

University of Kansas Medical Center Project ECHO Implementation Profile

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The University of Kansas Medical Center (KUMC) ECHO operation in Kansas City and the KU School of Medicine, Wichita Campus, and its Substance Use Disorders and Kansas Kids Map ECHO programs were part of 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.

Whitney Henley, MPH, senior research associate, KU Center for Telemedicine & Telehealth and coordinator for the KUMC ECHO operations, was an implementation fellow on the study team in 2021 and, with 14 other fellows, worked alongside Diffusion Associates to conduct research for this study. This profile is based on interviews conducted in August 2021 by James W. Dearing, PhD, professor at Michigan State University.

We begin this profile by sharing unique implementation insights from KUMC ECHO hub and its Substance Use Disorders and Kansas Kids Map ECHO programs

ECHO Implementation Insights

Entrepreneurial Leaders

The KUMC ECHO operation demonstrated how a small, dedicated team consistently produced ECHO programs without recurring dedicated from the host institution. Entrepreneurial leaders and staff were effective at using their connections with the Kansas Department of Health and Environment to win short-term grants and contracts from U.S. Health Resources and Services Administration (HRSA) and the Centers for Disease Control and Prevention (CDC) pass-through funding. The staff, though lean, had experience at other ECHO sites that helped them with the launch of this work.

Different Models Yield Different Results

The programs KUMC Project ECHO offered typically had large enrollments, and were non-cohort, short series. This enabled them to reach many providers rapidly, a desirable outcome for funders. Yet KUMC ECHO leaders knew that the alternative Centers of Excellence model of long-running cohort-based sessions as used in the team’s KSKidsMap ECHO was more likely to produce sustained practice improvement as well as enduring communities of practice among far-flung health providers in Kansas. Rather than competing, the two models were complementary.

Internal Bridges

KUMC ECHO is an excellent example of how the ECHO model can act as an enabling bridge within an organization to help fulfill objectives of units that otherwise might compete for resources or operate

independently (and possibly fall short of achieving objectives). ECHO programs tied together objectives and priorities of outreach and extension, community engagement, continuing medical education, and effective uses of new communication technology. The ECHO team was able to do this largely because its leaders had joint appointments and responsibilities in other units.

ECHO Model Adoption

Ryan Spaulding, PhD, acting director of the Center for Telemedicine and Telehealth at the University of Kansas Medical Center (KUMC), first learned of Project ECHO in 2010. A prior center director had advocated for Project ECHO and Spaulding signed an agreement with the University of New Mexico ECHO Institute to begin the KUMC Project ECHO hub in 2014. Spaulding wore several administrative hats for the university—he was, among other things, a vice chancellor and faculty member—and did not play a day-to-day role with ECHO. Project ECHO at the University of Kansas was part of the university's commitment to outreach and the improvement of health services especially in rural Kansas. The telementoring function that ECHO served was not a difficult sell at KUMC since the medical center already hosted the Center for Telemedicine and Telehealth within its Institute for Community Engagement, which also housed a Continuing Medical Education Office. The ECHO model's emphasis on rural health, medical education, and communication technology aligned well with the Institute.

In 2016, Shawna Wright, PhD, joined the medical center. She had been a community mental health provider and ran an independent tele-psychology practice. Wright was the facilitator for many of the ECHO programs and was centrally involved in the medical center's ECHO planning, budgeting, training, and reporting. Her ECHO staff included a scheduler, two IT personnel, and a researcher. The KU Medical Center ECHO typically employed a project manager. By August 2021, ECHO programs at the KU Medical Center had enrolled spoke participants from 103 of Kansas' 105 counties.

This ECHO did not have dedicated institutional financial support, but Spaulding and Wright positioned Project ECHO to be a means for addressing rural provider education needs as they were identified by the Kansas Department of Health and Environment, thus making ECHO an obvious choice for state funding, topic by topic. The team wrote many grant proposals and final reports, most to the state Department of Health and Environment, in response to invitations and requests for proposals. While some of these grants and contracts were modest in size, being entrepreneurial and piecing them together was how Spaulding and Wright kept the ECHO operation going.

Kansas Kids Map (KSKidsMap) ECHO

Kansas Kids Map (KSKidsMap) was a cohort-style multi-year small-enrollment ECHO program structured very much like the ECHO programs demonstrated during ECHO training by the ECHO Institute in Albuquerque. ECHO staff considered KSKidsMap their Center of Excellence program given its structural and process similarity to the original ECHO Model. The program was based at the KU School of Medicine, Wichita Campus. Key persons involved in starting and staffing this program included Kari Harris, MD, a pediatrician, and Polly Freeman, MSW, a social worker, who incorporated ECHO into a grant proposal to the HRSA for a Child's Psychiatry Access Program to provide consultations about children's mental health using ECHO. It also included the expertise of Rachel Brown, MBBS, who had been a regular participant in the University of Missouri Show-Me ECHO Autism program before arriving at the University of Kansas. Brown was professor and chairperson of the Department of Psychiatry and Behavioral Sciences at the KU School of Medicine, Wichita Campus.

The purpose of KSKidsMAP was to support primary care physicians and clinicians in Kansas who provided care to children. The program covered topics in ADHD, anxiety, depression, suicidal ideation, behavioral problems, poor school performance, learning disabilities, and other problems. As a spoke participant of the KSKidsMAP program, providers had access to support services through a toll-free consultation line, mental health and community resources, toolkits and best practices information, and case consultation, as well as regular case presentations, colleague discussion, and expert opinions that comprise the KSKidsMAP program.

Substance Use Disorders (SUD) ECHO

The Substance Use Disorders (SUD) ECHO was a continuously offered, brief 4-5 session program that provided accurate and up-to-date knowledge about opioids and prevention among children to physicians, advanced practice clinicians, nurses, and behavioral health practitioners who see children. The program was facilitated by Wright and relied on an expert review panel to listen to and discuss issues with participants. A key member of the expert review panel was Daniel Warren, MD, a physician in Family Medicine and Addiction Medicine at the University of Kansas in Wichita. Previously, Warren had participated in leadership teams for a Pain ECHO program operated by the United States Navy in the Pacific Northwest. Like other KUMC ECHO programs, there were no funds or staff time dedicated solely to this ECHO program. Funding flowed from the U.S. Centers for Disease Control and Prevention to the Kansas Department of Health and Environment, primarily to address the opioid crisis in the country. The state department then funded the Center for Telemedicine and Telehealth to deliver the SUD ECHO program.

ECHO Model Implementation

“We are grant-funded, whether those funds come from the HRSA Rural Opioid Response program, or the Opioid Data to Action program at the CDC that has supported the majority of our SUD and Pain Management ECHOs, and those all arrive through KDHE [Kansas Department of Health and Environment], the state department,” said Wright. “I can’t think of any project that we’ve done that hasn’t been funded through a grant, though there have been a couple of initiatives that we have just eaten the cost on because we believed in the initiative and wanted to support our healthcare workforce across the state.”

While the Project ECHO operation in Kansas did not have as many staff nor offer as many programs as some ECHO sites, the consistency of contract and grant funding that the team received was an example of how to be entrepreneurial with the ECHO Model. The team used its strong ties with leadership and staff at the Kansas Department of Health and Environment and delivered on prior assignments to position itself as a reliable partner organization to efficiently disseminate information among mostly rural health providers as well as to build capacity among that provider population. Participation in the KUMC ECHOs, hosted both in Kansas City and in Wichita, put geographically isolated providers in touch with one another—one of the original key Project ECHO objectives of linking disparate health providers into an informal and supportive practitioner network. “I think this is what I value most out of ECHO participation,” summarized Warren. “In the longitudinal kind of continuous ECHOs it’s the community that develops among people in different parts of a state. When I was in Washington and Oregon, those were irreplaceable connections. Even after just four or five session runs, that happens. I would like to see more of that in Kansas. A longer time together is what’s necessary for most people to change their practice patterns and elevate their standard of care.”

The team paid close attention to process issues in day-to-day work. “We’ve received a lot of feedback—from users and people who attended other ECHOs—that our ECHO is one of the most well-run, efficient, best facilitated ECHOs they’ve ever attended. We just heard that again this week from a user,” said Spaulding. “Dr. Wright really understands the principles, really makes the ECHO product one of the best that’s out there. I mean, we stick to the time, we get everything in, we always have cases, we don’t just treat it as a lecture, we really make it interactive, we really encourage people to turn their cameras on, and to ask questions. The ones I’ve been involved with truly are a discussion, not a one-way lecture.”

Wright and her staff solved the issue of case recruitment by adopting the expectation that participants volunteer to present a case at the time of program registration. “We list it right out,” Wright said, “We give a blurb about how important case-based learning is, and these are the dates of our ECHOs, so when would you like to provide your case? When would you like to share what’s going on in your practice? And then we have a coordinator who follows up with anyone who is willing to talk about a case. If they’re hesitant, she walks them through that, she preps them up, she does sound and audio testing with them, and makes sure that they have the coaching they need to present and to understand how that process works.”

The KUMC Project ECHO programs typically enrolled large numbers of participants in short-lived programs that were not cohort-based. Still, the “all teach, all learn” philosophy of ECHO served as a touchstone for the team. “I’m thinking about a case we had from Southwest Kansas about a patient with a pain management problem and a resulting opioid addiction,” said Spaulding. “The case was presented, the specialty team provided feedback, and as it turned out the patient was not appropriate for that suggested intervention. But then as a result of discussion and the didactic, other options came up that were appropriate. So, the nurse who presented the case got this patient into the right course of treatment and the patient made a complete turnaround, got off of opioids, the pain was significantly reduced if not eliminated; this has led to a completely different life because of ECHO. And we published a paper about that just last year. It’s just one case study, but we thought it was important to publish how that community of practice really contributed to that outcome.”

“And then,” added Wright, “later we heard from the nurse, ‘Thank you so much, these are the referrals I’ve made, this is how I’m following the patient.’ Then she comes back again and said, ‘Oh my goodness, I took another course because these referrals didn’t work out, and I learned this.’ So, we invited her back to share with the group. It turns out that the patient ended up getting a pain pump which was not a treatment for her diagnostic category. That opened up a whole new discussion for all of us in the ECHO about why was this right for this patient and when should it be explored for others? This led to the specialty team digging deeper into the case and this treatment.” That’s “all teach, all learn” in practice.

External partnerships with organizations other than the state Department of Health and Environment helped maintain and grow this operation. For example, the Kansas Department of Commerce approached the ECHO team to offer a program to help medical providers support disabled persons enter and stay in the workforce. Another initiative concerned health disparities. While the team aimed to include emphasis on health disparities into every one of its programs, KUMC offered an ECHO for nursing students at Washburn University that was focused on healthcare for diverse populations, especially Latino-Hispanic and African Americans.

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.

State and Federal Policies

The University of Kansas Medical Center Project ECHO operation was maintained and grew primarily because of its responsiveness to the opportunities and needs that arose from federal funding provided to the Kansas Department of Health and Environment to improve the lives of Kansans. KUMC ECHO stepped into this opportunity by drawing on expertise at the medical center, and packaging team-based solutions for continuing medical education, especially targeting health providers in rural Kansas. The ECHO team was entrepreneurial in identifying a market niche and provided a service or product that satisfied a need.

External Partnerships and Networks

Being repeatedly successful at garnering grants and contracts doesn't just happen. It is the result of the quality of what a team can deliver and a function of sophisticated inter-organizational relational development and maintenance. Relationships mattered in getting work done, and relationships when taken as a whole comprised inter-organizational networks. Leaders at KUMC who were involved in health technology, community engagement, outreach, and continuing medical education were effective in making connections that later led to inquiries about providing services that were valued by state-level decision makers.

Internal Partnerships and Organizational Structure

The University of Kansas Medical Center included a School of Health Professions, School of Medicine, and School of Nursing, and had campuses in Salina, Wichita, and Kansas City. As part of its commitment to improving the lives of Kansans, KUMC hosted an Institute for Community Engagement, which initiated and hosted efforts to improve access to care in all 105 Kansas counties. Both Project ECHO and Continuing Education were housed within this Institute. The various divisions, centers, and offices in the Institute for Community Engagement were closely tied; for example, the acting director of KUMC Project ECHO also oversaw three distributed Area Health Education Centers, the Continuing Medical Education Office, and was the acting director of the Center for Telemedicine and Telehealth.

Structures and Processes

In U. S. academic medical centers, it is sometimes common for units with titles such as outreach, continuing medical education, and telehealth to be of lower status compared to disease-specific units such as oncology or population-specific units such as pediatrics. KUMC leadership in its Institute for Community Engagement used the ECHO Model to link across these units, thus raising the importance of each unit, whether to address health disparities, reach out to rural populations, use new communication technologies, or re-educate providers on a regular basis.

Leadership within the Organization

Spaulding, the hub leader, was not engaged in day-to-day ECHO operations. He held multiple titles and responsibilities in the Institute (and beyond as vice chancellor) and could see how the ECHO Model could solve challenges for multiple units beyond its own immediate small team. Spaulding played the role of internal champion for ECHO. He also reported to the university executive vice chancellor and head of the medical center, so he had direct access to top-level administration. The hands-on ECHO team, modest in size, benefited from the steady engagement of medical leaders such as Brown and Warren (both of whom also brought credibility to KUMC ECHO because of their long prior involvement with other ECHO operations), and the managerial and organizational leadership of Wright.

ECHO Vision and Sustainability

KUMC ECHO programs were more responsive than proactive in topics chosen. ECHO staff asked KUMC physicians and researchers what should be covered for a given topic, but the topic itself was determined by funders. Spaulding and Wright both commented on this.

“We want to move more toward a research-based ECHO model,” said Spaulding. “Of course, this is a challenge because to do ECHO properly, they’re expensive, and a lot of departments don’t want to pay for that.” Submitting proposals for research or to deliver and evaluate programs was another way to establish more control over the programming that the team developed and delivered. “I have concerns just about whether ECHO really changes practice. I think it does in some isolated cases, but I’m not sure about the practice level, which is what it was designed for. There needs to be more research and we’d like to contribute to that. That’s where we want to go.”

Wright agreed, “The only thing I’d add is that we’re going to have to find funding to make that happen, right? For us to be in charge of the reins, we’ll have to seek that funding. And with these shorter series of ECHOs rather than the Centers of Excellence approach, per Dr. Warren’s point about building a community of practice, it’s a lot more difficult to measure practice change. So, we really need to think that through.”

Respondents

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