University of Chicago – ECHO Chicago
Implementation Profile

"Part of the goal of any successful team is to play to the strengths of those on that team and to recognize that not everybody can do everything. As a team, you hope that collectively you have people who will take turns leading and following as you address issues. The same is true in ECHO…"

ECHO-Chicago at the University of Chicago and its Behavioral Health Integration and Hepatitis C 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.

Karen Lee, MS, executive director of ECHO-Chicago, was a 2020 implementation fellow and worked alongside Diffusion Associates and nine other fellows to conduct this case study. This profile is based on interviews conducted by Lee and James W. Dearing, PhD, professor at Michigan State University, in October 2020.

We begin this profile by sharing unique implementation insights from ECHO-Chicago and its Behavioral Health Integration and Hepatitis C ECHO programs.

ECHO Implementation Insights

Adaptation is Necessary and Continuous

ECHO-Chicago was an early adopter of the ECHO Model and worked in partnership with spokes to design the program to meet their needs. Spoke participants played an important role in vetting the ECHO Model and shaping the direction of the hub. For example, the cohort design used by ECHO-Chicago was a response to spokes' needs. While New Mexico was successful in implementing a longitudinal model in rural settings, providers in the urban setting wanted defined start and end dates. ECHO-Chicago programs continued to evolve over time based on feedback from participants, lessons learned from the program team, and through engagement of broader stakeholders including patients.

Leaders Shape Programs

Most respondents had attended formal ECHO training, but it was their experiences as health practitioners in low-resource settings or their personal approach to ECHO sessions that seem to define the program. In the Behavioral Health Integration program, both program leaders had experience in community settings, which helped them translate recommended practices in very practical ways. Although the Hepatitis C team did not have this background, they approached each cohort and each session in a purposeful way to create an inclusive environment where participating providers and subject matter experts were seen as equals and partners in learning.

Case-Based Learning is All Teach, All Learn

ECHO-Chicago maintained strong fidelity to the case-based learning ECHO Model principle. They communicated to providers that case presentations were an expectation of participation. Respondents described the case presentations as a teaching and engagement tool. A standardized case form was used in part to draw providers' attention to certain components of care, but providers could shape the

case based on what was most relevant or challenging to them. This tailored the education and promoted buy-in and engagement to support ATALAS. A somewhat unexpected outcome was the impact that case-based learning had on the subject matter experts. One respondent shared, "ECHO work has helped me to be a better primary care doctor. I'm still learning in terms of the way that I work with my patients in a primary care setting. And it's been really helpful to hear the cases and to hear from my colleagues in this space." Similarly, another respondent shared, "I have been inspired by all the great people at FQHCs who are doing such amazing work. Working with these providers through ECHO has changed my understanding of medicine, and how we care for people, so much."

ECHO Model Adoption

Daniel Johnson, MD, was instrumental in bringing the ECHO Model to the University of Chicago. He heard about ECHO in 2009 from a colleague who had learned about ECHO through a friend who worked at the University of New Mexico. Project ECHO sounded well-aligned with the work Johnson was doing to address disparities and access to care. In October 2009, a team including Johnson, two members of the Urban Health Initiative, and two leaders of local federally qualified health centers (FQHCs), traveled to New Mexico to spend three days with the Project ECHO team. While formal immersion training did not exist at that time, the three-day experience was immersive. The Chicago team talked with members of the Project ECHO team and observed sessions at the Project ECHO hub and at a spoke site. Upon returning to Chicago, the team discussed how the model could be adapted to an urban environment, specifically the South and West Sides of Chicago, low income, and underserved areas of the Chicago health system.

ECHO-Chicago was situated within the University of Chicago's Biological Sciences Division in the Department of Pediatrics. Within the Department, ECHO was part of the Section of Academic Pediatrics, one of two sections led by Johnson. ECHO-Chicago aligned with Johnson's work under the UChicago Medicine's Urban Health Initiative, a program started by Michelle Obama when she worked at the hospital. Johnson's work under the Urban Health Initiative focused on improving delivery of care in urban, underserved communities so that individuals get care at "the right place, at the right time, and by the right provider."

A key advantage of ECHO-Chicago's position within the University of Chicago, as well as its close relationship with the Urban Health Initiative, was the ability to leverage existing networks to facilitate ECHO programming. For example, while ECHO-Chicago programs included subject matter experts external to the organization, many came from various parts of the university, including the Departments of Pediatrics, Medicine, Psychiatry, Obstetrics and Gynecology, and Family Medicine, as well as professional schools including the School of Social Service Administration and the Harris School of Public Policy. Leveraging existing networks was instrumental in recruiting community providers as spokes. The Urban Health Initiative's South Side Healthcare Collaborative was designed to bring together safety net institutions from across the South Side to discuss programming and policy that could collectively improve health and care delivery across the region. As faculty liaison to the Collaborative, Johnson had existing relationships with FQHCs. Through these relationships he piloted the ECHO model with six FQHCs. Seed funding for the pilot came from the Urban Health Initiative. Since then, the program had maintained some internal funding (about 25 percent of its budget) and brought in external funding, primarily federal and local foundation grants, and some philanthropy and the city health department funding.

Behavioral Health Integration ECHO

The Behavioral Health Integration ECHO program was launched in 2016, but groundwork for the program was laid years before. Doriane Miller, MD, a co-lead of the program, learned about the ECHO Model in early 2010 when Sanjeev Arora, MD, founder and director of Project ECHO, presented the ECHO model to a group of stakeholders convened by Johnson. Miller's long-standing interest in behavioral health integration in the primary care setting, coupled with a need she observed at the FQHC setting where she had been practicing integrated care, particularly in the areas of depression and anxiety, led to the development of a needs assessment in partnership with the ECHO-Chicago team. Discussions with leaders at several FQHCs confirmed the need and interest in behavioral health integration as well as managing serious mental illness. As planning for the program began, Daniel Yohanna, MD, joined as co-lead, lending his many years of experience in community psychiatry. At the time he had also been working with the American Psychiatric Association to develop payment models for behavioral health integration. Funding to pilot the Behavioral Health Integration program came from two local foundations. The program was supported by other foundation grants through partnership with a national organization interested in adapting the program for free and charitable clinics across the country.

The focus of the Behavioral Health Integration program was broad and included management of common behavioral health issues (e.g., depression, anxiety, substance abuse) as well as systems-level changes that support the delivery of integrated care. This ECHO used a multidisciplinary panel that includes subject matter experts including a primary care physician, a psychiatrist, and a community-based social worker. The Behavioral Health Integration program had trained three cohorts of providers since 2016. Two additional ECHO programs were spun off from the Behavioral Health Integration ECHO—one on the management of serious mental illness, and another on the management of depression and anxiety.

Hepatitis C ECHO

The Hepatitis C program launched in 2014 at a time when therapeutics for Hepatitis C were evolving and treatment within the primary care setting much more feasible. Andrew Aronsohn, MD, traveled to New Mexico to train at the ECHO Institute, observed a Hepatitis C session, and had a hepatologist-to-hepatologist conversation with Arora. In contrast to the longitudinal model that the University of New Mexico used for their Hepatitis C program, Aronsohn decided to develop a short 10-session cohort-based curriculum to develop the skills primary care physicians needed to independently treat Hepatitis C. After 10 sessions, the program was offered to a new cohort. The program pilot was supported through internal and in-kind support and then secured external funding. The Hepatitis C ECHO program was part of a five-year Centers for Disease Control and Prevention $6.5 million project to develop a public health infrastructure for screening, diagnosis, and treatment of Hepatitis C. The Hepatitis C ECHO quickly scaled the program to train providers across Chicago. This program was part of another federally funded project that expanded the program's reach to Southern Illinois and rural-based providers.

Like the Behavioral Health Integration program, the Hepatitis C ECHO used a multidisciplinary panel whose experts included a hepatologist, a pharmacist, a social worker, and an addictions specialist. The Hepatitis C program had trained 34 cohorts since 2014. The Hepatitis C ECHO was spun off to create a Hepatitis C program for case management teams.

The decision to adopt the ECHO Model for Behavioral Health Integration and Hepatitis C was similar; there were started to meet a need of safety net institutions. Miller observed a need for behavioral health integration within her own practice in a local FQHC. She was able to conduct a field investigation with other FQHCs to confirm that there was a broader need for behavioral health integration as well as additional need concerning serious mental illness. While the Hepatitis C program did not conduct a formal needs assessment, its leaders recognized changes in Hepatitis C treatment and protocols that made treatment within the primary care setting feasible. Knowing that many of the FQHCs served populations at higher risk for Hepatitis C, they foresaw a gap in knowledge and training that ECHO could bridge. Both programs benefited from guidance from the ECHO Institute, whether it was through observation in New Mexico, as in the case of the Hepatitis C program, or in hearing insights from Arora in Chicago, as was the case for Behavioral Health Integration. These programs found external funding to support their work.

ECHO Model Implementation

ECHO-Chicago's implementation of ECHO exemplified the four core ECHO principles as well as the overall principle of "all teach, all learn" (ATAL) in multiple ways. The principle of using technology to amplify scarce resources was realized by using videoconference technology—first Passport, then Vidyo, and then Zoom—to bring subject matter experts from the University of Chicago and other academic institutions together with safety net institutions across Chicago and beyond. Sharing best practices, another principle, was accomplished via short didactics presented at the beginning of each session. Topics were defined at the outset but evolved over time. For example, the Hepatitis C program initially focused on navigating the prior authorization process to access Hepatitis C medications. As restrictions were removed, the didactic curriculum was revised to focus on other topics such as harm reduction approaches and working with people who inject drugs. Similarly, the Behavioral Health Integration program adjusted didactic topics based on changes in the environment or among participants. For example, based on participations feedback, first one, then two sessions were added to address personality disorders. A session on immigration was added when the audience shifted to free and charitable clinics. Participants received support from subject matter experts through other channels as well. For all ECHO-Chicago programs, participants could contact subject matter experts with questions between sessions and after completing the program. In the Behavioral Health Integration program, "office hours" were established for out-of-session discussion of medication management with the psychiatrists or systems-level issues with quality improvement experts.

Case-based learning, another principle, remained a key component of the two ECHO-Chicago programs. When providers registered for an ECHO-Chicago program, presenting a case was stated as an expectation and required for continuing education credit. Programs scheduled case presentation dates at the onset of each session. Case topics were determined by participants to be as "user-centered" and helpful to the providers as possible. While the general topic of the case was left to participants, the details were influenced by the case report form. As described by the hub team, the case report forms also served as a learning tool: "The cases are influenced by the case report form that we use, because the fields in the form highlight areas that providers should pay attention to. Completing the case report form then becomes an effective learning tool, as well as a communication tool." Subject matter experts provided case guidance in the first session, where they presented their own case as an example and reviewed the elements in the case report form. As described by Behavioral Health Integration program leaders, the example case modeled the case-based learning that occurred in ECHO sessions: "We actually present patients that we've personally cared for and are caring for. These cases are neither simple nor straightforward. And at least for the case that I present, the patient continues to be an

ongoing challenge. By presenting this case as the example during sessions, I've received some advice and support for my own ongoing management of this patient who I've been seeing for more than five years. So, it really demonstrates "all teach, all learn," and "all support" atmosphere in these sessions."

Data to monitor outcomes, a fourth ECHO principle, was embedded in ECHO-Chicago operations. Feedback from participants and subject matter experts was used for continuous quality improvement. Program teams met after the conclusion of a program to review data, identify lessons learned, and discuss changes to curricula or processes to implement before the next cohort. The hub's data team used Power BI to create internal and external dashboards to track key metrics. The team then set goals (for example, the number of cases presented per session), and tracked progress over time. ECHO-Chicago shared data in annual reports, grant proposals, reports to funders, and updates to stakeholders such as elected officials and participating organizations. Sharing data with spokes was an effective strategy in sustaining participation over time. Organizations that signed a memorandum of understanding with ECHO-Chicago received an annual report identifying participants and key metrics such as total continuing education credits awarded to providers. Sharing this information with spoke leadership helped with organizational buy-in and ensured that providers were able to reserve time to participate in ECHO. Continuous quality improvement was guided by program-specific advisory boards for some areas. The advisory group members represented various backgrounds and experiences, including patients. Including patient representation on the advisory boards illuminated programmatic areas that were important to patient care, but that could be overlooked in the provider perspective of care. As described by a hub team lead, "The consumers on the advisory boards bring up a lot of interesting ideas that, as a provider, I don't focus on, but they do. So, as part of this advisory group, they help ensure that the non-medical issues are a focus of our programming, not just medical issues."

Implementation of the four principles built an "all teach, all learn" (ATAL) community that is core to the ECHO Model. We asked respondents to share what ATAL meant to them. All respondents discussed the partnership between subject matter experts and participating providers as facilitating collective problem solving and learning in the ECHO sessions. As a hub team leader said, "'all teach, all learn' means there's a recognition that everybody who comes to the table has something to offer and something to learn. Part of the goal of any successful team is to play to the strengths of those on that team and to recognize that not everybody can do everything. As a team, you hope that collectively you have people who will take turns leading and following as you address issues. The same is true in ECHO—as providers come into the room, they share their experience. They're not just there to absorb everyone else's. They're there to share their strengths, skills, weaknesses so that the collective group moves forward." Program respondents also noted that case-based learning was a major driver for ATAL. One respondent shared, "Every time we're in a session we learn something new. There's always a new nuance to a case that everyone in the room is learning about. Everybody is walking away with a new nugget of information every time."

The Behavioral Health Integration team offered additional perspective, they included "all support" as an additional component of ATAL. This was particularly poignant for issues arising during case presentations that related to larger systemic issues or social determinants of health for which providers can do little to change the patient's circumstances. The program team stressed the importance of being humble and acknowledging what you don't know, relaying their own experiences with these challenging issues, and providing a space for the group to share their experiences and support each other.

An "all teach, all learn, all support" (ATALAS) groundwork was laid by the Behavioral Health Integration and Hepatitis C program leaders from the first session. Program leaders explained that ECHO was not a webinar, that participation and discussion drove the training, and that cases were a tool for

engagement. A Hepatitis C respondent shared, “Almost universally, once providers start presenting cases, it becomes personal, closer to home. That will always solidify some engagement, even if you haven't gotten it before.” ATALAS was also reinforced when experts approached ECHO sessions with humility, showing that subject matter experts also struggled with many of the same issues as others in the group. Lightheartedness was another strategy to engage people in training and reinforce a level group dynamic between the subject matter experts and participants. As described by the Hepatitis C program team, “We don't take ourselves too seriously. It's a very serious subject matter and we're dealing with very, very serious social issues. We take that seriously, but we don't take ourselves seriously. That's key to being more accessible. I think that’s a major reason why people are so comfortable coming back to us after they complete the series. They know that they have this whole team right here for them any time they need us.”

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 these factors play a role in how ECHO was implemented here or elsewhere, and some factors were more important than others. Based on our interviews, we outline the factors below that appear to have the most impact on how the ECHO-Chicago hub and its Behavioral Health Integration and Hepatitis C programs were implemented.

Service Environment

ECHO-Chicago’s programming was driven by health issues that mattered most to participants, specifically to safety net providers. One respondent shared, “How we decide what to do is really a partnered process and goes in many directions. We have funders and faculty from the university that will come to us and say that they've identified a need that ECHO could help with, but we rarely move forward unless we've checked it out with our community partners. We had one program that we started that we didn't check out first with our community partners where we just went for the funding. In retrospect, that was a mistake.” That funding-driven program struggled with recruitment and was retired once the grant ended. The service environment also impacted programs. For example, ECHO-Chicago did not start a Hepatitis C program until 2014, when treatment evolved to a point that made management in the primary care setting feasible. The Behavioral Health Integration program was also the result of changes in the service environment. One respondent explained, “Years ago, there wasn't a behavioral health person in FQHCs. Now they have case management and want to know what to do with these case managers. The opposite has happened in behavioral health programs, which now have integrated with primary care. Higher reimbursement for integrated care also helped. These changes came as parallel processes and then they needed more education on what to do. So, the collaborative model, and ECHO, made sense.”

Funding

Funding was not the sole determinant of direction for ECHO-Chicago, but it shaped programs. One hub respondent described the influence of external grants in this way: “Whatever we write into our grant

proposals determines what we do. We have to follow through on what we commit to do, or at least make the best effort that we can. That influences decision making." For the Hepatitis C program, funding was critical for scaling programs beyond a pilot phase funded through internal and in-kind support. Growth was enabled by securing external grant funding. External funding improved the infrastructure, the ability to conduct outreach, hire personnel, and made teams more robust and diverse.

A common challenge mentioned by hub and program respondents was the need for sustainable funding. One program respondent said: "There seems to be support for the implementation of ECHO … certainly senior leadership would like to see their providers trained up, increase their knowledge, and subsequently deliver higher quality care. Oftentimes, people think of support as in, if there's a policy around it, then funds will follow. That has not been the case. And that's something that is widespread…. Additional funding for the ECHO Model baked in at the local and state level is needed to facilitate spread."

Interorganizational Relationships

Johnson's relationships and work with safety net institutions through the South Side Healthcare Collaborative provided a ready infrastructure for engaging spokes. Johnson explained: "I went to the Collaborative members to identify the safety net organizations that would be interested in hearing about ECHO. I then leveraged my relationships with FQHCs to launch ECHO-Chicago. The six original FQHCs that were willing to put their toe in the water came from the South Side Health Care Collaborative." At the program level, building interorganizational relationships was sometimes a challenge. As the Hepatitis C program worked to expand its geographic reach, they had to account for cultural and environmental differences. One respondent commented: "Expanding reach is hard. Even though there are limited resources in Chicago, it tends to be more limited and even more stigmatized in a lot of these smaller rural communities. It's hard to find providers who want to see patients with Hepatitis C. Some providers worry and have misconceptions of what treating Hepatitis C is going to entail for their clinics."

The relationship with the ECHO Institute influenced implementation. The ECHO Institute provided mentorship throughout ECHO-Chicago's journey. Said one respondent: "There isn't a year that goes by that we don't talk to Sanjeev Arora. And there certainly isn't a month that goes by that our team doesn't interact with the team in New Mexico." Engagement with the Institute occurred through monthly Superhub meetings, participation in ECHO collaboratives, MetaECHO conferences, and monthly meetings. Engagement with the ECHO Institute was at the hub and program level. For example, the Behavioral Health Integration team presented at a MetaECHO conference. The Hepatitis C program, trained and mentored by the Hepatitis C team at the University of New Mexico, was involved with other ECHO programs through the ECHO Institute's Hepatitis C Collaborative.

Leadership

The motivation and commitment of leaders at the hub and program levels was evident across interviews. As previously described, it was the alignment of the ECHO model with Johnson's interest and work in improving access to care that initiated ECHO-Chicago's journey. First-hand experience working in safety net settings motivated leaders to do ECHO work, and provided important grounding for program leaders to contextualize recommendations for environments with limited resources. As one respondent described, "Efficacy versus effectiveness in terms of translation of information was one of the reasons why it's important to have people like us—who have worked in resource strapped environments—serve as faculty. If you have people who are much more theoretical about the

implementation issues, then there's a gap between what is known to work in ideal settings versus the reality."

Leaders also set the tone for ATALAS to thrive during ECHO sessions. When asked about his approach to ECHO, one leader said, "The approach that I've always taken goes back to the communal aspect of what ECHO is all about. My style has been to be as inclusive as possible. My fear is talking down to somebody in a session or talking over or around somebody. ECHO is so great because it lends itself to participation. It's about respect and seeing the people on the other end as equals. We're all doing this together. We're all trying to learn about a disease, fight a disease, treat a disease, and take care of patients. And for me, trying to see things on that level has made it easier, and it becomes a self-fulfilling prophecy because I end up learning so much from their experiences."

Staffing

ECHO-Chicago's professional staff moved the hub and programs forward. The staffing model evolved over time. A hub respondent explained that as they added programs, they also added staff who were "no longer a jack of all trades. Rather, you had to identify responsibilities and put people into certain specialty areas to do their work. And that means that if you want consistency, you also have to develop process tools." The team used some of the tools in the Project ECHO Resource Library (PERL) as a starting point, but many of the tools were developed on their own. They also developed a process for onboarding new subject matter experts, which was a combination of written best practices and observational experience; "We train our facilitators because we want to make sure that we have fidelity to the model. We first have them observe a couple of ECHO sessions. We work with 60 plus facilitators for more than 20 topic areas, and everyone has a different style of facilitation, so we want to make sure that they learn from others' experiences. We have also developed a facilitation guide that lists best practices. And then, very early on, we connect our facilitators to the person who will be actually coordinating the series because we want to make sure that they're able to develop that relationship, which is very important, especially when they're doing the series for the first time."

The important role staff, and in particular the project coordinators, play was underscored in the program interviews. One program respondent stated, "The most important person for all of this has been our project coordinator. That is somebody that is able to do the type of outreach that she's done, and run the sessions, and make sure that everything happens. That is the key to make any of this happen. It just doesn't work otherwise." At ECHO-Chicago, the program coordinator sat within the hub team and worked with three to four program teams. Coordinators recruited spokes, sent session reminders, collected cases, ran the sessions, troubleshooted technology, served as the liaison between participants and subject matter experts between sessions, and collected data before, during, and after the cohort. They often served as a link between the program team and the larger ECHO communities or other stakeholder groups.

ECHO Vision and Sustainability

ECHO-Chicago had a vision of sustainability and growth. Sustainability was dependent upon finding a stable funding source that would support ECHO infrastructure more generally—rather than a specific ECHO program. While the hub has been able to find grant funding over its 10 years of operations, a hub respondent noted the challenges of grant funding: "We all know that eventually, grant funding dries up because you're no longer as innovative as you once were and so people don't always want to keep funding the same program." The hub was exploring funding from the State of Illinois as a potential

source. Noted challenges included a state budget that was currently in deficit as well as the ongoing COVID-19 pandemic that added to the state's financial strain.

ECHO-Chicago wanted to extend the ECHO model beyond traditional medical areas. They had recently initiated programs to work with non-medical professional groups such as teachers and judges, as well as directly with families. They also had a program under development that focused on integrating trauma-informed care into community-based workforce development programs. This work underscored an underlying belief about ECHO as a broadly applicable instrument for change. One respondent shared: "We really believe that this is a broad-based platform for doing the good works that are necessary to make the world a better place, and so we want to continue to move in that direction."

The Behavioral Health Integration program wanted to further expand behavioral health capacity in communities. The team discussed the emergence of semi-professional or non-traditional providers of behavioral health as a key component of a behavioral health system that could meet the exponentially growing behavioral health needs. ECHO could play an important role in supporting growth of the behavioral health workforce. A challenge was finding sufficient resources, including funding, to support this work and addressing issues of equity as outcomes for behavioral health, and health more generally, were impacted by environmental and societal factors including housing, employment, and access to resources.

The Hepatitis C program wanted to expand its geographic reach across Illinois and to engage in future Hepatitis C elimination efforts. As part of a federally funded project, the Hepatitis C program was beginning to expand to Southern Illinois. While funding was available, the inability to meet with people in-person due to COVID slowed efforts to build relationships with new clinics. Another challenge to geographic expansion was the stigma associated with certain populations at high risk for Hepatitis C, as well as misconceptions that providers have about Hepatitis C treatment, especially in rural areas. Using ECHO as a way to expand Hepatitis C treatment across Illinois sets the stage for future work toward the elimination of Hepatitis C.

The ECHO-Chicago hub, as well as the Behavioral Health Integration and Hepatitis C programs, shared a common interest in using ECHO to meet community health needs. They also shared a common concern about the availability of resources, especially funding, to meet these goals.

Respondents

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