



Missouri Telehealth Network
University of Missouri

ANNUAL REPORT

2023
EDITION



Mission

The Missouri Telehealth Network increases access to patient-centered health care via telehealth for rural and underserved Missourians by providing technical assistance to health care organizations, partnering with key stakeholders, operating telehealth programs, and supporting and developing telehealth policies.

Six Pillars of Our Culture



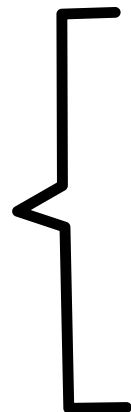
THE MTN TEAM WISHES TO BE THE TEAM THAT.....

- ...is mission oriented
- ...provides exceptional customer service
- ...seeks to continuously improve the MTN experience
- ...demonstrates excellent communication
- ...is a model of collaboration
- ...actively listens

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MESSAGE FROM OUR DIRECTORS

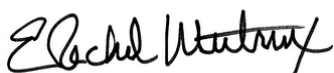
2023 brought Missouri Telehealth Network (MTN) back to our roots with several projects focused on expanding access to telehealth services for Missourians including:

- **Rural Citizen's Access to Telehealth (RCAT)** - a partnership with the Missouri Department of Social Services - MO HealthNet Division. This project, championed by Governor Parson and focused on patients enrolled in MO HealthNet, provides funds to increase use of telehealth in behavioral health and primary care including maternity care. We have engaged dozens of organizations and have funded projects in areas such as tele-stroke, school-based telehealth, tele-emergency services, and more.
- **Justice for Survivors Act** – a partnership with the Missouri Department of Social Services, this project includes an ECHO focused on forensic medical exams, asynchronous educational modules to train hospital staff on utilizing telehealth during the exams and setting up a state-wide sexual assault forensic exam (SAFE-T) telehealth network.

In addition, two new web-based resources were launched. MTN's virtual interactive **Telehealth Billing Tool** supports current and prospective telehealth providers in Missouri to better understand state and federal regulations. The **Interprofessional Telehealth Training Program (ITTP)**, an asynchronous class, provides strong foundational knowledge base for health professionals that want to learn more about telehealth.

Knowledge sharing is key to the success of one of our largest programs – **Show-Me ECHO**. We have continued our commitment to finding the best subject matter experts in the state. In 2023, 299 Show-Me ECHO Hub team members from 30 Missouri counties and the City of St. Louis, provided more than 18,000 hours of instruction to nearly 3,500 learners. Of the nearly 500 cases discussed, 99% were from a Health Professions shortage area. With nearly 40 topics, Show-Me ECHO is a cost-free option to increase professional knowledge for clinicians and educators across Missouri.

We are so proud that MTN brought home an **Excellence in ECHO Award** at the Global Meta-ECHO Conference. MTN affiliated faculty, staff, and students also published papers, posters, and won awards on projects highlighting the impact of Show-Me ECHO. Of course, we couldn't do this work without the excellent contributions of MTN faculty, staff, partners, and funders. **Thank you for your support** of the Missouri Telehealth Network and Show-Me ECHO program, and we look forward to a wonderful 2024.



**E. RACHEL
MUTRUX**
DIRECTOR



**KAREN EDISON,
MD**
SENIOR MEDICAL
DIRECTOR



KRISTIN SOHL, MD
MEDICAL DIRECTOR

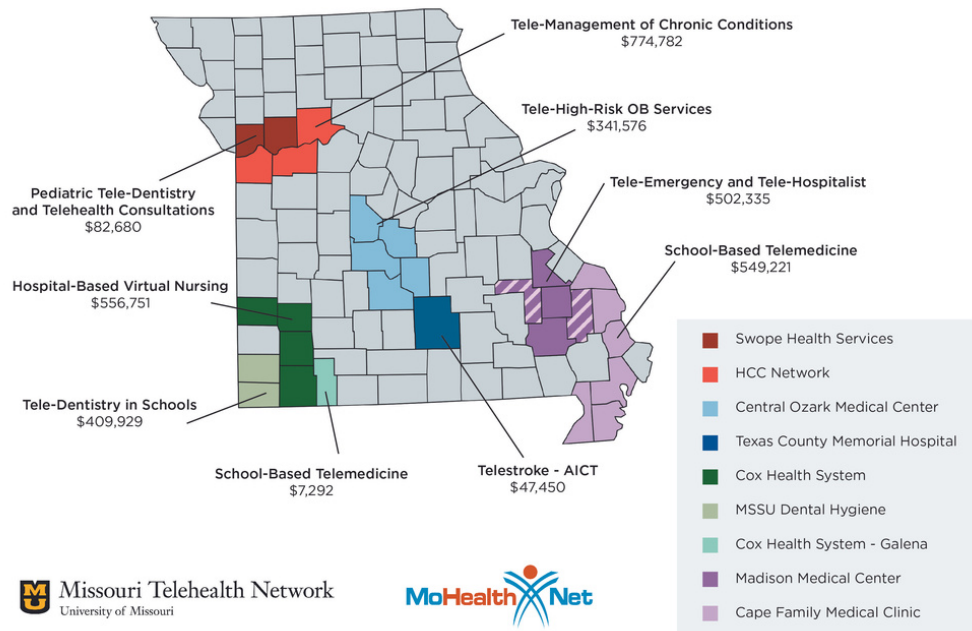


WHAT DID MTN DO THIS YEAR?

- We worked toward greater access to telehealth services.
- We provided technical support & resources regarding telehealth best practices.
- We helped healthcare, education, and other professionals learn and share best-practices.

The Missouri Telehealth Network has partnered with the MO Department of Social Services, MO HealthNet Division, to provide funding, education, and training opportunities to introduce or enhance existing telehealth services for rural providers accepting Medicaid patients through the Rural Citizens' Access to Telehealth project (RCAT).

**Rural Citizens Access to Telehealth (RCAT)
Current Project Awards**



Before the pandemic, only 2.3% of MO HealthNet participants used telehealth with 2.1 million services provided between March 2019 and February 2020. During the height of the pandemic, the percent using telehealth services increased to 20% ([GAO Report](#)) with 32.5 million services provided between March of 2020 and February 2021.

Telemedicine services bring advantages to rural regions by offering healthcare from home, cutting costs, reducing unnecessary ER visits, and minimizing patient travel. These services provide essential resources and medical attention in areas facing healthcare shortages, resulting in shorter wait times.

Healthcare clinics and providers are encouraged to apply for RCAT if they primarily serve rural populations in Missouri, participate in MO HealthNet, and/or are looking to increase access, increase patient recruitment and retention, and ultimately ensure patients receive consistent, timely, exceptional care.

Projects from across the state continue to be submitted and reviewed for approval.

WE WORKED TOWARD GREATER ACCESS TO
TELEHEALTH SERVICES.

04

SEXUAL ASSAULT FORENSIC EXAMINATION TRAINING

The SANE (Sexual Assault Nurse Examiner) exam is a forensic examination completed by a medical professional in order to collect evidence and provide care to individuals who have been sexually assaulted. In 2020, Missouri lawmakers and policy makers recognized the need to expand the availability of these exams.

To increase the number of SANE nurses and to increase survivor access to necessary services, the Missouri Telehealth Network and the Missouri Department of Health and Senior Services, Office on Women's Health, are working together to develop:

- a statewide teleSANE network
- virtual Sexual Assault Forensic Exam (SAFE) care education
- patient-centered trauma-informed care for patients
- Medical Forensic ECHO

TECHNICAL SUPPORT & RESOURCES

05

We provided technical support & resources regarding telehealth best practices.



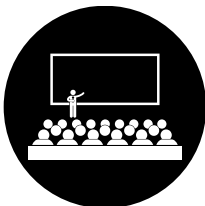
01 — Billing Resource

This FREE web-based tool provides Missouri-specific billing information and resources: telehealth rules, general information, and helpful resources based on organization type, service, and payor.



02 — HTRC Assistance

As the Missouri partner of the Heartland Telehealth Resource Center (HTRC), the Missouri Telehealth Network provides technical assistance and resources to organizations that want to start or improve their telehealth services.



03 — Telehealth Summit

The Summit connects providers, organizations, payers, funders, policymakers, and others to discuss telehealth innovations, funding opportunities and policy updates.



04 — Interprofessional Telehealth Training Program

These modules are designed to address the gap in training and knowledge about telehealth for medical, nursing, and other health profession students and practicing providers.

TELEHEALTH BILLING RESOURCE

Telehealth regulations and guidelines can be quite confusing and overwhelming for many healthcare professionals to navigate. This tool can help!

Coronavirus brought many changes to the healthcare system, including increased usage of telehealth services. Since the public health emergency has ended, telehealth regulations and guidelines continue to change. It can be quite confusing and overwhelming for many healthcare professionals to navigate this new landscape. Because of this, the Missouri Telehealth Network has developed a FREE, Missouri-specific billing tool guide to provide information and resources for Federally Qualified Health Centers, Community Mental Health Centers, Critical Access Hospitals, Rural Health Clinics, and more! Openly accessible and regularly updated, visit the site to find telehealth rules, general information, and helpful resources based on organization type, service, and payor.

<https://medicine.missouri.edu/offices-programs/missouri-telehealth-network/projects>



The screenshot shows the Missouri Telehealth Network website header. At the top center is the University of Missouri logo (a shield with 'M' over 'U'). Below the logo, the text reads "Missouri Telehealth Network" in a large serif font, followed by "University of Missouri" in a smaller serif font. A horizontal line separates this from a disclaimer below. The disclaimer text reads: "This website provides information on telehealth rules. While we make every effort to provide updated information, the resources on this page should not be considered legal advice. To get started, click on the desired provider type. You will be directed to the provider landing page where you can then click on the desired service type followed by payor."



RESOURCES



HEARTLAND TELEHEALTH RESOURCE CENTER

MTN is the Missouri partner of the [Heartland Telehealth Resource Center](#) (HTRC) which is a federally funded center created to increase and sustain telehealth use in order to expand services to rural and underserved communities. MTN provides expertise in key telehealth domains including technical, clinical, operational, legal and regulatory, and evaluation. HTRC provided more than 1,000 hours of outreach and offered technical assistance to 207 new recipients in 2023.



TELEHEALTH SUMMIT

In September, MTN hosted our second bi-annual Missouri Telehealth Summit. The Summit connects health care professionals, organizations, payers, funders, policymakers and others to discuss telehealth innovations, funding opportunities, and policy updates. Thanks to keynote speaker, Dr. Eric Wallace, MD, FASN from the University of Alabama at Birmingham for his presentation “Redesigning and Retooling for Healthcare Reform.” Dr. Wallace is the UAB’s Medical Director of Telehealth, Co-Director of the UAB Home Dialysis Program, and Director of the Rare Genetic Kidney Disease Clinic. Since becoming faculty, he has sought to eliminate geographic and socioeconomic barriers which prevent patients from accessing specialized care.

“Although I am not a medical provider, this (Summit) has helped me learn the ins and outs of telehealth, which in turn can allow me to support and facilitate these efforts within my community.” - Summit Participant

WE PROVIDED TECHNICAL SUPPORT & RESOURCES.

08

INTERPROFESSIONAL TELEHEALTH TRAINING PROGRAM



In 2023, MTN developed a comprehensive telehealth education program. In 2024, the accredited Interprofessional Telehealth Training Program (ITTP) will be offered for practicing professionals as well as students from all health disciplines. Curriculum topics include best practices, technology guidance, legal and regulatory updates, and key considerations on patient safety.

These modules are designed to address the gap in training and knowledge for medical, nursing, and other health profession students and practicing health professionals.

The course consists of five modules aimed at providing knowledge and skills for effective telehealth service delivery. Information includes:

- telehealth technology
- maintaining patient privacy and confidentiality
- collecting patient data during virtual health encounters
- addressing obstacles to telehealth access
- implementing inclusive practices for patients with diverse needs
- acknowledging and addressing the unique needs of underserved populations in telehealth
- complying with ethical and regulatory requirements

If you are interested in learning more, visit <https://umsystem-mtn.catalog.instructure.com/>

Show-Me ECHO

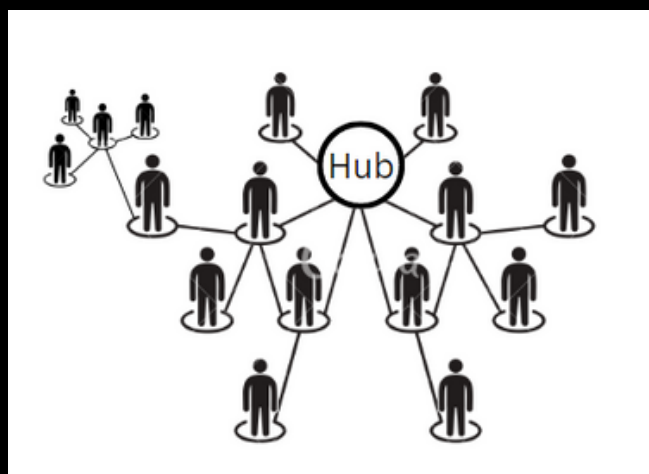
Missouri Telehealth Network's (MTN) flagship program is Show-Me ECHO (Extension for Community Healthcare Outcomes). The program started in 2014 with the support of state officials and a focus on improving the health of Missourians.

Because the ECHO Model uses videoconferencing, participants have easy access to education from their professional setting or home. Ease in access lowers the costs to participate. ECHO's case-based sessions create an opportunity to join a supportive, collaborative learning community. By working through challenges presented by participants, everyone learns to tackle complex problems.

Today, Show-Me ECHO continues to reach new participants and expand to new topics including education and community based topics that increase access to exceptional care by trusted professionals in individuals' own communities. Show-Me ECHO boasts one of the largest ECHO programs in the US and reaches every Missouri county and the City of St. Louis.

The ECHO Model

Based on a hub and spoke model, Show-Me ECHO aims to establish supportive networks of committed community members with shared interests. The hub is made up of a team of experts who share their knowledge and mentor individuals working in rural and underserved areas. Participants are the spokes bringing new knowledge into their local communities. ECHO participants often share what they learn with others in their community thereby spreading best practices even further.



History of Show-Me ECHO

11,173

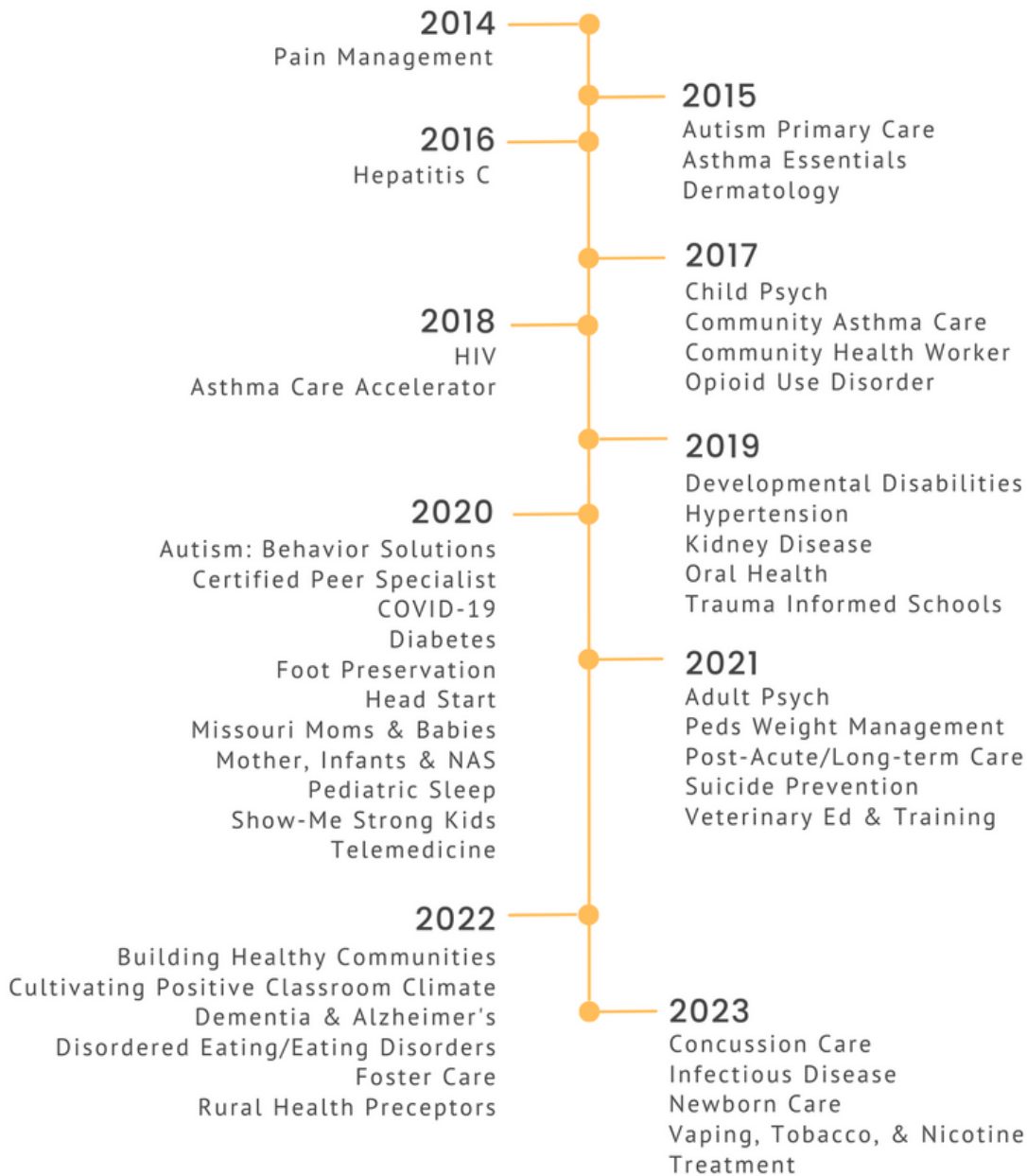
UNIQUE LEARNERS SINCE 2014

Most are Missourians, however, learners also come from 49 other states and 43 countries.

3,403

ORGANIZATIONS

Learners have come together from many organizations since Show-Me ECHO began.



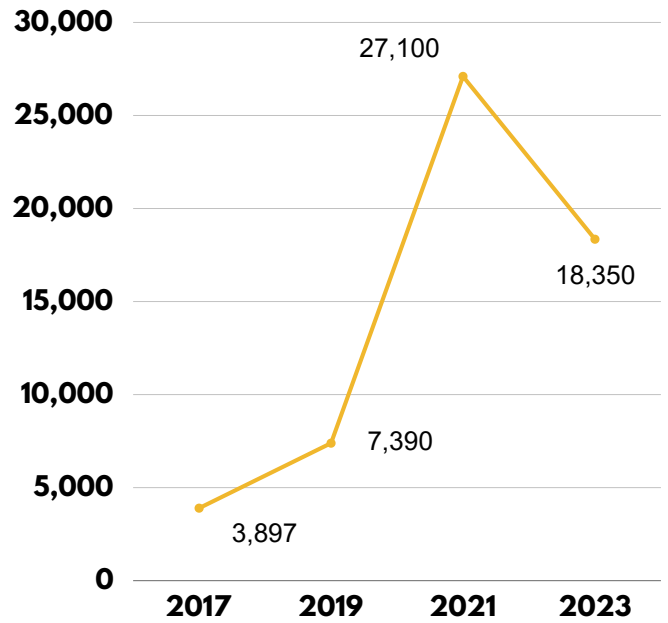
5-YEAR PERCENTAGE INCREASE (2019 TO 2023)

148%
HOURS OF INSTRUCTION

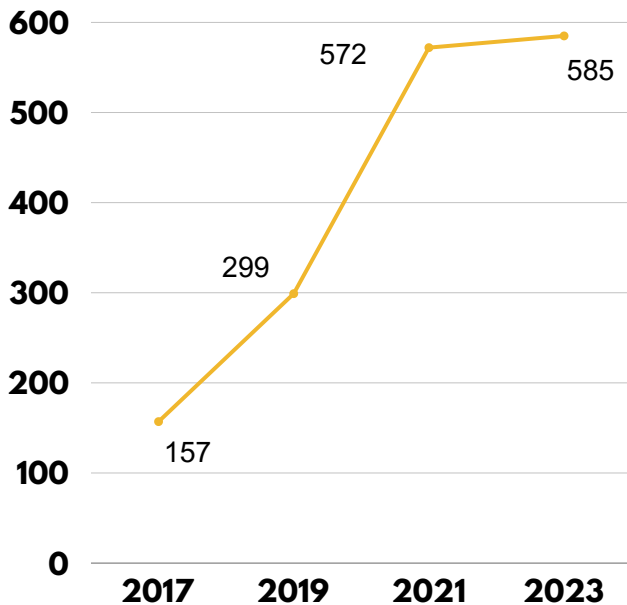
96%
NUMBER OF SESSIONS

117%
UNIQUE LEARNERS

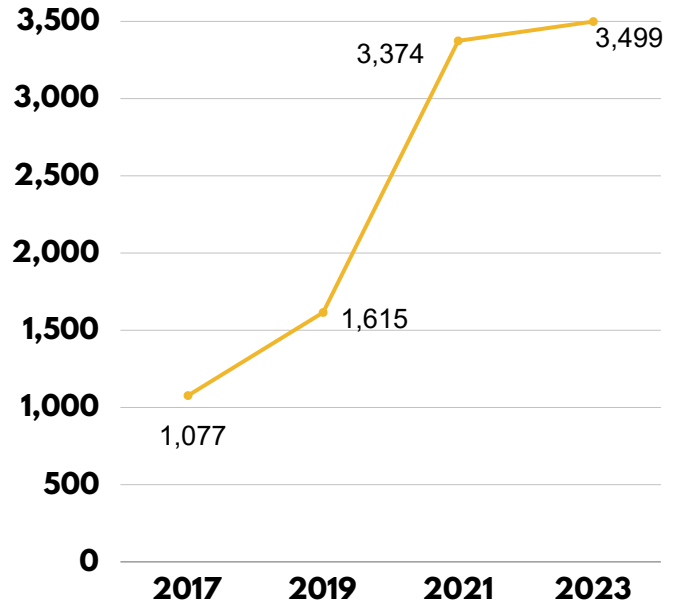
HOURS OF INSTRUCTION



NUMBER OF SESSIONS



UNIQUE LEARNERS



WE HELPED HEALTHCARE, EDUCATION, AND OTHER PROFESSIONALS LEARN AND SHARE BEST-PRACTICES.

12

LEARNING IN 2023

Interest in Show-Me ECHO remained strong in 2023. Show-Me ECHO is changing the way we share information and learn from each other in Missouri and beyond.

3,499
UNIQUE LEARNERS

18,350
PERSON-HOURS OF
INSTRUCTION

585
SHOW-ME ECHO SESSIONS



P-12 Education



Healthcare



Mental & Behavioral
Health



Social Services



Other

1548
ORGANIZATIONS

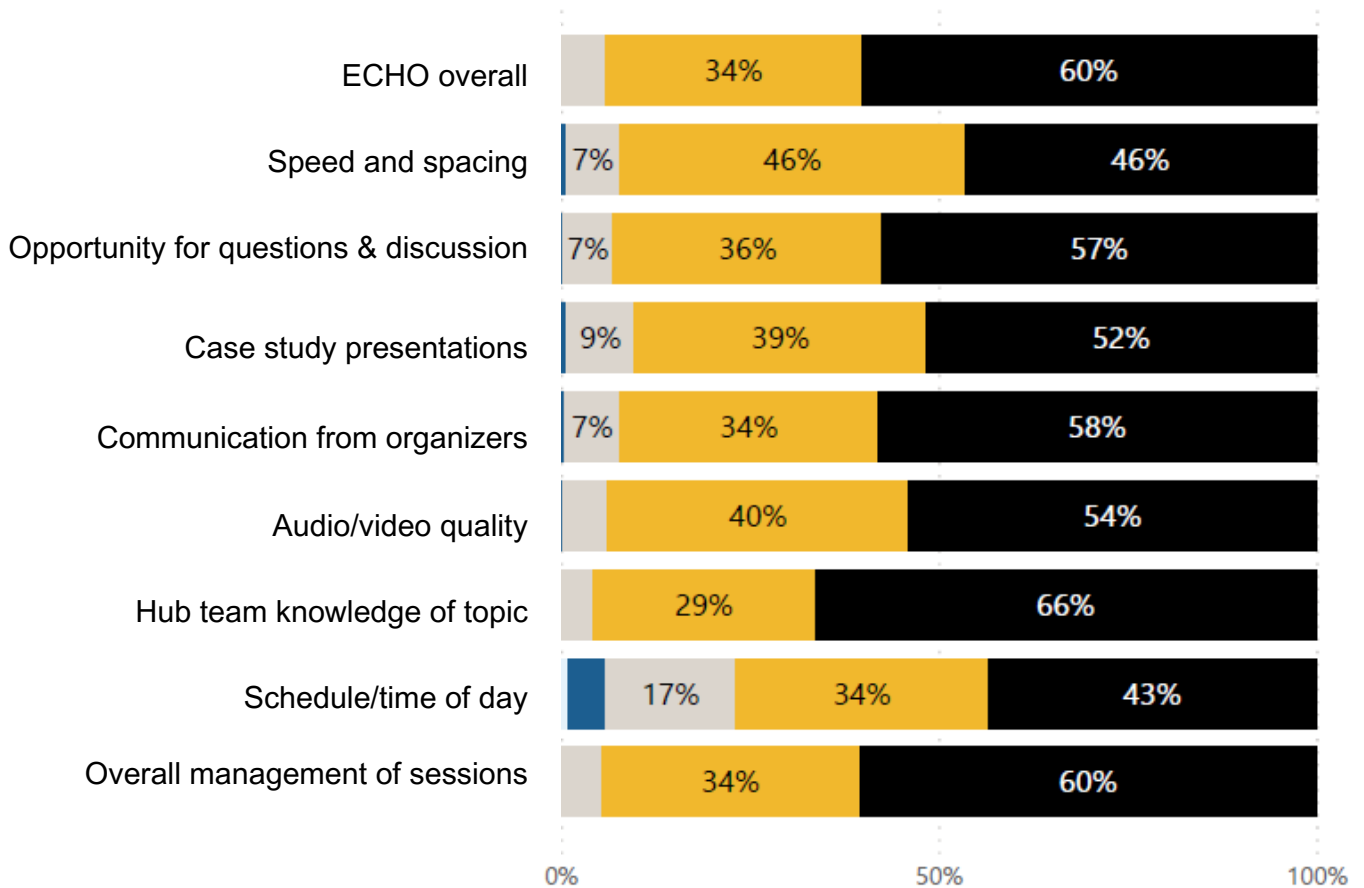


Higher Education

HOW WOULD YOU RATE THE FOLLOWING ASPECTS OF ECHO?

Based on 370 responses to our Fall 2023 participant survey, attendees are very satisfied with their learning experience. A five-point Likert scale was used. The possible responses were: poor, fair, average, good, or excellent. 95% of respondents rate their hub team members' knowledge about their topic as good to excellent. 93-94% rate their overall learning experience, management of the session, and opportunity for questions and discussion as good to excellent.

● Poor ● Fair ● Average ● Good ● Excellent



* percentages have been rounded, so may not total 100%



HEALTHY COOKING

DIABETES AND HYPERTENSION ECHOS COLLABORATE

Nutrition can be very complicated. Many people find applying research-based nutritional guidelines challenging. How can healthcare professionals support their patients in understanding dietary changes and restrictions? Show-Me ECHO’s innovative hub teams are up to the challenge. For the past couple of years, the Hypertension and Diabetes ECHOs have come together to promote healthy eating habits for individuals with high blood pressure (although everyone benefits!).

Claire Walsh, MS, RDN, LD, is a dedicated hub team member who also runs her own private practice—Clarified Nutrition—which provides functional nutrition for gut and hormone health. Claire joined the combined ECHO teams in a live “cooking demo,” emphasizing the importance of healthcare professionals providing specific examples of food choices and meal options that meet patients’ dietary needs without a lot of math and tracking.

To help patients implement information that research says is beneficial, clinicians must take a slightly different approach. Instead of focusing on food restrictions, Claire encourages clinicians to tell suggest foods to increase in their patients’ diets.



Participants were given copies of some of Claire’s tastiest dishes!

Joining the meeting live from her kitchen, **Claire Walsh, MS, RDN, LD** prepared several dishes while sharing recommendations for adding nutrients to meals. Participants were given copies of some of Claire’s tastiest dishes!

THIS KIND OF COLLABORATION EXTENDS KNOWLEDGE BEYOND THE ECHO SESSION AND THROUGHOUT THE ENTIRE COMMUNITY!

Community Health Workers

FRONTLINE AGENTS OF CHANGE

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COMMUNITY HEALTH WORKERS HELP REDUCE HEALTH DISPARITIES IN UNDERSERVED COMMUNITIES BY REACHING PEOPLE WHERE THEY LIVE, EAT, PLAY, WORK, AND WORSHIP.

Community Health Workers (CHWs) serve as frontline agents of change. They are sometimes called by other names such as community health advisors, advocates, or outreach educators. Regardless of their title, CHWs help reduce health disparities in underserved communities. These hardworking individuals typically live in the community they serve, giving them the unique ability to bring information where it is needed most - reaching people where they live, eat, play, work, and worship. This is why their impact is so powerful and so important.

CHW's scope of practice typically includes:

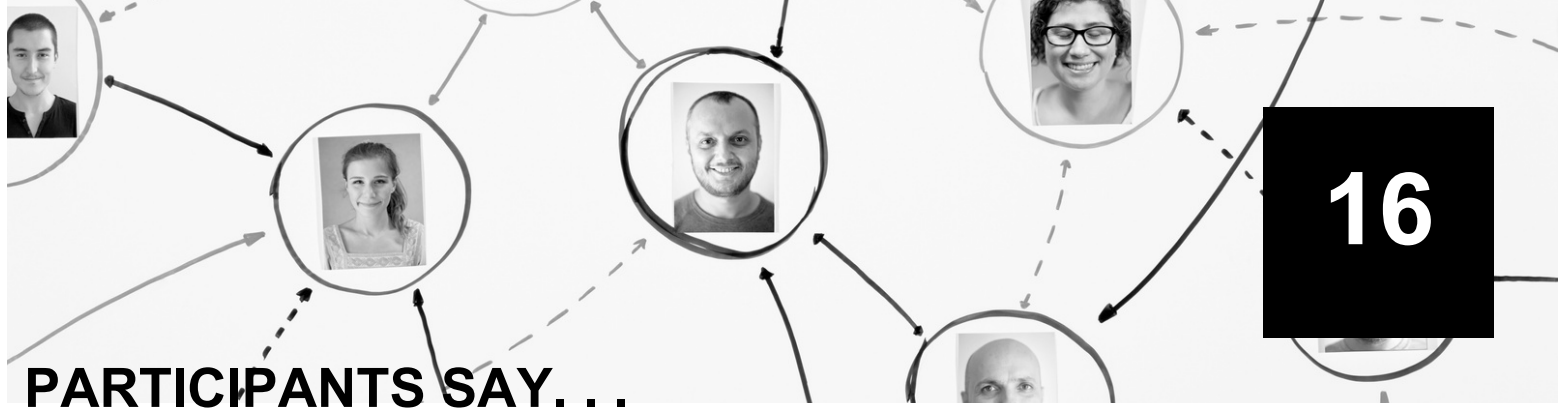
- individual support (encouragement and social support)
- care coordination (linking people to appropriate information and services)
- healthcare liaison (serving as a culturally-informed contact between individuals' healthcare systems)
- health education (providing relevant health education to reduce risk factors and promote healthy behaviors)
- advocacy (recognizing gaps and advocating for individual and community health needs).

The Community Health Worker ECHO has provided almost 5,500 hours education and mentoring to over 1,000 learners from 87 Missouri counties. With such an important role in our healthcare systems, Show-Me ECHO is honored to continue the support and learning collaborative for Community Health Workers.

"I've implemented a variety of changes based on CHW ECHO sessions I've attended. The most important being extending grace and patience to those who're justice involved."
- CHW ECHO Participant

"These (ECHOs) really help with resources for my patients and communities and learning what I can do to serve them better."
- CHW ECHO Participant

"I . . . enjoy the networking aspect and finding out what other CHW work looks like at so many different institutions and organizations. "
- CHW ECHO Participant



“I have on multiple occasions presented a challenging case and received feedback from the hub team and participants that was very helpful in managing my patient moving forward. In particular, training through ECHO Autism STAT and ECHO Autism advanced diagnosis has enabled me to provide diagnostic assessments to hundreds of families in my area who would typically be waiting over 2 years for an assessment. Those children are able to access services much more efficiently once they have a confirmed diagnosis, so I feel this is really making a significant difference for the health of these children and their families in our community.” Kelly Wright, MD

“The information learned through the echo has given me more tools to assist patients with nicotine cessation. In particular, when patients have other conditions or barriers to treatment, the various strategies help me help them with their goals of cessation.” Heather Lyons-Burne, Pharmacist

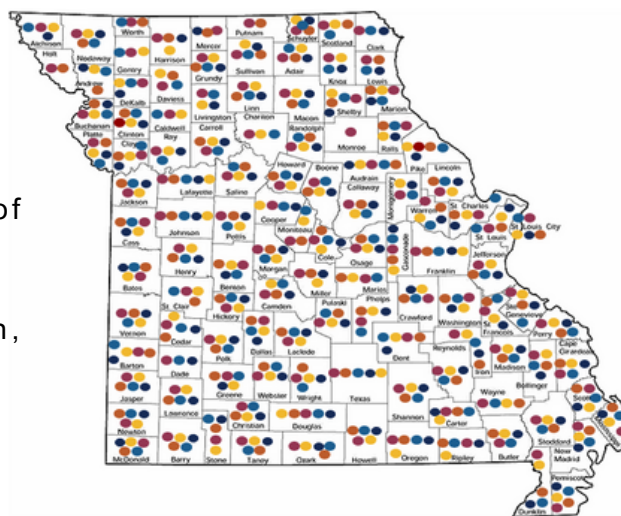
“I've received valuable recommendations for the management of challenging clinical presentations from the ECHO. It helps me feel like I'm not alone trying to care for patients. I really value the expertise of HUB members and other participants. I wish more people used the ECHO learning community. It's such a great resource and you can't beat the free CME.” Amy Braddock, MD

“I was fortunate enough to present a very complex case to the ECHO team including consideration of a diagnosis of antisocial personality disorder among others. The team provided excellent suggestions including diagnosis and treatment. What a wonderful experience consulting with Bart Andrews and a room full of experts!” John Hill, LCSW

Reaching Missourians

Addressing topics of concern to Missourians

Since its inception in 2014, Show-Me ECHO has addressed topics of importance to Missourians in clinical care, behavioral health, education, and community wellbeing.



- Adult Clinical
- Child Clinical
- Education
- COVID/Infectious Disease
- Community Support

*See appendix for ECHOs in each category

Modeled after the University of New Mexico's distinctive system for training primary care clinicians in specific disease states or conditions, MU's Show-Me ECHO program stands out as one of only 18 US superhubs that train others to establish additional ECHOs.

Participants engage with their peers and the expert hub team to exchange knowledge, provide support, offer recommendations, and give feedback. The ECHO learning process centers around an authentic, anonymized case presented by a learner. With interdisciplinary ECHO hub teams, diverse perspectives come together to approach challenges comprehensively. Through collaborative discussions on available evidence and solution formulation, all participants learn from one another, addressing local issues in context.

At no cost to participating sites or attendees, learning sessions offer free continuing education credits. The ongoing development of new Show-Me ECHOs continues to enhance healthcare access, quality, and overall well-being in communities throughout Missouri.

115*

Counties since Show-Me ECHO began

* Includes City of St. Louis

100%

of Missouri counties have benefitted**



CHANGES IN PRACTICE

- **Improved treatment and diagnosis**
- **Increased confidence**
- **Sharing information with others**

These are some examples of changes implemented by participants:

- “As a medical doctor, my exposure to oral health issues is limited, but the Oral Health ECHO model has been a transformative resource in enhancing the care I provide to my patients. The inclusion of expert dentists and pharmacists in the ECHO sessions has made a significant difference in my ability to address oral health concerns. . . . ultimately making me a more well-rounded healthcare provider.” - Oral Health Participant
- “Participation in ECHO has given me new treatment ideas that I can apply to my current patients. I have also gained a better understanding of the role of other disciplines in comprehensive management which will help me to make better suggestions for referrals in the future.” - Concussion Care Participant
- “The information I have learned in the ECHO has increased my confidence in working with clients with eating disorders and has helped me to share knowledge with colleagues in my setting.” - Disordered Eating and Eating Disorders Participant
- “I have obtained invaluable resources on recipes, nutrition resources to refer patients to, how to explain kidney labs to patients, etc. I use these resources all the time. Patients love having resources to refer to after their appointments.” - Kidney Disease Participant

97% of learners say that they are making changes to their practice based on participation in Show-Me ECHO programs.

Cases

POSITIVE OUTCOMES FOR PATIENTS

497

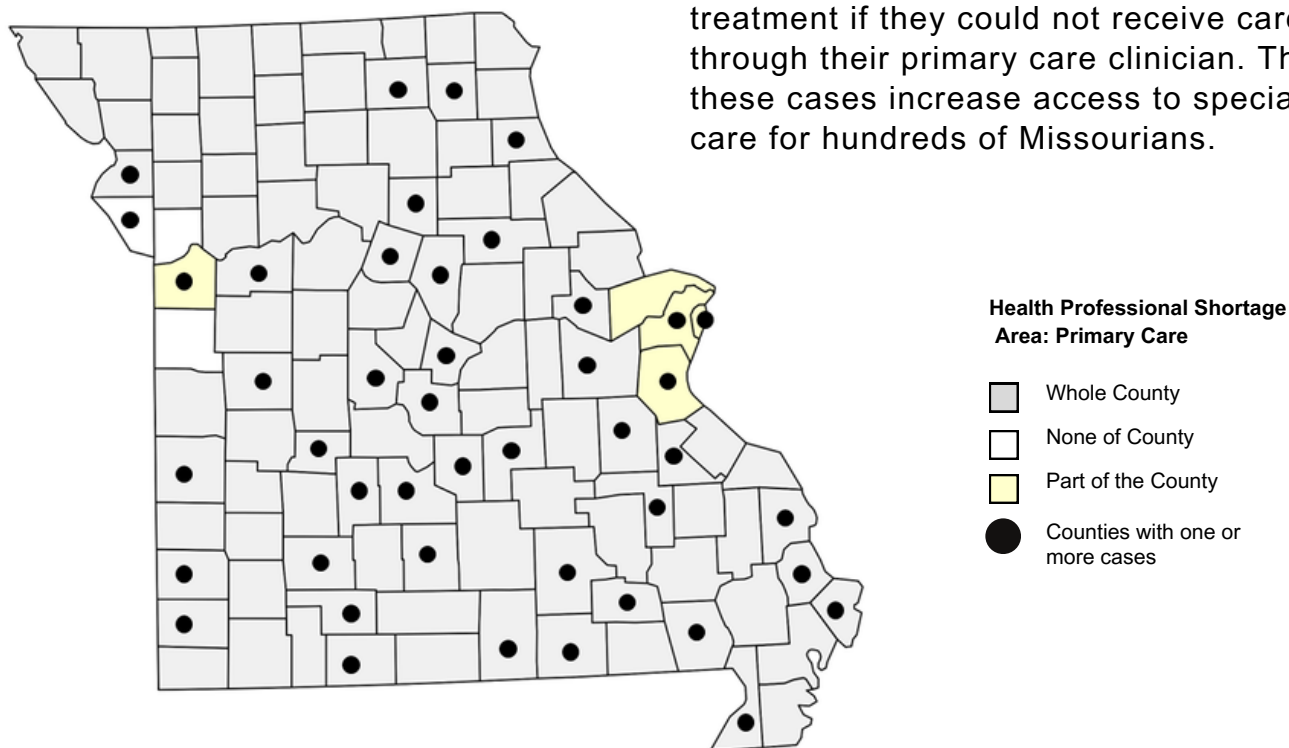
Cases discussed
across all ECHOs

99%

of cases were from
Health Professions
Shortage Areas

The presentation of patient/client cases in ECHOs offers practical and valuable learning opportunities. Participants in ECHOs can share de-identified cases that pose diagnostic or management challenges. By presenting cases, individuals can learn from peers and receive guidance from expert mentors. This knowledge can then be applied to assist not only the patient in the case but also similar patients in the clinician's practice.

In 2023, ninety-nine percent of cases were presented by participants working in primary care health professions shortage areas*. Some of these patients might have forgone treatment if they could not receive care through their primary care clinician. Thus, these cases increase access to specialty care for hundreds of Missourians.



* (<https://www.ruralhealthinfo.org/charts/5?state=MO>)

ECHOS PLANNED FOR 2024

20

Show-Me ECHO seeks to meet the needs of Missourians by consistently adding new ECHOs. These ECHOs will launch in 2024.

EMERGENCY MEDICAL SERVICES (EMS)

Emergency Medical Services (EMS) provide an essential service to all people across Missouri. Improving quality of care relies on timely and standard dissemination of knowledge.

Problem: Sharing essential information across the state to over 200 separate EMS agencies with varied education provided can be quite challenging.

Goal: Improve care at the prehospital level to support better outcomes in the hospital and post-discharge settings.

Target Audience: EMTs, paramedics, ambulance districts, critical care/flight nurses, physician medical directors.

The program aims to democratize instruction and awareness of best practices. An interdisciplinary team will offer interactive case-based learning sessions to improve prehospital outcomes and increase the overall health and well-being of Missourians.

EMS ECHO will explore new and improved approaches to treating acute injuries and illnesses in a prehospital setting to improve access to quality, evidence-based prehospital care throughout Missouri.

Sample Topics of Discussion: cardiac arrest, trauma, care for children, psychiatric emergencies, opioid overdoses, sepsis care, patient refusals, and environmental emergencies.



CARDIOVASCULAR

Problem: Each year, heart disease accounts for more than 15,000 deaths in Missouri, making it the leading cause of death in the state.

Goal: Participants will learn about early identification of cardiovascular disease to positively impact the at-risk population throughout Missouri.

Target Audience: primary care, advanced practice clinicians, community health workers, nurse care managers, other healthcare professionals.

Through this program, Show-Me ECHO aims to equip participants with the tools necessary to improve patient outcomes and reduce the burden of cardiovascular disease in Missouri. By collaborating with a team of experts, healthcare professionals will be able to implement evidence-based strategies to prevent and manage cardiovascular disease, ultimately leading to better health outcomes for patients across the state.

Sample Topics of Discussion: Prevention, early identification coronary disease, heart failure, and heart disease in women.



CELEBRATIONS



Awards and Recognitions



Medical Alumni Association Citation of Merit

Karen Edison received the University of Missouri Medical Alumni Awards Citation of Merit. The award is the highest honor presented by the School of Medicine. Those who receive the award have made significant contributions to the medical profession.

David Meyer Service Award

Kristin Sohl, MD won the David Meyers Service Award at the 2023 MetaECHO Conference. This award recognizes Dr. Sohl's dedication to addressing global inequities and health care accessibility issues through her work with Show-Me ECHO and ECHO Autism.



Presentation Awards

Second place, Best research poster award:

Mpyisi L, Long K, Becevic M. Dermatology ECHO at MU: Mentorship and educational impact of the Dermatology Extension for Community Healthcare Outcomes (ECHO) at the University of Missouri. (2023) 39th Annual Research and Creativity Activities Forum (RCAF), Graduate Professional Council (GPC), University of Missouri

First place, Basic science poster presentation:

Mpyisi L, Becevic M. Utility of the Show-Me ECHO telementoring on the education of healthcare professional students. Student National Medical Association (SNMA) Region II Medical Education Conference Research Symposium. (2023) St. Louis University, MO

Best podium presentation:

Mpyisi L, Long K, Becevic M. Dermatology ECHO at MU: Mentorship and educational impact of the Dermatology Extension for Community Healthcare Outcomes (ECHO) at the University of Missouri. (2023) American Academy of Dermatology (AAD) Annual Conference Dermatology Teachers Exchange Group, New Orleans, LA



The Global ECHO Excellence Award

Missouri Telehealth Network won a Global ECHO Excellence award at the MetaECHO Global Conference in September of 2023. The award reflected depth and breadth of programming, focus on outcomes, and success in improving the lives of patients and clinicians.

Best Innovation

Show-Me Dermatology ECHO:
Understanding diagnostic patterns
through Missouri Medicaid claims data
analysis

Travis Jackson (student), Karen Edison (Medical Director), Tracy Greever-Rice (CHP partner), Mirna Becevic (Lead Evaluator)

Winning Poster

Members of the Missouri Telehealth Network pose for a group photo at the MetaECHO Global Conference.

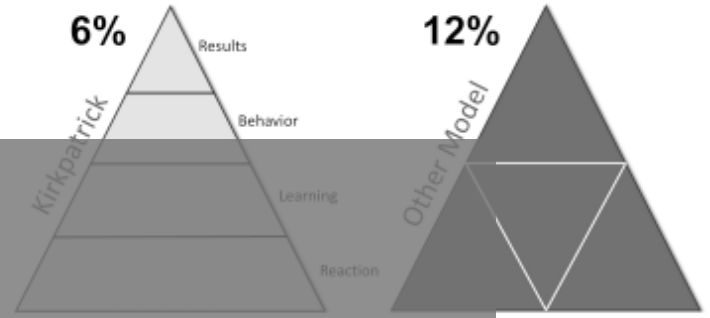
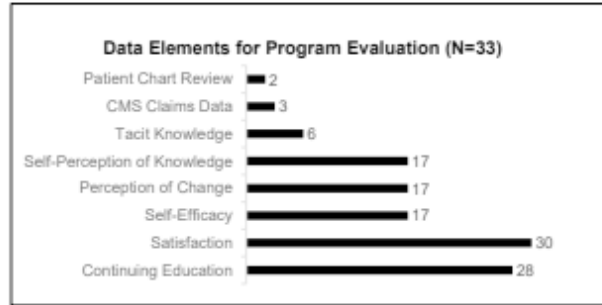


the data collection
ed by various ECHO

lucted to investigate
ks to assess the

a received indicating
cs are collected by
b, tacit knowledge by
respondents, 33 are
do not employ any
ed using Moore, 6%

follow a strict fidelity
ction and evaluation
onization of metrics
a sets for improved



PUBLICATIONS & PRESENTATIONS

healthcare Outcomes
had across 48 states.
all of excellent
primary care providers
in using case-based

choice questions was
REDCap in 2021 to
programs.
team members or
and who are ready
rily.
ct information.

CONCLUSION

- 75% (30 out of 40) of organizations are not following any established evaluation frameworks like Kirkpatrick (or) Moore (or) any other.
- The surprising lack of specific requirements for data collection and evaluation among ECHO programs underscores an opportunity for improvement, highlighting the need for standardized evaluation practices and data collection protocols.
- As the healthcare field continues to evolve, embracing more cohesive and systematic evaluation methods is paramount for the sustained success of ECHO initiatives and, consequently, for advancing healthcare outcomes on a broader scale.

FURTHER I

The proposal to
forward-looking s
substantial dataset
the overall evalu
outcomes and insi

1. Feldman, K. (2018) Isixsigma.Com.
2. 2. Sud, A., Hodgsc Framework for Co Teaching and Lea



- Conference presentations
- Peer-reviewed articles

MTN MetaECHO Sept 2023 Posters & Presentations

25

Posters

Improving Livestock Health through Veterinary Education and Training ECHO by Paula Adkins & Rachel Mutrux

Understanding Diagnostic Patterns Through Missouri Medicaid Claims Data Analysis by Travis Jackson, BS, Karen Edison, MD, Tracy Greever-Rice, PhD, Mirna Becevic, PhD

Building Regional Expertise: Perspectives from Show-Me ECHO by Mel Warne-Griggs, PhD, Lea Brandt, PhD, OTD, MA, Kimberly Hoffman, PhD, Tracy Greever-Rice, PhD

Harmonizing Metrics for Program Evaluation: A survey of National ECHO Hubs by Sara Kasukurthy, PharmD, MSHI, Kimberly Hoffman, PhD, Mirna Becevic, PhD



Presentations

Discerning the Important Features of Highly Functioning ECHOs: Fostering Learning Communities to Support Transformative Learning by Mel Warne-Griggs, PhD, Lea Brandt, PhD, Kristin Sohl, MD, Sara Kasukurthy, MA, Karen Edison, MD, Kimberly Hoffman, PhD

Data Driven Strategies for Every ECHO by Rachel Mutrux, Karen Edison, MD, Mel Warne-Griggs, PhD, Lisa Wilson, MSN, RN, AGNP-BC, Joe Kingsbury, MPA, BSBA

Show-Me Results: Utilizing Medicaid Claims Data for Research and Evaluation by Tracy Greever-Rice, PhD, Mirna Becevic, PhD., Karen Edison, MD

Considerations for Managing Your ECHO's Growth: Recommendations and Lessons Learned from 3 Superhubs by Sara Cichy, MBA, MPH, Abbey Fisher, MPA, CAPM, John Flannery, MD, FRCPC, Mel Warne-Griggs, PhD

Health Ethics ECHO: Closing the Gaps Between Ethical Intent and Response by Lea Brandt, PhD, OTD, Valerie Satkoske, & V. Satkoske, PhD & David Kappel, MD

PEER REVIEWED ARTICLES

Becevic M, Ge B, Braudis K, Cintrón C, Fleming D, Shyu CR, Edison K. **Diagnostic and treatment concordance in primary care participants and dermatologists utilizing Extension for Community Health Outcomes (ECHO).** Journal of Telemedicine and Telecare. 2023 Jan 18:1357633X221147074.

Long K, Ortega M, Pierce R, Arinze P, Propst M, Pierce L, Becevic M. **Bugs, Bumps, and Bacteria: The Role of Virtual Collaborative Learning Network in Pediatric Dermatology.** Missouri Medicine. 2023

Malow BA, Mazurek M, Stobbe G, Agrawal MM, Loftin R, Caudel D, Hess A, Westphal A, Smith J, Shouse J, Cheak-Zamora N, Sohl K. **ECHO autism adult healthcare: Training community clinicians to provide quality care for autistic adults.** Autism Res. 2023 Aug;16(8):1619-1629. doi: 10.1002/aur.2996. Epub 2023 Jul 31. PMID: 37519223.

Ogundele O, Mutrux ER, Hoffman K, Becevic M. **Improving Access to Care for Vulnerable Missourians: The Hotspot Project.** Missouri Medicine. 2023

Sohl K, Levinstein L, James A, Greer S, Boles K, Curran AB, Mahurin M, Mazurek MO, Nanclares V. **ECHO (Extension for Community Healthcare Outcomes) Autism STAT: A Diagnostic Accuracy Study of Community-Based Primary Care Diagnosis of Autism Spectrum Disorder.** J Dev Behav Pediatr. 2023 Apr 1;44(3):e177-e184. doi: 10.1097/DBP.0000000000001172. PMID: 36978232.

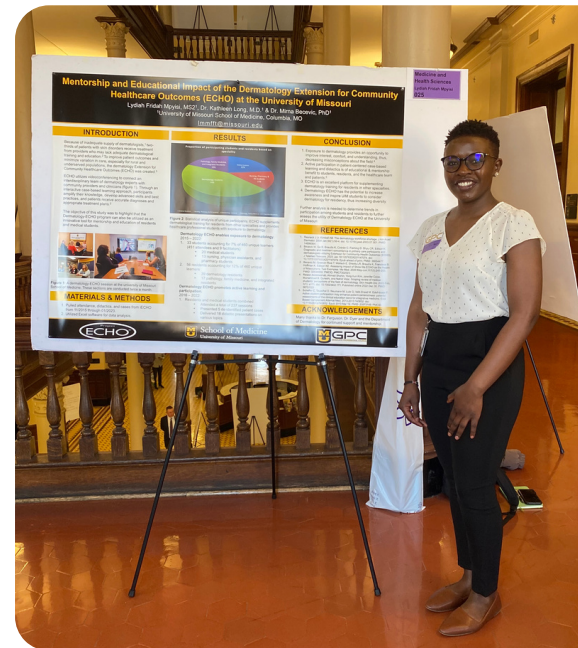
Sharing Show-Me ECHO

27

PRESENTATIONS

More than 40 Show-Me ECHO hub members, staff and leaders made presentations featuring Show-Me ECHO and the benefits of the ECHO model. A sample of groups presented to include:

- Academy of Neuro Physical Therapy Annual Conference
- American Dental Association SmileCon
- APTA Arkansas Optimize Conference
- Children's Mercy Hospital
- Infectious Diseases Interest Group
- International Community Development Society
- Kansas City University
- KS Chapter of the American Academy of Pediatrics
- Landmark Christian Recovery Conference
- Lincoln University
- Mercy Concussion Conference
- MetaECHO Conference
- Missouri Academy of Nutrition and Dietetics
- Missouri Association of School Nurses Annual Spring Conference - School Nurses Planting a Lifetime of Healthy Habits
- Missouri Pharmacy Association
- Missouri Primary Care Association
- Missouri Society of the American College of Osteopathic Family Physicians Winter Family Medicine Update
- Mizzou Therapy Services
- MO Chapter of the American Academy of Pediatrics
- MO DHSS School Health Program Weekly call for School Nurses
- MO Head Start Association, Region VII Head Start Association, MO Community Action Network
- MO PQC Convening
- MU - Pediatric Psychology
- MU Extension Administrative Leadership Meeting
- Pediatric Networking Group
- Southeast Missouri Recovery Alliance
- SSM Health Perinatal Outreach
- The Obesity Society - Annual Meeting





Sustaining MTN

MTN has been awarded more than 20 million for telehealth projects since 2014. Show-Me ECHO’s first projects in 2014 were funded with grant dollars. There have been more than \$2 million grant dollars awarded to fund Show-Me ECHO projects over the years.

Since 2015, Show-Me ECHO has also benefitted from state support. Missouri state officials and legislators recognize the impact of the ECHO model and choose to fund several of the ECHO programs each year through state appropriation. Additionally, in 2018, the Missouri Department of Social Services worked with each MO HealthNet managed care organization to implement sustained funding for Show-Me ECHO.

Without the ongoing support of these organizations, Show-Me ECHO would not be able to provide the interdisciplinary case-based learning collaboratives that impact so many Missourians.

Sustained support allows Missouri Telehealth Network to impact many Missourians.

New Grants

AHRQ 09/30/23 – 08/31/28

Advancing Long COVID Care in our Community through Access, Equity, and Collaboration

Site PI: Mirna Becevic
(PI: Abby Chang, WashU)

MO Department of Health and Senior Service 9/30/23-9/29/24

Alzheimer’s Program Services: To increase the ability to respond to Alzheimer’s Disease

PI: Lea Brandt

Appendices



A — Retired ECHOs

ECHOs that ended prior to 2023.



B — ECHOs by Category

List of ECHOs organized by category



C — Glossary

Terms related to Show-Me ECHO and the ECHO model.



D — Hub Team Members

List of 2022 Hub teams members and their organizations by ECHO.



E — Learner Survey

Details about the October 2023 participant survey.



F — Notes

Details informing the annual report.

Retired ECHOs

| ECHO | Start | End |
|--|--------------|------------------|
| Endocrinology (see Diabetes) | 2015 | 2017 reboot 2020 |
| Genetics/Genomics | 2019 | 2019 |
| Healthcare Ethics | 2017 | 2019 |
| Rural Veterans Behavioral Health (RVBH) | 2018 | 2019 |
| NAS (see Mother, Infants, & NAS) | 2019 | reboot 2020 |
| CROWN - High Risk OB (Rural) (see Missouri Moms & Babies) | 2019 | reboot 2020 |
| HOPE - High Risk OB (Urban) (see Missouri Moms & Babies) | 2019 | reboot 2020 |
| MTSS (Multi-Tier System of Supports) | 2018 | 2020 |
| SEMO Diabetes | 2019 | 2020 |
| Urban Dermatology | 2020 | 2020 |
| Managing Hospital & Patients in a Pandemic | 2020 | 2021 |
| COVID-19 & Kids (see Show-Me Strong Kids) | 2020 | reboot 2022 |
| Foot Preservation | 2020 | 2023 |

ECHOs by Category

ADULT CLINICAL

- **Adult Psych***
- **Certified Peer Specialist ***
- **Community Health Worker ***
- Concussion Care
- **Dementia & Alzheimer's***
- Dermatology
- **Developmental Disabilities***
- Diabetes
- **Disordered Eating and Eating Disorders***
- **Hepatitis C**
- **HIV**
- **Hypertension**
- **Kidney Disease: Prediction, Prevention, Protection**
- **Missouri Moms and Babies**
- Mothers, Infants & NAS
- **Opioid Use Disorder***
- Oral Health
- **Pain Management***
- **Suicide Prevention in Health Care***
- **Vaping, Tobacco, & Nicotine Treatment ***

CHILD CLINICAL

- Asthma 1 – Essentials: Impact Asthma
- Asthma 2 – QI/MOC: Asthma Care Accelerator
- Asthma 3 – Community: Asthma Care and Education
- Autism (Clinical Health)
- **Autism: Behavior Solutions in Schools ***
- **Child Psych***
- Concussion Care
- Dermatology
- **Disordered Eating & Eating Disorders ***
- **Foster Care ***
- Missouri Moms and Babies
- Mothers, Infants & NAS
- Newborn Care
- Oral Health
- **Pediatric Sleep ***
- **Pediatric Weight Management ***
- Show Me Strong Kids
- **Suicide Prevention in Health Care ***

COMMUNITY AND WELLNESS

- Asthma 1 – Essentials: Impact Asthma
- Asthma 2 – QI/MOC: Asthma Care Accelerator
- Asthma 3 – Community: Asthma Care and Education
- Building Healthy Communities
- **Certified Peer Specialist ***
- **Community Health Worker ***
- **Disordered Eating & Eating Disorders ***
- **Foster Care ***
- Infectious Disease
- Oral Health
- **Suicide Prevention in Health Care ***
- **Vaping, Tobacco, & Nicotine Treatment ***
- Veterinary Education & Training

EDUCATION

- **Autism: Behavior Solutions in Schools ***
- Concussion Care
- Cultivating Positive Classroom Climate – High School
- Head Start
- **Trauma-Informed Schools ***
- **Vaping, Tobacco, & Nicotine Treatment***

* Behavioral/Mental Health ECHOs

Glossary

Attendee (also spoke) = Individual attending ECHO to learn and be mentored in a condition

Case = Presentation and discussion of a challenge encountered by an ECHO learner in the course of their interaction with patients/clients, all identifying information having been removed

Clinical ECHO = An ECHO focusing on a medical condition. These ECHOs are designed to allow Primary Care Clinicians to treat their patients without specialist referrals.

Community ECHO = An ECHO focusing on non-medical community concerns, representing an extension of the ECHO model. These ECHOs may focus on health-related concerns, but their target audience is not typically Primary Care Clinicians.

Coordinator = An MTN staff member whose role is to help the hub team run the ECHO by handling all administrative matters

COVID ECHO = An ECHO focusing on COVID-related medical and/or community concerns

Didactic = Short (15-minute) lecture on a topic relevant to the ECHO

ECHO = Extension for Community Healthcare Outcomes

ECHO model = Through innovative telementoring, the ECHO model uses a hub-and-spoke knowledge-sharing approach where expert teams lead virtual clinics, amplifying the capacity for clinicians to deliver best-in-practice care to the underserved in their own communities. (<https://hsc.unm.edu/echo/>)

Facilitator (also hub team member) = Member of a hub team

Hours of instruction or instructional hours =
(Total learners) × length of session (usually 1 hour)

Hub team = Carefully selected team of content and mentoring experts who devise didactic lectures and facilitate an ECHO

Learners = Combination of attendees (spokes) and facilitators (hub team members)

Glossary

MTN = Missouri Telehealth Network

Organization = The place of employment of an ECHO learner. Note that different clinic locations count as different organizations.

Primary Care Clinician (PCC) = A health care practitioner who sees people that have common medical problems (<https://medlineplus.gov/medlineplus.html>). In this report, we define PCCs as:

- | | |
|---|--|
| <ul style="list-style-type: none"> • Physicians • Nurse Practitioners • Physician Assistants | <p>Who practice in the areas of:</p> <ul style="list-style-type: none"> • Family and Community Medicine • Pediatrics • Geriatrics • Internal Medicine • Obstetrics and Gynecology |
|---|--|

Session = One instance (between an hour and an hour and a half) of a virtual discussion around the ECHO topic. Show-Me ECHO sessions occur weekly, bi-monthly, or monthly depending on the ECHO topic

Session attendance = Number of individuals present during an ECHO session

Show-Me ECHO = The ECHO programs administered by MTN in the state of Missouri

Spoke (also attendee) = Individual attending ECHO to learn and be mentored by facilitators

Total attendees = Sum across all sessions of the number of attendees present (an attendee present for two sessions would be counted twice, for three sessions, thrice, etc.)

Total facilitators = Sum across all sessions of the number of facilitators present (a facilitator present for two sessions would be counted twice, for three sessions, thrice, etc.)

Total learners = Total facilitators + Total attendees = Sum across sessions of the session attendance

Unique attendees = Count of individual attendees participating in any session during the reporting year (counted once regardless of how many sessions attended)

Unique facilitators = Count of individual facilitators participating in any session during the reporting year (counted once regardless of how many sessions attended)

Unique learners = Count of individual learners participating in any session during the reporting year (counted once regardless of how many sessions attended)

Hub Teams

Experts practice throughout the state

299 experts served as hub team members in 2023. They come from 30 different Missouri counties and the City of St. Louis.

34

299

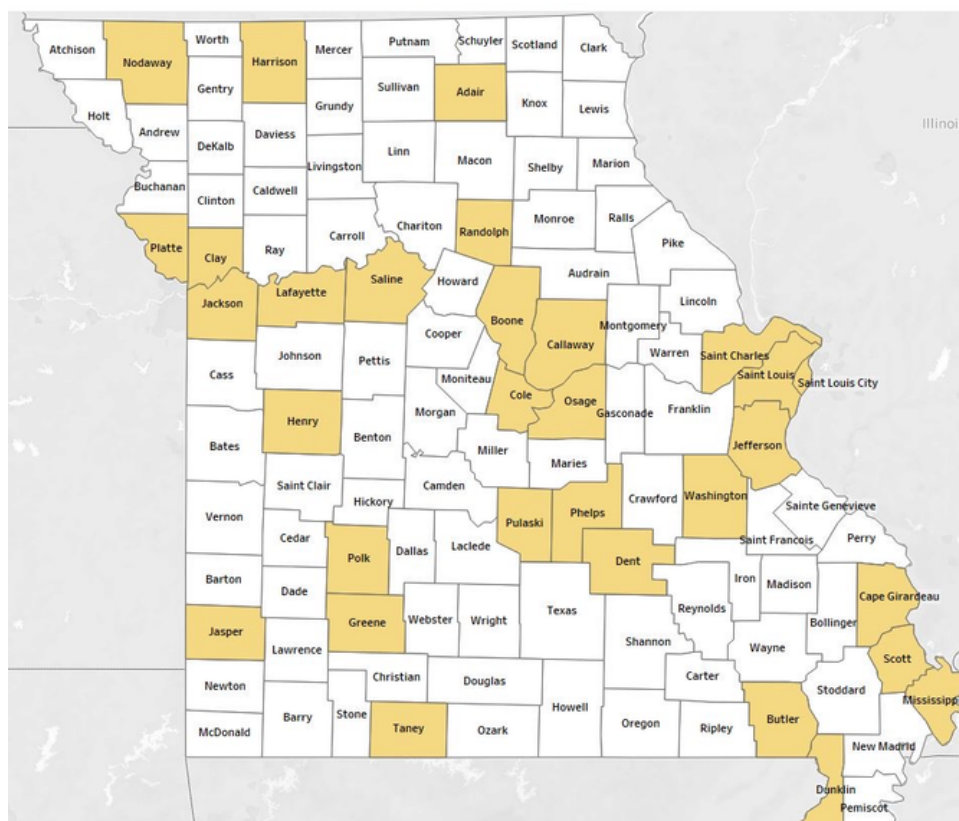
Hub Team Members

served in 2023

30

Counties

and the City of St. Louis



ECHO sessions are facilitated by a multidisciplinary team of specialists, called a hub team. The hub team consists of local and regional specialists, persons with lived experience, and subject matter experts. Show-Me ECHO strives to recruit hub team members that reflect the population served by the ECHO and from across the state.

Hub team members share their knowledge through making presentations and mentoring attendees who present de-identified cases and receive recommendations using a guided practice model. The ECHO philosophy of “all teach all learn” means that in addition to sharing their expertise, hub team members gain a better understanding of the challenges participants and those they serve encounter in underserved areas.

Hub Team Members

Serving in 2023

ADULT PSYCH

Angeline Stanislaus - Missouri Department of Mental Health
 Kimberly O'Leary - University of Missouri - School of Health Professions
 Mirna Herrera - University Health
 Pappa Ehimare - Compass Health Network
 Ravdeep Khanuja - Family Counseling Center
 Roger Sommi - University of Missouri - Kansas City School of Pharmacy
 Shawn McDaniel - University Health

ASTHMA

Benjamin Francisco - University of Missouri - Department of Child Health
 Bernard Eskridge - University of Missouri - South Providence Pediatrics
 Claudia Preuschoff - Poplar Bluff Pediatric Associates
 John Kraemer - Southeast Missouri State University
 John Spivey - Mercy Clinic - Children's Respiratory & Sleep Medicine
 Michelle Dickens - CoxHealth - Ferrell-Duncan Clinic
 Paul Foreman - University of Missouri - Department of Child Health
 Ragini Kapoor - University of Missouri Health System
 Rebecca Brown - Asthma Ready Communities
 Tammy Rood - University of Missouri - Department of Child Health

ASTHMA CARE ACCELERATOR

Benjamin Francisco - University of Missouri - Department of Child Health
 Claudia Preuschoff - Poplar Bluff Pediatric Associates
 John Spivey - Mercy Clinic - Children's Respiratory & Sleep Medicine
 Michelle Dickens - CoxHealth - Ferrell-Duncan Clinic
 Paul Foreman - University of Missouri - Department of Child Health
 Rebecca Brown - Asthma Ready Communities
 Tracy Godfrey - Access Family Care
 Ragini Kapoor - University of Missouri Health System

ASTHMA CARE & EDUCATION

Benjamin Francisco - University of Missouri - Department of Child Health
 Deb Cook - Kennett Public Schools
 Elizabeth Friedman - Children's Mercy Hospital
 John Kraemer - Southeast Missouri State University
 Layla Snipes - Saint Francis Medical Center
 Michelle Dickens - CoxHealth - Ferrell-Duncan Clinic
 Paul Foreman - University of Missouri - Department of Child Health
 Rebecca Brown - Asthma Ready Communities
 Shelley Cooper - Diversity Telehealth, LLC
 Tammy Rood - University of Missouri - Department of Child Health

Hub Team Members

AUTISM: BEHAVIOR SOLUTIONS

Amber Lashley - University of Missouri - Women's & Children's Hospital
 Amy Longenecker - Lived Experience Expert
 Cy Nadler - Children's Mercy Hospital
 John Mantovani - Mercy Kids Autism Center
 Kayleigh Fogle - Easterseals Midwest
 Marjorie Cole - Missouri Department of Health & Senior Services

AUTISM PRIMARY CARE

Alicia Curran - University of Missouri - Department of Pediatrics
 Kristin Sohl - University of Missouri - Department of Pediatrics
 Melinda Odum - University of Missouri - Department of Pediatrics
 Rachel Brown - University of Kansas School of Medicine - Wichita
 Sheila Chapman - Thompson Center for Autism and Neurodevelopmental Disorders
 Valeria Nanclares - University of Missouri Health System

BUILDING HEALTHY COMMUNITIES

Felisha Richards - Community Asset Builders, LLC
 Jeremy Milarsky - University of Missouri - Center for Health Policy
 Rachel O'Halloran - University of Missouri Extension
 Sarah Hultine Massengale - University of Missouri Extension
 Sawiyah "Chiquita" Chanay - University of Missouri Extension
 Sherry Lea - Council for a Healthy Dent County
 Tracy Greever-Rice - University of Missouri - Center for Health Policy

CERTIFIED PEER SPECIALIST

D'Markus Thomas-Brown - in2Action - Reentry Opportunity Center
 Lori Franklin - Missouri Department of Mental Health
 Michael Eanes - Burrell Behavioral Health
 Mirna Herrera - University Health
 Sarah Earll - DBSA St. Louis Empowerment Center
 Scott Breedlove - Missouri Credentialing Board
 Sheila Guinn-Peters - Compass Health Network
 Sheila Mihalick - DBSA St. Louis Empowerment Center

Hub Team Members

CHILD PSYCH

Arpit Aggarwal - Missouri Psychiatric Center
Austin Campbell - University of Missouri Health System
Garima Singh - Burrell Behavioral Health
Sara Wilson - Burrell Behavioral Health
Suzanne Taggart - Compass Health Network
Tracy Stroud - University of Missouri - Thompson Center

COMMUNITY HEALTH WORKER

Amy Summers - Northeast Missouri Health Council
Bryan Carcamo – KC Care Health Center Jann "Payree" Short - Ozarks Technical
Community College
Jill Lucht - University of Missouri - Center for Health Policy
Lorna Miles - Randolph County Caring Community Partnership
Melanie Calhoun - Betty Jean Kerr People's Health Centers
Stacey Robertson - Randolph County Caring Community Partnership
Suzanne Smith - Health Care Collaborative of Rural Missouri
Telesha Bennett - KC Care Health Center
Treva Smith - KC Care Health Center

CONCUSSION CARE

Annell Boland - Mizzou Therapy Services
Becky Bliss - University of Missouri
Chamelle March - University of Missouri
Kitty Newsham - Saint Louis University
Komal Ashraf - University of Missouri Health System
Mark Halstead - Washington University
Michael Rippee - University of Kansas Health System
Michelle Wheeler - University of Missouri Health System
Mike Mohrland - University of Missouri

Hub Team Members

COVID - 19

Christelle Iboudo - Children's Mercy Hospital
 Christopher Sampson - University of Missouri Health System
 George Turabelidze - Missouri Department of Health & Senior Services
 Gregory Storch - Washington University School of Medicine
 Jason Burnham - Washington University School of Medicine
 Jessica Stultz - Missouri Hospital Association
 Keri Barclay - Missouri Hospital Association
 Lea Brandt - University of Missouri Health System
 Robin Trotman - CoxHealth - Infectious Diseases Specialty Clinic
 Sarah Boyd - Saint Luke's Health System
 Taylor Nelson - University of Missouri Health System

CULTIVATING POSITIVE CLASSROOM CLIMATE - HIGH SCHOOL

Carolyn Barber - University of Missouri
 Christi Bergin - University of Missouri - College of Education
 Dan Gordon - Northwest Missouri State University
 Jennifer Foster - University of Missouri - eMINTS National Center
 Lindsay Brockmeier - University of Missouri - College of Education

DEMENTIA & ALZHEIMER'S

Andrea Denny - Washington University School of Medicine
 Jennifer Phillips - Washington University - Knight Alzheimer Disease Research Center
 Joel Shenker - University of Missouri Health System
 Lea Brandt - University of Missouri Health System
 Lenise Cummings-Vaughn - Washington University School of Medicine
 Sara Hill - CoxHealth
 Steven Stoner - University of Missouri - Kansas City School of Pharmacy
 Tim Holden - Washington University School of Medicine

DERMATOLOGY

Allison Sindle - Missouri Delta Dermatology
 Jon Dyer - University of Missouri - Department of Dermatology
 Kari Martin - University of Missouri - Department of Dermatology
 Kathleen Long - Harry S. Truman Memorial Veteran's Hospital
 Kristen Fernandez - University of Missouri - Department of Dermatology

Hub Team Members

DEVELOPMENTAL DISABILITIES

Dennis "Buzz" Bledsoe - Bledsoe Professional Services
 Jessica Hellings - University Health - Behavioral Health
 Joshua Wood - Fulton State Hospital
 Laura Hanneke - Pathways to Independence
 Melissa Weber - Best Abilities
 Preston Howerton - Howerton Integrated Medical Clinic
 Steven Stoner - University of Missouri - Kansas City School of Pharmacy
 Theresa Roberts - Missouri Department of Mental Health

DIABETES

Betty Drees - University of Missouri - Kansas City School of Medicine
 Brandon Barthel - University of Missouri
 Carol Recklein - BJC Hospital
 Kunal Malhotra - University of Missouri - Nephrology Department
 Raj Bhattacharya - University Health
 Sarah Wood - University of Missouri Extension
 Steven Douglas - Ferguson Medical Group
 Tripp Logan - L & S Pharmacy
 Waqar Salam - Clay-Platte Family Medicine Clinic

DISORDERED EATING & EATING DISORDERS

Annie Seal - None
 Beth Harrell - Beth Harrell, RD
 Beth Monson - University of Missouri Extension
 Beth Shoyer - University of Missouri Counseling Center
 Caroline Rudnick - McCallum Place Eating Disorder Center
 Ginger Meyer - University of Missouri Health System
 Jenny Copeland - Reconnect Eating Disorders Clinic at Ozark Center
 Melissa Lawson - University of Missouri - Department of Child Health
 Rebekah Freese - St. Louis Behavioral Medicine Institute
 Stephanie Bagby-Stone - University of Missouri Health System

FOSTER CARE

Bill Prince - Greene County Juvenile Office
 Christina Barnett - Missouri Department of Social Services
 Claire Hickey - Children's Mercy Hospital
 Emily Killough - Children's Mercy Hospital
 Jamie Scaccia - FamilyForward
 Jill Pingel - Missouri Department of Social Services - Children's Division
 Laine Young Walker - Missouri Psychiatric Center
 Lori Ross - Foster Adopt Connect
 Maya Moody - University of Missouri - Department of Child Health

Hub Team Members

HEAD START

Lynette Fowler - Mid-Area Regional Council Head Start
Nathan Beucke - University Physicians - South Providence Pediatrics
Tammie Benton - Jefferson Franklin Community Action Corporation
Tina Bernskoetter - Missouri Head Start Association
Vicki Davolt - University of Missouri Health System

HEPATITIS C

Eyad Alsabbagh - Saint Louis University Hospital
Janice Davis - Missouri Digestive Health Center
Joshua Moore - MO HealthNet Division - Department of Social Services
Kelly Wever - SSM Health Saint Louis University Hospital
Laura Marks - Washington University
Rachel Melson - Swope Health Services

HIV

Blair Thedinger - KC Care Health Center
Dima Dandachi - University of Missouri Health System
Kalisha Dixon - AIDS Project of the Ozarks
LaTrischa Miles - KC Care Health Center
Mark Sawkin - KC Care Health Center & University of Missouri
Phyllis Ballard - Washington University Pediatric Infectious Diseases

HYPERTENSION

Claire Walsh - YMCA of Greater Kansas City
Garth Graham - None
Jignesh Shah - University Health
Joseph (Joey) Lightner - University of Missouri - Kansas City School of Nursing & Health Studies
Lisa Cillessen - University of Missouri - Kansas City School of Pharmacy
Marnice Willis - University Health
Rick Lustig - Saint Luke's Hospital
Supavan Brown - University Health
Willie Lawrence - Research Medical Center

Hub Team Members

INFECTIOUS DISEASE

Christopher Sampson - University of Missouri Health System
 Drew Zimmer - CoxHealth – National
 George Turabelidze - Missouri Department of Health & Senior Services
 Gregory Storch - Washington University School of Medicine
 Jason Burnham - Washington University School of Medicine
 Keri Barclay - Missouri Hospital Association
 Robin Trotman - CoxHealth - Infectious Diseases Specialty Clinic
 Sarah Boyd - Saint Luke's Health System
 Taylor Nelson - University of Missouri Health System

KIDNEY DISEASE

Cate Rudder - Kilgore's Medical Pharmacy
 David Wooldridge - Saint Luke's Hospital
 Deanna Sybert - None
 Elizabeth Montgomery - National Kidney Foundation
 Jennifer Jackson - Cosmopolitan International Diabetes & Endocrinology Center
 Kelly Hinds - Kelly Hinds, RD
 Kunal Malhotra - University of Missouri - Nephrology Department
 Laurie Hines - Missouri Kidney Program
 Marian Carr - Minority Donor Awareness Society
 Melissa Bensouda - Bensouda Management Services, LLC
 Preethi Yerram - University of Missouri Health System
 Yolanda Thompson-Martin - University Health

MISSOURI MOMS & BABIES

Alicia Forinash - University of Health Sciences & Pharmacy
 Alison Williams - Missouri Hospital Association
 Amanda Stephens – None
 Anjali Anders - University of Missouri - Women's & Children's Hospital
 Bobbi Lakin - Family Care Health Centers
 Eboni January - Doctor EJ's Fitness Bootcamp
 Jennifer Salmons - University of Missouri Health System
 Karen Florio - University of Missouri Health System - Missouri Center for Maternal/Fetal
 Medicine
 Laura Vricella - SLUCare Physicians Group - Bellevue Avenue
 Shannon Lenze - Washington University School of Medicine

Hub Team Members

MOTHERS, INFANTS & NAS

Alan Barnette - Saint Francis Healthcare System
 Alison Williams - Missouri Hospital Association
 Becky Boedeker - SSM Health St. Mary's Hospital - Maternal & Fetal Medicine
 Elizabeth Simpson - Children's Mercy Hospital
 Emily Johnson - SSM Health Cardinal Glennon Children's Medical Center
 Katie Althoff-Moore - SSM Health St. Mary's Hospital
 Katie Hocker - Children's Mercy Hospital
 Kimberly Spence - Saint Louis University School of Medicine
 Mary Hope - SSM Health Cardinal Glennon Children's Medical Center
 Melissa Odegard-Koester - Southeast Missouri State University
 Misty Allen - Missouri Department of Social Services - Children's Division
 Niraj Chavan - Saint Louis University

NEWBORN CARE

Akshaya Vachharajani - University of Missouri - Department of Child Health
 Alan Barnette - Saint Francis Healthcare System
 Anjali Anders - University of Missouri - Women's & Children's Hospital
 Christine McQuay - University of Missouri Health System
 Dasi Schlup - University of Missouri - Women's & Children's Hospital
 Erin Martin - University of Missouri - Women's & Children's Hospital
 Jennifer Hanford - University of Missouri - Women's & Children's Hospital
 Roxana Ionas - Northeast Missouri Health Council - Crown Drive
 Traci Johnson - University Health
 Whitney Krueger - University of Missouri - Women's & Children's Hospital

OPIOID USE DISORDER

Angeline Stanislaus - Missouri Department of Mental Health
 Douglas Burgess - University Health
 Drew Shoemaker - Burrell Behavioral Health
 Eric Shult - University Health
 Evan Schwarz - Washington University School of Medicine
 Jacquetha Decker - Central Ozarks Medical Center
 Percy Menzies - Assisted Recovery Centers of America

Hub Team Members

ORAL HEALTH

Craig Hollander - Missouri Academy of Pediatric Dentistry
 Dima Dandachi - University of Missouri Health System
 Joseph Shea - St. Louis Prosthodontics
 Keerthana Satheesh - University of Missouri - Kansas City School of Dentistry
 Owen Lonergan - University of Missouri - Kansas City School of Dentistry
 Richard Vargo - ATSU Missouri School of Dentistry & Oral Health
 Romana Muller - ATSU Missouri School of Dentistry & Oral Health
 Sara Richter - University of Health Sciences & Pharmacy
 Stephanie Crist - Silver Lining Pharmacy Consulting LLC
 Brett Waite – Southwest Oral Surgery

PAIN MANAGEMENT

Azam Chizari - University Health
 Michelle Gates - University Health
 Mirissa Corbin - University Health
 Muhammad Farhan - University Health
 Richard Nobles - University of Kansas Health System
 Sarah Young - University Health
 Tony Brenneke – State Technical College of Missouri

PEDIATRIC SLEEP

Aneesh Tosh - University of Missouri - Pediatric & Adolescent Specialty Clinic
 David Ingram - Children's Mercy Hospital
 John Spivey - Mercy Clinic - Children's Respiratory & Sleep Medicine
 Steve Sheldon - Lurie Children's Hospital of Chicago
 Tracy Stroud - University of Missouri - Thompson Center
 Zarah Ner - University of Missouri - Women's & Children's Hospital

PEDIATRIC WEIGHT MANAGEMENT

Amy Braddock - University of Missouri Health System
 Angela Lima - Washington University School of Medicine
 Cristina Fernandez - Children's Mercy Hospital
 Debra Schumer - None
 Denise Wilfley - Washington University School of Medicine
 Julie Benard - Saint Francis Healthcare System
 Karen Stephens - Children's Mercy Hospital
 Meredith Dreyer Gillette - Children's Mercy Hospital
 Sarah Hampl - Children's Mercy Hospital

Hub Team Members

POST-ACUTE CARE/LONG-TERM CARE

Amy Vogelsmeier - University of Missouri - Sinclair School of Nursing
 Angela Sanford - Saint Louis University School of Medicine
 Kent Kirkwood - Lenoir Woods
 Lea Brandt - University of Missouri Health System
 Lisa Wilson - Missouri Telehealth Network
 Lori Popejoy - University of Missouri
 Marla Berg-Weger - Saint Louis University
 Susan Elliott - Saint Louis University

RURAL HEALTH PRECEPTORS

Carla Dyer - University of Missouri Health System
 Christine Heath - University of Missouri - College of Veterinary Medicine
 University of Missouri - Kansas City School of Pharmacy at MU
 Erica Ottis - University of Missouri - Kansas City School of Pharmacy at MU
 James Felts - Mercy Clinic Family Medicine
 Kelly Cochran - Community Health Network
 Linda Headrick - University of Missouri Health System

SHOW ME STRONG KIDS

Amruta Padhye - University of Missouri - Department of Child Health
 Christelle Ilboudo - Children's Mercy Hospital
 Elizabeth Friedman - Children's Mercy Hospital
 Jason Newland - Washington University School of Medicine
 Jennifer Blacksmith - Northeast Missouri Health Council
 Jennifer Goldman - Children's Mercy Hospital
 Jennifer Schuster - Children's Mercy Hospital
 Kristin Sohl - University of Missouri - Department of Child Health
 Luke Gard - Children's Mercy Hospital
 Marjorie Cole - Missouri Department of Health and Senior Services
 Maya Moody - University of Missouri - Department of Child Health
 Meelie Bordoloi - University of Missouri - Department of Psychiatry

SUICIDE PREVENTION IN HEALTH CARE

Bart Andrews - Behavioral Health Response
 Beth Zimmer - Chris Carter Charity for Life
 Donald Bohnenkamp - Washington University - Department of Psychiatry
 Kirsti Millar – ReDiscover – Lee's Summit
 Randy Jotte - Washington University School of Medicine
 Rebecca Hensley-Ward - University Health - Lakewood Counseling Services
 Richard Nobles - University of Kansas Health System
 Robert Poirier - Washington University School of Medicine
 Shelby Lang - Center for Behavioral Medicine

Hub Team Members

TELEMEDICINE

Eve-Lynn Nelson - University of Kansas Medical Center
 Karen Edison - Missouri Telehealth Network
 Kristy Gagnon - University of Kansas Medical Center
 Molly Brown - Heartland Telehealth Resource Center
 Rachel Mutrux - Missouri Telehealth Network
 Robert Stiles - University of Kansas School of Medicine
 Tim Davis - Oklahoma State University Center for Health Sciences

TRAUMA INFORMED SCHOOLS

Aaron Knipmeyer - Lafayette County C-1 School District
 Cecilia Belser-Patton - Alive and Well Communities
 Deb Cook - Kennett Public Schools
 Nicky Bennett - Lexington R-V School District
 Rachel Jones - Missouri Department of Mental Health
 Takeisha Brown - Kansas City Public Schools
 Taylor Decker - Rockwood School District

VAPING, TOBACCO AND NICOTINE TREATMENT

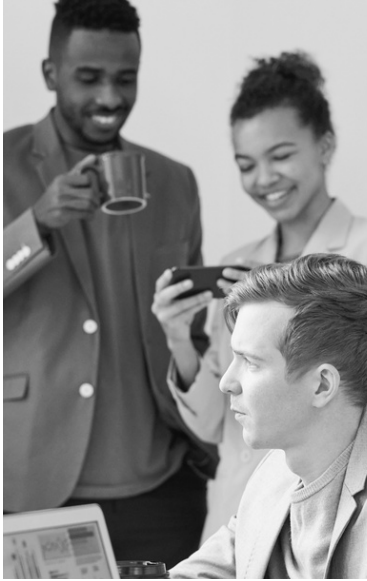
Bettina Drake - Washington University School of Medicine
 Bill Snook - Kansas City Health Department
 Brett Froeliger - University of Missouri
 Heather Lyons-Burney - University of Missouri - Kansas City School of Pharmacy
 Jenna Wintemberg - University of Missouri - School of Health Professions
 Jim Brawner - CoxHealth Center Branson
 Kevin Everett - University of Missouri - Department of Family and Community Medicine
 Li-Shiun Chen - Washington University School of Medicine
 Mardi Smith - Missouri Department of Health & Senior Services
 Thuylinh Pham - Children's Mercy Hospital
 Valerie Howard - Missouri Department of Health & Senior Services

VETERINARY EDUCATION & TRAINING

Brian Shoemake - University of Missouri - College of Veterinary Medicine
 Chris Baughman - Lincoln University
 Cody Secrest - Countryside Veterinary Clinic
 Corinne Bromfield - University of Missouri - Veterinary Continuing Education
 Craig Payne - University of Missouri
 Pamela Adkins - University of Missouri - College of Veterinary Medicine
 Scott Pooch - University of Missouri
 Tamara Gull - University of Missouri - Veterinary Medical Diagnostic Laboratory
 Tim Evans - University of Missouri - Veterinary Medical Diagnostic Laboratory

Learner Survey

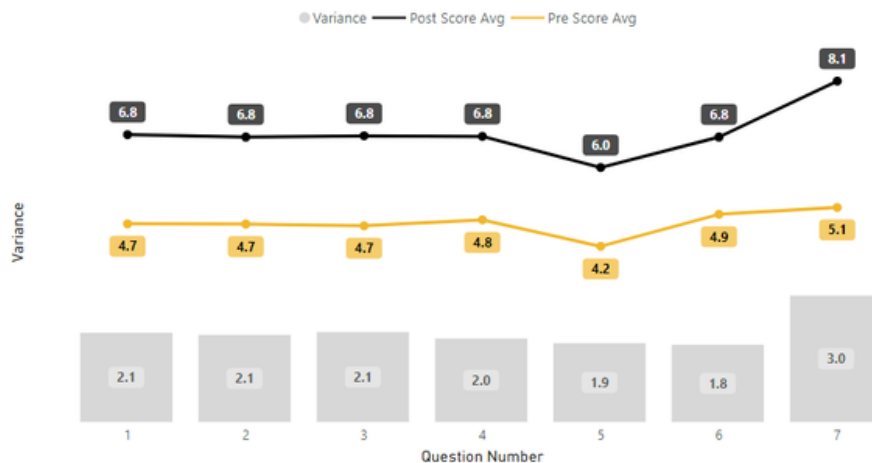
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303 survey responses

Twice yearly, all ECHO attendees are surveyed to learn about satisfaction with technical aspects of ECHO, confidence with ECHO-related skills (self-efficacy), suggestions for improvement, desired topics for knowledge-burst presentations, and any changes they have implemented as a result of their ECHO participation.

This report focused on the latest administration in October/November 2023.



Participants' report increased confidence with ECHO-related skills (self-efficacy) after attending ECHO. On average, there is 2 points pre and post-attendance difference on a ten-point scale:

O. Not confident at all - 6. Confident - 10. Highly confident/expert.

Skills include: identify a condition or issue, forming a plan for treatment, making referrals when needed, helping patients/students/clients understand their treatment, becoming a resource for others in their community, and using what has been learned to care for others.

Cases Map Page 19:

Health Professional Shortage Areas:

Data from data.HRSA.gov, January 2022

<https://www.ruralhealthinfo.org/charts/5?state=MO>

Case and Hub Map created with Mapchart.net

Counties with Participants Who Presented Cases

| | | |
|----------------|-------------|----------------|
| Adair | Howell | Phelps |
| Boone | Iron | Platte |
| Buchanan | Jackson | Pulaski |
| Butler | Jasper | Randolph |
| Cape Girardeau | Jefferson | Saint Francois |
| Carter | Knox | Scott |
| Christian | Laclede | Shannon |
| Cole | Lafayette | St. Louis City |
| Dallas | Lewis | St. Louis |
| Dunklin | Marion | Taney |
| Franklin | Miller | Vernon |
| Greene | Mississippi | Warren |
| Henry | Morgan | Washington |
| Hickory | Newton | Wright |
| Howard | Oregon | |