ECHO and Oral Health: Reaching Out to Rural Dentists

Elizabeth Carr[1], DeAngela Ivory[2], Vanessa Trammell[2]

University of Mississippi Medical Center School of Dentistry[1]

University of Mississippi Medical Center Telehealth Center for Excellence[2]

The University of Mississippi Medical Center Center for Telehealth

National Telehealth Center of Excellence

Project ECHO®

UMMC Mississippi Population Oral Health Collaborative

UMMC School of Dentistry

What is Project ECHO?

Project ECHO (Extension for Community Healthcare Outcomes) is a global movement to democratize medical knowledge and expand access to high-quality care for underserved populations.

Began in 2003 at the University of New Mexico by Dr. Sanjeev Arora to address hepatitis C treatment shortages in rural New Mexico.

"Moving knowledge, not patients" – Uses tele-mentoring to train primary care providers in specialty care, reducing disparities in healthcare.

Amplifies local capacity through collaborative learning, not traditional telemedicine.

How Project ECHO Works

The ECHO Model: Regularly held virtual "clinics" via Zoom/video conferencing connect expert "hubs" (specialists) with community "spokes" (primary care teams).

Key Components:

- Case-based learning: Providers present real patient cases for discussion and guidance.
- Best-practice sharing: No-cost, interactive sessions build skills in areas like chronic diseases, mental health, and addiction.
- No patient involvement: Focuses on mentoring providers, not direct care.

Accessibility: Free to join; sessions are recorded and resources shared for ongoing learning.

Expansion Areas: Covers 100+ topics, including COVID-19 response, opioid use disorder, global health issues, and oral health.

Impact and Global Reach of Project ECHO

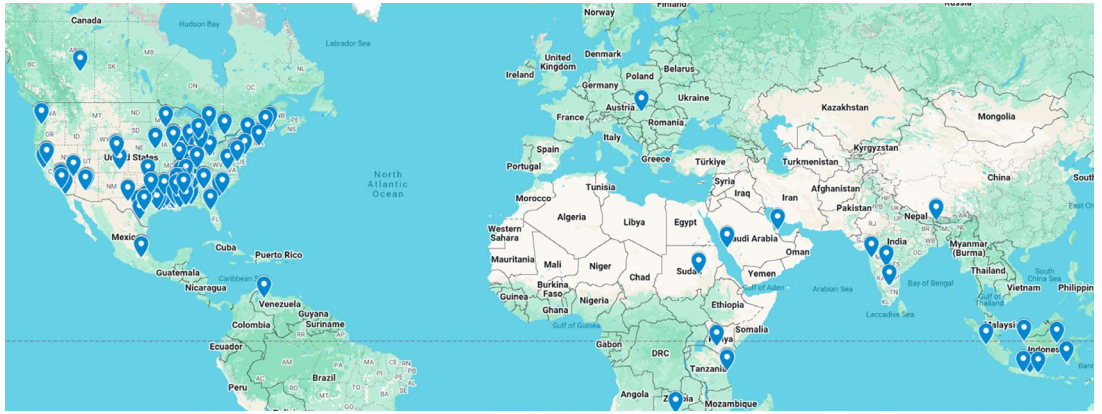
Proven Results: Improves patient outcomes (e.g., hepatitis C cure rates matched specialists); trains 1 million+ providers worldwide.

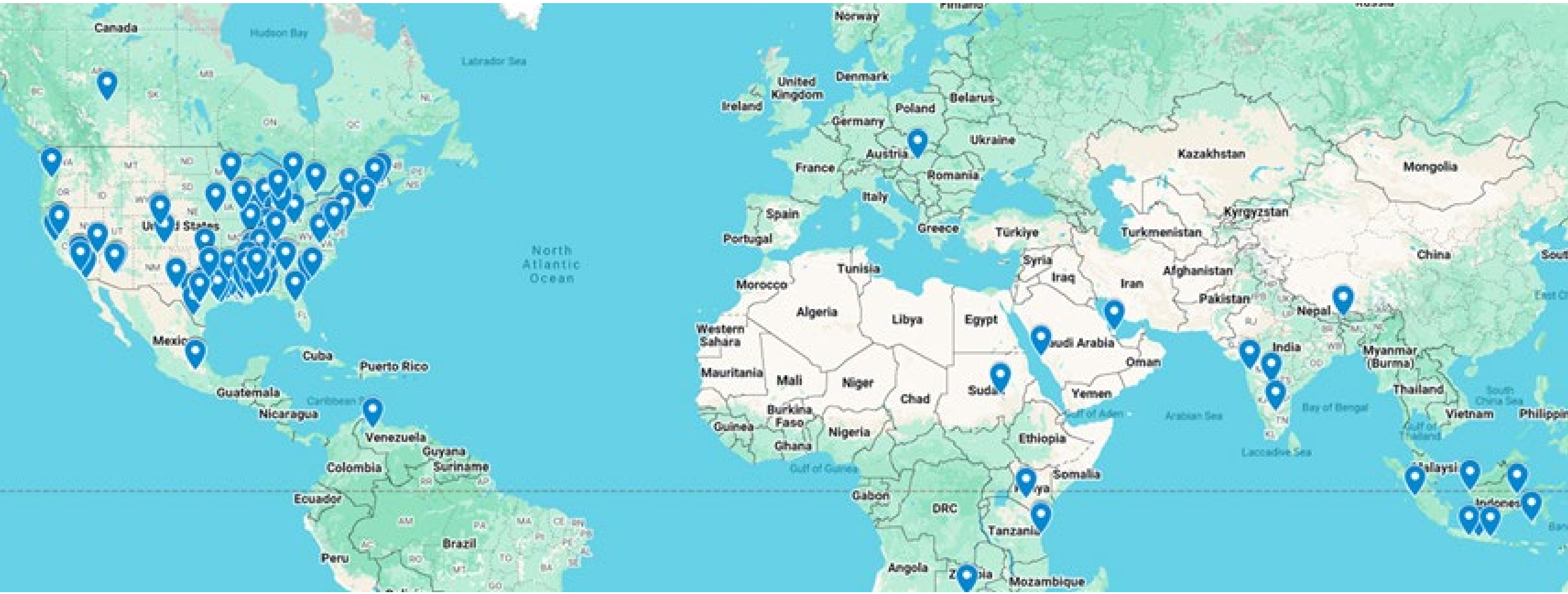
Global Scale: Operates in 40+ countries with 1,000+ hubs; partners with organizations like WHO, CDC, and governments.

Key Achievements:

- Treated over 1 million patients indirectly through trained providers.
- Reduced wait times and costs in rural/underserved areas.
- Adapted for crises: Supported COVID-19 vaccination and mental health during pandemics.

Future Vision: Aims to reach 1 billion people by 2025 through scalable, evidence-based tele-mentoring.




Canada
Hudson Bay
Labrador Sea
North Atlantic Ocean
Norway
United Kingdom
Ireland
Denmark
Poland
Belarus
Germany
Ukraine
Austria
France
Romania
Italy
Spain
Portugal
Greece
Türkiye
Kazakhstan
Mongolia
Kyrgyzstan
Turkmenistan
China
Syria
Iraq
Iran
Afghanistan
Pakistan
Nepal
India
Myanmar (Burma)
Thailand
Vietnam
Tunisia
Morocco
Algeria
Libya
Egypt
Western Sahara
Saudi Arabia
Oman
Yemen
Mauritania
Mali
Niger
Chad
Sudan
Burkina Faso
Guinea
Nigeria
Ghana
Ethiopia
Somalia
Gabon
DRC
Tanzania
Angola
Mozambique
Gulf of Guinea
Gulf of Aden
Arabian Sea
Bay of Bengal
Laccadive Sea
Gulf of Thailand
South China Sea
Mexico
Cuba
Puerto Rico
Guatemala
Nicaragua
Caribbean Sea
Venezuela
Guyana
Suriname
Colombia
Ecuador
Brazil
Peru

Understanding Project ECHO

Inspired by the way clinicians learn from medical rounds during residencies

THE UNIVERSITY OF MISSISSIPPI MEDICAL CENTER™

NATIONAL TELEHEALTH CENTER of EXCELLENCE

Center for Telehealth

Center for the Advancement of Youth (CAY) Training for Primary Care Providers

The overall goal of the CAY-ECHO program is to improve the developmental, behavioral, and mental health of Mississippi children ages 0-21 by increasing the capacity and confidence of primary pediatric providers to identify and manage pediatric behavioral, emotional, and developmental disorders within the medical home.

The CAY ECHO series will provide education to pediatric primary care providers throughout the state about early childhood development, pediatric behavioral health and best practices. Childhood development and pediatric behavioral health can be screened, diagnosed and treated inside of the medical home and proper education is crucial to ensuring positive patient outcomes.

CAY ECHO topics include:

- Autism Spectrum Disorder
- Tic and Tourette's Syndrome
- Minority Behavioral Health
- Infant Loss
- Anti-Bullying

How ECHO Works

The CAY ECHO meeting is hosted on the Zoom video conferencing platform. It is held every 2nd and 4th Thursday from 12 p.m.-1 p.m. CDT. Providers will receive case submission links once they have registered as participants.

Critical Care Project ECHO

Program Overview

In rural settings, healthcare providers are often called upon to care for seriously ill patients—without the immediate backup of an intensive care unit or critical care team. Critical Care Project ECHO is designed to support rural clinicians by providing practical, case-based learning and expert guidance—delivered virtually, no matter where you practice.

Purpose of Critical Care Project ECHO

The purpose of the Critical Care ECHO is to bridge the gap in access to advanced critical care expertise, particularly in rural and underserved areas. By leveraging the ECHO model, the program aims to:

- Build capacity among healthcare providers to manage complex critical care cases.
- Enhance the quality and safety of patient care in critical care settings.
- Reduce the need for patient transfers by equipping local providers to deliver care.
- Foster a collaborative learning community for ongoing professional development.

Goals of Critical Care Project ECHO

1. Enhance Provider Competence: Increase the knowledge, skills, and confidence of healthcare providers in managing critically ill patients.
2. Improve Patient Outcomes: Reduce morbidity and mortality through timely and effective interventions.
3. Promote Equity in Care: Ensure that high-quality critical care is accessible regardless of geographic location.
4. Facilitate Knowledge Sharing: Create a platform for the dissemination of evidence-based practices and innovative solutions in critical care.
5. Support Interdisciplinary Collaboration: Encourage teamwork among physicians, nurses, respiratory therapists, and other healthcare professionals involved in critical care.

UMMC Center for Telehealth Home
Program Director's Welcome +
Emergency Telemedicine +
Behavioral Health +
Extended Reality +
Electronic Resources +
Project ECHO −
Project ECHO Home
Center for the Advancement of Youth ECHO Training
Critical Care Project ECHO
Dermatology Training
General Neurology ECHO
Pediatric Dentistry
Pediatric Genetics ECHO
Sexually Transmitted Diseases in the Community ECHO
Teaching Educators About Child Behavioral Health (TEACH) Program
Frequently Asked Questions

Topics Covered

- Sepsis management
- Acute respiratory distress syndrome (ARDS)
- Mechanical ventilation strategies
- Cardiac emergencies
- End-of-life decision-making in critical care

Target Audience

The Critical Care ECHO program is designed for a varied group of healthcare professionals who play a role in the management of critically ill patients, including but not limited to:

- Physicians (e.g., hospitalists, intensivists, emergency medicine providers, and general practitioners)
- Nurses and Nurse Practitioners
- Physician Assistants
- Respiratory Therapists
- Pharmacists
- Allied Health Professionals
- Administrators and decision-makers seeking to improve critical care services

Contact Information

For more information, email Echo Hub Member Dr. Chandra at schandra@umc.edu or Project Manager DeAngela Ivory at divory@umc.edu.

Join us as we work together to expand critical care expertise and improve patient outcomes across the healthcare landscape!

- UMMC Center for Telehealth Home
- Program Director's Welcome +
- Emergency Telemedicine +
- Behavioral Health +
- Extended Reality +
- Electronic Resources +
- Project ECHO –
  - Project ECHO Home
  - Center for the Advancement of Youth ECHO Training
  - Critical Care Project ECHO
  - Dermatology Training
  - General Neurology ECHO
  - Pediatric Dentistry
  - Pediatric Genetics ECHO
  - Sexually Transmitted Diseases in the Community ECHO
  - Teaching Educators About Child Behavioral Health (TEACH) Program
  - Frequently Asked Questions
- Contact Us

Dermatology training with CEU credit for primary care providers

One in four primary care visits includes some type of skin complaint.* In Mississippi, there are 47,440 patients per one dermatologist.** At UMMC alone, new patients may wait up to six weeks to see a dermatologist.

The UMMC Project ECHO for Dermatology empowers primary care providers to treat skin conditions in their communities through case based learning and didactics. Providers can also expand the treatment of skin condition in their practices by submitting cases for treatment feedback.

Topics Covered

- Benign Skin Neoplasms
- Hidradenitis
- Blistering Disorders
- Malignant Skin Neoplasms
- Pediatric Dermatoses

How ECHO works

The dermatology meeting is hosted on the Zoom video conferencing platform within the iECHO platform.

It is held every three months, on the second Wednesday of the month from 11:45 a.m. - 12:45 p.m.

Session Login Information: Zoom Video Conference

Session Registration Link: Dermatology

General Neurology ECHO

Program Overview

The General Neurology ECHO (Extension for Community Healthcare Outcomes) program is a collaborative tele-mentoring model designed to empower healthcare providers with the knowledge and skills necessary to recognize, appropriately refer and assist in management of neurological conditions in their communities. Through virtual sessions, the program connects experts in neurology with healthcare teams, fostering the exchange of best practices, case-based learning, and real-time consultation.

Purpose of General Neurology Project ECHO

The purpose of the General Neurology ECHO is to bridge the gap in access to advanced neurology expertise, particularly in rural and underserved areas. By leveraging the ECHO model, the program aims to:

- Improve early recognition of neurological symptoms to expedite referrals for testing and diagnosis.
- Build capacity among healthcare providers to manage neurological cases.
- Enhance the quality and safety of patient care for neurologic conditions.
- Foster a collaborative learning community for ongoing professional development.

Goals of General Neurology Project ECHO

1. Enhance Provider Competence: Increase the knowledge, skills, and confidence of healthcare providers in recognizing and managing patients with neurologic conditions.
2. Improve Patient Outcomes: Reduce morbidity and mortality through timely and effective interventions and referrals.
3. Promote Equity in Care: Ensure that high-quality neurology care is accessible regardless of geographic location.
4. Facilitate Knowledge Sharing: Create a platform for the dissemination of evidence-based practices and innovative solutions in neurology care.
5. Support Interdisciplinary Collaboration: Encourage teamwork among physicians, nurses, advanced practice providers, and other healthcare professionals involved in neurology care.

- UMMC Center for Telehealth Home
- Program Director's Welcome +
- Emergency Telemedicine +
- Behavioral Health +
- Extended Reality +
- Electronic Resources +
- Project ECHO −
  - Project ECHO Home
  - Center for the Advancement of Youth ECHO Training
  - Critical Care Project ECHO
  - Dermatology Training
  - General Neurology ECHO
  - Pediatric Dentistry
  - Pediatric Genetics ECHO
  - Sexually Transmitted Diseases in the Community ECHO
  - Teaching Educators About Child Behavioral Health (TEACH) Program
  - Frequently Asked Questions
- Contact Us

Topics Covered

- Stroke
- Multiple Sclerosis
- Headaches
- Seizures
- Dementia
- Tremor
- Neuropathy
- Sleep

Target Audience

The General Neurology ECHO program is designed for a varied group of healthcare professionals who play a role in initial recognition and management of neurological patients, including but not limited to:

- Physicians (e.g., primary care providers, hospitalists, emergency medicine providers, and general practitioners)
- Nurses and Nurse Practitioners
- Physician Assistants
- Pharmacists
- Allied Health Professionals
- Administrators and decision-makers seeking to improve critical care services

Certification & Credits

Attending clinicians will get free CE in a virtual learning network through the University of Mississippi Medical Center.

AMA The University of Mississippi School of Medicine is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

The University of Mississippi School of Medicine designates this live activity for a maximum of (1.0) AMA PRA Category 1 Credit(s) TM. Physicians should claim only the credit commensurate with the extent of their participation in the educational activity.

Pediatric Genetics ECHO

Pediatric genetics training with CEU credit for primary care providers

The Pediatric Genetics ECHO aims to improve access to genetic services for children across the state of Mississippi by increasing the knowledge and confidence of primary care providers to identify, evaluate, and manage individuals with genetic conditions. Using case-based learning and brief didactics along with interactive video technology, our PG ECHO program connects groups of community providers with genetic specialists at the University of Mississippi Medical Center in real-time collaborative sessions.

The Project ECHO® model was developed by the University of New Mexico and has been utilized across the United States and globally to increase capacity to safely and effectively treat chronic, common, and complex diseases whilst dedicating themselves to de-monopolizing knowledge to expand access to best-practice medical care.

PG ECHO topics include:

- Common chromosome abnormalities
- Fragile X syndrome
- Turner syndrome
- 22q11.2 deletion syndrome (DiGeorge)
- History and evaluation
- Genetic testing
- Insurance concerns for ordering genetic testing
- Family history and testing for family members

Sexually Transmitted Diseases in the Community ECHO

STDs in the Community training with CEU credit for primary care providers, social workers and pharmacists

Mississippi has the highest rate of STIs (Chlamydia, Gonorrhea, and Syphilis) in the United States. Mississippi has seen a remarkable increase in syphilis in recent years, including a > 1000% increase in congenital syphilis since 2016. Community physicians and practitioners lack key information and are unaware of many resources available to help diagnose and treat STDs. This project will train community providers throughout MS in the diagnosis, prevention, and management of STDs.

Topics Covered

- Congenital syphilis
- Epidemiology of STIs
- Identifying and managing syphilis in adults
- Gonorrhea and chlamydia
- HIV Prevention - PrEP
- STD prevention DoxyPEP
- The other STDs - trichomonas, M genitalium, BV

Target Audience

- Physicians
- Physician Assistants
- Nurse Practitioners
- Social Workers

University of Mississippi Medical Center

Profile Completion: 80%
Complete Here →

Analytics
All Programs
Organization Profile
Organization Team

University of Mississippi Medical Center

Your Journey

View More Analytics

101
Learning Hours Completed

107
Sessions Conducted

516
Participants Joined

Programs I Manage

Pediatric Dermatology ECHO

Pediatric Dermatology Upper Midwest ECHO

Red Spots in Kids: From Birthmarks to 'What Is That?'
06 Aug 2025 12:00 pm - 01:00 pm CT
View Details

Sexually Transmitted Diseases in the Community ECHO

Sexually Transmitted Diseases in the Community ECHO

Biannual PrEP with Lenacapavir
07 Aug 2025 12:00 pm - 01:01 pm CT
View Details

New Announcements

Program Dentistry ECHO

Dentistry ECHO – July Session Recording Now Available!
Posted on 25 Jul 2025

Upcoming Dentistry ECHO Session – Immediate Full Arch Lo...
Posted on 10 Jul 2025

Recording Available – Dentistry ECHO Session
Posted on 01 Jul 2025

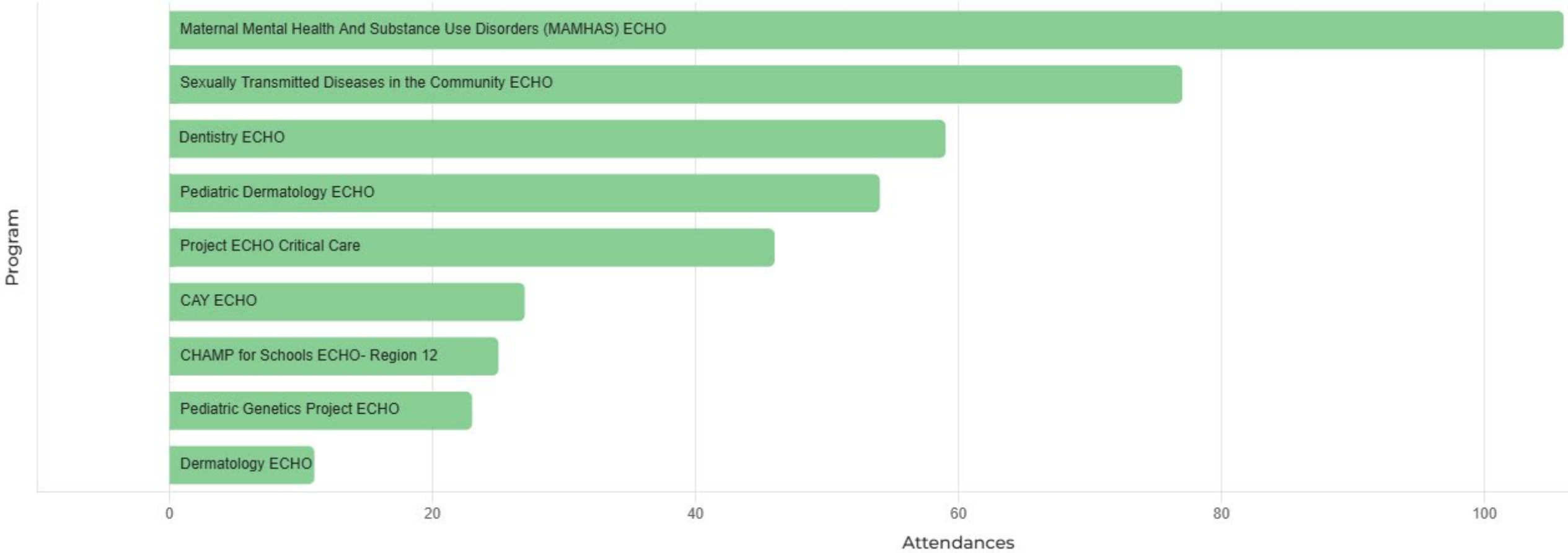
Program CHAMP for Schools- Region 6 E...

DMH Credit for May Grief Sessions
Posted on 17 Jul 2025

Program Pediatric Dermatology ECHO

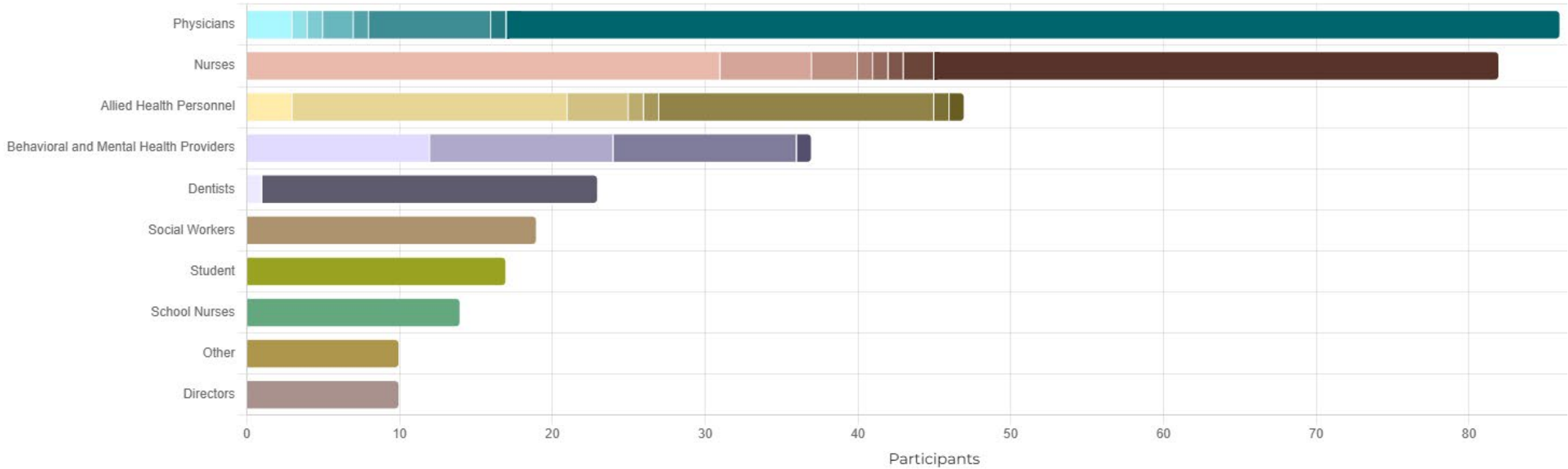
July Pediatric Dermatology ECHO Session – Recording Now Ava...
Posted on 02 Jul 2025

Attendance Overview



Professional Distribution of Participants

Participants grouped by profession; bar length shows count, color shows subcategory.



UMMC™

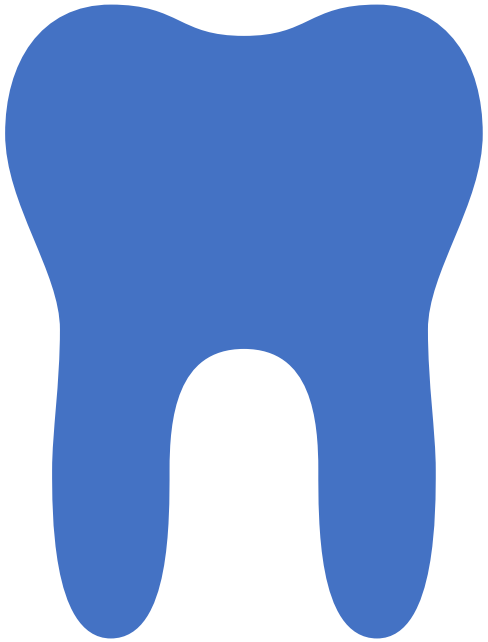
Mississippi Population Oral Health Collaborative

Dentistry ECHO Objectives

- Expand oral health knowledge among diverse provider groups
- Facilitate interdisciplinary and international peer learning
- Measure engagement and impact across regional and global participants

Dentistry ECHO History (Pre iECHO)

- Began presenting in April, 2022
- Sessions are on the fourth Friday of each month, held at noon CST

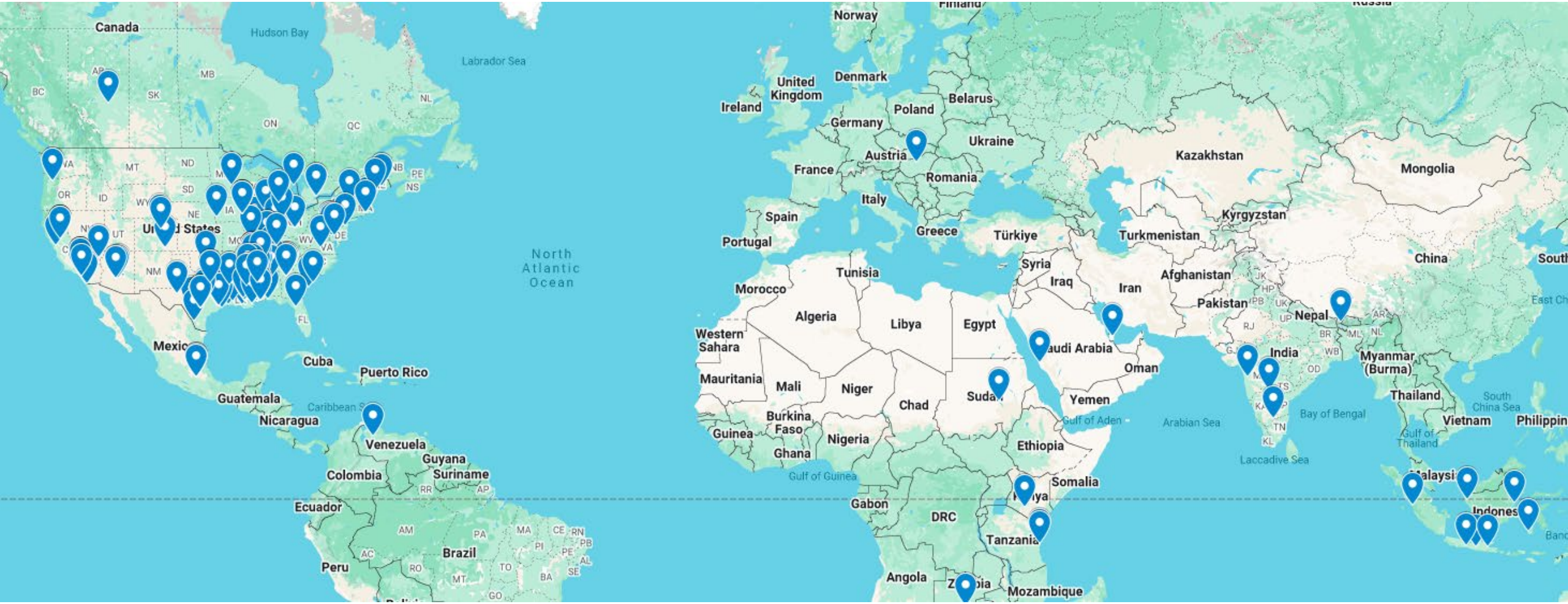


List of Presentations

- Caries Risk Assessment
- Fluorides
- Tethered Tissues
- Special Needs Patients
- Hypomineralization and Aesthetic Concerns
- Vital Pulp Therapy
- Dental Trauma
- Vaping
- Human Papilloma Virus and Oral Cancer
- How Market Forces Are Changing Dentistry- Implications for Rural Dentists
- The Impact of Telehealth on Rural and Underserved Communities
- Immediate Dentures- Do’s and Don’ts
- Fixed Prosthodontics

List of Presentations

- Understanding Your Adhesives
- BEWE Basics: Safeguarding Smiles with Erosion Detection
- Medicaid: An Overview
- Artificial Intelligence in Dentistry
- Rehabilitation of the Head and Neck Cancer Patient
- Emerging Trends in Same-Day Dentistry
- Diagnosing Oral Cancer
- Dental Care for the Frail and Elderly Patient
- Sleep Apnea
- Pearly Whites and Honest Bites: Feedback in the Dental Office
- Enamel Renal Syndrome: A Clinical Case Report
- Immediate Full Arch Load- Smart Solution or Shortcut to Trouble, Evoke and Provoke?



Geographic Reach: While 89% of participants are from Mississippi, the program has attracted attendees from other U.S. states and internationally, including Canada, Mexico, Hungary, Sudan, Kenya, Tanzania, South Africa, Saudi Arabia, Nepal, India, India, Indonesia, and Venezuela. This reach demonstrates potential for broader scalability to underserved regions.

Dentistry ECHO Impact:

Sustained impacts from the ECHO Dentistry project include a *shift in organizational culture within rural dental practices towards a greater emphasis on continuous quality improvement, telehealth, and evidence-based practice.*

Our survey results and participation rates have shown *sustained interest, high participation rates and positive feedback*.

This demonstrates the program's impact on technology adoption and improved patient care. The Dental ECHO program has significantly improved rural dental care in Mississippi by

Dentistry ECHO Impact

Enhancing CDE Access: Delivering cutting-edge knowledge to isolated providers.

Improving Patient Care: Teaching new technologies like AI and digital dentistry.

Addressing Rural Needs: Focused sessions on issues such as elderly care and Medicaid.

Building Community: Fostering professional networks for case discussions and support.

Future Focus

- The program is continuously adapting to expand its impact and integrate emerging technologies.
- Focuses on enhancing rural dental education and improving patient care.
- Initially launched in Year 2 of funding with a focus on pediatric dentistry.
- Expanded in Year 3 and carryover Year 4 to include all areas of dentistry.
- Currently active, hosting monthly sessions with an average of 30 participants.
- Participants include professionals from Mississippi, across the U.S., and internationally.
- Over 350 active users are registered on the iECHO platform.
- Future plans include continuing ECHO sessions, contingent on securing future funding for administration.

Dentistry ECHO Demographics

Metric	**Group A (MS)**	**Group B (National/Global)**
Unique Participants	**163**	**134**
Countries Represented	1 (USA)	9+ (India, Mexico, UK, Canada, etc.)
U.S. States Represented	1 (MS)	17+ (TX, CA, OR, CO, NV, etc.)
Top Roles	Hygienists (40%), Dentists (34%), Students/Admins (26%)	Dentists (44%), Faculty/Admins (29%), Hygienists/Assistants (27%)
Gender (Female-identifying)	79%	72%
Professional Affiliation	90+ institutions	75+ institutions

🧠 *Note: Participants ranged from university deans and faculty to new dental graduates and global practitioners.*

Dentistry ECHO Demographics

Metric	**Group A (MS)**	**Group B (National/Global)**
Total Attendance Events	**715**	**547**
Avg. Sessions per Person	4.39	4.08
% Attended 3+ Sessions	68%	64%
Certificates Earned	29	17
Max Attendance by Session	**Sleep Apnea (Mar 2025)** – 55 total	
Other High-Interest Topics	Digital Dentistry, Communication in Practice	

📊 *Attendance showed strong consistency across sessions, with meaningful increases in later sessions indicating growing topic relevance.*

Impact Summary

ECHO proved effective in attracting **both local and global audiences**, building equity in dental continuing education

MS-based professionals showed especially high retention and engagement

International participation grew steadily, reflecting global demand for virtual dental education

The program supported **interdisciplinary learning**, with a blend of faculty, students, clinicians, and administrators in every session

Impact Summary Continued

65% OF PROFESSIONALS **ATTENDED MULTIPLE SESSIONS**

DIVERSE REPRESENTATION FROM **ACADEMIA, CLINICAL PRACTICE, AND PUBLIC HEALTH**

HIGH CONSISTENCY IN ATTENDANCE SUGGESTS STRONG ALIGNMENT BETWEEN SESSION CONTENT AND PARTICIPANT NEED

REINFORCED INTERPROFESSIONAL LEARNING, ESPECIALLY BETWEEN HYGIENISTS, DENTISTS, AND ADMINISTRATORS

HIGHLIGHTED **GLOBAL INTEREST** IN ACCESSIBLE, EXPERT-LED DENTAL EDUCATION

The University of Mississippi Medical Center
Center for Telehealth
National Telehealth Center of Excellence

Project ECHO®

UMMC
Mississippi Population Oral Health Collaborative

UMMC
School of Dentistry

Project ECHO proved to be a scalable, high-engagement model for dental workforce education.

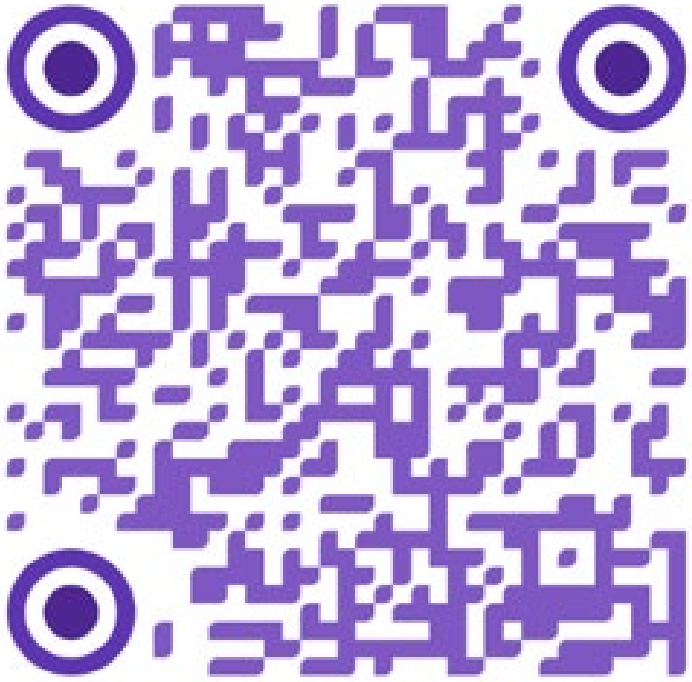
Effectively bridges geographic and professional gaps through virtual tele-mentoring.

Demonstrates strong participation, completion rates, and wide recruitment reach.

Supports local workforce development while promoting global knowledge exchange.

Demonstrates a sustainable model for expanding access to quality dental education.

Join us!



HRSA
Health Resources & Services Administration

This project was made possible by grant number U6631459 from the Office of the Advancement of Telehealth, Health Resources and Services Administration, DHHS.