Northeast Ohio Medical University ECHO
Implementation Profile

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Northeast Ohio Medical University (NEOMED) and two of its programs, the Ohio Systems of Care Project ECHO for Multi-System Youth and the Integrated Care at NEOMED ECHO, 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.

Sara Dugan, PharmD, worked with ECHO at NEOMED and was a 2021 implementation fellow. Dugan joined fourteen other fellows alongside Diffusion Associates to conduct research for this study. This profile is based on interviews conducted in July-August 2021 by R. Sam Larson, director of Diffusion Associates and Ariel Porto, program manager at the Weitzman Institute and a 2021 implementation fellow.

We begin this profile by sharing unique implementation insights from NEOMED ECHO and its Ohio Systems of Care Project ECHO for Multi-System Youth (Systems of Care ECHO) and Integrated Care at NEOMED (IC@N).

ECHO Implementation Insights

ECHO as Reciprocity

NEOMED's ECHO programs had strong external relationships with partner universities and providers in the area. Area physicians were especially important for NEOMED as they relied on these practitioners to work with their residents. ECHO programs provided free continuing education (and credits) to these same providers. ECHO, then, can be a form of reciprocity that adds values to relationships.

Building from Existing Programs

The Systems for Care and the IC@N ECHOs were built from existing programs. ECHO was a means to amplify existing programs. These programs show how ECHO can take existing work and magnify it, expanding case discussions and knowledge-sharing well beyond a one-to-one scope. Existing projects can reach a larger audience and the hub benefits from leveraging current expertise, rather than building ECHO programs entirely from scratch. Those interested in developing ECHO programs may want to begin by looking at current programs and consider how the ECHO Model would amplify the program.

Staffing from the Start

While ECHO may appear to be an uncomplicated model to adopt, several key resources are needed to launch a new program, such as training from the ECHO Institute or a Superhub, funding for infrastructure, participant buy-in, and the commitment of subject matter experts. One resource may often be overlooked—and that was the "behind the scenes" staff. IC@N ECHO respondents talked at length about the importance of having a strong implementation team, and of their own positive working

relationships. Facilitation and much of the operational work for the Systems of Care ECHO relied on an external agent with considerable professional experience. Project leads and coordinators—different in titles, but similar in roles—navigated many challenges together. This required open communication, knowing, and leaning on each other's strengths, and being explicit about where support was most needed.

ECHO Model Adoption

In 2017, staff members within the Department of Family and Community Medicine contracted with the ECHO Institute to offer a community health worker ECHO program. This effort was short lived as key staff left the university. The Department of Psychiatry was quick to "scoop up" ECHO and their leadership team "embraced it" and ECHO programs expanded. Discussions about becoming a Superhub led to a decision to "decentralize ECHO, pull it out of the Department of Psychiatry so we could get greater institutional support and buy-in." ECHO was then relocated to the Department of Health Affairs, which fit the broad collaboration across NEOMED's colleges and the variety of ECHO topics. By this time, the College of Pharmacy and the College of Graduate studies were also contributing to ECHO.

In 2019, NEOMED recruited John Langell, MD, from the University of Utah to be its new president. Langell was familiar with ECHO from his time at Utah and was a vocal supporter of ECHO at NEOMED. At the time of this interview, ECHO at NEOMED was shifting to a new department—the Center for Integrated Primary and Mental Health Care. ECHO aligned with the Center's pillars of research and discovery, education, and service. Emily Murphy, director of the Center for Integrated Primary and Mental Health Care, commented: "We're still trying to figure out the strategic plan for this new department. I think ECHO fits in all of the pillars because it is research, it is education, and it is service." Organization leaders thought this move would generate more leadership support and buy-in which they saw as critical for ECHO's success at NEOMED. Within the new center, ECHO would be one of several projects and programs.

ECHO work at NEOMED was supported by a small team each of whom had other responsibilities. One respondent said, "Only a tiny portion of our time is allowed to be dedicated to ECHO." One person had a small percentage of her time funded via NEOMED for ECHO work; all other staff funding came from grants. Funders included Substance Abuse and Mental Health Services (SAMHSA), Ohio Mental Health and Addiction Services (OhioMHAS), Ohio Medicaid Technical Assistance &Policy Program (MEDTAPP), and the Peg's Foundation, a non-profit organization with a mission to improve the lives of people with serious mental illness. Some ECHO programs were built into grants as one component of a larger intervention.

There were several advantages to being embedded in NEOMED, which is a unique medical school formed by a series of partnerships between four public universities, one private college, and a variety of hospitals and pharmacies across Ohio. Murphy explained, "We're looked at as the experts. I think that's the number one advantage. We are a really robust medical school and people come to us for solutions and education." The interprofessional focus of the school made for a good fit with ECHO.

Several NEOMED team members attended immersion training at the ECHO Institute, and in 2018, Sanjeev Arora, MD, founder and director of Project ECHO, visited NEOMED to present more widely on ECHO. NEOMED staff reached out to the broader ECHO community to discuss best practices around operations and to observe others' sessions. They engaged with hubs in Alaska, the University of Washington, the Missouri Telehealth Institute, and the University of Chicago. NEOMED's ECHO

implementation efforts benefited from several team members' firsthand experiences with integrated care and interprofessional case work. For example, Doug Smith, MD, the medical director for the Summit County Alcohol, Drug Addiction, and Mental Health Services Board and long-term faculty with NEOMED's Project ECHO programs, was formerly the medical director of three state hospitals where he held interdisciplinary meetings with psychiatrists, psychologists, and primary care physicians to discuss cases and assist each other in providing the best possible care to their patients.

Ohio Systems of Care Project ECHO for Multi-System Youth

This ECHO program was developed collaboratively by the Child and Adolescent Behavioral Healthcare Center of Excellence (CoE) embedded within Case Western Reserve University and NEOMED to assist care managers, social workers, primary care doctors, psychiatrists, and counselors with the care of youth requiring intensive home-based treatment and support across a variety of social systems. The CoE learned about NEOMED's use of the ECHO Model at a state conference and saw it as a "perfect fit" to expand access to an existing program that provided in-person case consultation service. The two organizations had a pre-existing relationship; working together on the ECHO was an extension of this relationship. The Systems of Care ECHO also brought together agencies that interface with at-risk pediatric and adolescent youth via education, criminal justice, mental health, developmental disabilities, and foster care.

Bobbi Beale, PsyD, the co-director of the CoE and the facilitator for the ECHO, was instrumental in the launch of the program. Beale attended immersion training at the ECHO Institute along with other project team members. She said her experience in providing technical assistance to community mental health centers was like a "mini-ECHO." It included "going in, gathering information, getting everybody's opinion, and stirring up conversations about potential ideas and interventions." Systems of Care ECHO was funded by Ohio Medicaid. The funding was administered through the Government Resource Center (GRC) that managed relationships between state departments. The GRC was a valuable partner and provided a support for evaluation and research.

Integrated Care at NEOMED ECHO (IC@N)

IC@N ECHO at NEOMED was started in 2017 by Nichole Ammon, then a clinical counselor in NEOMED's Department of Psychiatry. Ammon learned about ECHO at the annual American Psychiatric Association conference, where the University of Washington presented their Integrated Care ECHO program. Funding for the IC@N ECHO came from Ohio's Medicaid Technical Assistance & Policy Program (MEDTAPP) Healthcare Access Initiative grant focused on integrating primary and mental health care. Previously, Ammon's interprofessional team was providing individualized training to care settings that were trying to build an integrated care model. Ammon saw ECHO as a means to standardize the content and curriculum offered to participants. Of choosing to launch an ECHO, she explained, "So much of what we were doing was troubleshooting and trying to help people learn from each other. So, it was a perfect fit." IC@N ECHO aimed to build expertise in the care delivery of patients with complex, co-occurring psychiatric and physical conditions. Reflecting the program's promotion of team-based, integrated care, participants included mental health and primary care prescribers, nurses, social workers, and counselors.

Ammon, Jami Brewer (dissemination coordinator), and the project's medical director attended immersion training at the ECHO Institute prior to launch. They observed sessions led by the University of Washington and opened up their own sessions for observation. Ammon and Brewer drew on their professional learning experiences to design and successfully manage IC@N ECHO. Specifically, Brewer's

background in office administration and participation in the ECHO Institute's Global Program Management Collaborative helped her to simplify processes and triage technology challenges. In addition to her subject matter expertise in integrated care, Ammon found the 2019 MetaECHO conference very beneficial. IC@N ECHO was initially funded by MEDTAPP but this grant ended and the Best Practices in Schizophrenia Treatment (BeST) Center at NEOMED was providing support for this ECHO through their Peg's Foundation funding.

Both programs adopted the ECHO Model as a way to extend current one-on-one work so that they could work with more people/organizations from a broader geographic area while also creating a learning community. While IC@N ECHO had a diverse panel of experts, most were from within NEOMED. The diverse panel for the Systems of Care ECHO drew from more organizations.

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, through case-based learning, and using data. We asked respondents to tell us what "all teach, all learn" meant to them. Respondents at NEOMED defined an interactive environment where communication and learning occur between and among experts and spokes. Smith described "all teach, all learn" as the "back and forth exchange of information around a real person or people. We become a team where people are very open to discussing challenging situations." Similarly, a respondent from the Integrated Care ECHO described "all teach, all learn" as "coming together in an open, safe space to ask hard questions and get answers to implement back into your practice, whatever that practice might be." One respondent described ECHO as a "version of a family." But there was some hesitancy in how far a non-hierarchical approach could go. One respondent cautioned that while the "all teach, all learn" model was beneficial, it must have limits so that participants can clearly differentiate which recommendations were evidence-supported and delivered by experts in a given area, and which may be based on individual experiences and thoughts that were less grounded in peer-reviewed literature or science.

Systems of Care ECHO and IC@N ECHO reinforced "all teach, all learn" by focusing on the four principles of the ECHO Model. Overall, the sessions were designed to be engaging, and guided (but not dominated) by interprofessional subject matter experts. Participants of both programs were encouraged to continue to join sessions for an extended period. Both ECHOs featured didactic presentations followed by case discussions. Once per quarter, IC@N ECHO replaced the traditional didactic with a "journal club," where an article was shared ahead of the session and then discussed in-depth among experts and participants.

Both programs used cases, but what constituted a case and how it was used varied significantly between these two programs. Systems of Care ECHO had a waiting list of cases generated from the Family and Children's First Council (FCFC). These cases were of complex situations involving youth and families that warranted expert discussion. After the ECHO session ended, the expert team submitted a written recommendation, which was vetted and sent to the case presentation's team leader. In contrast, IC@N ECHO was less formal, with cases often coming from conversations. Initially, IC@N ECHO pressed the use of formal submission of cases. They had a case form that was online and easy to complete. They encouraged the use of the form, but it was not accessed often. Over time, cases evolved into the facilitator asking if someone had a question or example about practice. Ammon said, "We've taught ourselves to get better at grabbing the case on the fly and making sure we get the data. We have learned how to draw cases from the participants." When cases were not forthcoming, the facilitator

guided conversations around a variety of topics including news and policy updates that were likely to impact providers and their patients.

NEOMED program staff took intentional steps to continuously improve and ensure they were meeting participant needs. Of IC@N ECHO, a respondent noted, "We're in a constant plan, do, study, act phase. We're always asking ourselves: 'How do we continue to make this better?'" They also completed self-assessment scorecards during sessions and occasionally had NEOMED students do the same. Systems of Care ECHO used a series of surveys to seek satisfaction feedback from participants, including weekly surveys, an end-of-year impact survey, and a case feedback survey that was sent to case presenters two to three months after their case presentation to determine if the case recommendations were beneficial in practice. Project partners at the Government Resource Center received, analyzed, illustrated, and shared this data to inform changes to the project.

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 play a role in how ECHO was implemented here or elsewhere. Below, we identify factors that emerged during interviews that appear to influence how ECHO was implemented at the NEOMED hub, the Systems of Care ECHO, and IC@N ECHO.

Organizational Characteristics and Champions

NEOMED "grew up as a community medical school" and valued interprofessional education; these characteristics were compatible with ECHO and helped to solidify its fit with the institution's mission. ECHO programs had access to NEOMED faculty and students. Yet, ECHO work was in search of a home in NEOMED. ECHO had been housed within four different units in about as many years. The latter two moves—to the Department of Health Affairs and then to a newly formed Center of Integrated Primary and Mental Health Care—were a response to the expanding focus and the engagement of faculty from multiple colleges. It was also a strategic decision to strengthen leadership support. The new president at NEOMED was seen as supportive of ECHO, including ECHO in "his public speeches to everybody here at NEOMED and then with external community members and clinical partners; he always talks about Project ECHO and how supportive he was." The deans of the colleges of pharmacy, medicine and graduate studies were also supportive of ECHO. But it was not clear who wanted to "own" ECHO. One respondent said that administration wants to "own ECHO, but it has to break even." By moving ECHO into the new Center for Integrated Primary and Mental Health Care, stakeholders hope to gain more institutional support.

Organizational Staffing

ECHO at NEOMED was a small team and everyone has other responsibilities. The administrative staff and faculty experts from NEOMED, with the exception of Murphy, were funded through grants. Murphy was hard funded and ECHO was part of her role. Many, though not all, respondents attended immersion training. Murphy has a Lean Six Sigma background that she applied to her evaluation and quality

monitoring of the ECHO programs. A key role, and a relatively new role to the ECHO movement, was the inclusion of the NEOMED librarian who served as a digital librarian and provided resources both live and after sessions. Each NEOMED ECHO project included a coordinator to manage the functional operations of preparing for sessions, and a project lead whose exact title and responsibilities differed by project.

Experts and session facilitators were not all NEOMED employees. Experts were recruited from external organizations. The lead facilitator for the Systems of Care ECHO was not an employee of NEOMED but worked in a center at Case Western Reserve University. Leveraging relationships enabled this small team to have a larger impact.

Policy Environment

Funding for ECHO at NEOMED's came, in part, from state sources, so state policy had some impact on the direction of the ECHO programs. For instance, the Systems of Care ECHO benefited from the current governor's focus on child and family services and the funding of Medicaid to support ECHO and its partners. A new governor could bring a new focus, and this funding could be reduced or eliminated. NEOMED's ECHO programs also influenced the policy environment. The multi-level partnership represented in the Systems of Care ECHO offered statewide insight into the populations it served, connecting various offices, and illustrating the gaps in care. One respondent described this ECHO as "both a clinical and a political tool. People are using it to try to understand how we are meeting or not meeting the needs of those multi-system youth."

Funding

NEOMED's ECHO work was funded through grants. At times, grants ended and NEOMED had to identify new sources of funds to extend projects. IC@N ECHO was initially funded by MEDTAPP but that funding ended. They were then funded by the Peg's Foundation. Funds were relatively stable with a five-year renewal period, although the foundation requested that NEOMED continue to seek additional funding sources to supplement their support.

Unlike most medical schools, NEOMED did not have a faculty practice plan. Aside from grants, the university was funded exclusively through tuition and state share of instruction (SSI) dollars. ECHO staff need to have a compelling argument to justify the use of tuition dollars to support ECHO. State share of instruction funding was an allocation from the state based on student outcomes. This was how the state of Ohio subsidizes instructional costs at Ohio's public institutions of higher education. These funds had been "significantly cut." Murphy s made "pitches trying to get ECHO put in the state budget so that we can use those dollars for our programs and primary care enhancements." One pitch was to the University Council for all seven medical schools in the state. Murphy hoped to get their buy-in to having money for each medical school in the state budget to support ECHO and telehealth. Murphy also worked with NEOMED's government relations team and encouraged the development office to help her find funds for ECHO. Gaining Superhub status was considered one way to generate state-level stakeholder support.

ECHO Vision and Sustainability

We asked respondents about their vision for the future and what it would take to achieve it. Several themes came from this discussion.

Growth and Expansion

NEOMED wanted to grow the geographic footprint of ECHO. Murphy said they were in 63 of the state's 88 counties and she wanted to be in all of them. She also wanted to grow within the United States and have spokes from all states. Murphy counted off seven new ECHO programs that NEOMED would like to initiate. They wanted to address more topics of need for Ohio providers such as social determinants of health, Alzheimer's, dermatology, and transitions of care. Furthermore, they envisioned using ECHO to help share NEOMED's knowledge and expertise with the community by expanding outside of the health care space and offering programs for local agencies, such as programs covering bullying or nutrition for high schools. Smith described community-building ECHOs where new staff join a three-month ECHO and get to know each other and how the larger system works.

Murphy wanted to be a national partner in continuing education and service excellence. A step toward this vision was becoming an ECHO Superhub—a designation NEOMED officially received in 2021. Smith described being a Superhub as a "huge thing" for a community medical school. It would solidify their position in the community, in Ohio, and beyond.

Funding

When asked about her vision for the future, Murphy said, "I want to be here for starters." To ensure that, they were developing a sustainability plan that included applying for new grants, developing a budget for their Superhub work, and lobbying for state support of ECHO. Murphy was proactively trying to generate support from the state budget. But grants were limited and competitive, and shifting university and state priorities can impact the level of support for ongoing funding. As grants ended, the difficulty of replacing funding to sustain an ECHO program became both a priority and a hurdle.

Sustaining Spoke Engagement

Both ECHO programs wanted to increase sustained engagement of their spokes. Many Systems of Care ECHO participants join only when their team was scheduled to present a case and did not return for future sessions. The team wanted these spokes to "come back even if it's not their own case, because they were going to learn about resources for the youth and they could use this information in the future with a different situation." The IC@N ECHO team wanted to see participants join from a broader geographic range within Ohio and other states. They also wanted more participants to sustain attendance past an initial three to four sessions, which respondents described as a "hump" after which participants begin to join consistently and engaged more fully within the community.

To achieve this vision, both programs talked about the need to discover effective methods of reaching and engaging participants for the long run. This could include adjusting program logistics such as day and time or working through the barriers participants experience to joining for an extended period of time.

Continuous Improvement and Assessment

Reflecting on the future of Systems of Care ECHO, one respondent explained, "I think we're exactly in that sweet spot of doing good work. We've maintained our boundaries and our ethics, and we're trying to create more products for the state of Ohio through this project." Nonetheless, they would like more time focused on continuous quality improvement. Respondents within IC@N ECHO wanted to access more robust data to show provider- and patient-level changes that could be attributed to ECHO participation.

Respondents

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