



# Pilot of Remote Auditory Brainstem Testing Between a Diagnostic Center and a Birth Hospital

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## Disclosures

Derek Stiles is an employee of Boston Children's Hospital

Briana Dornan Nichols is an employee of Boston Children's Hospital

Sarah Stone is an employee of the Massachusetts Department of Public Health

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## Learning Objectives

- ★ Participants will itemize equipment and team-members needed to perform remote ABR services
- ★ Participants will describe the potential issues related to telehealth coverage for ABR services
- ★ Participants will contrast the effectiveness of a remote diagnostic ABR to an in-person ABR

# Background

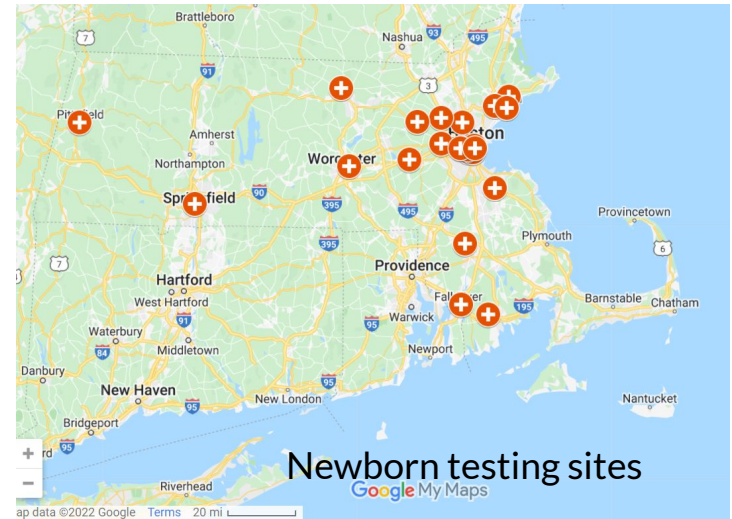
Cape Cod and the Islands are historically underserved

8% of Barnstable county refers were LTFU versus 1.6% of refers from other counties

4 birth hospitals in region:

Cape Cod Hospital - 959 births  
Falmouth Hospital - 77 births (closed in April 2020):  
Nantucket Cottage Hospital - 120 births  
Martha's Vineyard Hospital - 147 births  
(preliminary 2020 data)

Encouraged existing community based audiology sites  
to offer ABR testing, but volume was a concern





# CARES Act Funding

CARES Act: Maternal and Child Health Telehealth Capacity in Public Health Systems Direct Awards

Awards made by AMCHP with funding from HRSA

Encouraged creativity and small 'shovel ready' projects

Purchase of equipment was permitted

Received internal approval at MA DPH to move forward, process for current DPH approved diagnostic centers to apply as a partner

Boston Children's Hospital chosen as 'hub' site; spoke site to be determined

Applied for funding naming Boston Children's as a partner

MA received \$50K in funding October 2020, grant period originally ended April 2021, extended until June 2021

AMCHP contracted with NCHAM to provide technical assistance to states implementing remote audiology projects



## Cultivating a Remote Partner

- Worked with the Department of Public Health Newborn Hearing Screening Manager to determine the geographical area which is in the most need.
  - Where is the highest lost to follow-up rate in your state
- Our goal was a facility with a large catchment area to which the families had enough experience to go there for our remote ABR service.
  - We considered: Pediatrician offices, Early Intervention offices, and the largest birthing hospital in the geographical region with the highest “lost to follow-up” rate.



## Just the Right Spot

For our project, the birthing hospital appeared to be the most appropriate remote location

- The families we were trying to reach, in general, knew where the facility was located
  - They had their babies, who did not pass the newborn hearing screen, there
- The location of the hospital was central to the entire geographical region that we were attempting to support
- They had intrinsic experience with the population that was in need of this service



# Creating New Relationships for New Programs

Try

Try again

Try once more

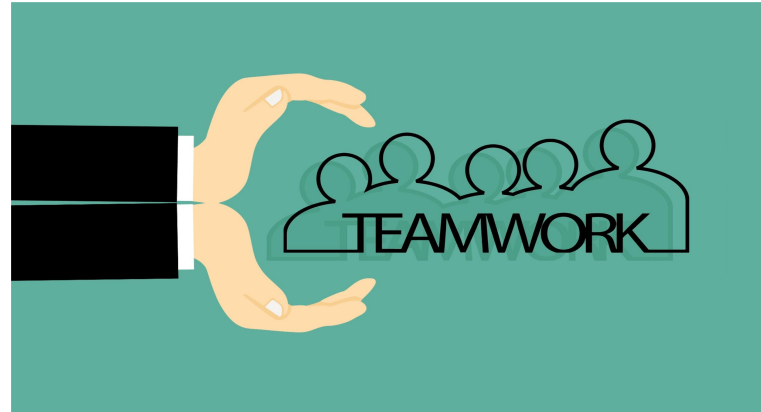
Try again tomorrow

**Keep trying** until you succeed



# Supporting Partners

- Find the level of support required for the remote site to feel that this is an easy process
- Provide support in many different forms
- Respond quickly to questions and concerns
- Be an ally



# Provide Adequate Training

- Many forms of training may be required
  - In person
  - Via telephone
  - In print, which may be reviewed over and over again
- Tune in and listen to what your remote site may need
  - Labels
  - Pictures
  - In person re-training

Be creative



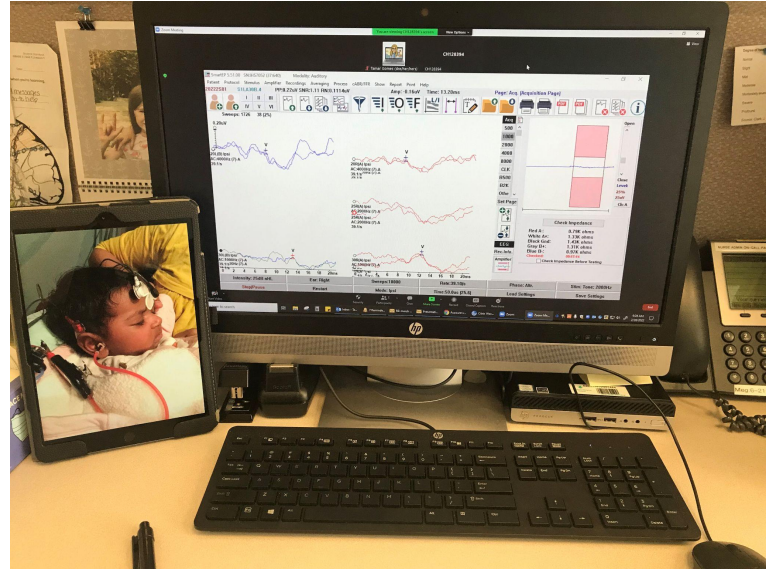
# Technology & set up

## Computer (dedicate device to running test)

- Laptop or desktop
- Wired internet or very stable wifi connection
- Zoom (or meeting connection application)
- Video & sound off

## 2nd device (dedicate to video communication)

- Device with video & sound on





# Connections

## Technology

- Check for computer updates & battery charging several days before
- Set up equipment 30 min before patient arrival
- Ensure strong internet connection (direct connection is preferred)
- Familiarity with equipment is key for remote support & troubleshooting

## People

- Check-in with remote staff several days prior to appointment
  - Confirm patient
  - Confirm timing
  - Clarify any questions/concerns - equipment updates, interpreters, staff coverage
- Call family personally to provide information, prep instructions, obtain history
- Follow up with remote site staff after

# Testing Logistics

- The remote support staff are the hands and eyes for testing
- Difficult to communicate directly with support staff subtly
- Turn testing computer screen away so parents cannot watch wave collection
- Testing Audiologist may try troubleshooting techniques in a different order
  - Non remote testing:
    - 1) Check inserts
    - 2) Cords
    - 3) position
    - THEN 4) change parameters
  - Remote testing:
    - 1) Re-check impedances
    - 2) slow rate
    - 3) check a different stimulus/ear
    - THEN 4) ask to check inserts, cords & position



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# Documentation Logistics

Options depending on billing and contract setup

- WHOSE patient is it?
- Documentation goes to clinic that the patient belongs to
- Can document at one clinic and upload PDF of report to secondary clinic ... or not
- This is tied into the billing





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Children's  
Hospital**

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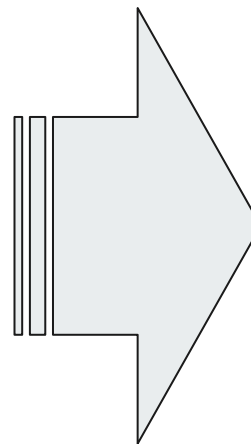
Where the world comes for answers

**Equipment Ownership**

**Equipment Maintenance**

**Credentialing**

**Documentation/Billing**





**Clear Clinical Need**  
**Invested Providers**  
**Institutional Commitment**  
**Climate Supporting Telehealth**

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# Questions?

