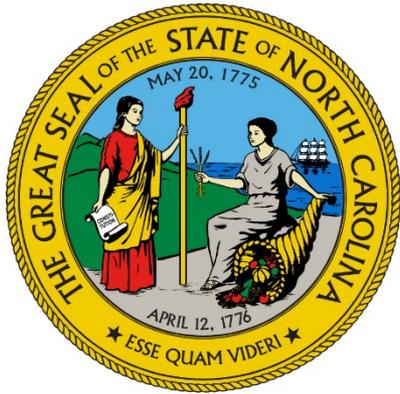


NC Department of Health and Human Services

**Newborn Hearing Screener Sensitivity Training:  
What We Offered. What We Learned. Where We  
Will Go Next.**



**North Carolina's  
Early Hearing Detection and Intervention  
(EHDI) Program**



**2019 EHDI Annual Meeting  
Chicago, Illinois  
March 3-5, 2019**

# Presenters

**Linda Bowen, M.S., CCC-SLP**

EHDI Regional Consultant

[lbowen@arhs-nc.org](mailto:lbowen@arhs-nc.org)

**Jude Williams, M.P.H.**

HRSA Grant Project Coordinator

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**NC Division of Public Health, Children & Youth Branch**

**Genetics and Newborn Screening Unit**

# Learning Objectives

- Participants will be exposed to innovative methods of training with community partners to enhance family outcomes.
- Participants will be able to describe the importance of sensitivity training for newborn hearing screeners.
- Participants will learn how data can be used to develop and improve educational materials.

# NC EHDI Program

- Supports, promotes, and monitors the newborn hearing screening, diagnosis and intervention process.
- Provides consultation, technical assistance, education and training to birthing facilities, audiologists, early intervention providers, primary care providers and other service providers.
- Supports families by connecting them to the available resources.

# NC EHDI Team

EHDI Coordinator

11 Regional Audiology and Speech/Language  
Consultants

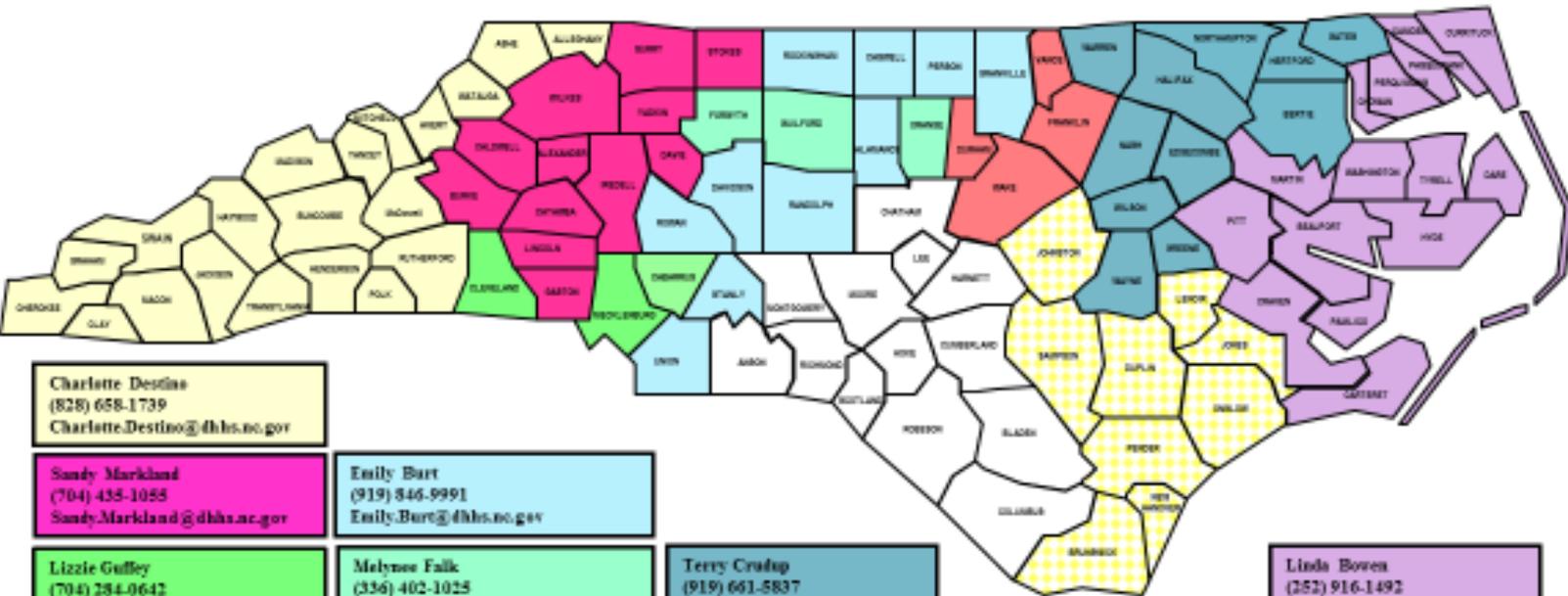
Parent Consultant

HRSA Grant Project Coordinator

Tracking and Follow-up Coordinator

Administrative Assistant

# North Carolina Early Hearing Detection and Intervention Regional Contacts



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\*Orange County served by Erin Dickens and Melynee Falk

\*Wake County served by Erin Dickens, Terry Crudup and Jason Guetgemann

Updated 02/07/2019

# NC Facts and Stats (2016)



- 9<sup>th</sup> most populous State, 10.3 Million residents
- Births – 122,939
- Diagnosed with Hearing Loss – 217
- % loss to follow-up/documentation – 34.4%
- Birthing facilities – 88



# Collaborating with Community Partners

## The CARE Project



- In March 2016, NC EHDI hosted a CARE Project Workshop for 22 professionals and parents of children with hearing loss.
- Topics: Adjustment Counseling, Parent Journey, Stages of Grief, Strategies for Professionals (Active Listening, Enhanced Awareness, Encouraging Resilience).
- Review of documentary film segments of families sharing their stories.

# A Newborn Hearing Screener's Response

Hi Johnnie,

Thank you for allowing the opportunity for me to be a part of the workshop. I felt blessed to be there and very grateful for the experience and knowledge I took away from the session.

Hearing the stories from both the videos and the others in the group helped me to better understand the process and journey beyond the initial hearing screenings that I do.

It inspired me to be even more aware and thorough in the initial screening and to continue to work very hard at keeping the moms and dads less anxious when I screen their babies. I also feel better prepared emotionally and mentally when I do have to explain a "Refer" result.

There is so much more I received from this experience and can use in every aspect of life, thank you to all!

Laura Hall



Photo credit: C&Y Branch

# Our Aha Moment



- CARE Project Family Stories
- EHDI Parent Partners
- Laura Hall, Newborn Hearing Screener

**Let's Create a Sensitivity Training for Newborn Hearing Screeners!**

Photo credit: [www.gettyimages.com](http://www.gettyimages.com)

# What We Offered



Photo credit: [www.gettyimages.com](http://www.gettyimages.com)

# Sensitivity Training Committee

**Laura Hall**, Newborn Hearing Screener

**Johnnie Sexton**, Executive Director, CARE Project

**Holly Shoun**, EHDI Parent Consultant

**Linda Bowen**, EHDI Regional Speech Language Consultant

**Marcia Fort**, Genetics and Newborn Screening Unit Manager and EHDI Coordinator

**Jude Williams**, EHDI Project Coordinator, HRSA Grant

**Emily Burt**, EHDI Regional Audiology Consultant

# Sensitivity Training Development

- Committee met regularly from Summer 2016 through Fall of 2017 to develop content and select videos.
- Obtained consent from Emily Perl Kingsley to use the “Welcome to Holland” Poem.
- Developed 30-minute video and inserted open captioning.
- Premiered at 2018 EHDI Conference.

# Ta-Da.... The Reveal

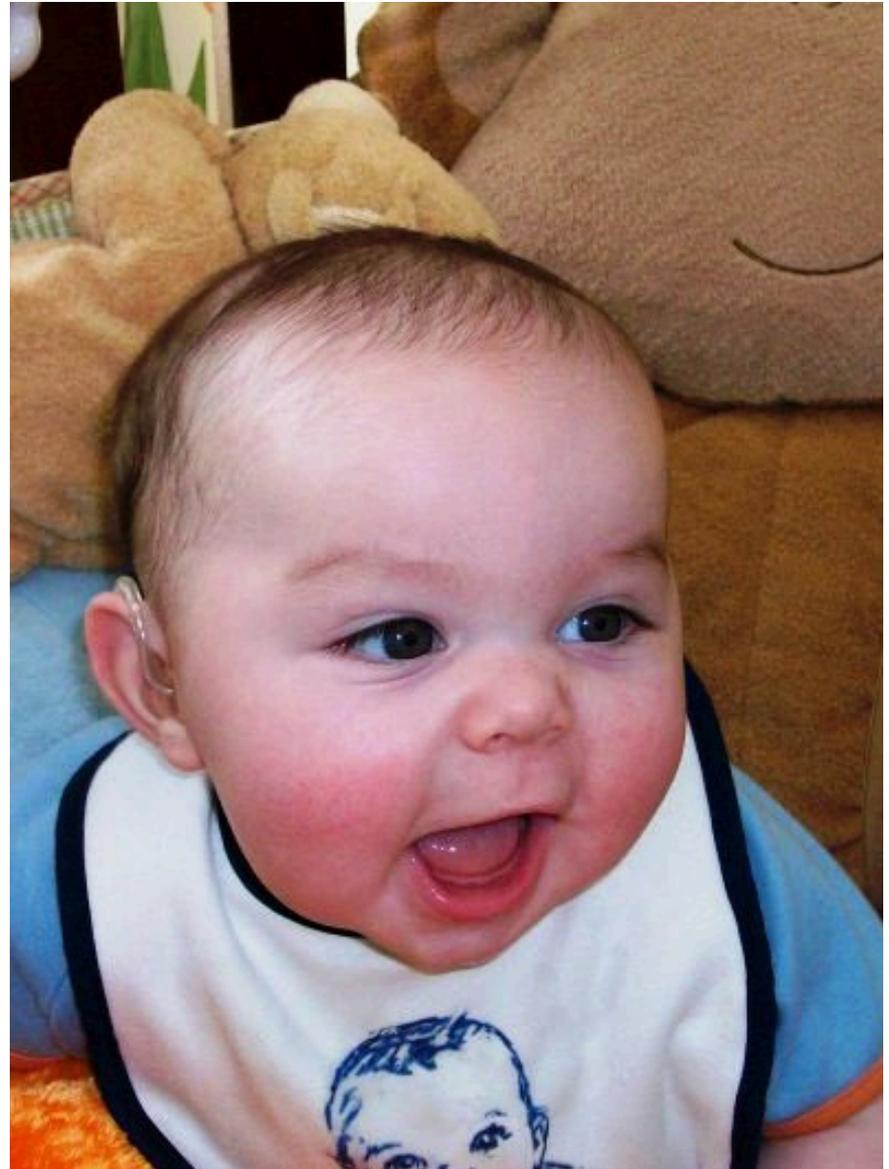


Photo Credit: C&Y Branch

# Sensitivity Training Content

- Hearing Loss Facts
- Speech and Language Development
- EHDI 1-3-6 Goals
- Essential Role of the Hearing Screener
- Stages of Grief
- Sharing “refer” results with families – Hit the Pause Button

# Hearing Loss Facts

## Congenital Hearing Loss

- Hearing loss is the most frequently occurring congenital condition.
- About 2 to 3 out of every 1,000 children in the United States are born with a hearing loss in one or both ears.
- More than 90% of deaf babies are born to hearing parents.



Photo Credit: The CARE Project

More than 90% of deaf babies  
are born to hearing parents

# Speech and Language Development

CARE Sensitivity Pilot

## Speech and Language Development

- It is important to stimulate the brain early
- Speech and language development is greatest during the first 3 years
- If not exposed to language during first 3 years, child has greater difficulty developing language



For these reasons, we want to identify hearing loss as early as possible,

01:38

1:03 PM 1/9/2019

# EHDI 1-3-6 Goals

**Early Hearing Detection and Intervention (EHDI) Program Goals**

**1-3-6**

**Screening – Diagnosis – Intervention**

- Every newborn is screened by 1 month of age;
- Infants that do not pass the screening receive a diagnostic evaluation by 3 months of age;
- Infants found to have hearing loss are receiving early intervention services by 6 months of age.

by six months of age.

04:05

1:05 PM 1/9/2019

# Essential Role of the Hearing Screener

CARE Sensitivity Pilot

## Essential Role of Hearing Screener



Photo credit: Children & Youth Branch

**You are....**

- the first professional contact
- responsible for efficient and accurate screening
- a key player in ensuring that babies have their screening in a timely manner

**You can make a difference and reduce the number of babies lost to follow-up!**

This will hopefully reduce the number of babies that are lost to follow up,

05:57

1:08 PM 1/9/2019

# Stages of Grief

CARE Sensitivity Pilot

Stunned  
Traumatized  
Upset  
Numb

Jolted  
Hysterical  
Thrown a curve ball  
Blown away

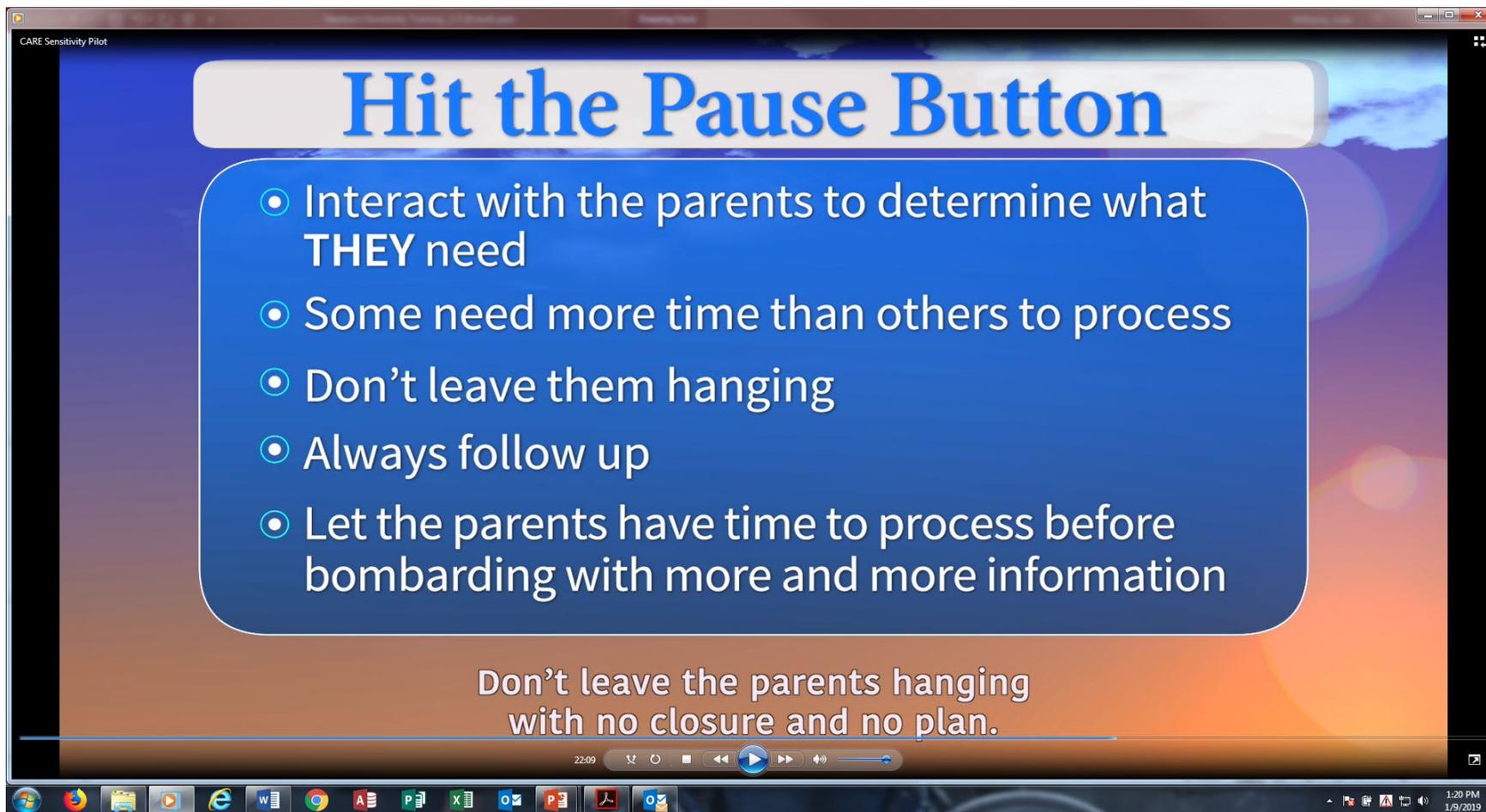
 **SHOCK**

Parents are stunned because what they are hearing  
doesn't fit in with their vision of having a baby.

12:45

1:11 PM  
1/9/2019

# Sharing “refer” results – Hit the Pause Button



CARE Sensitivity Pilot

## Hit the Pause Button

- Interact with the parents to determine what **THEY** need
- Some need more time than others to process
- Don't leave them hanging
- Always follow up
- Let the parents have time to process before bombarding with more and more information

Don't leave the parents hanging with no closure and no plan.

22:09

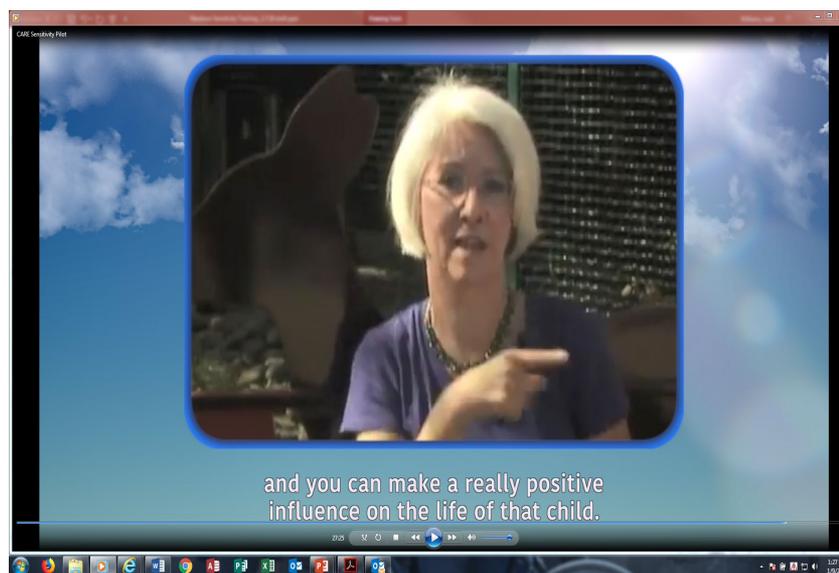
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1/9/2019

# Sensitivity Training Video Segment

Full training is available on the CARE Project YouTube channel

<https://www.youtube.com/watch?v=p-A7ZuqL9ck>

Video segment (25:13)



Video clip courtesy of National Center for Hearing Assessment and Management (NCHAM)

# Dissemination of Sensitivity Training

1. Used QI methodology. (PDSA testing)
2. Sent to three (3) birthing facilities. Asked to complete an evaluation. Received positive feedback. EHDI team decided to share training statewide. (June 2018)
3. Regional Consultants emailed training link to 88 birthing facilities. (July 2018)
4. Encouraged birthing facilities to include in yearly competency testing and on-boarding new screeners.
5. Needed a buy-in or hook - meets a Compliance Guide requirement.
6. Included a pre-test, evaluation and a post-test.

# What We Learned



Photo credit: [www.gettyimages.com](http://www.gettyimages.com)

# Results

- 767 NC hearing screeners registered to take the training.
- 64/88 (73%) of NC birthing facilities had at least one hearing screener register for the training.
- 1,174 views of training on YouTube.

# Video Evaluation

## Response Scale (1 - Strongly Disagree to 5 - Strongly Agree)

1. Did this training give you practical ways to share newborn hearing screen results with families?
2. After viewing this training, do you feel more confident in how you will share hearing screen results with families?
3. Did the personal stories shared in the training video help convey the message?
4. Would you recommend this training to other newborn hearing screener personnel?
5. If more training was available, what topics would you like covered in further trainings?
6. Other comments?

# Video Evaluation Results

## **More than 92% of respondents agreed that:**

- the training gave them practical ways to share newborn hearing screening results with families.
- they feel more confident in how they will share newborn hearing screening results with families after completing the training.
- the personal stories shared in the training supported the message.
- they would recommend the training to other newborn hearing screeners.

# Additional Training Requests

- Hearing screening technical skills
- What affects the testing
- How to reduce ambient and myogenic noise during testing.
- How the Automated Auditory Brainstem Response (AABR) works and how to trouble shoot problems with the machine.
- What and how to do the referral after a failed rescreen.
- Role play ways of responding to parents questions and concerns.
- How to care for a deaf infant and more about deaf culture.

# Improvement Comments



Photo credit: [www.gettyimages.com](http://www.gettyimages.com)

- Video too long. (n=1)
- Video too basic for nurses. (n=1)
- Pace was a little brisk; hard to remember the statistics. (n=1)
- Too much information for staff doing initial hearing screening. (n=1)
- Too much on grief. (n=1)

# Change in Knowledge

80.6% achieved an 80% or better score on  
the Pre-Test

(N range: 707-711)



98.2% achieved an 80% or better score on  
the Post-Test

(N range: 436-439)

# Pre-Post Test

Question	Pre-Test % Correct	Post-Test % Correct	% Change
1. What is the most commonly occurring congenital condition.	91.8	98.6	7.4% increase
2. About _____% of deaf babies are born to parents that can hear.	39.5	89	125.3% increase
3. A “refer” or “did not pass” on the initial hearing screening means:	99	97.9	1.1% decrease
4. Best practice guidelines state that an infant who does not pass the inpatient hearing screen complete a follow-up rescreen by:	84.3	82.8	1.8% decrease
5. What percent of babies never complete the necessary testing after referring on their newborn hearing screen? This is also referred to as lost to follow up.	47.9	87.4	82.5% increase
6. Some reasons babies are lost to follow up include:	92.7	96.3	3.4% increase
7. REMOVED Q			
8. Can a “refer” or “did not pass” result on the newborn hearing screen evoke a grief response from parents/caregivers?	97.2	99.8	2.7% increase
9. Grief is:	96.6	99.1	2.6% increase
10. How the newborn hearing screener shares the newborn hearing screen results can have a positive impact on the life of the child/family and can make a difference in how quickly a child is identified with hearing loss and how quickly a child receives the care he/she needs to maximize speech and language development. a	99.3	100	0.9% increase

	Pre-Test % answer correctly	Post-Test % answer correctly	% Change (increase)
<p>1. What is the most commonly occurring congenital condition.</p> <p>a. PKU b. Down Syndrome c. Hearing Loss d. Spina Bifida</p>	91.8	98.6	7.4
<p>2. About _____% of deaf babies are born to parents that can hear.</p> <p>a. 25 b. 50 c. 75 d. 90</p>	39.5	89.0	125.3
<p>5. What percent of babies never complete the necessary testing after referring on their newborn hearing screen? This is also referred to as lost to follow up.</p> <p>a. 3 b. 12 c. 34 d. 56</p>	47.9	97.4	82.5

# Lessons Learned

- Birthing facilities were interested in our providing education because it was easy and met our and their needs and goals.
- Buy-in is essential – training met compliance guide requirement.
- Newborn Hearing Screeners want to understand the technical aspects of their work.
- Some birthing facilities were resistant to trainings developed outside of their agency.



Photo credit: [www.gettyimages.com](http://www.gettyimages.com)

## More Lessons Learned

- Not all birthing facilities can access YouTube from a work location (used a thumb drive or CD for some facilities).
- Not all birthing facilities allowed viewing of video at work or on work-time.
- Listen and act on what you learn from your partners.
- Presentation package was a bit cumbersome.

# Where We Will Go Next



Photo credit: [www.gettyimages.com](http://www.gettyimages.com)

## Next Steps

- Review training results with birthing facilities and continue to suggest they use the training for yearly competency testing and with new screeners.
- Offer training to other screening personnel (primary care providers, midwives, health departments).
- Streamline training package.
- Develop an Audiology Sensitivity Training.
- Develop other requested trainings.

# Feedback

“I really enjoyed taking this training and working for this company. I am raising a deaf child and all of the information that was presented in this video of what not to say to parents was said to me, affecting my ability to help my daughter get early intervention. You guys are doing a great job and I am glad I get to play a part in communicating to parents the results of their newborn’s hearing screening. Keep it up!!”



Photo credit: [www.gettyimages.com](http://www.gettyimages.com)