Project ECHO Nevada
University of Nevada, Reno School of Medicine
Implementation Profile

"[Participants] don't feel as though they're in a bubble, but rather that they are part of a larger team in which they can work together toward impacting a particular patient's health."

Project ECHO Nevada at the University of Nevada, Reno School of Medicine was selected to participate 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.

Troy Jorgensen, project manager for Project ECHO at the University of Nevada, Reno School of Medicine, was a 2020 implementation fellow and joined nine other fellows alongside Diffusion Associates to conduct research for this study. This profile is based on interviews conducted in September-October 2020 by Nagesh Rao, PhD, professor at Ohio University, and Maggie McClain McDonnell, director of education at Oregon ECHO Network and a 2020 implementation fellow.

We begin this profile by sharing unique implementation insights from Project ECHO Nevada and its Nutrition Education and Sports Medicine ECHO programs.

ECHO Implementation Insights

Build Partnerships

Build partnerships, utilize their networks, and collaborate to acquire funding. Partnerships were key to building successful ECHO program at the University of Nevada as partners often had existing resources that can be beneficial. These resources included existing networks of providers or other audiences that can be used when recruiting participants for your ECHO programs. For example, Project ECHO Nevada partnered with the Nevada Certification Board, which certified community health workers in Nevada. This board helped to recruit participants to the Nutrition Education program by disseminating information about the program. In addition, many partners can assist with identifying and acquiring funding to support ECHO programs. As an example, the Nevada Cancer Coalition received a Centers for Disease Control and Prevention (CDC) grant and partnered with Project ECHO Nevada to deliver a series on Cancer Survivorship. Partners can also provide valuable insight into the needs of a service area, information that can be used to develop ECHO programs to address those needs. Some partnerships to consider when forming your ECHO are state or local health districts, state licensing boards, and professional organizations or associations.

Visit Sites

Frequent visits to stakeholders and to spoke sites was important for ensuring that ECHO programs thrive in Nevada. A "visit" might occur through email or telephone, but in-person visits or meetings were particularly valuable. Consistent meetings with hospital administrators, clinic managers, and other influential staff at spoke sites keep them informed on your activities and any new programs. In addition, you can gather information on their specific needs that can lead to new programs. Site visits were also an opportunity to see facilities and gather information on their capacity and capabilities.

Use Advisors

Form an advisory council or steering committee to gather input and provide updates. Forming an advisory council with relevant stakeholders, funders, and partners was a great way to solicit input and feedback on your existing programs. Additionally, meetings with advisors were an opportunity to brainstorm about new opportunities or needs as they arise.

Foster Team Buy-In

Establish hub team buy-in from the start when developing new programs. This was particularly important for ECHO programs with small staff as it can build strong accountability. Sending hub teams to immersion training or inviting them to attend the MetaECHO Conference also creates buy-in. This buy-in can lead to teams being more engaged with the ECHO Model, greater accountability, and better facilitation of sessions.

ECHO Model Adoption

Project ECHO Nevada was established in 2012 and was a long-standing ECHO hub with a wide array of programs. Evan Klass, MD, and Melissa Piasecki, MD, were instrumental in bringing the ECHO Model to the University of Nevada, Reno School of Medicine (UNR Med). They learned about ECHO from an article by Sanjeev Arora, MD, in the *New England Journal of Medicine*, after which they decided to travel to the University of New Mexico (UNM) to better understand the ECHO Model. During these early days at the ECHO Institute in New Mexico there was limited infrastructure in terms of training and support for ECHO and much was learned directly from Arora and his team. Klass and Piasecki returned from New Mexico with the goal of establishing an ECHO hub in Nevada. Klass and Piasecki, along with others from UNR Med, conducted a needs assessment via a road trip across the state. During this trip they visited potential stakeholders who would later become spokes for this ECHO hub. These stakeholders included many of the Critical Access Hospitals (CAHs) in Nevada, as well as smaller rural clinics and Federally Qualified Health Centers (FQHCs). These visits were key in establishing relationships with sites, as well as gathering information about the needs of communities. Based on the needs assessment, Project ECHO Nevada established four ECHO programs: Antibiotic Stewardship, Diabetes & General Endocrinology, Hepatitis C, and Sports Medicine.

The Nevada ECHO hub experienced continued growth in the number of ECHO programs and staff, including the hiring of a program director, clinic coordinator, and IT support. The hub grew from the original four programs to offering 14 programs in 10 different subject matter areas at the time of this writing. To support this growth, staff members involved in program management attended immersion training at the ECHO Institute. In addition, team members attended supplemental virtual trainings offered by the ECHO Institute about iECHO, clinic coordination, and IT.

Project ECHO Nevada was housed within the Office of Statewide Initiatives at the University of Nevada, Reno School of Medicine. The purpose of the Office of Statewide Initiatives was to improve access to quality health care for rural Nevada by providing collaborative leadership and resources to health care and community organizations. Project ECHO Nevada fit well within this department as a rural outreach and support program. A key advantage offered by the Office of Statewide Initiatives were pre-existing relationships with many of the stakeholders that the ECHO hub utilized. These relationships included critical access hospitals, provider organizations, and county/state departments of health. Additionally,

Project ECHO Nevada drew on faculty from UNR Med as subject matter experts for several ECHO programs offered by the hub. Faculty included both academic and community faculty in the areas of infectious disease, cardiology, pediatrics, geriatrics, pain, and sports medicine.

The ECHO hub at UNR Med was initially funded through grants administered by Nevada's Office of Statewide Initiatives. As it became better established within the state, Project ECHO Nevada had secure funding year-over-year via a line item in the state budget for University of Nevada, Reno School of Medicine. This steady funding source from the state was crucial to the hub, allowing it to establish long-term programs as it had reliable funding. The hub also pursued grant funding and contracts for shorter-term programs to address specific needs that arose within the state.

Nutrition Education ECHO

The Nutrition Education ECHO program started in November 2019 in response to the discontinuation of the long-standing Diabetes & General Endocrinology ECHO program due to loss of faculty. Karmella Thomas, RD, CDE, and Mordechai Lavi, MD, started the Nutrition Education ECHO to support community health workers in managing their clients with type 2 diabetes. Thomas was a long-time ECHO hub member for the Diabetes & General Endocrinology program and Lavi was the medical director for Project ECHO Nevada. Lavi attended the formal ECHO immersion training at the UNM ECHO Institute while Thomas drew from her previous experience in the Diabetes & General Endocrinology program to develop the program. Thomas also drew on her formal training as a registered dietician and certified diabetes educator, and trainings through the Academy of Nutrition and Dietetics. State funds for Project ECHO Nevada supported this program, including time for faculty and staff. The Nutrition Education program was a cohort-based program whose participants were Community Health Workers supporting patients with diabetes.

Sports Medicine ECHO

The Sports Medicine ECHO program, launched in 2012, was one of the longest standing programs at Project ECHO Nevada. This program trained and supported primary care providers in the field of sports medicine and included topics such as injuries, rehabilitation, and nutrition. This program was led by Carol Scott, MD, who first learned about the ECHO Model from Klass. As the first Sports Medicine ECHO program, Scott relied heavily on her training as a physician certified in sports medicine to guide the program's development. Scott participated in training through the ECHO Institute and learned much from Klass regarding the ECHO Model and its implementation. This program had state funds to support the faculty and staff. The Sports Medicine program was a drop-in based series and participants were primary care providers, physical therapists, and athletic trainers who were looking for support in addressing the physical wellbeing and fitness of their patients/clients.

The Nutrition Education and Sports Medicine programs were identified as areas of need for the state of Nevada. Community health workers expressed interest in receiving training and support through a program like ECHO to better manage their clients with diabetes. Similarly, primary care providers in rural areas of Nevada expressed interest in learning more about sports medicine–related injuries and rehabilitation. Adoption decisions also differed. For example, the Nutrition Education series was created in response to the discontinuation of the long-standing Diabetes and General Endocrinology program. The discontinuation of that series was used as an opportunity to pivot from the traditional audience of primary care providers to a new audience of community health workers. In contrast, the Sports

Medicine program was established based on information from site visits and conversations with stakeholders who expressed interest in such a program.

ECHO Model Implementation

The ECHO Model seeks to build a learning community where "all teach, all learn." This is done by leveraging technology, sharing best practices, utilizing case-based learning, and analyzing evaluation data to refine programs. We asked respondents to tell us what "all teach, all learn" meant to them. Respondents described a shared understanding that all opinions, regardless of their source, have validity. Respondents expressed that it was important that all participants in their sessions felt personally welcomed, as were their thoughts and ideas. "All teach, all learn" was linked to the interdisciplinary approach that ECHO programs used at each session. Hub teams often had subject matter experts from a variety of disciplines who were learning from each other and this learning was demonstrated for the participants. One respondent commented that it was important that participants "don't feel as though they're in a bubble, but rather that they are part of a larger team in which they can work together toward impacting a particular patient's health."

Additionally, hub teams learned from the participants, including information about their patient population, services available in their area, and barriers to care their patients may be facing. "All teach, all learn" was described as participants learning from each other. Many participants were practicing in similar communities and treating similar diseases with similar challenges. As such, solutions for these challenges were often reached among the participants themselves rather than from the hub team. All of these aspects of "all teach, all learn" came together during ECHO sessions to build a learning community.

Project ECHO staff and leaders reinforced the "all teach, all learn" model in multiple ways. In the hub, "all teach, all learn" was reinforced by using a standard agenda or outline for each session so participants became comfortable and more willing to engage. This consistency included introductions at each session to build group rapport, followed by a case presentation, then the didactic. Case presentations were another opportunity to promote "all teach, all learn." Hub team members would sometimes present their own patient cases to the spokes for review and consultation. This showed that even the subject matter experts did not have all the answers and needed input from others. In addition, the conversations were managed to ensure that everyone who wanted to share was able to do so. The ECHO staff facilitating the sessions watched for non-verbal cues from participants and monitored Zoom functions such as muting/unmuting and the chat box.

Both programs focused on the four principles of the ECHO Model. Both programs drew on expertise available at the University of Nevada, Reno School of Medicine, including a registered dietician, an internal medicine physician, and a family medicine physician with certification in sports medicine. Both programs utilized Zoom video conference technology to connect with spokes and offer didactic presentations at all sessions. Each program also created a learning environment through spoke introductions, discussion questions/prompts, and opportunities to present cases. These interactions were often facilitated by the hub team but spoke-to-spoke interaction was common. A case-based model of learning was used by both programs and cases were presented by the spokes or by a hub team who shared from his or her own practice.

Programs had unique ways of reinforcing an "all teach, all learn" practice. For example, the Nutrition Education program utilized a cohort model where a set number of participants were recruited to

complete a six-week course. This group attended an initial orientation session where they learned the principles of the ECHO Model and set expectations for the series. During the orientation session, spokes were assigned dates to present a case that led to a high number of spoke presenting cases during the series. In contrast, the Sports Medicine program provided drop-in sessions where any spoke could attend and no commitment was required. These spokes were not assigned dates to present cases as they may be attending only a single session based on their interest in a specific topic. An additional key difference between these two programs was their evaluation methods. Sports Medicine utilized CME/CEU evaluations for the majority of feedback and evaluation data. The Nutrition Education program performed a more robust evaluation. This evaluation included evidence from the CME/CEU evaluation, a pre- and post-knowledge survey, and spoke focus groups conducted at the end of the series.

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 is implemented at Project ECHO Nevada and the Nutrition Education and Sports Medicine programs.

External Funding/Contracts

This hub was primarily funded by state funds administered to the University of Nevada, Reno School of Medicine. It also relied on external funding sources such as grants and contracts. Grant sources provided support for specific programs such as pain management/addiction, first-episode psychosis, or cancer survivorship. Additionally, external contracts with organizations like Medicaid Managed Care Organizations (MCOs) were a funding source for the hub. Contracts typically fund short, targeted series to meet objectives set forth in an agreement such as a memorandum of understanding (MOU). External funding/contracts were not a factor for either the Nutrition Education or Sports Medicine programs as they were supported in their entirety though the state funding provided to UNR Med.

Inter-organizational Environment and Networks

Partnerships played an important part in supporting this hub and ECHO programs. At the hub level, partnerships developed through an advisory council that guided decisions about new programs. Partnerships with the state hospital consortium, professional associations, and grantors/funders supported marketing and recruitment and were important to the sustainability of this hub. In particular, the Nutrition Education program had a strong relationship with the Nevada Certification Board that oversaw the certification of community health workers in the state. This board also approved the CEU credits offered by the Nutrition Education program and assisted with marketing the series.

Service Environment

Several state and national policies influenced ECHO programs. One state policy was Assembly Bill 474 which passed in the 2017 state legislative session. This bill set regulations on the prescribing of controlled substances, such as opioids, in Nevada. After passing, providers expressed concern about how the policy would impact their practices. The Nevada ECHO hub worked with the state's medical officer to deliver a session detailing the new law and addressed questions/concerns from providers.

Organizational Characteristics

Being part of the School of Medicine had a strong influence on the hub and ECHO programs. They were able to draw on faculty from the school as hub team members and subject matter experts for ECHO programs. This location also posed challenges when faculty left the school to pursue other opportunities. This situation occurred with the hub's Diabetes and General Endocrinology program, leading to the creation of the Nutrition Education program with the remaining faculty from that program. Additionally, the school had a number of community faculty who had signed agreements with the university to provide their services and expertise as needed. This network of community faculty was a valuable asset for the hub to draw on when developing new programs.

Leadership

Internal leadership from the hub's medical director, associate dean for the Office of Statewide Initiatives (OSI), and Executive Associate Dean provided strong direction and support. Lavi served as the hub's medical director and provided leadership in its day-to-day operations and quality improvement. In addition, the associate dean for OSI and executive associate dean provided decision making support and influenced the direction for the program as a whole.

Organizational Staffing

Organizational staffing also influenced the implementation of ECHO at this hub. This hub had a small staff of three and still offered thirteen programs and approximately twenty sessions a month. This ECHO operations team accomplished so much because the hub team had high buy-in and accountability. Much of the curriculum planning, scheduling, and preparation was undertaken by the hub and program experts with limited prompting from the hub staff.

ECHO Vision and Sustainability

When asked about the vision for the hub for the next several years, respondents wanted to deepen their program evaluation, ensure sustainability for the hub, and meet the goals set forth in their organization's strategic plan to increase participation by 25 percent. To achieve this vision, they needed to increase staff to support evaluation activities and recruit participants. A challenge to overcome was the state's budget deficit caused by COVID-19. Nevada's primary source of state revenue was from tourism, which took a huge downfall during COVID. This challenge created an opportunity for the hub to expand their funding network and work with new organizations such as Medicaid MCOs to acquire sustainable funding.

The Nutrition Education program wanted to support more patients with diabetes by recruiting more participants into the program while also providing community health workers with a solid foundation of

knowledge on diabetes and nutrition. To achieve this vision, the Nutrition Education program was utilizing the Nevada Certification Board's required competencies to become a certified community health worker in Nevada. Many of these requirements included education and training on diabetes and nutrition. As such, the Nevada Certification Board had been supportive of this program and approved CEU credits and marketed the program to community health workers across the state.

The Sports Medicine program wanted to recruit more participants and increase case presentations during sessions. With high turnover at rural health care facilities, recruiting new participants was an ongoing challenge. To support this vision, they planned to fostering relationships with their spokes to ensure that information about this program was reaching newly hired medical staff. However, turnover of administrative staff at these facilities meant explaining the program to a new CEO to earn their buy-in.

Respondents

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Suggested Citation

McDowell, M. & Rao, N. (2022). *Project ECHO Nevada University of Nevada, Reno School of Medicine Implementation Profile.* Diffusion Associates. https://www.diffusionassociates.com/echo.