Inflammatory Bowel Disease Education: I Can Hear the Extension for Community Healthcare Outcomes

The rapid evolution of care for patients with inflammatory bowel disease (IBD) has resulted in significant variation in management of patients with IBD. Studies have identified disparities in management between experts in IBD and community providers.^{1,2} In addition, high volume IBD centers have improved operative and inpatient outcomes compared with hospitals that have lower volumes.³⁻⁵ In remote areas such as the Mountain West, the distances that must be traveled and snow fall in the winter create difficulties for patients to easily obtain care from referral centers with specific expertise such as IBD. It therefore seems reasonable that facilitating access to care for IBD patients to providers who are familiar with best practice guidelines will improve outcomes in patients with IBD. The IBD Live program developed by the regional academic centers and recently published by Regueiro et al⁶ in the *IBD* journal provides a valuable service to the participating IBD experts and their patients. Publishing the IBD Live case discussion provides case-based learning opportunity to disseminate information to a wider audience.

Project ECHO (Extension for Community Healthcare Outcomes) was founded at the University of New Mexico by Dr. Sanjeev Arora so that primary care clinicians could treat hepatitis C in their own communities with support and guidance. This program has been shown to be a successful model for the management of hepatitis C.⁷⁻⁹ Project ECHO has now expanded to over 40 sites around the world. As the ECHO model expands, it is helping to address some of the most intractable problems of health care system, including inadequate or disparities in access to care, rising costs, systemic inefficiencies, and unequal or slow diffusion of best practices.

Building on the hepatitis C Project ECHO model, in 2014, the University of Utah established the Mountain West IBD Knowledge Network (IBD ECHO) to provide IBD education, guidance, and coaching to the practicing gastroenterologists and other community providers such as physician assistants, nurse practitioners, surgeons, and some primary care physicians in remote and underserved areas across the Mountain West. Project ECHO is a collaborative model of medical education and care management and is not traditional telemedicine. The ECHO model does not directly “provide” care to patients. Instead, it dramatically increases access to specialty treatment in underserved areas by providing front-line clinicians with the knowledge and support they need to manage patients with complex conditions such as IBD. It does this by engaging clinicians in

a continuous learning system and partnering them with specialists at an academic medical center or hub using videoconferencing technology. ECHO-based projects at the University of Utah reach out to 44 sites from 9 states (Utah, Wyoming, Montana, Idaho, Nevada, Colorado, Oregon, California, and Nebraska), and the IBD ECHO currently has participating sites from Utah, Nevada, Idaho, Montana, and Wyoming.

Utah Project ECHO uses a mobile Polycom HDX 7000 Series videoconferencing unit to broadcast high-quality audiovisual sessions to providers that have logged into the HIPAA-compliant network bridge managed by the Utah Telehealth Network. The unit contains content-sharing capabilities, which makes it easy to display images, such as deidentified radiographic imaging and labs, PowerPoint presentations used during didactic sessions, and other updates/guidelines. This multipoint videoconferencing system allows for face-to-face conversation between all participants. With a capacity for 50 participants in a single virtual clinic environment, the bridge provides an efficient mechanism for continuing education. Utah Telehealth Network works with the University of Utah ECHO program coordinator to set up, test, and certify videoconferencing connections for new participants. Most importantly, participation in the Utah IBD ECHO is at no cost to the participants, includes the secured videoconferencing software, and Category 1 continuing medical education credits. The participating providers need only to supply a computer with a microphone, camera, and internet access.

The IBD ECHO sessions focus on case-based learning with cases presented by community providers, in addition to including brief didactic presentations by the IBD faculty devised to effectively educate providers on best practices and the practical application with guidance of a specialist. A typical IBD ECHO session begins with approximately 30 to 45 minutes of case presentations and discussion followed by a 10- to 15-minute didactic presentation. The sessions are led by the University of Utah IBD faculty and a gastrointestinal/hepatology-focused clinical pharmacist. The gastrointestinal fellow on the IBD rotation is also in attendance. Before the session, community providers complete and submit deidentified case presentation forms that provide the necessary details required for the faculty to provide guidance, endoscopy reports, pathology reports, and imaging to the IBD ECHO coordinator, who prepares the case presentations for faculty review. The IBD faculty review the cases in advance to ensure that ECHO provider educational needs will be met, including the provision of clear recommendations. During the session, providers present cases and receive individualized mentorship and education regarding each case. Educational, collegial discussions occur during the case presentations. Providers may attend sessions for educational purposes, regardless of

Received for publication February 11, 2015; Accepted March 10, 2015.

The authors have no conflicts of interest to disclose.

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DOI 10.1097/MIB.0000000000000432

Published online 4 May 2015.

ECHO vs. Telemedicine

FIGURE 1. Project ECHO model force multiplication versus traditional telemedicine.

whether they are presenting a case. Through the ECHO model, community providers experience case-based learning using the community provider's cases and directly receive answers for their case-management questions. With several providers logged into the interactive videoconference anyone is able to inquire about any issue with the direct interaction of a specialist. All of those in attendance learn from each other's cases and the discussion and teaching points in each case. This format amplifies the output from the experience compared with telemedicine or having the patient travel to see the specialist as illustrated in Figure 1.

Given what has transpired with the expansion of the hepatitis C Project ECHO, we expect other regional IBD ECHO centers will be established across the United States and elsewhere that will aid in the dissemination of best practices, and improve the care of patients with IBD. Program and contact information for those wishing to participate in the University of Utah IBD ECHO or replicate the program in their region can be obtained by accessing the following website: <http://healthcare.utah.edu/echo/>.

Kathleen Boynton, MD*

Ann Flynn, MD*

Terry Box, MD*

Anthony Dalpiaz, PharmD[†]

Leah Willis, MS[‡]

Tyson Kay[‡]

John F. Valentine, MD*

*Department of Medicine
Division of Gastroenterology, Hepatology and Nutrition
University of Utah
Salt Lake City, Utah

[†]Department of Pharmacy Services

University of Utah

Salt Lake City, Utah

[‡]TeleHealth Services

University of Utah

Salt Lake City, Utah

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