University of Missouri Show-Me ECHO
Implementation Profile

"We have great state health agencies, but our health indicators were going in the wrong direction due to underfunding. So, we needed to do something different. And we really saw ECHO as part of the solution."

The Show-Me ECHO hub at the University of Missouri and two of its programs, the Asthma and Dermatology ECHOs, were included in a study led by Diffusion Associates and funded by the Robert Wood Johnson Foundation. The purpose of this study was to document and share how ECHO is adopted, implemented and sustained across ECHO hubs and programs in the United States and Canada. This study was separate from, but endorsed by, the ECHO Institute.

Rachel Mutrux, senior program director, Missouri Telehealth Network, was a 2021 implementation fellow and joined fourteen other fellows alongside Diffusion Associates to conduct research for this study. This profile is based on interviews conducted in August 2021 by James W. Dearing, PhD, a professor at Michigan State University, and Whitney Henley, senior research associate, KU Center for Telemedicine & Telehealth and a 2021 implementation fellow.

We begin this profile by sharing unique implementation insights from the Show-Me ECHO hub at the University of Missouri and its Asthma and Dermatology ECHO programs.

ECHO Implementation Insights

Bring the Right People to the Table

From the beginning, Show-Me ECHO leadership worked to be inclusive and to strategically engage experts who could advance its mission. Because the Show-Me ECHO team collaborated with health policymakers, it was well funded. Additionally, having experts who were clinically knowledgeable, as well as involved in efforts beyond ECHO, was an asset that enabled the team to provide top-quality education, and it benefited recruiting efforts for both experts and participants.

Emphasize Assessment and Research

The program's embedded use of assessments contributed to success. While many ECHO programs collect assessment data, the Show-Me ECHO team had created a process for summarizing data, providing it back to the team, and making changes quickly and decisively. Additionally, the group ensured collection of outcomes data and used their findings to justify their program to existing and potential funders and advocate for growth.

Intentional and Strategic Recruitment

Show-Me ECHO's deliberate methods of recruiting staff, expert presenters, and cases highlighted their commitment to inclusion and addressing health equity. While these concepts were formalized in Show-Me ECHO strategic plans, learning how they carried out efforts in their day-to-day work was illuminating. By recruiting individuals to better represent the people that they care for, the Show-Me ECHO team created strong learning communities to advance the health of Missourians.

ECHO Model Adoption

In 2014, Wayne Cooper, MD, began advocating for Missouri to develop an ECHO program. Cooper reached out to Karen Edison, MD, senior medical director, and Rachel Mutrux, senior program director, at the University of Missouri. The three of them joined leaders from the Missouri State Assembly in a visit to Albuquerque to learn more about Project ECHO. According to one respondent, they "quickly saw the power of the model, something we needed in Missouri . . .. We have great state health agencies, but our health indicators were going in the wrong direction due to underfunding. So, we needed to do something different. And we really saw ECHO as part of the solution."

After returning to Missouri from Albuquerque, the team brought together key stakeholders who were involved in Missouri health policy, leveraging partnerships made through the existing Missouri Health Equity Collaborative. Sanjeev Arora, MD, founder of Project ECHO in New Mexico, traveled to Missouri and assisted the team in presenting the model to the state assembly with Mutrux, Edison, Cooper, and the leaders who had traveled to Albuquerque. They brought stakeholders together to share a meal and learn about the benefits of Project ECHO. The team secured $1.5 million in funding from the state to begin ECHO in Missouri. The operation was then annually funded at $4.5 million with monies from several sources, including a state appropriation of $1.5 million per year, augmented by contracts with each of the three Medicaid Managed Care organizations in the state who provided an additional $3 million per year.

Show-Me ECHO is a well-known, large, and well-regarded ECHO operation in the United States. It is located within the Office of Health Outreach Policy and Education (HOPE) and functions as a part of the Missouri Telehealth Network (MTN). The ECHO hub and programs are part of the MTN because, as one interviewee explained, "We already had the expertise. We had the contacts, we've already got the staffing, and we know the model." In 2021, the Missouri Telehealth Network Show-Me ECHO Team included 27 people, with eight partnerships with other organizations. One partnership with the University of Missouri Extension included funding .10 FTE of 23 Extension Specialists to build community understanding of ECHO as a means of increasing participation.

Show-Me ECHO grew from two ECHO programs in 2014 to 35 ECHO programs in 2021, providing education on a variety of clinical care topics. Show-Me ECHO was also an ECHO Superhub, providing ECHO immersion training to leaders and staff of newer ECHO operations at other organizations. New ECHO programs were developed if: (1) a funder approached the group with a specific topic/need; (2) the Show-Me ECHO team identified a need in the state based on health outcomes; or (3) a champion came forward and identified a gap in service. Once the decision was made to offer a new program, the team decided whether the new program would enroll participants in a cohort model in which participants signed up for a defined number of sessions with a start and end date (like a standard in-service course) or be an open-ended program in which anyone was welcomed to join any session with no specified end date. For example, the Asthma Program was structured as a cohort model. Participants first completed a "bootcamp ECHO" and then get involved with the other ECHOs addressing asthma. Six times a year, the Show-Me team had a new cohort that they trained. This approach enabled the program to train a greater number of clinicians.

Show-Me Asthma ECHO

After attending immersion training in Albuquerque, a pulmonary medicine specialist who was closely involved with the creation of the Asthma ECHO identified a need for three asthma ECHO programs rather than just one program. The Show-Me ECHO began its first Asthma ECHO in 2015. Arora from the ECHO Institute supported their work by participating in some trainings and writing letters of support for several grant applications.

One of the staff members closely involved with the Show-Me ECHO Asthma Program was the project director of Asthma Ready Communities, a group in Missouri. This individual had a great deal of experience in health policy and planning and brought that perspective to the program. The Show-Me ECHO Asthma Program piggybacked on the work of an existing, multi-disciplinary team that was already addressing social, environmental, and clinical factors related to asthma prevention and management in the state. This team understood that creating a diverse group of learners, working together, would lead to positive outcomes in asthma care.

Show-Me Dermatology ECHO

Leaders and staff at the Show-Me hub also recognized an unmet need in Missouri regarding dermatology. "In multiple countries, over multiple decades, over time, it's been shown that one in five complaints by primary care patients are dermatology related, and most of those diagnoses never get made because [those generalist providers] don't know dermatology," said an interviewee. Edison led the Show-Me ECHO Dermatology Program. Her extensive experience as a clinician in the state, paired with her understanding of the ECHO Model, were important to the creation and sustainment of the Show-Me ECHO Dermatology Program as well as its success.

ECHO Model Implementation

The ECHO Model seeks to build a learning community where "all teach, all learn." This is done by leveraging technology, by sharing best practices, using case-based learning, and by using data. We asked respondents to tell us what "all teach, all learn" meant to them. Respondents talked about "all teach, all learn" as a collaborative process at the heart of the ECHO Model. One respondent said, "One of the most important aspects of ECHO is that it's collegial and friendly, and it's not one-way transmission of information. We all learn from each other. We all teach, we all learn."

Many of the examples provided by the Show-Me team illustrated extending transmission of knowledge beyond expert sharing with participants. In one instance, a patient described in a case presentation had developed symptoms after being spurred by a rooster. An IT support person was able to shed light on this dermatology case by providing more information about roosters. In another instance, an environmental scientist shared the effects of blighted housing with the asthma group.

The Show-Me ECHO hub team created a learning community by thoughtfully recruiting specialty team members/presenters, and in how they recruited cases and case presenters. For example, when creating an ECHO program about hypertension, a condition that inequitably affects African American men, the Show-Me team recruited an African American hypertension cardiology specialist from a region that was experiencing negative health disparities in cardiac outcomes among African American men. By strategically recruiting presenters, the Show-Me ECHO programs were led by knowledgeable experts who are perceived as credible and trusted speakers by participants.

The Dermatology ECHO Program team made a concerted effort to ensure that everyone on session calls used plain language. The team recognized that individuals on the call varied in experience and some participants tended to use dermatology jargon that may not be understood by others. Similarly, a respondent pointed out that when she facilitated the Dermatology ECHOs, there were times when she would pause a conversation to ask specialists to explain to participants why they asked a particular question about a patient case presented in discussion. In this way, participants could understand the rationale behind the asking of diagnostic questions.

Additionally, when asked about their efforts to address diversity and inclusivity, one respondent said, "We do diversity and inclusivity training for our own staff. We have this written into our strategic plan to continue to build on the work. We're never going to be perfect in this aspect, but as we continue to educate people about it, we want all of our hub teams to be able to use appropriate language and understand the different cultural contexts to which they're speaking."

Both the Asthma and Dermatology ECHO teams took measures to ensure that their programs did not stagnate while continuing to embrace the principle of "all teach, all learn." One way that the Asthma Program did this was by changing faculty and facilitators every year. This brought in new expertise, fresh perspectives, and provided more representation across the state. The Dermatology Program incorporated ongoing quality improvement. If it became apparent to staff that a component of the program was not working well, changes were made rapidly. "We evaluate our ECHOs all the time, and if they're not working, we stop them. Then we reboot them with new people. We're kind of ruthless about quality. We have to be, because every time someone comes, it has to be a good experience for them. It has to be the right experience."

Factors Influencing Implementation

Studies of program implementation identify contextual factors that can shape how a program was implemented. These factors include leaders and champions, state and federal policies, funding, partnerships, and internal organizational structures and processes, monitoring for quality and fidelity, and staffing—including how people were trained and the characteristics of the people leading and supporting the program.

Not all of these factors may play a role in how ECHO was implemented here or elsewhere, and some factors were more important than others. Below, we identify factors that emerged during interviews which influence how Project ECHO was implanted at Show-Me ECHO at the University of Missouri.

Quality and Fidelity Monitoring and Support

The Dermatology and Asthma respondents described processes to ensure that they offered high-quality programs and attended to fidelity to the ECHO Model. Evaluations of participants as well as evaluations of the ECHO sessions were summarized in reports and quickly given to team leaders and presenters so adjustments could be made, if necessary, with little time lost.

Leadership

One respondent said, "The program director is trusted. Her earnestness and her integrity and her honesty and trustworthiness make her an ideal ambassador throughout rural Missouri. She was born

and raised in a rural area, and that matters. So, she has Missouri credibility, which really is an asset to this program." Additionally, the respondents we interviewed had long experience and had worked with many key stakeholders, coalitions, and organizations over the years in Missouri. Many of the involved clinical leaders also had a great deal of knowledge regarding policy and environmental factors that may affect ECHO programs in their areas of expertise.

Funding

Show-Me ECHO was well funded through state appropriation funds as well as through contracts with each of the three Medicaid Managed Care organizations. While the Dermatology ECHO was funded through state funding, the Asthma Program funding came from a variety of sources including the Centers for Disease Control and Prevention, the Missouri Telehealth Network, and foundations. Regular collection of data about ECHO programs was important to continued support. "We feel like evaluation is key to our sustained funding," said an interviewee. "We have outcomes that we tout and there are four or five that we are counting right now, but we always need new outcomes. And we think that is key to our sustained funding, as is recruiting expert hub team members from all areas of our state."

Partnerships and Networks

Leaders and staff of both programs discussed partnerships that advanced their efforts. Asthma ECHO respondents mentioned that their relationship with Arora helped them with program development as well as with securing grant funding. Dermatology ECHO leaders assisted ECHO teams from other states. Show-Me ECHO was well-known and relationally connected both within the state and in networks of providers and ECHO practitioners across the United States.

ECHO Vision and Sustainability

When asked about the vision for the hub for the next several years, one respondent said, "My vision for the Show-Me ECHO program is to have all primary care providers that are treating underserved Missourians come to our Show-Me ECHO programs to learn more and join in these learning collaboratives." Another interviewee said that hub staff "look really hard at who's coming to our ECHOs. Where do they practice? Where do they live? What are their credentials?" Staff shared that they gathered formative data to help them reach audiences that could benefit from participation but were not yet participating in ECHO. There remained a continuing need to explain the ECHO Model and advocate for leaders of healthcare organizations to allow their providers the time off from patient care to join ECHO programs.

Another respondent said their ultimate goal in the state was to change health outcomes by improving health and healthcare. To move forward with that vision, the respondent said that having more people involved was key. To do that, the respondent was already "going around via Zoom and talking to all the federally qualified health centers and giving updates on ECHO and on our new ECHOs programs." Additionally, the Show-Me ECHO team was working earlier in the pipeline by educating medical students and residents with the hope that they "see the value of ECHO and when they go out into practice, hopefully they will continue to participate in various ECHOS."

Respondents

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