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Grantmakers in Health

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PROJECT ECHO

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Project ECHO (Extension for Community Healthcare Outcomes) is an innovative model for expanding access to specialty and high-quality primary care in rural areas using telehealth-enabled networked learning. Unlike traditional telemedicine, which enables remote interactions between providers and patients, Project ECHO uses state-of-the-art telecommunications technology and case-based learning to cultivate collaborative mentoring partnerships between specialists and primary care providers. Developed at the University of New Mexico Health Sciences Center's ECHO Institute, Project ECHO trains and supports primary care providers to treat complex diseases outside their usual scope of practice, dramatically expanding capacity to provide treatment and improving patient outcomes. Originally designed to improve access to hepatitis C treatment within New Mexico, Project ECHO has expanded to address a wide variety of conditions, including HIV, addiction and psychiatric disorders, pediatric epilepsy, chronic pain, and diabetes/endocrine disorders. Project ECHO has also been replicated across the United States and in eight additional countries.

Led by a multidisciplinary team at the academic medical center "hub," primary care providers at "spoke" sites participate in disease-focused learning networks via weekly or biweekly videoconferences known as teleECHO clinics. Primary care providers (including nurses, community health workers, medical assistants, pharmacists, counselors, nurse practitioners, physician assistants, physicians, and others who provide health-care education or services) present active, de-identified cases during teleECHO clinics, and review treatment options. These discussions, along with didactic presentations, web-based disease management tools, and data registries for tracking patient outcomes, allow primary care providers to manage complex patient care with the support of a team of multidisciplinary specialists.

Participants are also able to learn from other primary care providers facing similar challenges, building their knowledge and skills for future practice. A network for specialty care begins to develop in the community as these highly trained local providers gain a reputation for delivering high-quality services and other local providers start referring their specialty patients for treatment. Patients benefit, not only by avoiding long distance travel for treatment, but also because they can be cared for by providers who know them and understand their sociocultural environment. The right care is delivered in the right place, at the right time. Specialists are freed to see the most complicated and urgent cases, and the remainder are cared for by providers they know and trust in their communities. Project ECHO moves knowledge instead of moving patients.

INITIAL VISION AND LEADERSHIP

Sanjeev Arora, MD, a leading expert on liver diseases and a faculty member at the University of New Mexico School of Medicine, first developed Project ECHO in 2003. Dr. Arora was deeply troubled by the overwhelming number of hepatitis C-infected people in New Mexico who were not getting treatment—at the time only about 5 percent were able to access care. He was continually confronted with the disturbing signs and consequences of this woefully inadequate capacity: an eight-month wait for new patients seeking appointments at his office, large numbers of patients traveling hundreds of miles to see him, most patients presenting with advanced hepatitis C infections that had gone untreated for years, and, tragically, too many patients dying as a direct result of treatment delays.

Others might have thrown up their hands, but Dr. Arora decided he needed to do something—and fast. He saw that he needed to "demonopolize" his own specialized expertise in order to create the service capacity necessary to address the high level of unmet need. His vision for a "virtual grand rounds," while clearly grounded in traditional medical education practices, sought to expand the requisite clinical expertise far beyond a few highly trained specialists. After testing the model with a small pilot program, the Hepatitis C TeleECHO Clinic was launched in 2004 with a $600,000 contribution of in-kind support from the

University of New Mexico Health Sciences Center, a $1.4 million grant from the Agency for Healthcare Research and Quality, and a $900,000 grant from the New Mexico legislature.

GROWTH, ADAPTATION, AND REPLICATION

Dr. Arora recognized early on that the Project ECHO training model could be adapted to other clinical conditions and had the potential to be broadly replicated. "My goal was to serve every person in New Mexico with hepatitis C. And I thought if I could do that I would have a model to serve complex diseases around the world!" (Solovitch 2012). Hepatitis C patients often experience a number of other health concerns, including HIV infection, drug and alcohol use, diabetes, and depression, so early expansion efforts focused on creating teleECHO clinics to address these common co-morbidities (Basseri et al. 2010).

Over time the model has been adapted to address more than 40 different diseases and has been replicated by 52 hub sites spanning 22 states and eight countries outside the United States, including sites within the U.S. Department of Defense and the U.S. Department of Veterans Affairs health care systems. As of June 2015, the ECHO Institute is sponsoring 14 teleECHO clinics in New Mexico:

- Child and Youth Epilepsy
- Chronic Pain and Headache Management
- Complex Care
- Endocrinology
- Hepatitis C Community Care
- HIV/AIDS
- Integrated Addiction and Psychiatry
- Rheumatology
- Women's Health and Genomics
- Multiple Drug Resistant Tuberculosis
- Health and Wellness in Indian Country
- Obesity Reduction Specialist Training for Community Health Workers
- Diabetes Specialist Community Health Worker Training
- Prison Peer Educator Training

Expansions to other clinical and geographic areas have been supported through multiple grants by a number of private and public funders. Growth and replication of Project ECHO accelerated considerably in 2007 when the effort was selected as one of three winners in the global Disruptive Innovations in Health and Health Care competition sponsored by Ashoka's Changemakers and the Robert Wood Johnson Foundation's Pioneer Portfolio. This award raised the visibility of the ECHO model and served as a catalyst for additional investments by health funders:

- In 2009 Project ECHO received a $5 million grant from the Robert Wood Johnson Foundation to expand its work to asthma, diabetes, chronic pain and headache, high-risk pregnancy, integrated addictions, psychiatry, and rheumatology, as well as to replicate the model in academic medical centers outside New Mexico, beginning with the University of Washington Medical School.

- In 2012 the GE Foundation provided a $4.7 million grant for the development of a new model for integrating behavioral health care with primary care, known as ECHO Access. Prior efforts to implement psychiatry teleECHO clinics focused on building behavioral health knowledge among primary care providers. However, ECHO Access trains dedicated teams of nurse practitioners/physician assistants and community health workers to screen for, diagnose, and treat mental illness and substance use disorders in community health centers across New Mexico.

- In 2012 the Center for Medicare and Medicaid Innovation within the U.S. Department of Health and Human Services awarded Project ECHO an $8.5 million grant to help develop ECHO Care, a program focused on the needs of complex patients with multiple chronic diseases. In addition to relying on a Complex Care TeleECHO Clinic to facilitate specialty consultation, "outpatient intensivist" teams will be formed at participating primary care sites. ECHO Care is designed to improve access to and quality of care, while also reducing costs by minimizing emergency room use and hospital admissions. All Medicaid managed care plans in New Mexico have agreed to pay the full costs of ECHO Care services, at both hub and spoke sites, during the pilot (RWJF 2014).

- In 2013 and 2014 the Con Alma Health Foundation and the McCune Foundation provided funding for Prisoner Health is Community Health, a peer education program to educate prisoners about hepatitis C and other specialty disease areas. The McCune Foundation provided additional funding in 2014 to support community health worker training.

- In 2014 The Leona M. and Harry B. Helmsley Charitable Trust provided a $6.4 million grant to develop and pilot Endocrinology ECHO (EndoECHO) to address the widespread and rapidly expanding need for greater access to complex diabetes care and specialized endocrinology treatment, especially among publicly insured and uninsured patients. With an eye toward supporting the future dissemination of EndoECHO, the trust's grant includes funds for the Center for Health Care Strategies (CHCS) to develop a multistate learning collaborative for Medicaid agencies to learn from each other and CHCS about promising strategies to secure sustainable funding streams for the Project ECHO model. Through a separate $1.3 million award to New York University's Robert F. Wagner Graduate School of Public Service, the trust is also supporting a comprehensive evaluation of EndoECHO, assessing the pilot clinic's impact on patient outcomes, utilization of services, and health-related expenditures in New Mexico.

EVIDENCE OF EFFECTIVENESS

A prospective cohort study of Project ECHO's hepatitis C clinic demonstrated that care delivered by primary care providers with teleECHO support is safe and as effective as treatment provided by specialists at the University of New Mexico Hospital's Hepatitis C Clinic (Arora et al. 2011). As primary care providers in unsupported practices do not typically provide these services, they were not used as the comparison group. Hepatitis C-infected patients served by such practices are unlikely to receive treatment and typically have poor outcomes. Outcome evaluations for other clinical areas are under way, but results are not yet available.

Program evaluations have also shown that the self-assessed skills and competence of participating providers improved significantly following their involvement in teleECHO clinics (Arora et al. 2010). Participating providers also report high levels of satisfaction with the program, indicating that Project ECHO has reduced professional isolation and has enhanced their broader professional experience. These positive effects on provider morale have the potential to improve long-term retention of health care providers in rural settings.

SUSTAINABILITY

Project ECHO continues to rely primarily on grant funding from private foundations and government agencies at both the state and federal level. Grants support costs associated with specialty consultation, as well as administrative expenses related to maintaining the hub, while spoke sites typically contribute in-kind support for staff time devoted to teleECHO clinic participation. Although Dr. Arora is optimistic that public funders recognize the value of these investments, maintaining financial support is an ongoing effort in New Mexico and at most replication sites.

Project ECHO and replication partners have worked with insurers to test more sustainable financing arrangements, but identifying mutually acceptable arrangements has proved challenging given the constraints of traditional fee-for-service reimbursement. The cost-effectiveness of the ECHO model varies somewhat depending on disease focus. While cost-effective in terms of expenses relative to outcome improvements, Project ECHO clinics are not always cost-saving. Medicaid managed care plans in New Mexico have all agreed to reimburse for ECHO Care services on a fee-for-service basis. As plans gain experience financing ECHO services and longer-term savings accrue, alternative payment mechanisms more amenable to the model may emerge. Reforms related to the creation of accountable care organizations promise enhanced flexibility in funding streams and may offer a path to sustainable financing for Project ECHO.

REPLICATION CONSIDERATIONS

Project ECHO is designed to be adaptable to different needs, organizations, and environments. Rather than requiring rigid adherence to model fidelity, Dr. Arora believes that users can customize the model to meet

their own objectives and requirements. For example, with a planning grant from The Colorado Health Foundation, the University of Colorado is exploring the use of Project ECHO's collaborative learning approach to improve training and networking for local public health officials. In addition to focusing on patient care in clinical settings, the university also hopes that the ECHO model can be applied to strengthen public health practices throughout Colorado.

While Project ECHO implementation is flexible, experience has demonstrated that it is most successful when certain key elements are in place:

- Replication sites adhere to four key principles of the ECHO model: 1) technology is used to leverage scarce health care expertise and resources; 2) best practices are shared to standardize care across disparate health care delivery systems and reduce disparities; 3) case-based learning is used as the primary modality to build knowledge, confidence, and expertise; and 4) evaluations are conducted to monitor outcomes.

- TeleECHO clinics are most appropriate for diseases and conditions that are fairly common (i.e., have a relatively high prevalence), involve complex management or are subject to evolving treatments, have a high societal impact in terms of health and economic consequences, result in serious outcomes if left untreated, and are known to have improved outcomes with evidence-based treatments and management.

- Clinical champions support implementation at both the teleECHO hub and the participating primary care spokes.

- Specialists are committed to a collaborative approach to patient co-management and recognize the insights and expertise contributed by primary care providers.

- Primary care providers are able to earn no-cost continuing medical education credits for participation in teleECHO clinics.

- Primary care practice management/leadership support providers' involvement in teleECHO clinics and value the staff time committed to these activities.

TECHNICAL ASSISTANCE

In 2013 the Robert Wood Johnson Foundation provided a $5 million grant to support Project ECHO in building the infrastructure and tools necessary to bring the model to scale nationally. The ECHO Institute allows Project ECHO to meet the growing demand for replication assistance, supports efforts to ensure the integrity and sustainability of the model, and connects ECHO programs nationally and globally to share data for identifying disease patterns and establishing best practices. A portion of the 2014 grant from The Leona M. and Harry B. Helmsley Charitable Trust is also allocated toward building a quality assurance team and resources to support replication sites.

In 2015 the GE Foundation awarded a three-year, $14 million grant to enable the University of New Mexico Health Sciences Center to significantly increase the number of federally qualified health centers (FQHCs) that participate in Project ECHO nationwide. The grant also includes a partnership with the Institute for Healthcare Improvement for an ECHO-based quality improvement program to support FQHCs in improving the effectiveness and efficiency of operations.

Consistent with his philosophy of "demonopolizing" knowledge, Dr. Arora and his team offer a wide variety of technical assistance resources to others interested in replicating the Project ECHO model. Multistaging training is available for those seeking to establish teleECHO clinics:

- A 90-minute videoconference hosted on a monthly basis provides an introduction to the model.

- A comprehensive, one-day orientation is provided monthly, along with a readiness assessment for participants. Participants are responsible for their travel costs, but the training, related materials, and readiness assessment are available free of charge.

- Replication training for hubs is offered via a three-day immersion, which is offered monthly and requires <u>partnership</u> documents to be signed.
- Various levels of ongoing technical assistance and support are available if needed.

INTERVIEW RESPONDENTS

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