists on reporting into the TEHDI MIS.

Strategy 1.6: Consent Presentations
By March 31, 2015, the TEHDI Program will educate a minimum of 100 providers and/or audiologists on the consent options to encourage information exchange in the continuum of care with parents.

Aim 2: **Parent Support Groups Engagement.** By March 31 2015, the TEHDI Program will expand its partnership with contracted parent support groups (i.e., pilot projects initiated during the current HRSA Grant cycle) to evaluate lessons learned and implement best practices in order to increase the amount and integrity of TEHDI MIS data.
Baseline: Data pending outcome of the pilot project.

Strategy 2.1: LTF/LTD Improvement Strategies
By August 31, 2014, the TEHDI Program will identify and implement a minimum of one strategy from the contracted parent support groups to address LTF/LTD.

Strategy 2.2: Outreach Activities Report
By September 30, 2014, the contracted parent support groups will report on onsite technical assistance, education, and outreach activities provided (frequency to be determined by the pilot project).

Strategy 2.3: Summary of Parent Support Project
By March 31, 2015, the contracted parent support groups will provide a summary of the entire project, including recommendations for improvement.

Aim 3: **Audiologist Outreach.** By March 2015, the TEHDI Program will partner with audiologists and DARS-ECI to increase the referral rate by 2%.
Baseline: From April 2012 to March 2013, the referral rate was 96.8%.

Strategy 3.1: Audiology Engagement
The TEHDI Program will initiate an outreach program to licensed audiologists in Texas (per DSHS licensing in 2013, there were 1183 audiologists) to increase the number of facilities that have participated in the EHDI-PALS by a minimum of 10 additional facilities by October 31, 2014 (baseline as of November 2013, only 32 facilities participating in the EHDI-PALS).

Strategy 3.2: EHDI-PALS Survey
By November 30, 2014, OZ Systems will provide the TEHDI Program with a list of pediatric audiologists practicing at each facility that completed the EDHI-PALS survey.

Strategy 3.3: Provide Presentations
By March 31, 2015, a minimum of two presentations will be held with audiologists to identify barriers to reporting in the TEDHI MIS and to partner with the TEDHI Program, DARS-ECI and other stakeholders to better serve newborns, infants and children diagnosed with hearing loss.

Year Two of Grant Cycle (April 1, 2015 – March 31, 2016)

Aim 1: **Educational Outreach Initiatives.** In an effort to improve health care providers' knowledge about universal newborn screening, by March 31, 2016, the TEHDI Program will expand its educational outreach initiative to providers in the health care and early intervention networks by 20%.
Baseline: Data will be gathered upon completion of Year One.

Strategy 1.1: Educational Material Development
By March 31, 2016, QR coded products will be developed, printed, and distributed to stakeholders on 50% of the marketing materials available for distribution.
Baseline: As of SFY 2013, there are 20 different materials available for marketing.

Strategy 1.2: Texas EHDI Regional Summit
By August 31, 2015, a minimum of three Texas Regional Summit conferences will be implemented allowing the TEHDI Program to identify regional stakeholders' barriers to reporting via the TEHDI MIS system.

Strategy 1.3: Medical Home Education
By March 31, 2016, a subject matter expert will present a minimum of three *Medical Home* presentations to educate stakeholders about the continuum of care process.

Strategy 1.4: Early Head Start Training
Pending the results of the pilot presentation conducted in the first year, the TEHDI Program predicts that by November 15, 2015, a minimum of two presentations will be provided to train Early Head Start program personnel on Advanced OAE screening and reporting to the TEHDI MIS.

Strategy 1.5: Early Intervention Outreach

By March 31, 2016, a minimum of two presentations will be provided to EI Specialists on reporting to the TEHDI MIS.

Strategy 1.6: Consent Presentations
By March 31, 2016, the TEHDI Program will educate a minimum of 100 providers and/or audiologists on the consent options to encourage information exchange in the continuum of care with parents.

Aim 2: **Parent Support Groups Engagement.** Pending the outcome of the project completed in the first year of the grant cycle the TEHDI Program predicts an increase of project size by 25% by March 31, 2016.
Baseline: Data pending outcome of the pilot project initiated during the current HRSA grant cycle.

Strategy 2.1: LTF/LTD Improvement Strategies
By August 31, 2015, the TEHDI Program will identify and implement a minimum of one strategy from the contracted parent support groups to address LTF/LTD by provider use of the TEHDI MIS.

Strategy 2.2: Outreach Activities Report
By March 31, 2016, the contracted parent support groups will report on onsite technical assistance, education, and outreach activities provided (frequency to be determined by the pilot project).

Strategy 2.3: Summary of Parent Support Project
By March 31, 2016, the TEHDI Program will receive a summary of the entire project year from the contracted parent support group(s) to analyze the efficacy of the project using quality improvement methodology.

Aim 3: **Audiologist Outreach.** By March 31, 2016 the TEHDI Program will partner with audiologists and DARS-ECI to increase the referral rate to ECI by 1% (baseline data to be determined following completion of the first year in the grant cycle).

Strategy 3.1: Audiology Engagement
The TEHDI Program will initiate an outreach program to licensed audiologists in Texas (per DSHS licensing in 2013 there were 1183 audiologists) to increase the number of facilities that have participated in the EHDI-PALS by a minimum of 10 additional facilities by October 31, 2015.
Baseline: As of November 2013, 32 facilities have participated in the EHDI-PALS.

Strategy 3.2: EHDI-PALS Survey
By November 30, 2015, OZ Systems will provide the TEHDI Program with a list Texas pediatric audiologists practicing at each facility that completed the EDHI-PALS survey.

Strategy 3.3: Provide Presentations
By March 31, 2016, a minimum of two presentations will be held to invite audiologist to identify barriers to reporting in the TEHDI MIS and to partner with the TEHDI Program,

DARS-ECI, and other stakeholders to better serve newborns and infants diagnosed with hearing loss.

Year Three of Grant Cycle (April 1, 2016 – March 31, 2017)

Aim 1: **Educational Outreach Initiatives.** In an effort to improve health care providers' knowledge about universal newborn screening, by March 31, 2017 the TEHDI Program will expand its educational outreach initiative to providers in the healthcare and early intervention networks by 20%.
Baseline: Data will be gathered upon completion of Year Two.

Strategy 1.1: Educational Material Development
By March 31, 2017 a strategy of including QR coded products will be developed, printed, and distributed to stakeholders on 100% of the marketing materials being distributed.
Baseline: As of SFY2013 there are 20 different materials utilized for marketing.

Strategy 1.2: Texas EHDI Regional Summit
By August 31, 2016, a minimum of three Texas Regional Summit conferences will be implemented allowing the TEHDI Program to identify regional stakeholders' barriers to reporting via the TEHDI MIS system.

Strategy 1.3: Medical Home Education
By March 31, 2017, a subject matter expert will present a minimum of three *Medical Home* presentations to educate stakeholders about the needs of hearing loss follow-up within the continuum of care process.

Strategy 1.4: Early Head Start Training
Pending the results of the pilot presentation conducted in the first year, the TEHDI Program predicts that by November 15, 2016, a minimum of two presentations will be provided to train Early Head Start program personnel on Advanced OAE screening and reporting to the TEHDI MIS.

Strategy 1.5: Early Intervention Outreach
By March 31, 2017, a minimum of two presentations will be provided to EI Specialists on reporting to the TEHDI MIS.

Strategy 1.6: Consent Presentations
By March 31, 2017, the TEHDI Program will educate a minimum of 100 providers and/or audiologists on the consent options to encourage information exchange in the continuum of care with parents.

Aim 2: **Parent Support Groups Engagement.** Pending the outcome of the project completed in the first two years of the grant cycle the TEHDI Program predicts an increase the project size by 25% by March 31, 2017.
Baseline: Data pending outcome of the pilot project initiated during the current HRSA grant cycle.

Strategy 2.1: LTF/LTD Improvement Strategies
By August 31, 2016, the TEHDI Program will identify and implement a minimum of one strategy from the contracted parent support groups to address LTF/LTD.

Strategy 2.2: Outreach Activities Report
By March 31, 2017, the TEHDI Program will receive on-site technical assistance, education, and outreach activity reports from the contracted parent support groups on frequency to be determined by the pilot project.

Strategy 2.3: Summary of Parent Support Project
By March 31, 2017, the contracted parent support groups will provide a summary of the entire project, including recommendations for improvement.

Aim 3: **Audiologist Engagement.** By March 31, 2017 the TEHDI Program will partner with audiologists and DARS-ECI to increase the referral rate to ECI by 1% (baseline data to be determined following completion of the first year in the grant cycle).

Strategy 3.1: Audiology Engagement
The TEHDI Program will initiate an outreach program to licensed audiologists in Texas (per DSHS licensing in 2013 there were 1183 audiologists) to increase the number of facilities that have participated in the EHDI-PALS by a minimum of 10 additional facilities by October 31, 2016.
Baseline: As of November 2013, 32 facilities have participated in the EHDI-PALS.

Strategy 3.2: EHDI-PALS Survey
By November 30, 2016, OZ Systems will provide the TEHDI Program with a list Texas pediatric audiologists practicing at each facility that completed the EDHI-PALS survey.

Strategy 3.3: Provide Presentations
By March 31, 2017, a minimum of two presentations will be held to invite audiologist to identify barriers to reporting in the TEHDI MIS and to partner with the TEHDI Program, DARS-ECI, and other stakeholders to better serve newborns and infants diagnosed with hearing loss.

Strategies and Tools
The current strategies and tools used by the TEHDI Program are as follows:

- **Joint Committee on Infant Hearing (JCIH) Executive Summary 2007 -** The TEHDI Program is guided by the recommendations of the JCIH Executive Summary publication.
- **Best Practices Acquisition –** The program continues to interact with stakeholders to evaluate and improve processes. This is accomplished through various stakeholder meetings, presentations, and educational delivery systems that evaluate participant responses.
- **TEHDI MIS Data Collection** – The TEHDI MIS provides the best indicators of the screening process through continued monitoring/analyzing of trends and data.

- **TEHDI Program Certification Process** – The TEHDI Program certification process provides for the ability to implement quality improvements to birthing facilities through a positive feedback cycle.
- **TEHDI QI Team** – The TEHDI Program has established a QI Team to develop aims, measures, and quality improvement processes through use of the PDSA *Model of Improvement*.

Improvement Measures

Linkages to pertinent organizations are a large part of the overall improvement strategy. The Interagency Council and the Texas Deaf and Hard of Hearing Leadership Council: Birth to Three are two of the most engaged organizations. Details of both are listed within the ORGANIZATIONAL INFORMATION heading. With DSHS, the TEHDI Program is organizationally placed within the Family and Community Health Services Division which is also responsible for administering the Title V Maternal and Child Health Block Grant. Both the Title V MCH Director and CSHCN Director manage resources that can be of support to this proposal, including but not limited to subject matter expertise on parent engagement, home visiting and medical home. The TEHDI Program does not currently have a formal working relationship with the emerging Texas Home Visiting Program; however, there has been dialogue in at least one of the Texas Early Head Start initiatives on how the Texas Home Visiting Program could be included in shared outreach activities within the eight counties funded for this important endeavor. In addition, the DSHS Office of Title V and Family and Community Health Services will provide assistance in establishing ongoing communication with the home visiting program administered by the Texas Health and Human Services Commission (HHSC).

As of the 83rd Legislative Session, the Newborn Screening Advisory Committee was granted responsibility inclusive of the newborn hearing screening program. The advisory committee advises DSHS on strategic planning, policy, rules and services related to newborn screening and additional newborn screening tests.

Project Sustainability Plan

At this time no additional state funding has been allocated to the program. However, by working within the Texas HHSC Enterprise infrastructure with other agencies such as DARS, Department of Family and Protective Services, Department of Aging and Disability Services and within internal program partners of DSHS adds greatly to sustainability.

Quality Improvement Data Collection

The TEHDI Program continues to develop and expand data collection activities through the TEHDI MIS system. The TEHDI QI Team will continue to enhance data through quality management efforts by using the PDSA *Model for Improvement*.

WORK PLAN

See Attachment 1: Work Plan for the detailed work plan.

RESOLUTION OF CHALLENGES

The TEHDI Program is committed to resolving challenges through new initiatives and expansion of existing processes that have proven successful.

The areas of need and the resolution of challenges proposed:

- **Audiologists Engagement**
  - **Challenge:** Increase pediatric audiologist participation in the TEHDI MIS by correcting misunderstandings about its use.
  - **Resolution:** Develop an education strategy; engage with pediatric audiologists to determine what factors would encourage participation and reporting and implement small, effective strategies that can improve the reporting process for the entire system.
- **Educational Outreach Materials**
  - **Challenge:** Outdated collateral materials.
  - **Resolution:** Provide technical assistance, content information, and oversight to a marketing vendor to update educational materials to include adaption of QR coding for mobile application firmware.
- **Early Intervention Engagement**
  - **Challenge:** Barriers to multi-agency communication in the area of early intervention with state, non-profit, and private services.
  - **Resolution:** Continue engagement with stakeholders through PDSA *Model of Improvement* and establish common ground by creating a universal parent consent form that will enable multi-agency communication.
- **Texas Head Start Engagement**
  - **Challenge:** Barriers to acquiring data on babies after hospital discharge and identification of missed and/or babies with late onset hearing loss.
  - **Resolution:** Conduct a series of meetings between Texas Head Start State Collaborative Office and the ECHO Initiative through NCHAM to establish a pilot program to encourage Head Start participants to provide hearing screenings and report follow-up activities into the TEDHI-MIS.
- **Parent Support Group Engagement**
  - **Challenge:** Underuse of parent resources throughout the state to determine effective strategies for intervention.
  - **Resolution:** Establish contracts with parent support groups to work with providers to make recommendations to resolve issues identified as loss points, improve communication across the TEHDI continuum, and help the program to implement innovative quality improvements.
- **Medical Home Outreach**
  - **Challenge:** Engaging a large audience of pediatricians to learn about the issues of LTF/LTD and the importance of reporting to the TEHDI Program.
  - **Resolution:** Obtain one or more state champion(s) to present the model of the *Medical Home* presentations to pediatricians in peer-to-peer presentations at the leadership level and providing education of the importance of reporting to the TEHDI MIS.

EVALUATION AND TECHNICAL SUPPORT CAPACITY

TEHDI Program Performance

At this time the TEHDI Program tracks each of the following performance measures:

- Birth Admission Screen – reports the total births requiring a screening (e.g., excludes deceased, very ill, refused, etc.) and a screen status (i.e., In Process, Complete, Missed, and Infant Needs Follow-up Services).
- Did Not Pass (Refer) on Birth Screen – reports the percentage of children who received follow-up care due to a unilateral refer or bilateral refer on birth screening and the results of their outpatient screening and/or audiological assessment. This tracks the number of children that have completed a diagnostic evaluation and the ensuing results.
- Did Not Receive (Miss) the Birth Screen – reports the percentage of children who received outpatient care after not receiving a birth screening and the results of the outpatient screen and/or audiological assessment.
- 1-3-6 Report (per the benchmarks for state EHDI programs) which measures the age of children at the time of the final screening, the age at the time of an audiological evaluation which resulted in diagnosis and the age at the time of refer to ECI.

In addition to these performance measures the program also tracks outreach/education efforts to various stakeholders across the continuum of care, the number and type of marketing products disseminated, and the number of presentations completed on a quarterly basis.

The aims and strategies developed by the TEHDI QI Team, as discussed in the Work Plan of this application, will be measured utilizing the PDSA *Model for Improvement*. This quality improvement methodology is used to identify small programmatic changes that can result in documented improvement in LTF/LTD within the continuum of care. By asking the following three questions the TEHDI Program works to effect change:

- What are we trying to accomplish?
- How will we know if change is an improvement?
- What changes can we make that will result in improvement?

For each aim statement developed, the QI Team identified change strategies which will be implemented using the Plan, Do, Study, Act (PDSA) cycle (see Attachment 6 for examples of the first grant cycle year PDSA proposal). The PDSA cycle will be used to test changes initiated on a small scale, identify and further develop positive ideas, and build confidence in stakeholders that the changes are leading to improvement in the program. Changes that showing positive results are expanded and tested on gradually larger scales over time, until the team is secure in the knowledge the change should be rolled out system wide. The QI Team will continually reassess the strategies being employed to garner the most successful outcome for the program in the long term.

Performance Inputs

TEHDI MIS

DSHS uses a web-based reporting and tracking system for its early hearing screening and intervention program. The TEHDI MIS is designed to be used by birth facilities, audiologists, and early intervention specialists to enter screening and follow-up data on Texas newborns, infants, and children. Data from the birth screens and test results are entered into the TEHDI MIS as the testing occurs in licensed birth facilities. Child disposition is entered into the data system by audiologists and intervention specialists. The number of births in Texas birth facilities varies from as few as one per year to over 17,000 at the largest birth facility. On average it is estimated there are 1,200 newborns every year with hearing loss. The TEHDI MIS is the repository for over three million records that have been collected since implementation in 1999.

As the oversight agency, DSHS certifies hearing programs and monitors program compliance with established certification requirements and performance standards. The current DSHS contractor, Optimization Zorn, Inc. (dba OZ Systems), developed and manages the TEHDI MIS. OZ Systems tracks birth facility hearing screening compliance, provides technical assistance, limited case management, and training to birthing facilities. This includes English/Spanish letters sent to families whose child has not returned for follow-up testing following discharge from the birth facility. Additionally, follow-up telephone calls to families to clarify results and documentation are also performed. Services performed are under the direction of pediatric audiologist, Dr. Terese Finitzo.

The TEHDI Program will work with Dr. Finitzo and her staff to support the development of the identified change strategies to evaluate the effectiveness of each project. In addition to Dr. Finitzo's expertise, the TEHDI Program also works with Karen Ditty, AuD. Dr. Ditty serves as a technical resource for the National Center on Hearing Assessment and Management. As a nationally and internationally-recognized subject matter expert, Dr. Ditty is an invaluable TEHDI partner.

TEHDI QI Team

The individuals identified as part of the QI Team serve an integral part to the success of the TEHDI Program. This team consists of the following positions:

- TEHDI Coordinator – With over 35 years of experience in the field of deafness and hearing loss, Doug Dittfurth serves as the team lead.
- Program Educator – James Goolsby oversees educational activities and materials, as well as coordinating outreach training through the HRSA grant.
- Data Analyst – Cheri Grimm serves as the Quality Assurance Specialist within the TEHDI program. She plays an integral role in developing, coordinating, and evaluating quality enhancement initiatives.
- Pediatric Audiologist
- Early Intervention program representative
- Parent of a child with hearing loss

Each member of the team brings to the program a unique set of skills and knowledge to strengthen the likelihood of success in reducing LTF/LTD. In addition to those individuals

identified as part of the QI Team there are numerous key personnel that are vital to the success of the program. These include but are not limited to the following:

- Newborn Screening Support Group Manager – Eugenia Dunham (Principal Investigator for HRSA Grant)
- Program Specialist/Project Assistant – Camden Frost

See Attachments 2 and 3 for detailed information on the key support personnel identified by the TEHDI program.

Key Processes

The TEHDI MIS is key to obtaining accurate data which includes information on LTF/LTD. Information provided to the CDC on outcomes is provided through the TEHDI MIS. The TEHDI QI Team has reviewed the current system processes and identified aims and change strategies that are expected to have maximum impact of success on LTF/LTD.

The processes will be redesigned using the PDSA *Model of Improvement* cycle to deliver results that are oriented towards specific and measurable aims. Through these new quality control measures, the TEHDI Program will identify critical success factors; identify metrics for measuring the successes; and identifying the processes that deliver improvements to measuring those successes. These include each of the following identified programmatic needs:

- TEHDI Education Material and Training Development
- Audiologist Engagement
- Parent Support Group Engagement
- Texas Early Head Start Engagement
- Early Intervention Engagement
- Medical Home Outreach

Data Collection Strategy

In addition to the data collection strategies which are identified above, each of which is ongoing, the program incorporated the following steps into their contract with their MIS vendor:

- For children who need services to document presence or absence of hearing loss as defined by CDC, the number with complete contact information in TEHDI MIS will be tracked on a monthly basis to allow a baseline and trending to be examined.
- For children who need services to document presence or absence of hearing loss as defined by CDC, the number of communications with audiologists will be tracked on a monthly basis to allow a baseline and trending to be examined.
- For children who need services to document presence or absence of hearing loss as defined by CDC, the number of children with diagnostic audiology information will be tracked on a monthly basis to allow a baseline and trending to be examined.

The quality improvement methodology will be utilized to ensure the best possible outcomes for reducing LTF/LTD. These data collection strategies will continue to be monitored for effectiveness and revised as needed based on the approved QI methodology.

Published Materials

See Attachment 8

ORGANIZATIONAL INFORMATION

HHSC provides guidance, coordination, and leadership for the HHS system, which includes DSHS and DARS. The departments are guided by three key principles:

- A focus on client needs and program delivery – realigning programs around the people served;
- Effective stewardship of public resources – streamlining administrative operations and redirecting savings into services; and
- Cultural change and accountability – changing the organizational structure to a single-entity, outcome-based philosophy across a more diversified system.

DSHS administers the TEHDI Program and operates within the framework articulated by the HHSC Strategic Plan. In particular, Strategic Goal 2 speaks directly to the TEHDI Education Project intent: "promote and protect good health – protect public health and promote the overall physical and mental health of Texans through the provision of education, early intervention, substance abuse treatment, health insurance, and appropriate health services for eligible populations."[10]

Enabling Legislation

The TEHDI Program was established in 1999 and enacted through Chapter 47, Texas Health and Safety Code, Hearing Loss in Newborns. The statute requires DSHS to establish certified hearing screening programs in birth facilities; establish certification standards for screening facilities; provide a system for tracking screening, follow-up, diagnosis, and intervention; provide technical assistance to birth facilities; assure that birthing facilities report screening results to parents, attending physicians, primary care physicians, or other applicable health care providers, and DSHS; and ensure intervention is available.

The TEHDI Program follows the rules published in Texas Administrative Code, Title 25, Part 1, Chapter 37, §§37.501 – 37.512, relating to Newborn Hearing Screening. The rules outline processes and criteria for program performance standards and goals; program certification; screening results and follow-up care; the information management, reporting, and tracking system; and confidentiality and general access to data. Both the statute and rules were developed with the JCIH 2000 Position Statement as the guide with the 2007 JCIH statement used as a reference document for the continuing growth of the TEHDI Program.

Department of State Health Services

Vision: A Healthy Texas
Mission: To improve health and well-being in Texas

[10] HHS System Strategic Plan, FY 2007-2011.

Scope: DSHS administers and regulates health, mental health, and substance abuse programs.

Family and Community Health Services Division
The TEHDI Program operates within the Division for Family and Community Health Services in the Newborn Screening Unit. Other closely related programs within this division include: Children with Special Health Care Needs Services Program; Early and Periodic Screening, Diagnosis, and Treatment Program, known in Texas as Texas Health Steps; Women, Infants and Children Nutrition Services; Health Screening /Case Management; and the Office of Title V and Family Health Program. These programs share common goals and principles that often result in collaborative projects. Shared goals and principles among division programs include:

- Provision of family-centered, community-based strategies for improving the quality of life for children and their families;
- Provision of cultural competency in agency leadership and staff;
- Research, assessment, and evaluation of program strategies and materials to effectively reach diverse populations;
- Provision of health education and community outreach in a culturally and linguistically appropriate manner;
- Reduction of health disparities among Texans; and
- Service of major information and referral resource in order to link families with the services they need.

The continued collaboration with division programs adds to the project team workforce. Additionally, DSHS offers support to the TEHDI Program through its language services program, Contract Development and Support Branch, Quality Monitoring Branch, and Division for Regional and Local Health Services.

The size and scope of Texas creates unique challenges for the TEHDI Program to ensure timely, appropriate care to infants in need. The program maintains strong collaborative relationships with both internal and external stakeholders to ensure access to quality health and human services.

DSHS Newborn Screening Program
The Newborn Screening Program, in conjunction with the DSHS laboratory, shares responsibility for the screening of babies for congenital and heritable disorders. Newborn screening is a legislatively-mandated preventive public health program for early identification of conditions that can lead to catastrophic health problems. Each year, the DSHS newborn screening laboratory performs approximately 780,000 newborn screens, making it the highest volume screening laboratory in the world. In 2011, the inclusion of severe combined immunodeficiency screening into the list of disorders increased the newborn screening bloodspot panel to 29 disorders, 30 including hearing screening. The TEHDI and Newborn Screening programs are located within the Newborn Screening Unit.

Children with Special Health Care Needs (CSHCN) Services Program
The CSHCN Services Program serves children with chronic physical or developmental conditions less than 21 years of age; and people of any age with cystic fibrosis. The program helps clients with their medical, dental, and mental health care; drugs; special therapies; case

management; family support services; travel to health care visits; insurance premiums; and transportation of deceased clients.

DSHS Genetic Services Program
The Genetics Services program is also located within the Newborn Screening Unit. The program provides access to direct health care services and population-based services through the administration of Title V contracts with public and private providers; identifies current and future needs for genetic services in Texas; provides leadership in developing policy and monitoring the provision of genetic services; and serves as a resource/referral for questions about genetics and genetic services.

DSHS Texas Health Steps (THSteps)
In Texas, the Early and Periodic Screening, Diagnosis, and Treatment program within DSHS is referred to as THSteps. THSteps has created a series of online, credentialed continuing education modules, one of which focuses on newborn hearing screening. The training module is targeted to health care professionals, including physicians, nurses, nurse practitioners, audiologists, social workers, and midwives. THSteps provides Medical Home and newborn hearing screening training.

DSHS Title V
In Texas, the Title V program is managed by DSHS to administer the Maternal and Child Health Services Block Grant to improve the health of all mothers, women of childbearing age, infants, children, adolescents, and children with special health care needs. The program provides an opportunity for the TEHDI Program to obtain subject matter experts on women's health, child health, adolescent health, and perinatal health systems. The Title V block grant funds part of the TEHDI Program.

Texas Deaf and Hard of Hearing Leadership Council: Birth to Three (TDHHLC)
The TDHHLC, formed in 2006, addresses the critical issues of LTF/LTD with stakeholders throughout Texas. The TDHHLC conducted baseline research in 2007 – 2008 and identified several key strategic initiatives focused on improving providers' knowledge and skills across the continuum of care process. Providers included prenatal providers, newborn/outpatient hearing screeners, pediatric audiologists, PCPs, otolaryngologists and EI specialists. The TDHHLC also identified that parents navigating the continuum of care process need additional support in understanding how to access providers and services in a timely and effective manner. The TDHHLC identified key strategic initiatives emphasizing both increased provider knowledge and formal family support services and resources. Meeting once a year face-to-face to exchange information between stakeholders, the rest of their work is accomplished through conference calls, webinars and email communications.

Interagency Council
Members of the TDHHLC, who are state employees, make up the Interagency Council who work with and advise each respective state agency throughout the year with several face-to-face meetings. Members include the DSHS Newborn Screening Support Group Manager, the TEHDI Coordinator, a representative from TEA responsible for overseeing services to deaf and hard of hearing students, and a representative from DARS/ECI. These members, in turn, take action needs back to their state agencies, working within leadership on implementation plans.

DARS-ECI
DARS ECI is a statewide program for families with children, birth to three, with disabilities and developmental delays. ECI assists families with helping their children reach their potential through developmental services. At no cost to families, ECI provides evaluations and assessments to determine eligibility and need for services through state and federal funds within the Individuals with Disabilities Education Act (IDEA, P.L. 108-446). Families and professionals work as a team to plan appropriate services based on the unique needs of the child and family. Contracted ECI staff visit families in their homes and focus on working with the child and family in their natural environment. The program facilitates diagnosis and intervention steps of the TEHDI process for infants identified with possible hearing loss/deafness.

DARS –DHHS
DARS-DHHS works in partnership with people who are deaf or hard of hearing to eliminate societal, communication barriers and to improve equal access. The TEHDI Program uses their 28 regional resource specialists to share TEHDI-related information at the local level.

TEA
The TEA supports the TEHDI Program by providing educational intervention services. TEA's Deaf Services manages the operation of the agency's Regional Day School Programs for the Deaf; performs all activities required to maintain a statewide program for students who are deaf or hard of hearing; and provides leadership to local regional day schools for the deaf in the planning, implementation, and operation of comprehensive education programs for students who are deaf or hard of hearing.

ESC, Region 10 - Deaf and Hard of Hearing: Birth to Five
Texas has 20 ESCs that provide technical assistance and professional development for school districts and their employees. ESC, Region 10 provides leadership, staff development, consultation and technical assistance to assist regional day school programs for the deaf and local school districts statewide with the development and implementation of comprehensive early intervention services to families of infants and toddlers with hearing loss. Additionally, through interagency collaboration between the TEA, the DARS-ECI Office, and the TEHDI Program, ESC Region 10 works to promote practices and protocols that support a comprehensive statewide seamless system of coordinated services between newborn hearing screening programs; audiology and otolaryngology services; medical home services; and local early intervention services (ECI, deaf education and private therapy services). ESC-10, in conjunction with the interagency council, is dedicated to reducing LFU/LTD; increasing the number of children and families served through the Individuals with Disabilities Education Act promoting effective transition practices between Part C (ages birth to 2) and Part B (ages 3 to 21) systems; and improving child and family outcomes as a result of effective early hearing detection and intervention processes and services.

Texas Head Start Programs
Head Start programs prepare economically disadvantaged children for school by providing early reading and math skills needed to be successful in kindergarten and beyond. Local Head Start providers work in conjunction with other service providers and government agencies to meet the educational, health, nutritional, social, and other needs of enrolled children and families. Head

Start programs emphasize parent involvement and work closely with families in the education of their children. The TEHDI Program proposes a collaborative initiative establishing an ECHO program that would provide hearing equipment, training, and TEHDI MIS access to a select Early Head Start region. This program focuses on low income families with pregnant women, infants and toddlers up to age 3. There is a federal mandate requiring all Head Start programs to provide vision and auditory screens to new enrollees.

The TEHDI Program will continue its collaboration with Head Start programs through the ECHO initiative, which focuses on "echo-ing" successful newborn hearing screening efforts within Head Start program settings.

Texas Parent-To-Parent
Texas Parent-To-Parent is a nonprofit organization that was created by parents for families of children with disabilities, chronic illness, and other special needs throughout the State of Texas. The majority of its staff, Board of Directors, and volunteers are parents of children with disabilities or chronic illness.

Hands and Voices
Hands and Voices is a nationwide nonprofit organization dedicated to supporting families and their children who are deaf or hard of hearing, as well as the professionals who serve them. It is a parent-driven, parent/professional collaborative group that is unbiased towards communication modes and methods. In 2010, the Texas Chapter of Hands and Voices was approved to implement a “Guide by Your Side (GBYS)” program. GBYS is a trademarked family support program connecting newly identified families with an infant/child with hearing loss with a support network. The TEHDI Program has worked closely with Hands & Voices over two years of the previous grant period to include parent perspectives within the TEHDI continuum.

HoPE Support Network℠
The HoPE Support Network provides a Parent Partnership Program that supports families whose infant or toddler is suspected or has been recently diagnosed with hearing loss and to educate providers about the importance of their role in supporting these families. In May 2012, the HoPE Parent Partnership Program hired a team of parents who have children with hearing loss to serve in an outreach capacity on behalf of Texas families new to the diagnosis of early childhood hearing loss. Trained parents served as Parent Partners to assist families to better understand their child’s hearing loss and begin to access medical services, early intervention services from both public and private sectors; and state and community based resources.

EHDI State Champions
Dr. Audra Stewart serves as an AAP Chapter Champion for the state of Texas. Her role is to increase awareness and improve outcomes for children with hearing loss through early hearing detection and intervention. Dr. Stewart is on staff as a Neonatologist at Children’s Medical Center and Parkland Memorial Hospital and has served as the physician liaison on the ESC Region 10 Texas Deaf/Hard of Hearing Leadership Council: Birth to Three, since 2009. Dr. Stewart developed her passion for early hearing detection and intervention, and pediatric hearing loss after the diagnosis of bilateral sensorineural hearing loss in her eldest child. Thanks to newborn hearing screening, her daughter has been amplified since eight weeks of life.

Dr. Rachel St. John represents Texas as another AAP Chapter Champion. She is a board-certified pediatrician and a certified sign language interpreter. She is currently working as a Health Education Consultant with the Texas Region 10 ESC EHDI Pilot Program, as well as a freelance interpreter specializing in medical encounters.

Texas Head Start State Collaboration Office and the ECHO Initiative

The TEHDI Program has collaborated with EHS programs to provide training for programs providing OAE hearing screenings for children. Also, the TEHDI Program is a partner of the national ECHO Initiative. EHS programs currently using OAE equipment are eligible for upcoming training opportunities offered jointly by the national ECHO Initiative and TEHDI. The TEHDI Program is working toward solutions to integrate screenings at EHS sites to integrate into the TEHDI MIS. Content will focus on capacity building, provide an introduction to TEHDI best practices, the ECHO Initiative and provide an introduction to OAE hearing screening practices. EHS programs already providing hearing screening services or EHS programs interested in offering hearing screening services are being contacted.

Texas Deaf and Hard of Hearing Leadership Council (TDHHLC)

The TDHHLC was established as a component of the TEA's *Continuous Improvement Plan for Deaf and Hard of Hearing Services*. The leadership council is coordinated by the ESC Region and its purpose is to provide leadership and guidance in the development of comprehensive services for infants and families referred after screening. The leadership council addresses service coordination between the medical home, families and related professionals with expertise in hearing loss, as well as state and local agencies responsible for the provision of services to children with hearing loss. Early developmental opportunities are maximized, resulting in improved language/communication outcomes for children and families as a result of the early hearing detection and intervention processes and services. The diverse membership of the council includes:

- ESC representatives,
- State agency representatives (TEA, DARS, DSHS),
- Early intervention/educational programs on the local level,
- Parents of infants/children diagnosed with a hearing loss,
- Deaf and hard of hearing adults,
- Pediatric providers (medical and audiological),
- Community-based outreach programs, and
- Hearing screening program managers.

EXPECTED OUTCOMES

With the requested funding and collaborative support of its stakeholders, the TEHDI Program will be able to initiate, implement and expand numerous programmatic projects designed to reduce Texas' LTF/LTD rates. Through the design and scope of work allowed by the funding of this project, Texas will realize a decline in its LTF/LTD rate by 20%. Using 2011 CDC data, the 2017 rate will be in the mid-fifties percentage.

Texas Early Hearing Detection and Intervention (TEHDI) Program
2014 EHDI Conference Document

Texas Department of State Health Services
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