Pairing Project ECHO and patient navigation as an innovative approach to improving the health and wellness of cancer survivors in rural settings

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Abstract

Purpose: We conducted a 12-month pilot study of 2 complementary strategies for improving rural cancer survivorship outcomes: (1) Project ECHO, a telementoring model to increase knowledge and skills about cancer survivorship among multidisciplinary health care provider teams in rural areas and (2) patient navigation (PN) services to connect rural cancer survivors with resources for enhancing health and wellness.

Methods: We recruited 4 CDC-funded National Comprehensive Cancer Control Program sites to implement Project ECHO and PN interventions for a defined rural population in each of their jurisdictions. Sites received ongoing technical assistance and a stipend to support implementation. We conducted a mixed-methods evaluation consisting of quantitative performance monitoring data and qualitative interviews with site staff to assess implementation.

Findings: Site teams delivered 21 cancer survivorship ECHO sessions to rural providers resulting in 329 participant encounters. Almost all (93%) ECHO participants reported enhanced knowledge of cancer survivorship issues, and 80% reported intent to apply learnings to their practices. Site teams engaged 16 patient navigators who navigated 164 cancer survivors during the study period. Successful implementation required strong partnerships, clear avenues for recruitment of rural providers and cancer survivors, and activities tailored to local needs. Fostering ongoing relationships among sites through community of practice calls also enhanced implementation.

Conclusions: Sites successfully implemented a novel approach for enhancing care for cancer survivors in rural communities. Pairing Project ECHO to address structural barriers and PN

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to address individual factors affecting survivorship may help bridge the health equity gap experienced by cancer survivors in rural communities.

Keywords

cancer survivors; health care needs; patient navigation; rural health; telementoring

INTRODUCTION

While rural populations in the United States have lower overall cancer incidence than their metropolitan counterparts, they experience higher cancer mortality.[1,2] This health disparity can be attributed in part to *structural barriers* that inhibit the delivery of cancer care in rural settings.[2] For example, although about 20% of US residents and 20% of cancer survivors live in rural areas,[3] a smaller percentage of medical specialists practices in these areas (eg, only 3% of medical oncologists[4] and 2% of health social workers[5]). Health care providers (HCPs) may also have difficulty identifying mental health services available to their patients.[4] Primary HCPs in rural areas, in addition to providing usual care to cancer survivors, may also deliver cancer care usually covered by specialists in urban areas. However, HCPs often lack experience in treating survivors,[6] and transfer of care from oncologists is not always complete.[7] Moreover, emerging evidence about standards of specialized cancer care can outpace HCPs' ability to remain current, especially for HCPs in rural areas with less access to learning opportunities than in urban areas.[8]

In addition to structural barriers, *individual factors* can also undermine long-term recovery among cancer survivors. Specifically, survivors living in rural areas are more likely to engage in high-risk health behaviors, such as tobacco use, alcohol consumption, and physical inactivity, and are less likely to receive cancer screenings and recommended immunizations than those in metropolitan areas.[2]

Recognizing these issues, we designed a 12-month pilot study with a 2-pronged strategy to address the structural and individual factors that contribute to reduced cancer survivorship in rural settings. First, we used Project ECHO's (Extension for Community Health-care Options) telementoring model to address structural barriers by increasing knowledge and skills about cancer survivorship among multidisciplinary HCP teams in rural areas. Second, we engaged patient navigation (PN) services to address individual factors by connecting rural cancer survivors with support and resources to encourage health and wellness.

Project ECHO is a collaborative model of education and care management, developed at the University of New Mexico School of Medicine, that brings together health care specialists and rural practitioners through multipoint videoconferencing (telementoring) to increase workforce capacity in rural and underserved areas.[9] Project ECHO's hub-and-spoke model provides opportunities health care experts (ie, hubs) to share their knowledge with HCPs in rural and remote communities (ie, spokes) and encourages collaboration among and between the spokes and the hub, resulting in enhanced knowledge base and skill sets of multiple HCPs in multiple locations.[10]

PN is a patient-centric health care delivery service designed to eliminate barriers to timely care and to address the needs of cancer survivors and their caregivers.[11] For cancer survivors, patient navigators (herein referred to as navigators) provide direct one-on-one assistance to cancer patients and families to help them overcome obstacles at all stages of cancer care from screening, diagnosis, treatment, and continuing through posttreatment survivorship.[11] Navigators also help cancer survivors access needed community resources posttreatment.[12] Although PN has been implemented in rural areas for cancer screening and treatment,[13,14] to our knowledge, no published studies of PN in rural communities have described implementing PN in posttreatment survivorship.

This paper describes the evaluation of 4 pilot sites' implementation of a novel intervention combining Project ECHO and PN strategies to improve the health and wellness of cancer survivors in rural communities.

METHODS

Site selection

We recruited the existing awardees of CDC's National Comprehensive Cancer Control Program (NCCCP)[12–14] to implement the pilot interventions due to their long-standing connections with local rural populations and focus on addressing the needs of cancer survivors. The project team disseminated a brief project description outlining the pilot project's aims, expected activities, period of performance, and funding amount to all 66 NCCCP awardees funded through June 2022. Eleven NCCCP awardees, including 10 states and 1 tribal organization, submitted written applications describing their needs and contexts in rural areas and their experience and capacity to implement the expected activities. We reviewed and rated applications based on a combination of defined selection criteria, including rurality (percentage of population residing in nonmetropolitan counties defined using the 2013 Rural-Urban Continuum Codes [USDA ERS—Rural-Urban Continuum Codes]), geographic diversity, relevant needs and experience, and readiness for rapid implementation.

Five sites were selected for the pilot, including 4 states and 1 tribal organization. One site withdrew from the study due to demands associated with the COVID-19 pandemic response. The remaining 4 sites were geographically diverse (with one in each of these regions: Southeast, Midwest, Southwest, and Northwest) and had rural populations ranging from 10% to 65% of the total population.[15] All 4 sites reported previous experience with PN in rural settings and 2 of the 4 sites reported previous experience with Project ECHO. Three states are among the 15 largest states in the country in terms of total square miles, yet all of the sites were in the bottom half of the country in terms of population size. Each site was responsible for defining the specific rural area of focus for their pilot program. All 4 sites completed the implementation of Project ECHO and PN interventions from April 2020 through April 2021.

Implementation support

Each site received a $40,000 stipend to support pilot planning, implementation, and evaluation activities through a subcontract agreement with ICF. Upon selection, each site team was paired with a technical assistance (TA) liaison with expertise in program implementation and evaluation to provide guidance for the duration of the project. The TA liaisons facilitated monthly 1-hour TA calls with each site team during the project period to discuss project requirements, implementation progress, challenges, and solutions.

Site teams also participated in 4 community of practice[16] (CoP) calls facilitated by the project team. The purpose of the CoP calls was to establish and promote peer relationships and dialogue among the sites as a form of additional support. Site teams were encouraged to share and exchange updates, challenges, and solutions around project design, implementation, recruitment, evaluation, and sustainability.

Project planning and evaluation data collection and analysis

Before site teams planned their Project ECHO and PN interventions, the TA liaisons conducted 9 60-minute key informant interviews with rural HCPs in each of the 4 states to inform site-specific needs. Each site team recruited 1 or 2 HCPs or partners to represent the experiences and perspectives of providers serving rural communities. The interviews assessed needs corresponding to the components of cancer survivorship care[17] and gathered contextual information on rural communities in each state. The project team provided interview summaries to each site, and TA liaisons collaborated with their assigned site teams to create site-level plans for implementation and evaluation.

The project team conducted a mixed-methods descriptive evaluation to assess implementation (ie, planning and delivering the interventions) and outcomes of the project. Evaluation plans included site-specific process and outcome evaluation questions and indicators, as well as common metrics across all 4 sites. Common Project ECHO metrics included session participation, self-reported knowledge gain, and intent to apply learnings postsession. Common PN metrics included requests for navigation, barriers identified, and completed navigations. Site teams tracked and submitted qualitative and quantitative data to the project team through a monthly reporting protocol and submitted a final evaluation report.

Upon conclusion of the project, TA liaisons conducted 4 90-minute key informant interviews (via videoconference) with program staff from each site. The interviews examined experiences in planning, implementing, and evaluating the Project ECHO and PN strategies and recommendations for other practitioners aiming to implement the strategies. All interviews were recorded and transcribed. Transcribed responses from all 4 sites were compiled by interview question in an electronic spreadsheet for analysis. Using the interview topics as the initial a priori codes, 2 authors conducted a thematic analysis of data from 2 sites, each independently generating additional thematic codes. After the first round of analysis of 2 sites, the authors compared their findings to further refine and agree on final thematic codes before continuing to analyze the remaining interviews independently as part

of a multistage, iterative process. After the transcripts were coded, the authors met again to synthesize and distill a final list of themes for each topic from all the interviews.

The project team synthesized the cross-site data from the monthly reports, evaluation reports, and key informant interviews to glean learnings across programs and understand ways to apply lessons to other settings. The ICF Institutional Review Board reviewed and approved all procedures for this project (FWA00002349, expires October 13, 2025).

RESULTS

Implementation approach

Program staff at each site tailored and implemented Project ECHO and PN interventions in a format that was most appropriate for their specific context (eg, partnership capacity, needs of survivors, caregivers, providers, and clinic capacity) as summarized below (Table 1).

Project ECHO implementation

Each site delivered a series of ECHO sessions focused on rural cancer survivorship. To do this, 1 site team created a new ECHO hub and 3 site teams partnered with an existing ECHO cancer hub in their jurisdiction. Of the 3 that partnered with existing ECHO hubs, 2 worked with ECHO hubs already engaged in cancer survivorship work to deliver sessions specific to this project. Site teams found that partnering with an existing ECHO hub (regardless of the hub's previous content areas) allowed them to leverage the ECHO hub's experience in planning and implementing sessions and in recruiting participants. Two of the 3 site teams paid a fee to the ECHO hub for organizing and conducting the sessions. One site reported:

> I believe we were meeting every other week with two staff from [the Project ECHO hub]. They were really important in helping us think through the logistics of setting up an ECHO series… [answering questions] like when do you want to hold these, how often, how are we going to reach out to the target audience, what are the topics, how will we get the marketing out, how will we capture the evaluation information? (Supervisor, site A)

One site team was unable to identify an existing ECHO hub that was suitable for its audience and needs and chose to establish and operate its own new cancer survivorship hub specifically for the pilot project. This endeavor required substantial resource commitment for training on the ECHO model and session interface, planning, and implementing each ECHO session, and recruiting presenters and participants; however, this model allowed the site team to tailor the format and content of their ECHO sessions to the specific goals of their pilot project. This site noted:

> It definitely was advantageous for us to learn the [Project ECHO] model, because we had a very solid foundation… Although the challenge of having to become an ECHO site [and the] learning curve of actually going through the process…was a barrier, we quickly found that it helped us in the long term. (Evaluator, site D)

Site teams recruited ECHO participants using communication networks established through existing relationships of their Project ECHO hub, state cancer coalition, state Office of

Rural Health, and/or advisory boards. For most sites, this effort involved disseminating information and recruitment materials through their partners' communication channels (eg, listservs or meetings). For other sites, it included tailored communications (eg, emails and phone calls) to individuals. Site teams found the tailored outreach to individuals to be an effective recruitment strategy; however, this strategy required significant staff resources and did not always glean more participants. One site explained:

> We brainstormed those sessions, what that would look like and then utilized the existing network that we already had…and physicians that we had been dealing with over the years to reach out and see if they would be interested [in participating] as a presenter. (Navigator, site B)

Finally, each site team used the findings from the needs assessment to identify and select the specific topics to be delivered through the ECHO sessions. Topics were tailored to address the needs identified in the state and for its rural providers. In some cases, site teams (and/or their partners) were able to repurpose or tailor existing content from previous survivorship series to develop the didactic portion of the ECHO sessions; other times sites worked with their partners to develop new content for the sessions. Each site's designated ECHO team typically hosted and facilitated the sessions and engaged physicians and/or clinical directors to deliver the educational content.

Patient navigation implementation

Site teams collaborated with partners and clinics to develop and define the PN role and function within their existing health system(s). Most site teams engaged experienced navigators for the project either by creating navigator positions or, in the case of 1 site, reallocating staff time and training them to provide direct navigation services. Often clinics already had a resource team in place that could add the cancer survivorship resources and training needs of the pilot project with limited additional effort. Two site teams used PNs working in the CDC-funded National Breast and Cervical Cancer Early Detection Program (NBCCEDP)[18] to navigate survivors identified through the clinics.

Site teams used a range of approaches to identify and recruit cancer survivors and their caregivers for PN. Two site teams used Medicaid claims data to identify individuals with a cancer diagnosis or treatment within the previous year. One used internal Medicaid claims from their state health department, focusing on individuals diagnosed through NBCCEDP. Navigators reached out to these survivors via phone or letter inviting them to participate in the pilot project. The other site team relied on a newly recruited clinic partner to identify Medicaid patients and refer them to the navigators.

Another approach for identifying survivors for PN was provider recollection, used by 1 site team. This site recruited a rural Federally Qualified Health Center, which then assigned a provider to identify individuals for PN. Three site teams used marketing and awareness materials to encourage cancer survivors and caregivers to self-identify and initiate services with a navigator. Recruitment materials included posters or rack cards placed in providers' offices, website promotion, and email communications.

Each site team developed and implemented processes and protocols for navigating cancer survivors and monitoring the process following recruitment. All site teams used web-based searches to identify and compile existing community resources relevant to a range of survivors' needs; 2 site teams also solicited recommendations for community resources from their navigator teams or networks. Site teams also developed processes to identify and record survivors' needs, requests, and stated barriers to receiving care and the resources provided to survivors or caregivers. One site team purchased a navigation software package that allowed systematic data collection of survivors' needs and resources. The software also provided automated reports for tracking resolution to barriers. Other site teams used checklists or other tracking tools to monitor navigation services, such as reported by this site:

> We created a list of survivor resources and [the] links and phone numbers for connecting with [each] resource so we could share them with the cancer survivor[s]. We created a database to record the survivor information like demographics, cancer type, where they had treatment, [and] time since treatment. And we created…an intake questionnaire for the cancer survivor to obtain all that information… And then we created a navigation protocol workflow. (Program manager, site C)

Reach and outcomes achieved

Each site team tracked and reported the reach and outcomes from their Project ECHO and PN interventions as summarized below (Table 2).

Project ECHO reach and outcomes

In total, the site teams delivered 21 ECHO sessions resulting in 329 participant encounters with HCPs, including primary care physicians, nurses, oncology specialists, community and social health workers, physical and occupational therapists, and navigators. Site teams received 122–124 responses to postsession survey items. Among survey respondents, most (93%) reported that their knowledge was enhanced because of the session they attended, and a majority (80%) reported that they intended to apply what they learned from the session in their work with cancer survivors.

Patient navigation reach and outcomes

Site teams onboarded a total of 16 navigators who supported 164 cancer survivors and caregivers during the 12-month pilot period. All 4 site teams created new processes or workflows to track cancer survivors' needs, guide and deliver PN services, and document services provided. Two site teams navigated 81 and 80 survivors, respectively, 1 navigated 3 survivors, and 1 was not able to navigate any cancer survivors during the program period (despite setting up new processes) due to delays in establishing a new partnership affected by demands of the COVID-19 pandemic and limited ability to identify cancer survivors using existing electronic medical records. Program staff at this site concentrated on identifying resources for survivors, training navigators, and continued efforts to identify survivors after the pilot period ended. Among the sites that successfully navigated cancer survivors, navigators recorded a range of barriers to survivorship care and wellness experienced by survivors and provided assistance and resources to survivors about the

following topics: financial concerns, tobacco cessation, physical activity, nutrition, social support, insurance, employment, and care coordination.

Implementation facilitators and challenges

Interviews with staff from each site at the end of the pilot period revealed facilitators and challenges to overall implementation as well as those specific to implementing Project ECHO and PN interventions (Table 3).

Facilitators and challenges to overall pilot study implementation

Interview participants reported 2 major facilitators to the overall project: their participation in CoP calls and the individual, proactive TA provided monthly by the project team. Participants reported that the CoP calls were helpful in connecting with staff from other sites, forming relationships, sharing information, getting "pearls of wisdom," and receiving progress updates:

> I liked the CoP calls and how we had a different topic to focus on each time. Our [CoP] calls allow us to feel not alone.… It's nice to know that you're not the only ones that might be having a hard time reaching providers or sharing the message you're trying to get out. From those calls, I've reached out and had separate meetings and email exchanges with several other sites to share information, successes, and ask questions, so that was a huge bonus. (Program manager, site B)

Proactive, individual TA provided an opportunity for site staff to ask their TA liaisons questions and discuss challenges, which minimized delays in implementation and data collection. Site staff reported that they appreciated the monthly calls, the questions asked by the TA liaisons, and the sense of accomplishment the monthly calls produced.

The largest barrier to overall program implementation was stress on health care systems caused by the COVID-19 pandemic, which was declared a month prior to the start of program implementation and persisted throughout the pilot period. The reallocation of health care resources to the pandemic resulted in the withdrawal of 1 of the 5 original sites and suppressed participation among HCPs in the pilot interventions.

Facilitators and challenges to Project ECHO implementation

Three facilitators for Project ECHO implementation emerged from the analysis. First, the ability of site staff to use existing partnerships or to establish partnerships with experienced organizations was critical to quickly implementing the Project ECHO interventions. One site team had an established relationship with a Project ECHO hub. They reported ease in implementing the pilot project due to the willingness of the hub to participate given past successes:

> Our strategy with ECHO was to work with our existing ECHO hub and build on the partnership. And so our ECHO hub really has… led the way on all of that. They have the flier template that we use for marketing. They work with the content experts and presenters to obtain PowerPoint slides and case study examples for discussion. They conduct everything through their Zoom accounts. And they have

all of the databases and collect all the information on registrations, evaluations. (Program manager, site C)

A second facilitator to implementing Project ECHO was having regular communication with partners to ensure that partners' needs were interpreted accurately and were met as intended. Site teams used the results of the needs assessment to tailor session topics and held regular meetings with partners to fully address identified needs. One site reported:

> In the initial planning for the series itself, we did have some regular meetings… so that we were all on the same page about what we wanted to …We really wanted to make sure that [partners] were included in the entire series and available. Because we thought that was going to really help with the foundation of it and show that we're all supporting each other through the entire series. (Navigator, site B)

Finally, the materials and resources available through Project ECHO's website and Project ECHO hubs facilitated efficiency in planning and implementing Project ECHO sessions, as this site noted:

> The biggest [resource] …was just access to the Project ECHO training itself with the University of New Mexic…That training… from Project ECHO…was probably the biggest and [most] vital resource that we had. Also, the Project ECHO library… There were a lot of things, we didn't have to reinvent the wheel. (Evaluator, site D)

Two challenges to implementing the Project ECHO series also emerged. The first was the learning curve to understand the ECHO process from planning to facilitation to evaluation of an ECHO session. Site teams relied on their Project ECHO hub partners and the resources available through Project ECHO to mitigate this challenge. The second challenge was recruiting presenters and participants for sessions, given the demands on providers' time, which was particularly challenging during the COVID-19 pandemic. Mitigation strategies included targeted communication strategies via trusted partners (eg, promoting sessions through respected partners' established listservs, newsletters, and social media channels; presenting at virtual networking events and conferences), and connecting needs for cancer survivors to providers' daily work. One state also offered continuing education credits to ECHO session participants as an additional participation incentive.

Facilitators and challenges to patient navigation implementation

The knowledge of experienced navigators and internal partnerships facilitated the PN intervention. One site team expanded an existing PN program by taking advantage of a strong internal partnership with NBCCEDP. They modified existing processes to meet the needs of this pilot project and used navigators who had been doing similar work. Two other site teams already had experienced navigators who were able to tailor navigation processes for cancer survivors and to identify resources for survivors. One site reported:

> We utilized this opportunity to create a network of navigators across the state so that we could share and understand what resources there were… We help each other overcome barriers, and we share information. (Navigator, site B)

Finally, the flexibility in defining the PN role for the survivor, clinic, and community was a facilitator to implementing PN interventions, as noted by this site:

> We realized that we needed to define what the patient navigation role was going to be. Here in [state] we don't have a specific patient navigation… training program or role defined. So clinics and health systems are using that role in different ways. (Supervisor, site A)

Challenges to implementing the PN intervention included lack of existing partnerships in rural areas and difficulties contacting and securing participation from clinics and provider partners, particularly during the height of the COVID-19 pandemic. For example, 1 site established a new partnership with a community health center, but had to put the PN program on hold during a surge in COVID-19—as a result, no survivors were navigated during the pilot period. Similar to challenges observed when implementing Project ECHO, site teams reported that HCPs have many competing priorities and demands:

> We didn't hear back from a lot of clinics. A couple we did hear back from said they could not participate. A couple [clinics stated that] due to the pandemic, they just didn't have the bandwidth to take on something new, even though they understood that it would benefit their patients. (Program manager, site C)

DISCUSSION

This study found that participating sites successfully implemented a novel approach to enhance care for cancer survivors in rural communities by pairing Project ECHO to address structural barriers and PN to address individual barriers to survivorship care and well-being. Successful implementation required strong partnerships, clear avenues for recruiting rural providers and cancer survivors, and activities tailored to local needs. Site teams benefited from support provided by CDC and ICF through ongoing, tailored, and proactive TA with a dedicated liaison and CoP calls with peer sites.

Almost all ECHO participants reported enhanced knowledge, and most reported intent to apply what they learned to their practices. Our results support the ECHO model as an effective tool for strengthening the capacity of rural HCPs to deliver up-to-date, high-quality cancer care to their patients.[19] Similar to an assessment of the Cancer Screening, Prevention, and Survivorship ECHO,[20] we found that the educational material delivered in ECHO sessions was relevant to HCP from diverse disciplines and that the online learning platform was advantageous during the COVID-19 pandemic.

A previous review of NCCCP action plans showed that programs enlist PN workforce staff across the cancer care continuum.[21] However, the extent to which staff activities were related to posttreatment survivors (ie, survivors who had returned to their primary HCP) is unknown. Findings from this study identify a need for engaging navigators in the care of cancer survivors in rural communities and support the feasibility for NCCCP awardees to expand their work in this area.

Our findings demonstrate many benefits of working with new and existing partnerships and building on existing resources when implementing telementoring and PN interventions. For telementoring interventions, while most sites partnered with existing ECHO cancer hubs to implement survivorship sessions, 1 site succeeded in creating a new ECHO hub for the

project with strong participation among health providers. All sites took advantage of existing partner communication networks to recruit session participants. Sites benefited from ECHO hubs' expertise in planning and implementation, access to their existing implementation materials, administrative support to assist with session coordination, and their marketing and recruitment resources. Access to partner networks for recruitment was critical to promoting sessions to a broad audience of rural providers. For PN interventions, site staff relied on existing internal partnerships and relationships with providers to identify cancer survivors, recruit experienced navigators using existing networks and relationships, and tap into existing community resources to help survivors. Similar to an assessment of colorectal cancer screening programs,[22] we found that using existing resources expanded sites' ability to identify and recruit cancer survivors for PN interventions.

Although the pilot study was not designed to identify or test any particular readiness factors required for successful implementation of Project ECHO or PN interventions, the sites demonstrated that these interventions can be successfully implemented within a range of different circumstances and conditions.

Limitations

Our findings are based on a small number of sites and may not be generalizable to other NCCCP programs or organizations implementing Project ECHO and PN interventions. The short implementation period, while sufficient to measure our outcomes, did not allow us to measure improvements in survivorship care or health benefits among survivors. Finally, the pilot project launched shortly after the onset of the COVID-19 pandemic, which strained the capacity of state and local clinical staff to engage in ECHO sessions and assist the pilot sites in identifying cancer survivors.

CONCLUSIONS

Lessons learned from this pilot project can help support the work of NCCCP recipients and Comprehensive Cancer Control coalitions[23] working with rural communities. The findings can help guide development of survivor-focused interventions in state and jurisdictional cancer plans. Further, this project provides a model for increasing the capacity of jurisdictions working with rural cancer survivors to address structural- and individual-level needs to reduce health disparities between rural and metropolitan communities. Future research that explores readiness factors that contribute to successful implementation and measure longer-term changes in survivorship care could yield additional insight into the sustainability of this model of care. Investigating the implications of this 2-pronged model long-term, including outcomes for cancer survivors, is important for understanding the full range of potential synergies and benefits of these strategies, which may extend beyond what was captured during the pilot study.

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TABLE 1

Summary of site-specific approaches to implementating pilot interventions for improving cancer survivorship care in rural settings

Site	Project ECHO	Patient navigation
A	• Established a new partnership with an existing Project ECHO hub that focuses on behavioral health, mental health, substance use disorders, and pediatrics.	• Partnered with a community-based, primary health care center with 6 satellite clinics located in 2 rural counties.
	• Delivered 6 Project ECHO sessions on these topics:	• Trained an existing team of 6 Health Advocates at the primary health care center to deliver PN services.
	– COVID-19 risks and precautions,	• Established a multilayered approach to identify and recruit cancer survivors through direct outreach using Medicaid claims data and community outreach using social media platforms, posters, and postcards.
	– social and emotional challenges for cancer survivors and pharmacological treatment options and community resources,	• Identified resources for cancer survivors through a state-wide web-based referral and resource system and via internet search for resources in select focus areas.
	– survivorship care plans and communication between oncologists and HCPs,	
	– transfer and management of data between oncologists and HCPs, and	
	– young adult and adolescent cancer survivors.	
B	• Partnered with an existing Project ECHO hub previously focused on cancer survivorship.	• Created a new stand-alone telenavigation program staffed by 2 trained navigators from the state cancer coalition.
	• Identified presenters to develop and deliver 6 Project ECHO sessions to address the following topics:	• Designed and launched a website dedicated to survivors' needs with a link to enroll in PN.
	– orientation and introduction to Project ECHO and PN,	• Worked with partners for program promotion. Partners promoted the program through various newsletters, presentations, and direct outreach by email.
	– addressing needs of breast cancer survivors post mastectomy,	• Identified resources for cancer survivors from a network for navigators and via web search for resources relevant to survivor needs.
	– late and long-term side-effects of various cancer treatments and therapies,	• Used patient navigation software to track referrals, enrollment, navigation services, and outcomes.
	– managing orthopedic side effects of cancer treatments	
C	• Partnered with an existing Project ECHO hub previously focused on cancer survivorship.	• Partnered with a rural Federally Qualified Health Center to develop a new PN process for cancer survivors.
	• Revised and reused existing content to deliver 4 Project ECHO sessions on these topics:	• Clinic staff identified and referred cancer survivors to the PN program. Survivors could also self-refer through marketing materials at the clinic and on social media.
	– health care planning for frail and geriatric cancer survivors,	• Identified and compiled resources for cancer survivors through online searches and from members of the state cancer coalition.
	– cancer and aging,	• Developed process where the PN contacted enrolled survivors to gather additional information, offer resources and activities. The PN emailed resources to survivors who were not reached by phone.
	– cognition and polypharmacy in geriatric oncology, and	
	– cardio-oncology and risk-stratification for cancer screening.	
D	• Initiated a new independent ECHO hub for the purpose of the pilot project.	• Developed and added a new posttreatment protocol into an existing patient navigation system.
	• Engaged subject matter experts to develop and deliver 5 Project ECHO sessions on these topics:	• Recruited survivors who had Medicaid and were seen through the state's CDC-funded Breast and Cervical Cancer Early Detection Program.

Site	Project ECHO	Patient navigation
	– nutrition and diet,	
	– assessing and addressing sexual health,	• Developed an internal posttreatment navigation checklist for PNs.
	– opioid stewardship strategies for cancer-related pain,	• Developed process where PNs contact survivors directly to conduct posttreatment assessments and link survivors back to primary care providers, resume preventive screening, and offer additional supportive care.
	– care transitions for cancer survivors and their family caregivers, and	
	– secondary cancers.	

TABLE 2

Site-specific reach and outcomes of pilot project interventions,May 2020-April 2021

Site	Project ECHO					Patient navigation		
	Number of ECHO sessions delivered	Number of ECHO participant encounters	Types of ECHO participants	Number of participants who reported enhanced knowledge/total number of item responses (%)	Number of participants who plan to use learnings/total number of item responses (%)	Number of unique survivors navigated	Types of survivors navigated	Types of barriers addressed (top 3)
A	6	67	Nurse navigators, social workers, and quality improvement specialists	19/21 (90%)	20/22 (87%)	0	N/A[a]	N/A
B	6	49	Primary care providers, ancillary care workers, including community health workers, social workers, and physical and occupational therapists	18/19 (95%)	14/19 (74%)	81	Adult cancer survivors, caregivers, and providers from clinical partners	Financial, support resource needs, and care coordination
C	4	53	Physicians, nurses, nurse practitioners, and social workers	21/21 (100%)	22/22 (100%)	3	Survivors from a rural community	Tobacco cessation, physical activity, nutrition, and social support
D	5	160	Primary care providers, oncology specialists, community and social health workers, and clinical support staff	56/61 (92%)	43/61 (70%)	80	Patients enrolled in Medicaid seen through the Breast and Cervical Cancer Early Detection Program	Financial, insurance, and employment
Total	21	329	N/A	114/122 (93%)	99/124 (80%)	164	N/A	N/A

[a]Intended population of focuswas Medicaid enrollees who had been diagnosed with cancer within the previous 5 years.

TABLE 3

Facilitators and challenges to implementation

Intervention	Facilitators	Challenges
Overall	• Connections and dialogue with other pilot sites during community of practice calls • Technical assistance provided during the pilot	• COVID-19 pandemic led 1 site to withdraw from the pilot and suppressed HCP participation in pilot interventions
Project ECHO	• Use of existing relationships with the ECHO hubs and state-wide associations • Access to the Project ECHO training institute and resources through the University of New Mexico • Regular communication and meetings with partners	• Steep learning curve to establish, facilitate, and plan an ECHO series • Difficulty recruiting ECHO participants (rural providers) and ECHO presenters
Patient navigation	• Flexibility to define patient navigation for the specific context • Dedicated staff who are knowledgeable of existing systems and partnerships • Relationships with existing partners	• Difficulty contacting clinics and other provider partners • Lack of existing partnerships in rural communities