



Increasing Medical Provider Knowledge of Childhood Hearing Differences: An Opportunity for Interdisciplinary and Cross State Collaboration

Arielle Spellun, MD, Jennifer Fleming, Sarah Stone, Amy Szarkowski, PhD,
Jane E. Stewart, MD, SM

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What is your role professionally or within EHDI?

Parent of a child with a hearing difference

Individual with a hearing difference

EHDI Coordinator/DPH

Clinical Professional or Student: Audiologist

Clinical Professional or Student: Speech Language Pathologist

Clinical Professional or Student: Medical Doctor

Clinical Professional or Student: Nurse

Clinical Professional or Student: Psychologist or Neuropsychologist

Teacher/Educator

Other



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Learning Objectives



- Identify the impact of training on clinical practice and patient/family experience
- Explore ways to measure the effectiveness of educational interventions
- Brainstorm potential collaborations leveraging EHDI to improve provider education across states and disciplines

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Lifetime Objectives: Improve care for children with hearing differences by educating their providers!

Medical Education



Medical Education



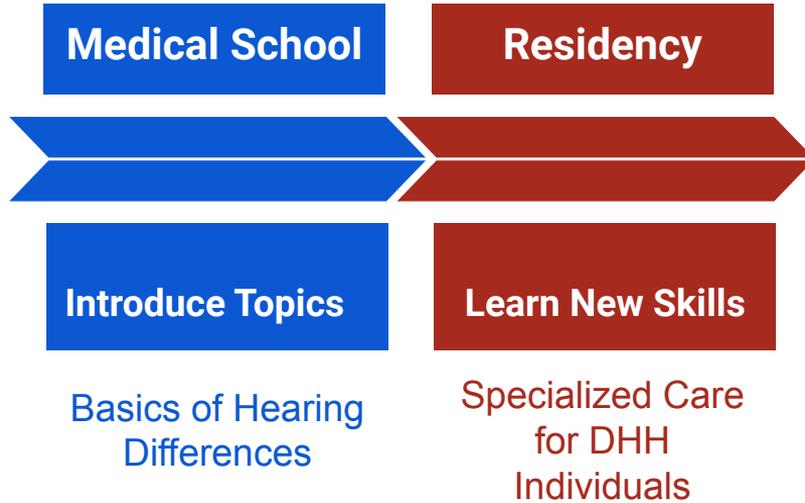
Medical School



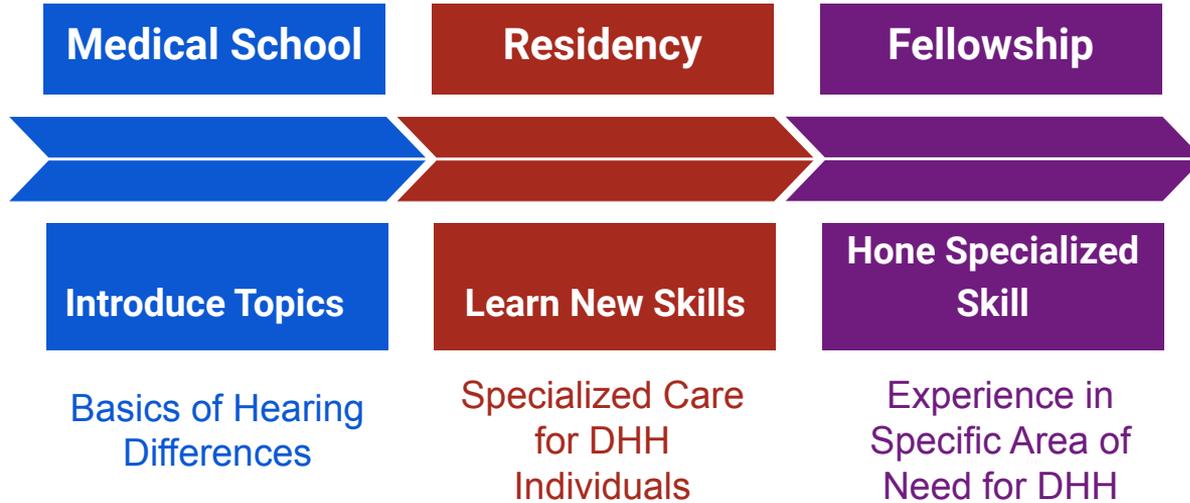
Introduce Topics

Basics of Hearing
Differences

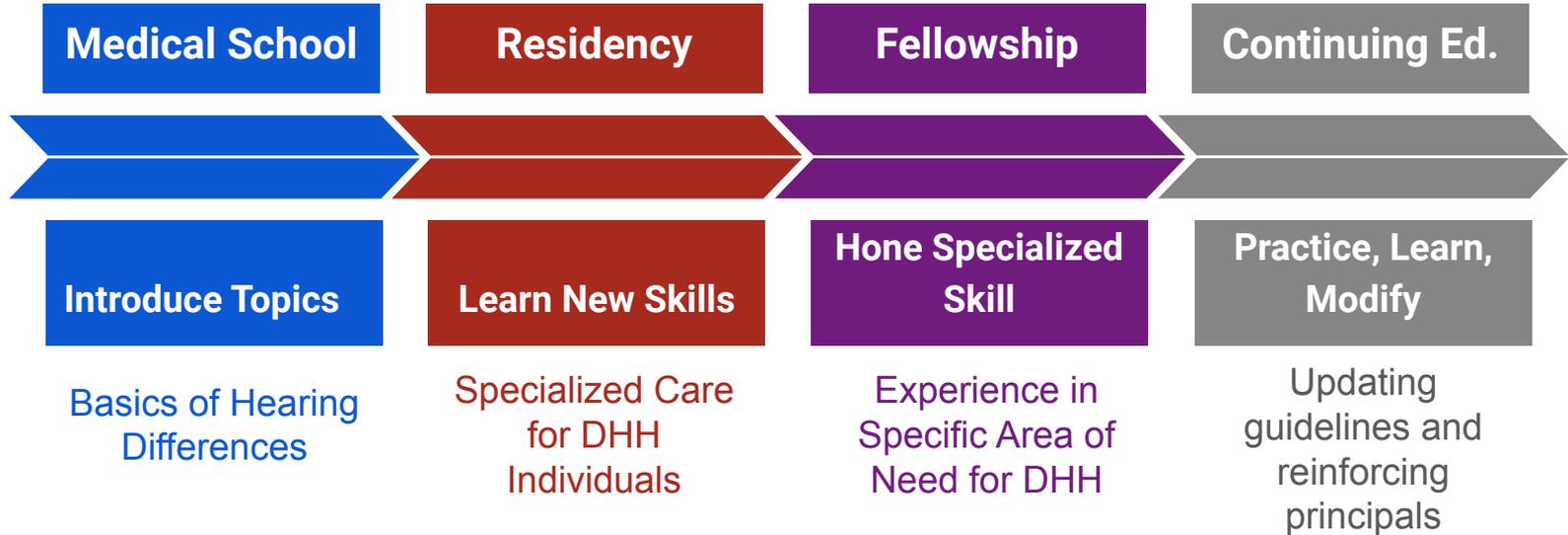
Medical Education



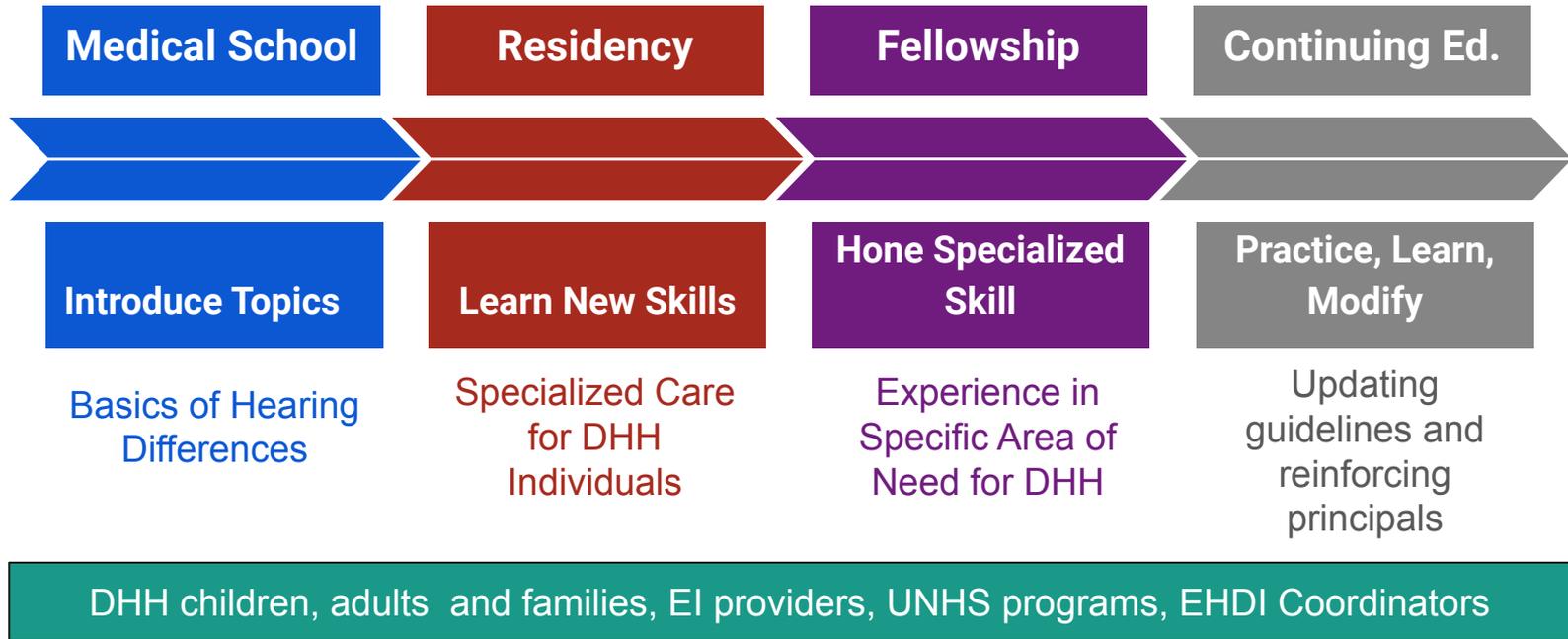
Medical Education



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Medical Education



Parent Perspective

- Expectations of providers:
 - Immediately after diagnosis
 - Getting started in early Intervention
 - First 6 months
 - 1 year
 - 2 year
 - Transition to preschool
- Build a team of experts
- Knowledge is power
- Trees grow
- Early foundation sets the stage



For parents and d/Deaf or hard of hearing individuals, what information has been most helpful that your provider shared with you?



EHDI Based Community Education



- Engage, educate, and train health professionals and service providers
- Emphasis on 1-3-6 Recommendations
- Focus on benefits of family-centered medical home and the importance of communicating accurate, comprehensive, up-to-date, and evidence-based information to families
- **HRSA Goal:** Increase number of health professionals and service providers trained on key aspects of EHDI Program by 10%

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How are you educating providers in your state?

Grand Rounds

Webinars

Shadowing Opportunities

Lunch and Learn Sessions

CME Courses

Other



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Initial MA EHDI Outreach Project

- Initiated June 2018
- Patient information sent to PCP via fax and mail
- Additional efforts
 - Follow up with PCP and provider team
 - Track outreach and letters
 - Develop action items for additional outreach as needed
- 395 letters sent to date!



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January 4, 2021

John Smith, MD
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Dr. Smith –

Our records indicate that Baby Eddie, DOB 11/11/20, was recently diagnosed with permanent unilateral moderate sensorineural hearing loss. As your MA American Academy of Pediatrics (AAP) Early Hearing Detection and Intervention (EHDI) Chapter Champion, I would like to offer you my assistance. First, I would like to provide you with some important updated information that could prove valuable in the growth, learning, and eventual outcome of your patient with any form of hearing loss.

1-3-6
EARLY IS BEST!
Language input
is a determinant
of literacy

Early diagnosis and intervention, and avoiding language deprivation are crucial to the development of speech, language, cognitive, and psychosocial abilities. The Joint Committee on Infant Hearing (JCIH) guidelines is 1-3-6: screening by one month of age, diagnostic testing by three months, and early intervention (EI) services initiated by six months. The key role of EI is to provide an enriched language environment as early as possible to the infant's developing brain and promote optimal early language learning during this sensitive period of development.

Infants who have been diagnosed with permanent hearing loss of any degree (including unilateral losses) or with an immediately qualifying diagnosis are eligible for EI services in MA at no cost to the family. In light of these extremely difficult times, telehealth services have been approved and MA EI provider agencies are offering families support utilizing remote technology to provide services. Based on the family's Worcester address, there are several direct referral options. Two options follow:

- South Bay Community Services – Early Childhood, Worcester: 548 Park Avenue, Suite B, Worcester MA 01603. Ph. 774-823-1500 or
- Parnet EIP: 237 Millbury Street, Worcester, MA, 01610. Ph. 508-755-1288

It is important to know that services are available from specialty service providers who have special skills and knowledge around hearing loss. Families may request more than one specialty service provider. These providers can be found on the Universal Newborn Hearing Screening Program (UNHSP) website (<http://www.mass.gov/dph/newbornhearingcreening>) along with other information and resources. Family TIES also has a family to family matching program in which mentor families are paired with new families to offer support and information (<https://www.massfamilies.org/wp-content/uploads/2018/08/PCP-MATCH-REQUEST-Form-English-Fillable-2019.pdf>). Another resource is the Massachusetts Commission for the Deaf and Hard of Hearing (MCDHH).

<https://www.mass.gov/service-details/massachusetts-commission-for-the-deaf-and-hard-of-hearing-mcdhh>. Child specialists are assigned by region and offer individualized support to families.

Language development is dependent on early input to the infant's developing language acquisition center during a critical window. The initiation of language stimulation right away is very important in the long-term development of language and communication. Prompt initiation of amplification, auditory input, and language input (spoken and visual) is associated with improved long-term outcomes. Establishment of EI services is complex and decisions about the best plan for providing an enriched language environment require parent education¹. Essential parent information includes support in:

- Understanding the hearing loss diagnosis and results of their child's hearing diagnostic evaluation.
- Information on communication development from infancy through childhood.
- Communication choices and language exposure: this refers to all listening, spoken, and visual or signed language or combination thereof. For example, some families planning on a cochlear implant may opt to use multiple modes by initiating the use of sign language prior to receiving the cochlear implant.
- Choices in amplification.
- Educational resources and choices².

Additional information, compiled especially for primary care providers, can be found on our website <https://www.mass.gov/info-details/universal-newborn-hearing-screening-materials-for-health-care-provider-materials-for-primary-care-providers>.

Please feel free to reach out to me with any questions or concerns. I am eager to offer support to optimize outcomes for your patient.

Sincerely –



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Ref:
¹Wacker CJ, Hensch TK. Critical periods in speech perception: new directions. *Ann Rev Psychol* 2015;66:117-96.
²Yoshida-Cook C. Principles and guidelines for early intervention after confirmation that a child is deaf or hard of hearing. *J Deaf Stud Deaf Educ* 2018;18:248-75.
³Swank J, Biedler J. Hearing Loss in Pediatrics: What the Medical Home Needs to Know. *Pediatr Clin N Am* 66(2019):425-446.

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1 HEARING SCREENING
2 BY HEAR
3 DIAGNOSIS
4 BY HEAR
5
6 INTERVENTION

Initial MA EHDI Outreach Project

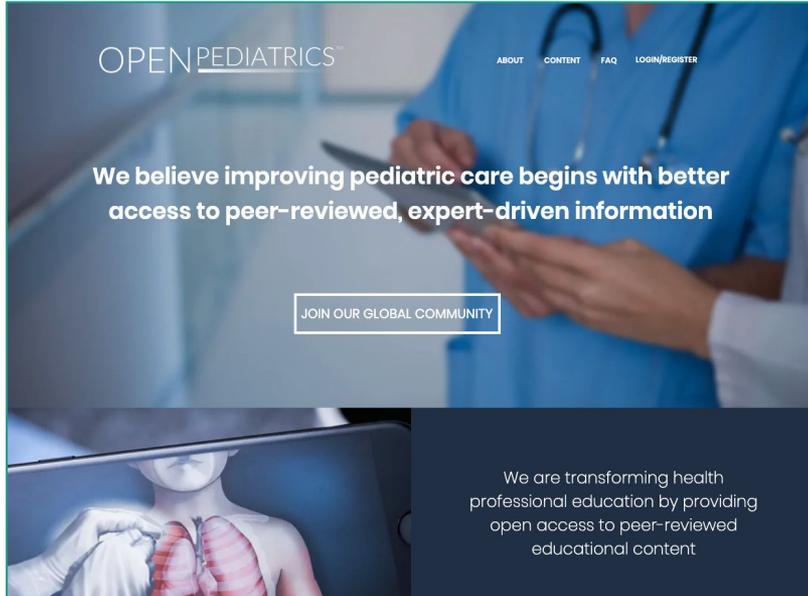


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- 395 letters sent to date!
- PCP EI referrals increased
- 83% initially un-enrolled at time of letter eventually enrolled in EI
 - Unenrolled more likely to have mild or unilateral hearing difference
- Earlier outreach more effective

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Caring for Deaf and Hard of Hearing Children After a New Diagnosis: An Overview for the Medical Home

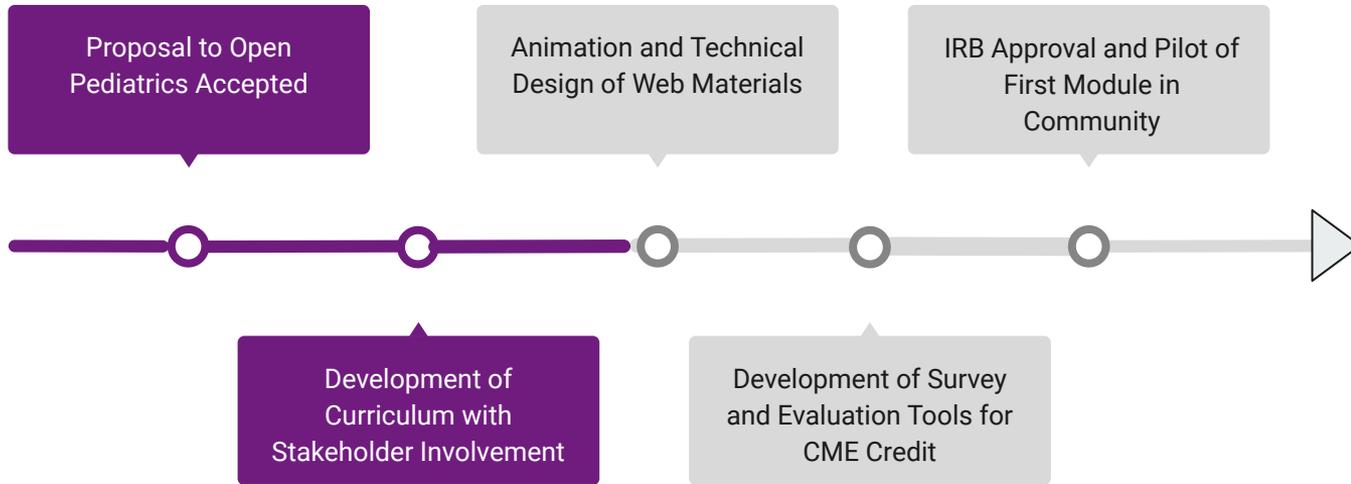
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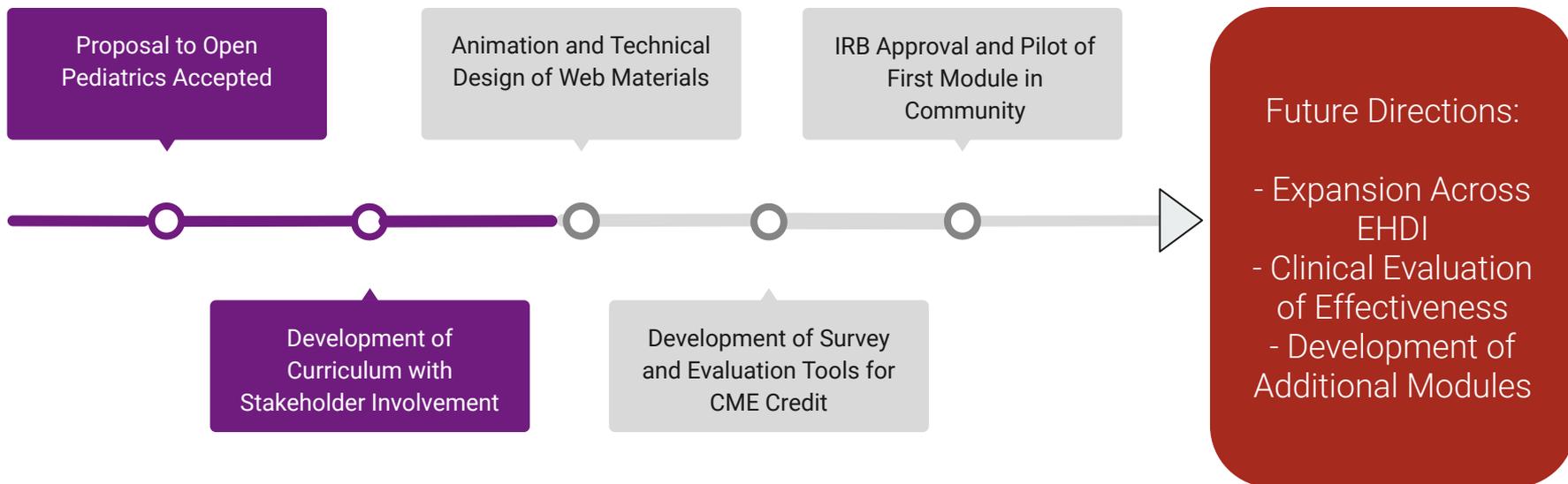
Learning Objectives

- Appreciate the **diversity of experiences** of individuals with hearing differences
- Review the **physiology and epidemiology** of childhood hearing differences
- Outline the process for **hearing screening and diagnosis**
- Review **initial management** after a new diagnosis of a hearing difference
- Understand the importance of **language access** for developmental outcomes
- Review **interventions** aimed at restoring language access including early intervention, sign languages, hearing aids, and cochlear implants
- Describe the **role of the medical home** in facilitating care for deaf and hard of hearing children and their families

OPENPediatrics - Our Next Step



OPENPediatrics - Our Next Step



How would you measure the success of your MedEd intervention?



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Evaluating Impact and Effectiveness



- Baseline needs assessment of pilot data participants
- Content based evaluation of learning objectives
- Response to curriculum and materials
- Evaluating impact on clinical practice

Opportunities for Collaboration



- Exploring the Bigger Picture
- Requirements for Med Ed topics
- Collaboration across EHDl groups
- Scaling up

Review of Learning Objectives



- Identify the impact of training on clinical practice and patient/family experience
- Explore ways to measure the effectiveness of educational interventions
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Thank you!

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