

Remote ABR Services on Cape Cod 3 Years Later

EHDI 2025

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Disclosures

Derek Stiles and Tamar Gomes are full-time employees of Boston Children's Hospital



Learning Objectives

1. Explain the essential components required to set up a remote diagnostic ABR program, including technology, personnel, and inter-hospital collaboration.
2. Describe the benefits of remote ABR diagnostics in enhancing early detection of hearing loss in children, particularly in underserved or rural areas.
3. Analyze the challenges and propose solutions related to technology, personnel management, and billing processes in the implementation of remote ABR services.



3 Years Ago....



Massachusetts DPH awarded
CARES grant from AMCHP

- Telehealth focus



DPH Identifies Cape
Cod/Islands with High LTFU

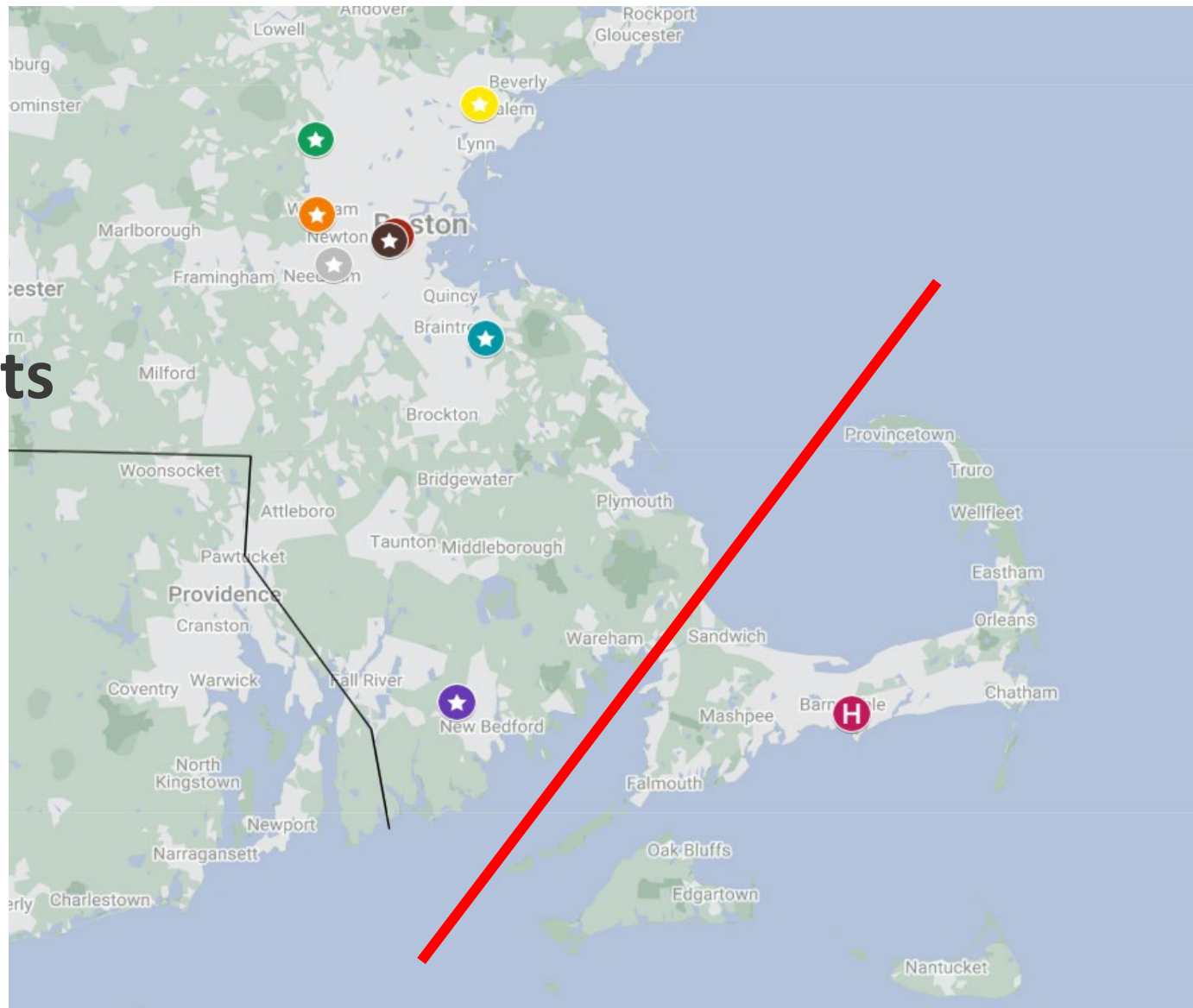


Partnerships with BCH and
CCH

- Proof of Concept



Cape Cod, Massachusetts Geography



Boston Children's



Establishing the Relationship Between Hub and Spoke

The Hub: BCH

Experienced
pediatric
audiologists

The Spoke: CCH

Central to region
of need

Hospital
infrastructure

Medical staff
support



Business and Contracting

Models:

- EHDI/grant funded
 - South Dakota – USD hub to frontier clinic spokes
 - Alaska – Anchorage hub to Nome spoke
- Insurance funded
 - Texas First Sounds program – Houston hub to Deep East Texas spoke
- Proof of Concept
 - North Carolina – East Carolina University hub to area spokes. EHDI staff schedule & set up patient at local hospitals/clinics
 - Colorado ↔ Guam – Colorado Children's hub



Business and Contracting

Our set-up

- Cape Cod Healthcare owns the program
 - Documentation in their medical record
 - Billing through their hospital
 - Responsible for equipment and supplies
- Boston Children's is contracted to provide services
 - Remote testing
 - Reporting to state DPH
 - Consulting as needed



Training

On-Site Training

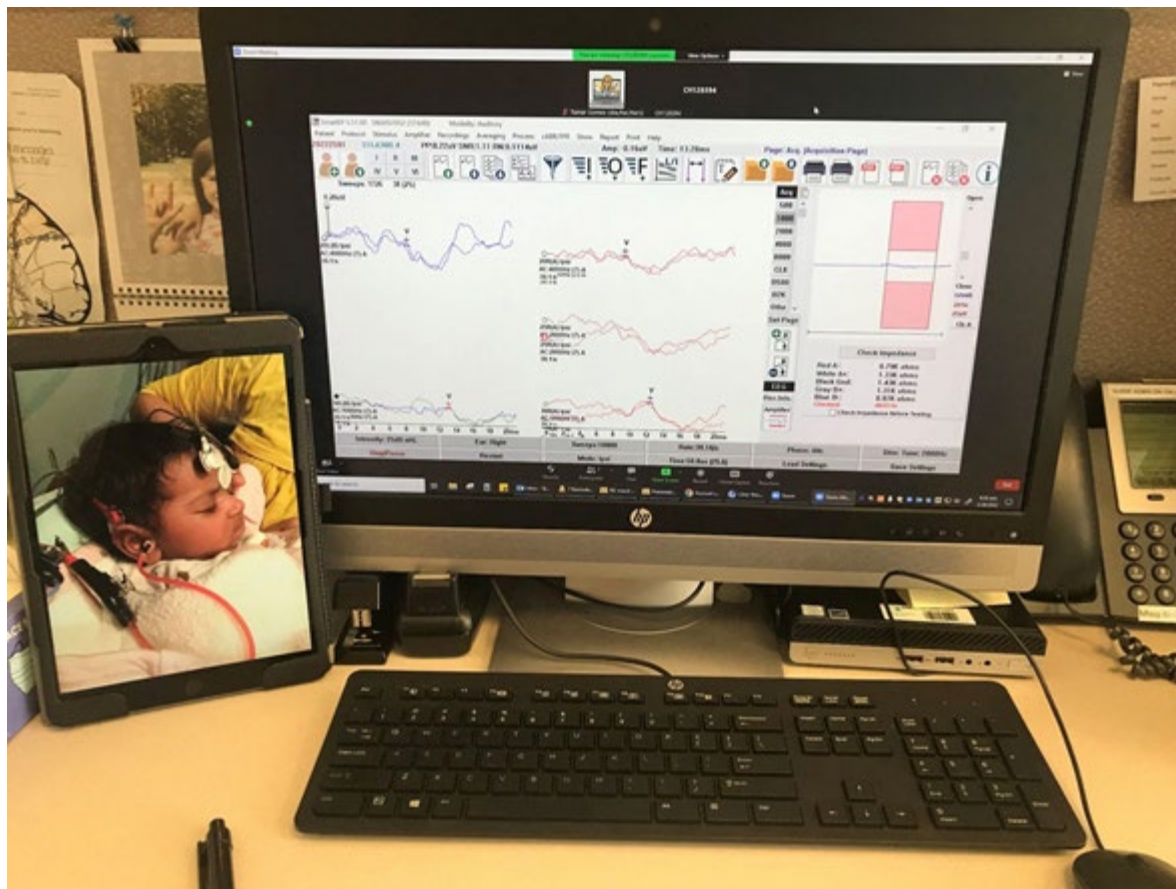
- Multiple visits to teach ABR set-up to nursing staff

How-To Manual

- Schedule an appointment
- Explain to families
- Prep the equipment/patient for testing
- Pictures of all supplies with labels
- Important passwords and login information
- Contact information to call for help



Audiologist Site Set-up



1st Device

- To run the ABR by remote control
 - Sound & Video off

2nd Device

- Video communication
 - Sound & Video on

3rd Device

- Discreet communication between team members

Patient Site Hands-on Set Up

- 1st Device: ABR Computer
 - Sound off/Video on
 - Zoom/Teams capable
 - Share screen & Allow remote control
- 2nd Device: Communication
 - Sound on/Video on
 - Focused on the baby
- 3rd Device: Discreet communication between the Hub-Spoke Teams
- Comfortable chair for the caregiver, pillow/bassinet on which to place the baby, swaddling blanket



TODAY! THREE YEARS LATER



Boston Children's

Where the world comes for answers

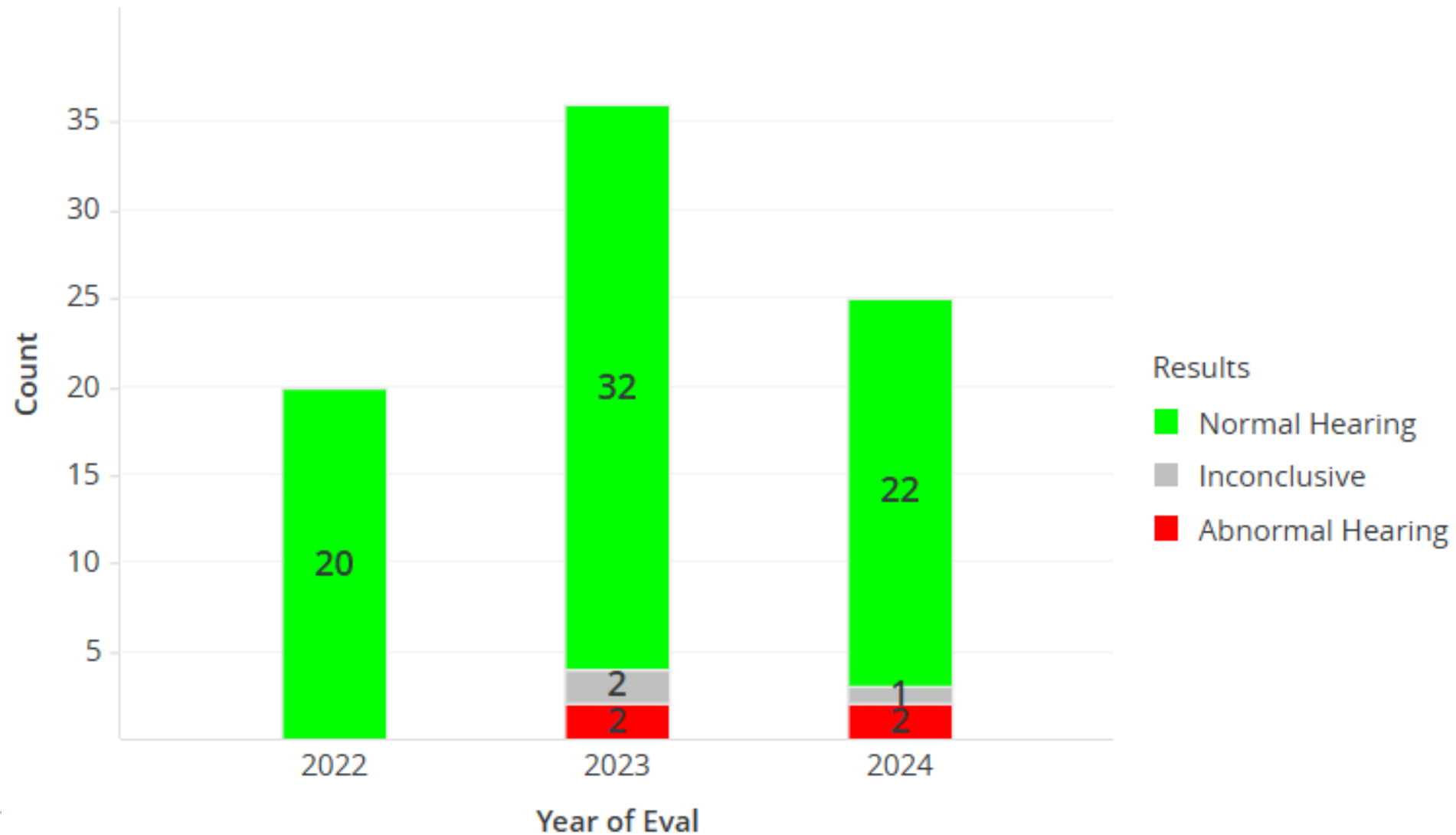


We're still doing it

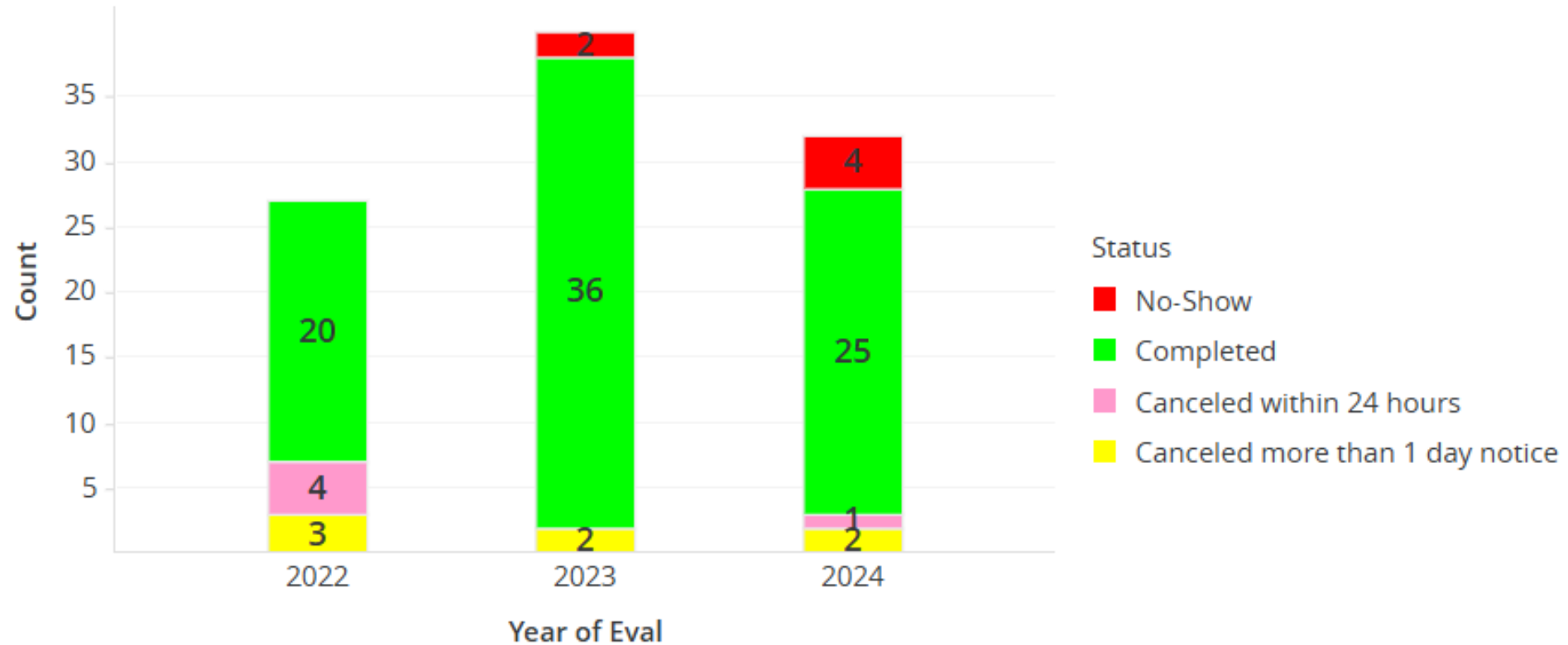
- Standing Visits
- Reduced wait-time for families
- Ease of access for families with transportation barrier
- Learning curve with spoke site support needs
 - Continued training
 - Equipment monitoring



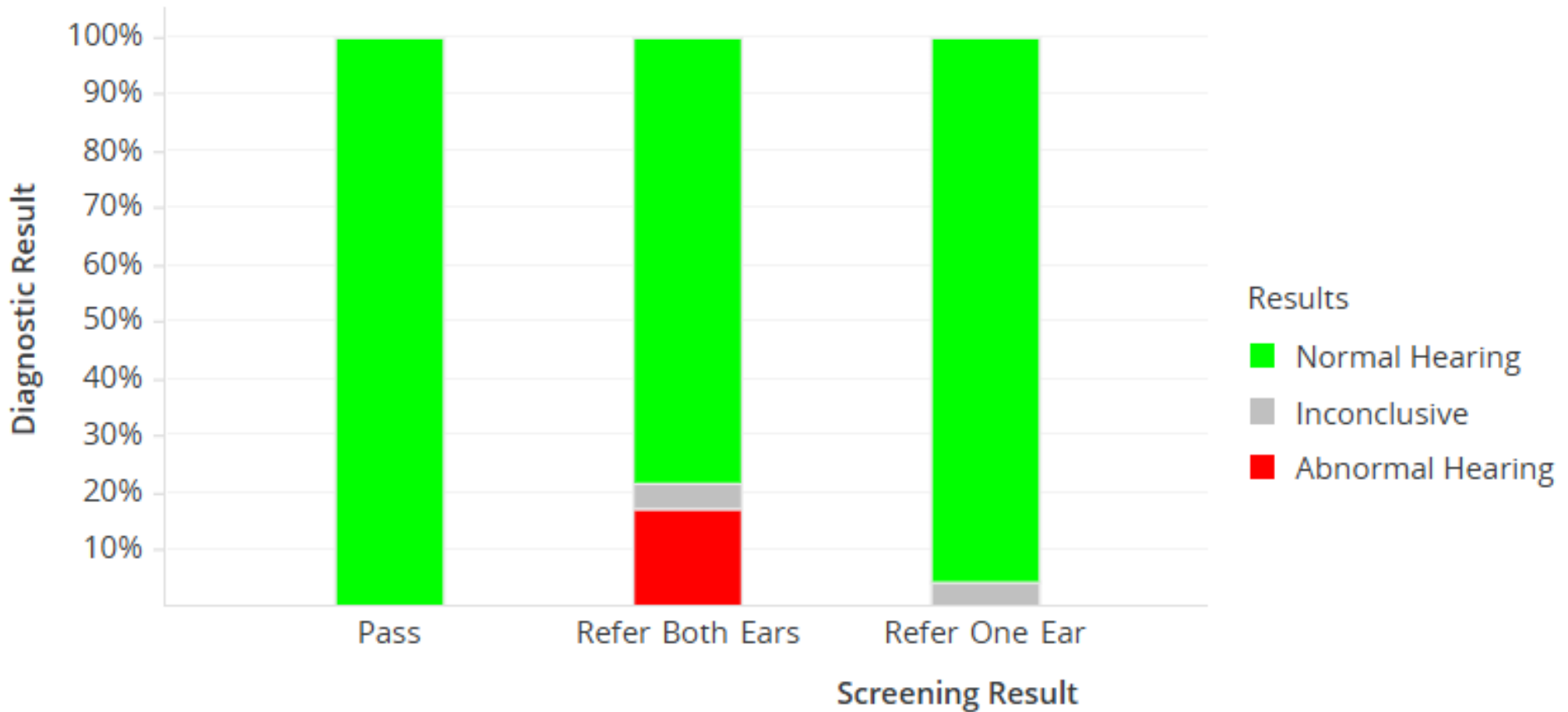
Remote ABR Diagnostic Results



Remote ABR Diagnostic Results



Diagnostic Result by Screening Result



Team Preparedness & Training

- Provide comprehensive training: “See One, Do One”
- Conduct regular hands-on sessions and check-ins
- Equip staff with basic IT troubleshooting skills
- Address high staff turnover with effective onboarding

Communication & Coordination

- Maintain clear communication with families before and after evaluations
- Coordinate effectively with hands-on and remote teams
- Ensure next steps for the baby are clearly defined



Remote Site Responsibilities

- **Essential:** Prepare infants, monitor electrodes and earphones
- **Complex:** Conduct equipment maintenance, manage supply orders, provide hands-on patient care in the moment



Program Efficiency

- Timely and accurate documentation, considering multiple facilities
- Direct referrals to Early Intervention by audiologists





Technology & Equipment

- Keep IT support readily available across all sites
- Prompt equipment check-ups and supply chain management
- Ensure regular equipment maintenance
 - Charging
 - Software updates
 - Calibrations
 - Troubleshoot electrical artifacts
 - probe blockage – cerumen
 - Secure cable connections
 - Check for wear & tear; tubing holes
 - Supply expirations

PERSISTENCE!

Questions and Comments?

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- Robler, S. K. (2018). Audiological care and telehealth in remote Alaska. *Perspectives of the ASHA Special Interest Groups*, 3(18), 5-12.
- Stuart, A. (2016). Infant diagnostic evaluation via teleaudiology following newborn screening in Eastern North Carolina. *Journal of Early Hearing Detection and Intervention*, 1(2), 63-71.
- Williams, H. Riley, E. & Messersmith, J. (2020). South Dakota Early Hearing Detection and Intervention Program: Using Teleaudiology to Conduct Infant Diagnostic Assessments. *Journal of Early Hearing Detection and Intervention*, 5(1), 47-53. DOI: <https://doi.org/10.26077/xvak-k565>