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HRSA Acknowledgment

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The contents are those of the author(s) and do not necessarily represent the official views of nor an endorsement by the HRSA, HHS or the US Government.

Expanding the Pediatric ECHO model

Pediatric Dermatology for
the Upper Midwest



Sarah Asch, MD

Hometown Pediatric Dermatology

www.hometownpediatricdermatology.com

Objectives for today

1. Expand the concept of the “Hub” in rare subspecialties in an ECHO model.
2. Incorporate pediatric opportunities for collaboration in healthcare that differ fundamentally from adults.
3. Discuss the role of an early phase quality improvement project in ECHO.

Project ECHO: Moves Knowledge, not Patients

Problem



Sanjeev Arora M.D.,
Hepatologist

8 month wait for Hep C clinic



Attempted Solution Democratize knowledge



Hep C team at hub
+ willing PCCs collaborated.
10 min lecture
PCCs brought cases of current patients

Video Technology (2003 - WOW!)

Project ECHO

ECHO: **E**xtension for **C**ommunity **H**ealthcare **O**utcomes

Reduced wait times, More patients treated

Outcomes of PCCs **EQUAL** to specialists
(with this subspecialty support)

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Outcomes of Treatment for Hepatitis C Virus Infection by Primary Care Providers

Sanjeev Arora, M.D., Karla Thornton, M.D., Glen Murata, M.D.,
Paulina Deming, Pharm.D., Summers Kalishman, Ph.D., Denise Dion, Ph.D.,
Brooke Parish, M.D., Thomas Burke, B.S., Wesley Pak, M.B.A.,
Jeffrey Dunkelberg, M.D., Martin Kistin, M.D., John Brown, M.A.,
Steven Jenkusky, M.D., Miriam Komaromy, M.D., and Clifford Qualls, Ph.D.



PBS Special

This collaboration began at a SEARCH virtual poster session...

Sarah Asch MS, MD
Pediatric Dermatologist



Mission: To deliver high quality, timely
pediatric subspecialty care to rural kids
and adolescents



Saurabh Chandra, MD, PhD, MBA

Project Director
Telehealth Center of Excellence,
University of Mississippi Medical
Center (UMMC)



And so was born

**Project ECHO:
PEDIATRIC DERMATOLOGY FOR THE UPPER MIDWEST**

Hub team (UMMC):

DeAngela Ivory, Vanessa Trammel, LaKitha Hughes

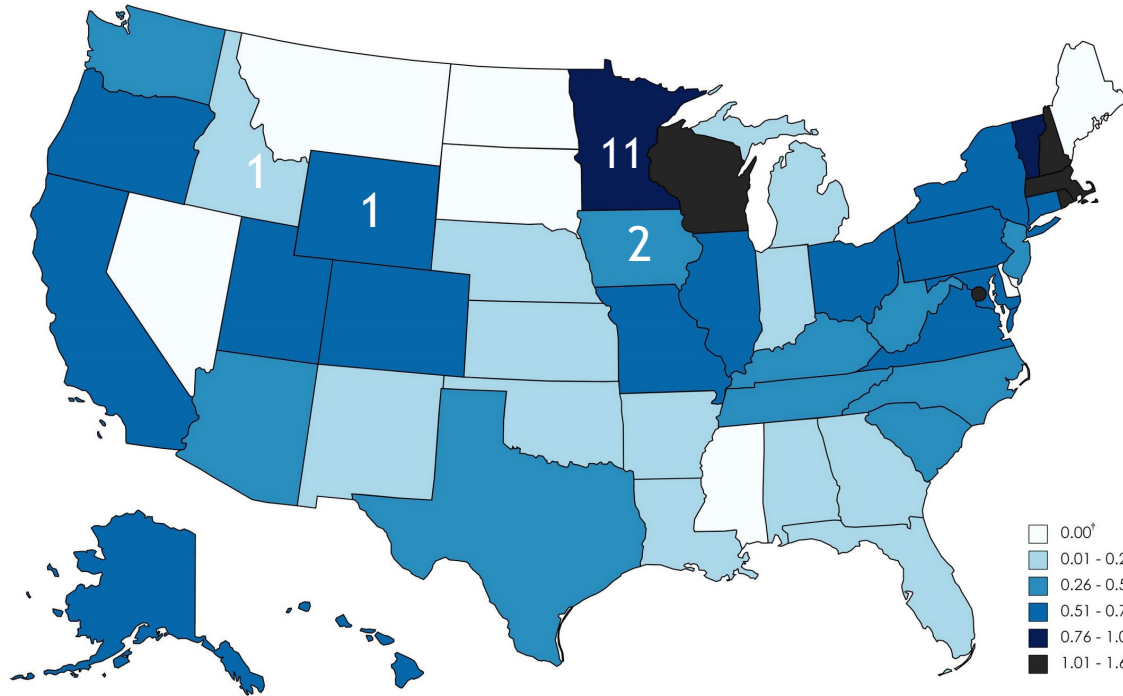
Lead (Hometown Pediatric Dermatology):

Sarah Asch, MS, MD



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Why Pediatric Dermatology?



Approximately 98% of pediatric dermatologists who currently practice in the U.S. work in a metropolitan area of the country.

The numbers of pediatric dermatologists in a given state do not reflect the complexities of distance, insurance, referral patterns

Pediatric Dermatology, Volume: 38, Issue: 6, Pages: 1523-1528, First published: 14 October 2021, DOI: (10.1111/pde.14824)

Shivani Sinha MS, Gloria Lin MD, MS, Micaella Zubkov BS, Rong Wu PhD, Hao Feng MD, MHS

Geographic distribution and characteristics of the pediatric dermatology workforce in the United States



Lack of dermatology training in pediatrics residency

30% of pediatric primary care visits are for a primary skin problem

> [Pediatr Dermatol](#). 2015 Nov-Dec;32(6):819-24. doi: 10.1111/pde.12662. Epub 2015 Sep 3.

Deficiencies in Dermatologic Training in Pediatric Residency: Perspective of Pediatric Residency Program Directors

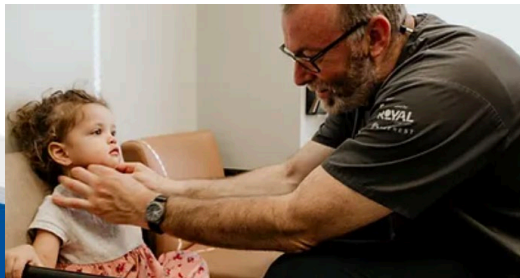
Kate Khorsand ¹, Heather A Brandling-Bennett ^{1 2}

Affiliations + expand

PMID: 26337718 DOI: [10.1111/pde.12662](#)

AND YET:

ONLY 6% of pediatric residency program directors felt that their graduating residents received “very adequate” and 26% felt their residents received “INADEQUATE” training in dermatology.



Q. Why not just keep it to academic centers?

A. They have changed...

- “Shadow clinic”
- ECHO does not always come as a “credit”, but just an extra volunteer job
- Burnout at academic centers for rare specialties
- More rare specialty experts are leaving these environments

Private practice experts as a possible solution:

UMMC COE contracts with me to be the Lead

Khorsand K, Sidbury R. The shadow clinic: Emails, “curbsides,” and “quick peeks” in pediatric dermatology. *Pediatr Dermatol.* 2019; 36: 607-610.

<https://doi.org/10.1111/pde.13854>

Building a new type of Hub team

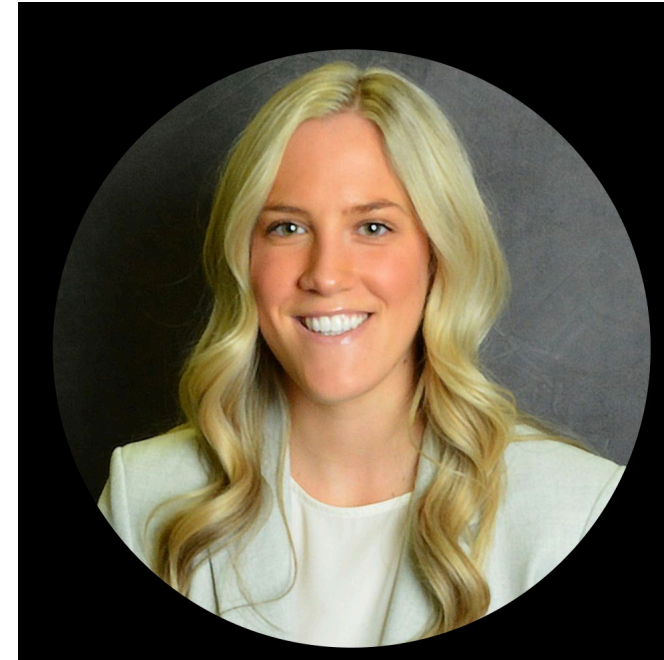
Virtual Grand Rounds at regional rural centers => Meeting a medical student

Brailyn Weber

Medical student at University of North Dakota

Interested in dermatology, limited local mentorship opportunities

Plans to return to North Dakota to practice



ECHO: PEDIATRIC DERMATOLOGY FOR THE UPPER MIDWEST

Hub team: DeAngela Ivory, Vanessa Trammel (UMMC)

Physician lead: Sarah Asch, MD (Minnesota)

Medical Student: Brailyn Weber (North Dakota)

Guest Speakers:

Because who wants to hear me talk every month?

- Via the American Academy of Pediatrics Section on Dermatology
- Soon to add PeDRA (Pediatric Dermatology Research Alliance)

Experienced speakers who then suggest their mentees who are --

Young, emerging faculty who need places to build their CVs!

PEDIATRIC DERMATOLOGY FOR THE UPPER MIDWEST

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Varied guest speakers from various academic centers,
but with a central physician who recruits and gives a
number of the talks, advertises, works closely with Hub
team

Unexpected synergies: How do we advertise this?

I was a local conference speaker => Clinic in the Classroom Webinar => School nurses list serve

I reached out to AAP State Chapters => Executive Director in Wyoming for AAP, is also for AAD (Dermatology)

AAP Section on Telehealth list serve

LinkedIn Posts

Be open to unexpected developments

Our target audience healthcare providers in the Upper Midwest.

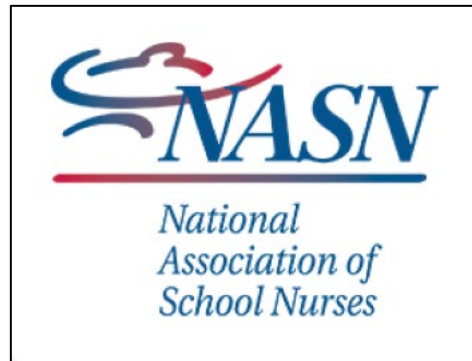
Accordingly, 45.5% of our participants are from rural and/or urban cities in Minnesota, North Dakota and Nebraska.

We also have regular participants from the East and West U.S. coasts, because of the paucity of pediatric dermatologists throughout the U.S.

And, we have had attendees from several other countries (India, Ecuador, Tanzania)

You may hit a target you didn't expect...

National Association of School Nurses



Beyond Ice Packs, School Nurses Provide Vital Care to Rural and Impoverished Communities

<https://www.forbes.com/sites/lakenbrooks/2021/05/29/beyond-ice-packs-school-nurses-provide-vital-care-to-rural-and-impoverted-communities/>



School nurses with high attendance

School nurses make up nearly 50% of our participant population.

School nurses were nearly twice as likely to be 100+ miles or 2+ hours from a pediatric dermatologist (or to be unsure of their closest pediatric dermatologist) compared to all other attendees.

An unexpected connection to rural children!

Very little is ever truly new, build on the base

Successful pilot in this exact subject matter



Pediatric Dermatology

RESEARCH IN BRIEF

Efficacy of pediatric dermatology Extension for Community Healthcare Outcomes (ECHO) sessions on augmenting primary care providers' confidence and abilities

The banner features the text "Pediatric Dermatology" on the left, followed by a row of logos including "the society for pediatric dermatology", "European Society for Pediatric Dermatology", and "ESPD". Below this is the text "RESEARCH IN BRIEF" and the main title of the study in bold.

An unanswered question in ECHO, and specifically from prior pediatric dermatology ECHO, is how well is information retained?

Incorporating QI

As a clinical pediatric dermatologist; knowing that we aren't training pediatricians well, I want to make sure that ECHO is actually helpful, but.. I am not in a closed medical or insurance system and I know school nurses are attending...

- I can't measure Medicaid claims - because we cross state lines
- Medicare doesn't apply to kids
- There are multiple primary referral centers

Can we show that attendees remember what they learned?

Quality improvement:

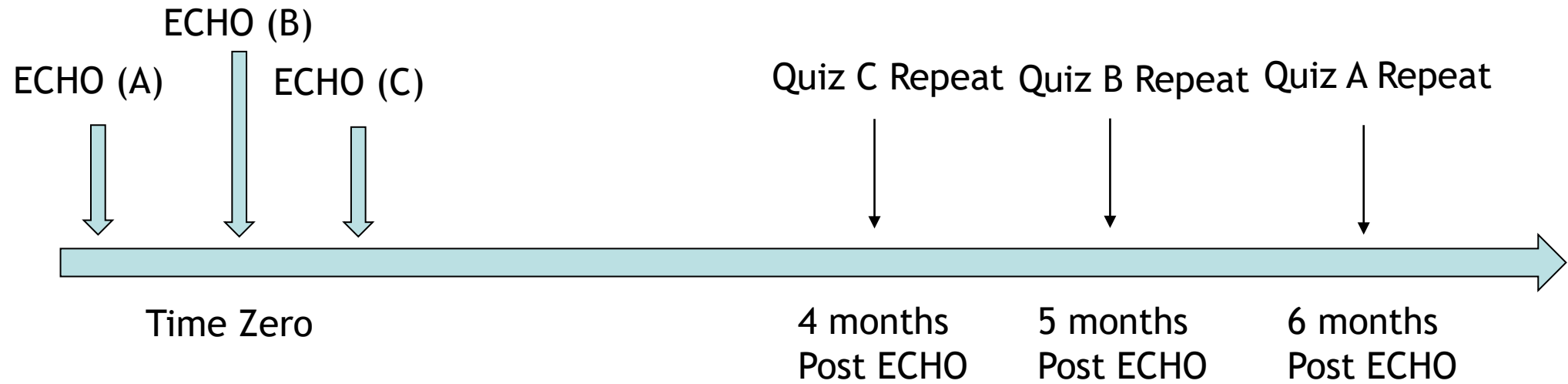
Step 1 - how is your baseline quality?

The first step of any quality improvement project is to see if you have something to improve

QI Design

First 3 questions quiz distributed immediately after with the CME links

Repeat identical Quiz sent at 4,5 or 6 months after the ECHO presented

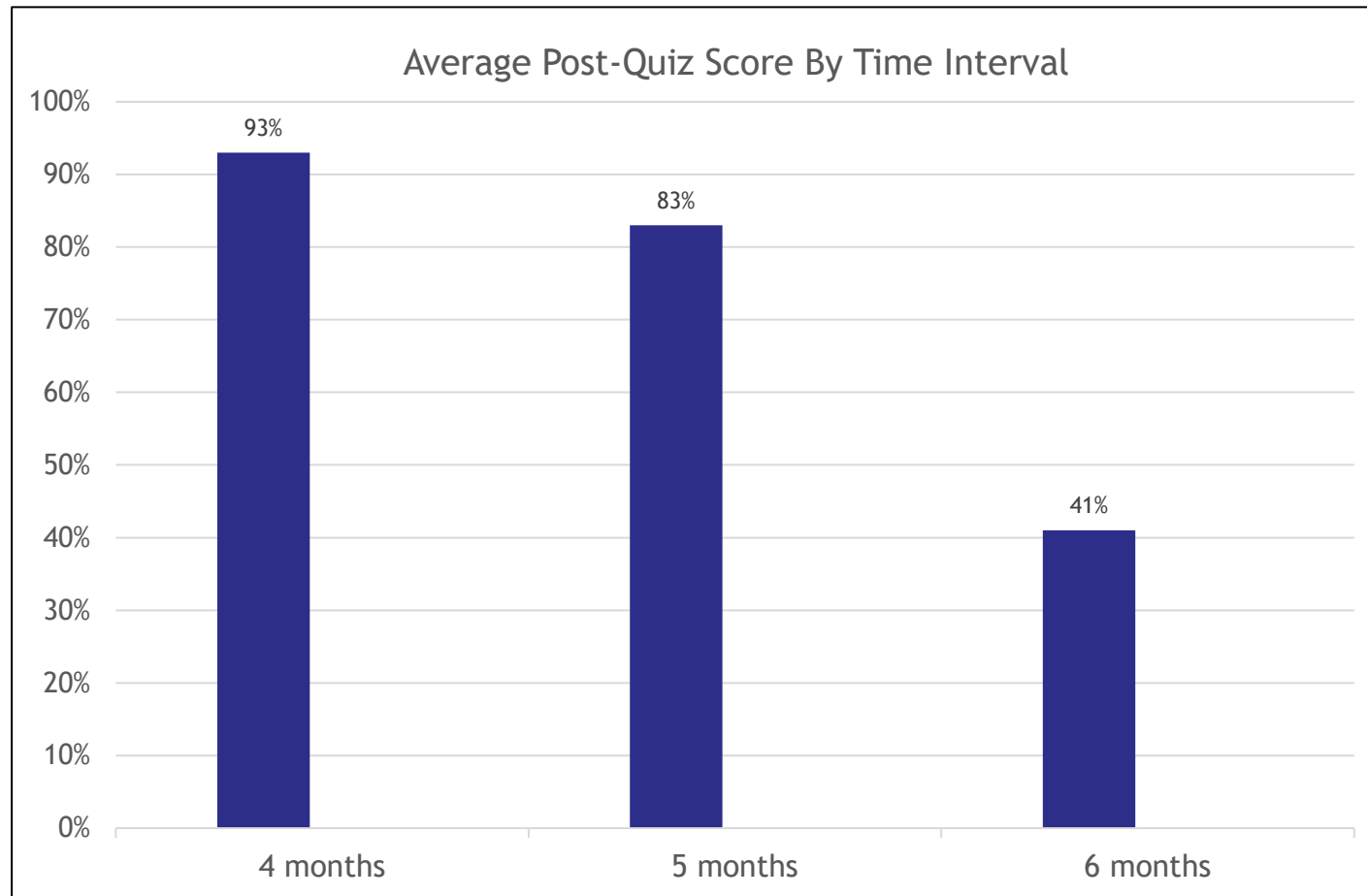


Response rates are low, but similar over time and regardless of profession or time interval since lecture

Reponse Rates By Profession			
Profession	Attendance	Recall	Rate
Pediatrics	19	7	37%
Dermatology	3	1	33%
School nurse or other nurse	32	11	34%

Average Response Rates By Time Interval	
4 months	45%
5 months	25%
6 months	43%
No trend, sample is small	

Retention is good 4-5 months, *May* be lower at 6 months



One story is worth ten studies...

“After attending an ECHO session on eczema, I mentioned dupilumab to the family of one of my students who has been struggling with eczema. She has clearer skin than she has had in years and her confidence has gone through the roof!”

- School nurse attendee

Pediatric Dermatology ECHO for the Upper Midwest 2024

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Opportunities for next steps and further research

Collect quizzes at 6 months and 9 months or a year out to determine if this learning loss continues

Quizzes with immediate responses at 6 months out as reinforcement (there is evidence to show that being quizzed reinforces material on its own)

Quizzes from prior ECHO sessions given again (6 months out, for example)

Quizzes during the sessions instead of after - increase responses

Repeat ECHO topics every 6-9 months

End of talk...just the beginning of the story