United States Air Force Project ECHO
Implementation Profile

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The United States Air Force Project ECHO and its Diabetes Management ECHO program 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.

Eva Serhal, PhD, senior director of the CAMH ECHO operation, was a 2020 implementation fellow and worked with nine other fellows and Diffusion Associates in conducting research for this study. This profile is based on interviews conducted by Serhal and James. W. Dearing, PhD, professor at Michigan State University, in October 2020.

We begin this profile by sharing unique implementation insights from the United States Air Force Project ECHO.

ECHO Implementation Insights

Organizational Culture Shapes the Form that ECHO Takes

Even when leaders intend to implement the ECHO Model with fidelity, they can be met with system resistance that forces an adapted form of the model. Eppolito understood the ECHO Model and saw it as a solution to a changing military medicine system. But the ECHO Model was not compatible with the incentive structure and the way of work in military medicine. "We were up against that culture, right from the get-go," said Eppolito. Most Air Force ECHO programs stopped having case presentations and ECHO programs became didactics. Overtime, the ECHO label was removed from the chronic pain management ECHO, the addictions ECHO, and the acupuncture ECHO because the format had moved so far afield.

Institutional Commitment Makes the Difference

Where there was institutional commitment to a health problem, ECHO can flourish. The Air Force Project ECHO operation successfully placed its Diabetes Management ECHO within the Department of Defense Diabetic Center of Excellence. This brought dedicated staffing and funding for this program which invited participants from all branches of the U.S. military around the world. The Air Force ECHO programs that did not have this level of support withered. "They do a lot of things beyond just ECHO," explained Eppolito. "ECHO came under their umbrella. That's why diabetes is different from our other efforts. That's why diabetes has survived."

A dedicated and inspirational leader can be sufficient to launch and grow an ECHO operation, but perhaps not to sustain it. "Finding a home" for each ECHO program was essential if the larger healthcare system does not provide dedicated resources for ECHO participation.

ECHO Model Adoption

Antonio J. Eppolito, MD, was lieutenant colonel, United States Air Force, and chief of Air Force Telehealth and Telemedicine for the Air Force surgeon general at Defense Health Headquarters in Falls Church, Virginia. Eppolito first heard about Project ECHO when he was stationed at Kirtland Air Force Base in Albuquerque, New Mexico, in the early 2000s through a collaboration that the Air Force had with the University of New Mexico School of Medicine and the local Veterans Administration Hospital. When Eppolito learned that he was to be transferred to Washington, DC, to work at the Pentagon, he decided to replicate the ECHO Model across the Air Force. He met with Project ECHO founder Sanjeev Arora, MD, in the University of New Mexico School of Medicine, who encouraged him to try ECHO for growing continuing medical education in the military.

From his headquarters office in Virginia, Eppolito's plan for the overall ECHO operation was to find expert and motivated physicians in Air Force hospitals worldwide who would work as Master Provider Champions leading ECHO programs on various health topics as facilitators. In this way, Eppolito would not need staff at headquarters in his Telehealth and Telemedicine Division within Medical Informatics working on ECHO. Aside from him, the people working on ECHO would be distributed across Air Force hospitals, with spoke participants coming from the 75 Air Force primary care clinics. Within a few years of Eppolito's adoption of Project ECHO, the U.S. Army and U.S. Navy adopted Project ECHO for chronic pain management, reaching Army hospitals and Navy hospitals. Under Eppolito's leadership, the Air Force started ECHOs in traumatic brain injury, chronic pain management, addictions, acupuncture, podiatry, behavioral health, neurology, and dermatology, peaking in year four with 11 ECHO programs. The three services came together and negotiated a contract from the Department of Defense (DOD) with the ECHO Institute for consultation and training. After those operations began, the Veteran's Administration launched the VA ECHO focused on Congestive Heart Failure because of their older, sicker population of patients and then expanded to other topics.

Eppolito had a standard approach to scale up for each ECHO program. "I would go to our specialty consultant in the particular field—say dermatology—and I would have the consultant speak with all his colleagues, all the Air Force dermatologists as a group. He'd ask them: 'Do you guys want to provide a Dermatology ECHO?' They'd agree. So, I was like, 'Okay, one of you has to step up to be the Master Provider Champion.'" The Master Provider Champion for dermatology recruited a set of colleagues to comprise a team of specialists who would provide guest speakers for didactic presentations, invite others to sit in, alternate facilitating sessions, and assist in drafting the curriculum. Eppolito would submit the curriculum and plan to the DOD's CME platform for accreditation so spoke participants received CME. Once approved, Eppolito's administrative assistant posted the schedule and disseminated marketing mailers while Eppolito publicized the new program at conferences and visits to clinics. The dermatologist facilitating the program had a nurse or technician who, for extra duty, would be the Dermatology ECHO coordinator.

Air Force Diabetes Management ECHO

Eppolito began the Air Force ECHO effort in 2011 by launching a program about diabetes. He recruited Darrick Beckman, an active-duty endocrinologist at Wilford Hall Medical Center on Lackland Air Force Base in Bexar County, Texas, near San Antonio, who was also medical director for a Diabetes Center of Excellence. Beckman was excited to facilitate a diabetes ECHO program. "It was a complicated diabetic management ECHO," said Eppolito. "That was our first and I like to say our flagship ECHO. It's always been our most robust. Our other ECHO specialties have come and gone but the diabetes ECHO is still with us today, ten years later."

The Air Force Diabetes Management ECHO became more lecture-based over the years, partly because of the difficulty of persuading spoke participants to present a case to the group for discussion. "We don't have the carrot to get them to volunteer a case," said Beckman, the Master Provider Champion for the Diabetes Management ECHO. "We try to make it interactive by keeping the cases in there, but we've drifted away from that component because of constraints within the system that we work in." Beckman addressed this challenge by asking colleagues in the Diabetic Center of Excellence for cases of complex patients that they would discuss in ECHO sessions and asked participants what they would do based on what they know about the case. Participants included MDs, dieticians, nurses, and pharmacists.

Even though the program was more didactic, leaders of the Diabetes Management ECHO were responsive to participants' needs. "We'll ask people in the clinics what we should cover," said Beckman. "They'll say 'Hey, we really want some more information about X, Y, or Z.' That's where we get the majority of our didactic sessions." Connie Morrow, administrative coordinator for the program, agreed. "That's spot on. October is coming up and that is when we are planning for next year's topics. We have to plan out a year at a time because that's a CME requirement. I go back and pull all of our evaluations and suggestions from the CME site that we track and that's where we get that information."

ECHO Model Implementation

"All teach, all learn" was truncated in the Air Force implementation of Project ECHO. The consultative, shared learning, and discursive approach modeled at the University of New Mexico was not an ideal fit for military hospital and clinic personnel where hierarchy was the norm. The longest running ECHO programs initiated by Eppolito and the distributed Master Provider Champions began in a form true to the ECHO Model but evolved to emphasize didactics; they have become similar to webinars.

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 by the Air Force.

Service Environment and Policies

The military medical system was not particularly flexible. "Despite my attempts to do ECHO the way Dr. Arora was doing it, the Air Force wasn't really conducive to doing ECHO the pure way," recounted Eppolito. "I wasn't able to get two hours per session the way it should be done. We could only get one-hour sessions. We couldn't get the frequency of every week. Staff wouldn't buy into that. We went twice monthly or once a month. And over time, the pendulum swung toward the didactics and less toward the case presentations, which is exactly the opposite direction that ECHO is supposed to go, to the point where they started feeling like webinars. I was always apologetic to Dr. Arora that we were

diluting his brand, but he insisted that we keep on. And that's where we are now." The team removed the ECHO label from the chronic pain management ECHO, the addictions ECHO, and the acupuncture ECHO because the format had moved so far afield.

Military medicine had changed considerably over the last decades. "When I started 25 years ago," said Eppolito, "you would go into any military facility and the entire staff were board-certified family physicians. MDs. We did full scope of practice. Everything. All procedures, we saw all patients, all manner of disease, and you never referred out because it was like a badge of honor." He continued, "Now, a lot of our primary care clinics are basically glorified urgent care centers. They've moved away from managing patients and into just screening and referring them. We've lost family physician MDs as the primary care managers and they've been replaced with civilian mid-level physician assistants and nurse practitioners who are excellent in what they do but also limited in scope. With a lot of emphasis now on how many patients you can see quickly, it's difficult to impart a paradigm shift where you're going to put in ECHO and people have the time and the patience to present cases and retain management of patients. It's been too easy for military providers to just kick a referral down the road. And there's no incentive to not refer out to specialty care and no incentive to take the time to manage that patient yourself. See as many patients as you can as quickly as you can." In this way, the ECHO Model was not compatible with the incentive structure and the way of work in military medicine. "We were up against that culture," said Eppolito. "Right from the get-go. That's why ECHO was a hard sell and still is. You could say, 'Well, that's a perfect environment for ECHO. Let's bring it back.' But you'd need to completely change the paradigm and the culture. The DOD wasn't going to change the way they do medicine."

Patients/Client Characteristics

The U.S. military had an active-duty patient profile that was rather homogenous compared to the diversity of the nation's population. Personnel were overwhelmingly male, young adults, and healthy. Certain health concerns were especially important for this population segment, such as traumatic brain injury and behavioral health. The topical applicability of the ECHO Model was well suited to the military because specialty ECHOs could be launched for each health priority.

Funding

"We were kind of a victim of our own success," said Eppolito, "because we were doing so well without hiring any staff, without providing any bonus incentives, no monetary rewards for extra duty, and we didn't have to buy any equipment because we had all the hardware and software and the video platforms already in place. We just leveraged what we had. So, we were able to run ECHOs basically with no budget and no manpower." Thrift led to unanticipated consequences. "Because we were successful, they never gave us any budget or any personnel. So ultimately the institution never had to buy into the ECHO Model because they didn't invest in it. That put us in jeopardy in terms of continuity. And so, we had a lot of turn over with staff and we lost Provider Champions who ran things."

The distributed program approach that Eppolito created with the Air Force hospital leads, paired with Eppolito's enthusiasm and ability to market ECHO within the Air Force hospital and primary care clinic systems, did not convince superiors that anything needed to change. Eppolito remained a one-man show at headquarters in Arlington in terms of Project ECHO. Ultimately, lack of institutional buy-in led to retrenchment. "People lost enthusiasm, people got fatigued, people separated or retired and I couldn't recruit replacements," said Eppolito. "As a result, while we would have a good run say with the Dermatology ECHO—one of my favorites—we would lose it."

Engagement of Specialist Leaders and Spoke Participants

In seeking to expand Project ECHO to new health conditions across the Air Force, Eppolito welcomed all comers—the specialists—from the hospitals. This led to a proliferation of ECHOs that were founded with enthusiasm but that then folded for a lack of continued interest among primary care doctors in the clinics. Not all topics of interest to specialists will appeal to generalist physicians.

Individuals' Characteristics

Project ECHO began and expanded in the Air Force because of the vision and commitment of Eppolito. Through his presentations and site visits, he recruited Master Provider Champions who found staff to help with spoke recruitment, program coordination, and CME accreditation, and who could attract a team of related specialists for presentations and group discussions. Eppolito grew ECHO without dedicated resources—with the exception of the Diabetes Management ECHO that became a programmatic part of the DOD Diabetic Center of Excellence.

ECHO Vision and Sustainability

Eppolito brought ECHO to the military with a strategic intent to use ECHO as a means to move military medicine back to a patient-centered comprehensive model of care. But as the organizational change saying goes, "Culture eats strategy for lunch." Whereas decades ago, military medicine was organized around a comprehensive care approach to patients, over subsequent years the incentive structure shifted. Military healthcare providers followed suit.

"The Air Force was one of the early replicators for ECHO," said Eppolito. "We were proud to be an ECHO site. We had some early successes and I think we're still very successful and proud of our Diabetes ECHO and that's going to continue going forward because it fit with the mission of the Diabetic Center of Excellence. So, it had a home. But I knew we were up against a challenge of bringing the ECHO paradigm to military medicine. Unfortunately, military medicine had changed too much to really accept ECHO in its pure form so we were less than completely successful overall." Added Beckman: "If I had my druthers, I think that getting back to the true ECHO Model makes the most sense, really being case based. Unfortunately, without some dedicated time for it, all this does is put more time and effort on our primary care doctors, who are already overtaxed."

Respondents

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