HRSA 22-154 Accelerating Cancer Screenings (AxCS)
Central Virginia Health Services, Focus-Breast & Colorectal Cancer

Project Narrative

INTRODUCTION: Colorectal and Breast Cancer Screening Partnership

Accelerating Cancer Screening in Rural Communities through Collaboration (ACSRC^2) brings together Central Virginia Health Services (CVHS) and Tri Area Community Health (TACH) to increase screenings for breast and colorectal cancer and follow up care across the combined 27 counties and two independent cities served by the two Community Health Centers (CHC). For this Collaboration project, the Health Centers are partnering with UVa Comprehensive Cancer Center, one of two NCI-designated cancer centers in Virginia. With the Center's partners at the University of Virginia (UVA), the ACSRC^2 will implement evidence-based practices for cancer screening navigation and community outreach tailored to each Health Center's identified needs. There are a total of twelve (12) clinical sites operated by the two Community Health Centers engaged in this project. These are listed in the Project/Performance site location form.

AxCRS project partners

Central Virginia Health Services (CVHS) is a community-based, non-profit that provides integrated health care for adults and children. It operates 20 health care centers located across central Virginia, serving fifteen counties and four cities. Services include medical, dental, and behavioral health, with an in-house pharmacy for patients' medication needs. Affordable medications and visits via telehealth are available. The focus is on affordable and accessible care for medically underserved individuals, including non-English speaking people. Poverty, geographic isolation, too few primary care providers or no dental or mental health services characterize CVHS communities. Each community has unique characteristics and over half are rural. Founded in 1970 by community activists in the medically underserved rural counties of Buckingham, Cumberland, and Fluvanna, CVHS is Virginia's first and largest community health center. Its mission is to provide safe, accessible, affordable, comprehensive, high quality and culturally sensitive health services. Providers include patients as partners in achieving or maintaining their optimal health. The ACSRC^2 project will focus on the CVHS clinic sites that are within the UVACCC catchment area before expanding the screening initiatives to additional health system sites within CVHS. In 2021 CVHS served 48,226 patients through 192,217 visits.

Tri Area Community Health (TACH) is a Community Health Center that operates five sites in the Blue Ridge Mountain region of Southwest Virginia and has served the area for over 40 years. Carroll County is served by a clinic and pharmacy located in Laurel Fork; Floyd County is served by a clinic located in the Town of Floyd; Franklin County is served by a clinic and pharmacy in Ferrum; Grayson County is served by a clinic in Troutdale (Grayson Highlands); and Patrick County is served through a collaboration between Tri-Area and Patrick County Family Practice (a Rural Health Clinic) and Caring Hearts Free Clinic in the Town of Stuart. Comprehensive primary medical and behavioral health services are provided by TACH at all sites except Stuart, where TACH provides behavioral health to complement the medical care offered by the existing rural health clinic and free clinic. The TACH service area is in the

economically depressed Appalachian region, with the median household income almost $30,000 lower than the Virginia median. Both the unemployment rate and the uninsured rate are several percentage points higher than the Virginia rate, according to the 2021 County Health Rankings. In 2021 TACH served 10,133 patients through 33,933 patient visits.

UVA Comprehensive Cancer Center (UVACC) The UVA Comprehensive Cancer Center serves over 3.2 million residents from 87 counties throughout rural Virginia and West Virginia, including the 27 counties served by CVHS and TACH. A cornerstone of UVACCC is the Community Outreach and Engagement (COE) program, with almost two decades of commitment to ensuring access to effective cancer control strategies to improve the lives of residents and cancer patients regardless of distance, insurance, or poverty status. UVACC's Office for Community Outreach and Engagement (OCOE) 1) supports community-academic partnerships, 2) facilitates community input for investigators, and 3) increases the capacity of research in communities that is responsive to the pressing health concerns of community members in the catchment area. OCOE has an office at the University of Virginia in Charlottesville, but also has 3 full-time outreach specialists living and working in regions across the catchment area with the most pressing cancer control needs. The area that CVHS serves is within driving distance of the OCOE main office. TACH's service area is within driving distance of outreach specialists in its satellite locations in Danville and in Wise County where UVA has a campus.

Guided by the principles of community engagement, OCOE including outreach specialists and Navigators, will deliver culturally adapted, evidence-based interventions, screening services, and education to enhance the well-being of individuals, organizations, and communities across the catchment area. OCOE collaborates with more than 100 community partners including numerous federally qualified health centers, government officials, healthcare providers, faithbased leaders, and state coalitions. Through partnerships they have successfully facilitated over 11,000 cancer screenings and reached more than 20,000 individuals through evidence-based programming over the past five years.

UVA Cancer Center's COE team has longstanding relationships with CVHS and TACH. A recent collaboration over three years between UVACC and CVHS successfully decreased time to follow up for colorectal cancer screening. The initiative used mailed FIT tests with patient navigation to UVA Colonoscopy and increased both the number screened and the timeliness of follow up for individuals with positive FITs. This project will build on the process and results of the earlier program by developing new pathways for breast screening and follow up and expanding the CRC screening effort to offer it more widely at CVHS and introduce it to TACH.

NEED

1. **Data that describes the impact of breast and colon cancer in the service area**

CVHS and TACH patients and service areas have unmet CRC and breast cancer screening needs: CVHS and TACH provide accessible and equitable care to medically underserved communities in Virginia that experience elevated morbidity and mortality from

colorectal (CRC) and breast cancers and where rates of cancer screenings fall significantly below public health benchmarks. To decrease disparities in cancer morbidity and mortality it is essential to address the need for increased cancer screenings and earlier detection of treatable cancers, while increasing access to comprehensive follow up care. As is detailed throughout this section, there is a profound need and opportunity to increase CRC and breast cancer screening rates in the CVHS and TACH service areas by deploying targeted, evidence-based patient navigation, efficient access to affordable screening and follow up care, alongside robust community outreach programming. CRC screening rates and outcomes can be improved by facilitating access to and completion of stool-based screening tests (e.g., FIT tests) and removing barriers to diagnostic colonoscopies following an abnormal stool result. Breast cancer screening can be increased by addressing the needs of enhanced navigation to affordable and accessible mammography services often unavailable because of financial and transportation barriers.

Both health centers serve significant rural patient populations that need more access to cancer screening. Residents of rural communities may be disadvantaged due to socioeconomic deprivation and tend to have lower adherence and access to preventive care and uptake of cancer screening. Approximately 50% of CVHS patients and nearly 100% of TACH patients reside in rural areas. In addition to the sociodemographic details for each center in listed in Table 1, CVHS has 9% of patients who speak a language other than English (TACH 1% - but significant outreach efforts are currently underway across its service area) and 7% of patients who agricultural workers (not applicable for TACH). Service area status score for CVHS is 59 and TACH is 50.

Table 1. Patient Demographics (2021)		
	CVHS[1]	**TACH**
Race		
White	55% (38-73%)[1]	92%
Black	31% (14%-44%)[1]	4%
Other	14% (5-47%)[1]	4%
Ethnicity		
Hispanic	13% (1-57%)[1]	4%
Financial		
Patients at or below 200% of poverty level (UDS, 2021)	24% (7 -60%)[1]	73%
Patients at or below 100% of poverty level (UDS, 2021)	14% (4-36%)[1]	35%
Uninsured (UDS, 2021)	19% (8-53%)[1]	8%
Medicaid (UDS, 2021)	28% (22-41%)[1]	29%
Medicare (UDS, 2021)	22% (8-32%)[1]	25%
Education and employment		
Unemployment rate (2020 Census)	4% (2-4%)[1]	4%
Less than a high school education (2020 Census)	13% (9-23%)[1]	19%

Footnote: 1 CVHS data from grant project performance sites only, overall (range)

Impact of Colorectal Cancer in Service Area: CRC has a significant impact in the service area where screening rates are low and there is a high burden of CRC incidence. These are impacted by a range individual needs and system barriers to CRC screening adherence and follow up. Table 2 summarizes the CRC needs and barriers to be addressed in this application for CVHS and TACH. Additional description of these needs is included in the sections that follow.

Table 2. Summary of Needs for Colorectal Cancer Screening	
Screening Completion	Low utilization of stool-based screening options • Low health literacy and educational attainment and awareness of screening options • Lack of standardized referral and navigation pathways Limited workforce for navigation and follow up
Follow up	Access barriers for colonoscopy after positive stool-based screening • Limited referral appointments • Long wait times • Financial burden • Insufficient transportation resources Limited workforce for navigation

Colorectal cancer incidence and mortality exceed state and national rates: The CRC incidence rate within the CVHS service area is 38/100,000 and within the TACH service area it is 57/100,000, both of which exceed the state rate of 35 and the national rate of 37, emphasizing the importance of increasing early detection and follow up through comprehensive CRC screening initiatives. The CRC mortality rates within the CVHS and TACH services areas are 8 and 13, respectively, compared to state and national mortality rates of approximately 13. Table 3 provides additional details about CRC incidence and mortality rates, including racial and ethnic disparities in CRC incidence rates, which are elevated among the Black population in the CVHS service area and among the Black and Hispanic populations in the TACH service areas.

Table 3. Colorectal Cancer Incidence and Mortality in CVHS and TACH service areas[1]	CVHS	TACH
Overall service area CRC incidence rate	38	57
Race and ethnicity		
Asian	12	--[2]
Black	50	--[2]
Hispanic	16	--[2]
Other	27	--[2]
White	37	51
Overall service area CRC mortality rate	8	13
Race and ethnicity		

Asian	--	--[2]
Black	12	--[2]
Hispanic	3	--[2]
Other	--	--[2]
White	7	11
Advanced cancer incidence rate (stage 3 and 4)	6	10
Advanced cancer mortality rate (stage 3 and 4)	0.91	1.14
Footnotes: 1 age-adjusted rates per 100,000 population, 2 Subgroup not reported due to small sample size.		

Colorectal Cancer screening rates are below national rates and benchmarks: All clinical sites in this project are significantly below the national benchmark of 80% for CRC screening and the state and national estimates of CRC screening of 70%. Table 4 displays the screening rates by site, race, ethnicity, and insurance status. The CRC screening rate at CVHS project sites is less than 50 percent (49.4%) and ranges from 41.9% at the Buckingham clinic to 58.9% at the Southern Albemarle clinic. There is a particular need for intervention for the uninsured ageeligible patients (36.6% screening rate compared with 51.4% of insured patients). Across all project sites at CVHS the return rate of FIT tests in 2021 was 65%, with a rate as low as 33% at the Peterson clinic. The recent collaboration between CVHS and UVACC to mail FIT tests to age-eligible patients resulted in an increase in the number of tests utilized; however, a primary barrier to lack of FIT test completion is the challenge of providing sufficient individualized patient follow up, including reminders and barrier removal. The completion rates could be improved through navigation that leverages existing strong community partnerships and trust in CVHS.

The CRC screening rate at TACH is 41% (2021), which represents a slight decrease compared to prior years. There is a considerable opportunity to increase CRC screening by introducing stool-based screening. Currently, TACH relies solely on colonoscopy for screenings, which is hampered by financial and transportation barriers, and the limited number of available appointments for colonoscopy for uninsured patients in the region due to a lack of GI providers in the region. Because colonoscopy is the gold-standard and because of concern about cultural norms related to toileting, TACH medical providers have historically opted not to promote stoolbased screening. However, with the recent hiring of several new medical providers and a new Medical Director, TACH is exploring how best to shift to stool-based screening. The proposed AxCS project allows TACH to benefit from CVHS's experience and UVACC's expertise.

Table 4. Colorectal Cancer Screening Rates by Race, Ethnicity, and Insurance status (2021)		
	CVHS [1]	**TACH**
Overall	49% (42-58.9%)	41%
Race		

White	47%	--[2]
Black	55%	--[2]
Asian	53%	--[2]
American Indian	33%	--[2]
Other	53%	--[2]
Ethnicity		
Hispanic	53%	--[2]
Non-Hispanic	49%	--[2]
Insurance		
Insured	51%	--[2]
Uninsured	37%	--[2]
Footnotes: 1 CVHS data from grant project sites only, overall (range), 2 TACH subgroups not reported due to small sample sizes.		

Impact of Breast Cancer in Service Area: Low screening rates among CVHS and TACH patients and elevated cancer incidence and mortality rates in the service areas are evidence of the unmet needs related to breast cancer in both Health Centers' communities. As summarized in Table 5 and detailed below, access barriers to breast cancer screening and follow up services within these rural communities need to be addressed to decrease the burden of breast cancer.

Table 5. Summary of Needs for Breast Cancer Screening	
Screening Completion	Equal access to screening mammography • Excessive distance and community time to screening sites • Insufficient transportation resources • Limited referral sites • Financial burden • Underutilization of EHR and population health tools Limited workforce for navigation
Follow Up	Access to follow up services • Insufficient transportation resources • Financial burden

Breast Cancer Incidence & Mortality Rates: As listed in Table 6, the age-adjusted breast cancer incidence rate of 149 for CVHS and 180 for TACH in their respective service areas far exceed the state and national rates of 126 and 127 and highlight the need for expanded screening and prevention services within these regions. The mortality rates of 8 in the CVHS service area and 13 in the TACH service area are below the VA and US rates, which are both approximately 20. These higher rates may result from the lack of mammography screening locations in the rural areas, and the long travel distances for rural-residing women to get breast screening.

Table 6. Breast Incidence and Mortality in CVHS and TACH service areas[1]	CVHS	TACH
Overall incidence rate	149	180
Race and ethnicity		
Asian	72	--[2]
Black	162	--[2]
Hispanic	71	--[2]
Other	107	--[2]
White	152	166
Overall mortality rate	8	13
Race and ethnicity		
Asian	13	--[2]
Black	13	--[2]
Hispanic	5	--[2]
Other	20	--[2]
White	7	2
Advanced cancer incidence rate (stage 3 and 4)	2	31
Advanced cancer death rate (stage 3 and 4)	1	2
Footnotes: 1 age-adjusted rates per 100,000 female population, 2 Subgroup not reported due to small sample size.		

Breast cancer screening rates fall below public health targets and state and national rates: Like the underperformance in CRC screenings, all CVHS and TACH clinics are under the Healthy People 2030 target for breast cancer screening of 77.1% and lower than the state average of 73% and the national average of 68% of women being current on breast cancer screening. The breast cancer screening rate among CVHS project sites is 47% and ranges from 35% at CVHS Buckingham to 60% at CVHS Peterson. CVHS and TACH both serve as the safety net systems for the uninsured, a population with limited resources and many barriers to screening. The Buckingham clinic serves many uninsured, and not only those who reside in the county. When possible, CVHS' Fredericksburg clinic refers women to Buckingham for breast screenings, since that clinic has a mammography unit and with results are read by UVA Radiology. The largest number of CVHS uninsured are seen at the Fredericksburg clinic; most are undocumented. There are no racial and ethnic disparities in breast cancer screening rates; however, there is a significant disparity by insurance status, with 31% of uninsured having had a mammogram compared to 50% of insured patients at CVHS. The overall breast cancer screening rate for the CVHS sites in this project is 47%. At TACH, the breast cancer screening rate is 38%.

Table 7. Breast Cancer Screening Rates by Race, Ethnicity, and Insurance status (2021)		
	CVHS [1]	TACH
Overall	47% (35-60%)	38%
Race		
White	47%	--[2]

Black	55%	--[2]
Asian	53%	--[2]
American Indian	33%	--[2]
Other	53%	--[2]
Unknown	41%	--[2]
Ethnicity		
Hispanic	53%	--[2]
Non-Hispanic	49%	--[2]
Unknown	53%	--[2]
Insurance		
Insured	50%	--[2]
Uninsured	31%	--[2]
Footnotes: 1 CVHS data from grant project sites only, overall (range), 2 TACH subgroups not reported due to small sample sizes.		

2. **Barriers to maximizing equitable access to cancer screening and referral for care and treatment in the service area**

CVHS and TACH clinics experience workforce, care coordination, and community education barriers to maximizing equitable access to cancer screening and referral to care: There is a significant need to address inequitable access to cancer screening and referral to care. Significant barriers exist for both CVHS and TACH to maximize equitable access. A committed workforce at CVHS and TACH is made of members of the mostly rural communities that these clinics serve. Despite the staff and organizational dedication to the health care needs of patients, there is limited workforce to provide cancer screening navigation. A screening Navigator could provide patient-level navigation that removes access barriers to CRC and breast cancer screening. In addition, the Navigator would be able to conduct the robust and communityoriented follow up that is necessary when providing comprehensive care to medically underserved communities.

Care coordination and integration: Both CVHS and TACH have care coordination staff who organize patient care activities and share information among all clinical staff who are responsible for a patient's care. The goal is integrated, value-based care that is safer and more effective across services. Care coordination at the health centers would benefit by using the systematic identification of patients who are overdue for screenings through EHR flags and chart scrubbing by clinical staff. Coordinators also would assist with the screening pathway (drafting orders, giving FIT test, helping with patient education). A well-organized cancer screening patient navigation pathway, that also takes advantage of health IT resources, could alleviate inconsistent screening, sole burden on the provider, and necessary supports. Screening follow up now is hampered by lack of access to specialist providers who will perform colonoscopies for uninsured patients. There are few available "slots," a long wait to appointments, and a difficult process for registration of patients who need financial assistance to cover the cost of follow up care.

Community outreach and education: Both health centers and their clinics support community outreach to the extent possible, given the demands of providing primary health services. Improved awareness among community members about screening guidelines and the importance of timely screening is needed throughout the service areas. Community members need trusted sources of accurate information, for example from community Navigators, that is accessible both in terms of literacy and culture.

Assistance with enrollment in affordable health insurance: CVHS and TACH have enrollment counselors to assist the public with applying for insurance enrollment through Virginia Medicaid or the Federal Marketplace. CVHS has four and TACH has six of these staff members, who are regularly trained and certified. Patients are evaluated at the clinics, and if they are uninsured, they are referred to an enrollment counselor upon registration. These staff work with individuals in-person, by phone, and/or virtually. In 2019 CVHS acquired Point Care tracking software that allows counselors to screen applicants for all available sources for which they are eligible. The software supports tracking of assistance activities and follow up, reporting, connects to Virginia Medicaid for status of applications, and allows for reminder communications about renewals. CVHS will share with TACH its procedures for working with Point Care and lessons learned.

Rural location of clinics and Communities without Internet/Technology Infrastructure: Over half of CVHS counties are rural and virtually all TACH patients reside in rural areas. Most of these counties are designated health provider shortage areas and have very limited broadband access. Many low-income patients cannot afford internet service or data plans; older adults may not have or use computers or smartphones. Lack of internet connectivity is a barrier to the use of health IT. CVHS staff have difficulties with deploying telehealth and other technology tools in Buckingham, Charlotte, and Prince Edward clinics, south of Charlottesville. These factors mean that health center patients are adversely affected by social determinants of health (SDOH).

3. **Health-related social needs of health center patients in the service area that affect equitable access to cancer screening and referral for care and treatment**

Distance to care, lack of transportation and its cost compounds barriers to cancer screening: Both CVHS and TACH patients experience barriers to obtaining needed care due to transportation. Travel times to receive cancer screening and follow up care are significant for rural patients. For CVHS those who need colonoscopies may need to travel 1 ½ to 2 hours, and at TACH travel time to get to cancer centers in southwest Virginia can be 1 ½ hours, up to 3 hours. At CVHS, while there is a mammography unit at the Buckingham site, patients can live as far away as 2 hours from that site, may not own a car, and may not be able to afford to pay for transportation. There is very limited public transportation available in the Virginia communities served by this project – usually none in rural areas. The exception is public transport in the two small cities CVHS serves, which represents only three of the project's 12 clinical performance sites. The rapidly increasing cost of gas now add significant cost, given the low median incomes of communities served by the project's site (see Financial Strain below).

Language access challenges: One of CVHS city sites has the Health Center's largest uninsured population, largely due to the high population of immigrants in the region. CVHS ensures access to care through translation services, and almost all staff in that clinic (Fredericksburg) are bi-lingual (Spanish). There also is a care coordinator dedicated to assist the site's patients. TACH has a lower number of non-English speakers in its population; however, the translation service is offered when needed.

Cultural barriers (health literacy): Health literacy can be a barrier for patients. Both Health Centers consider how to improve this barrier in their Quality plans. There has long been a strong emphasis on health education for FQHCs, a shared responsibility of all clinicians, nurses, and other staff. Adding dedicated Patient Navigators for the project's target population will help to address this barrier, along with the training for the clinics by partner UVACCC. According to its 2019 needs assessment, 43% of residents in the CVHS service area and 46% of residents in the TACH service area report low health literacy.

Housing insecurity: Recent data on Housing Problems from the 2022 County Health Rankings for the seven localities of the eight CVHS clinics ranges from 20% of population in Fredericksburg, 19% in Charlottesville, to a low of 11% for Louisa (rural). As rents increase with inflation, these statistics could worsen during this project period. The 2021 County Health Rankings cite severe housing cost burden average for the TACH service area is 9.6%, with a cost burden ranging from a low of 8% in Grayson and Patrick Counties to a high of 12% in Floyd County. The Virginia average is 12%.

Food insecurity: In 2019, the UVACC needs assessment found that 22% of households in the CVHS and 24% of households in the TACH service area report experiencing food insecurity. More recently, 2022 County Health Rankings include a Food Environment Index. For six of CVHS communities, the index numbers are around 8-9%, with the highest (8.9%) for Louisa, and lowest (6.4%) for Charlotte. Rural Charlotte is a largely agricultural county.

Financial strain: Recently reported median incomes (County Rankings) confirm that individuals served by the Health Center clinics experience financial challenges, likely affecting their ability to get cancer screenings and especially, follow up if a screening is positive. Incomes for the CVHS communities range from a low of $17,255 in Prince Edward to a high of $40,198 in Albemarle. Household incomes for the other five communities hover from $25,000 to just over $34,000. For the TACH service area, the average median household income is $51,320 and ranges from the lowest in Grayson County at $45,900 to the highest in Franklin County at $61,700. The state average is $79,200.

In terms of unemployment, the latest Rankings report lower percentages in CVHS communities. The highest at 7.4% is for Buckingham, and the lowest is 5.4% for Albemarle County. For the TACH service area, the unemployment average is 6.3%, just above the Virginia rate of 6.2%. TACH had a low of 5.1% in Floyd County and a high of 8.2% in Carroll County.

Other Social Determinants of Health (SDOH): The Health Centers use the PRAPARE questionnaire, which is integrated with their EHR, to identify barriers their patients experience related to SDOH. CVHS' Director of Clinical Operations manages the SDOH activities for the

Health Center, and supervises a team of 14 care coordinators, who use these data tools in their work with patients. One staff member at each clinic has been trained and serves as the SDOH resource for providers. The other SDOH resource tools that aid with overcoming barriers patients may encounter are FindHelp.com (previously branded as Aunt Bertha). It is an online system that supports referrals to local social service resources (food, legal, childcare, housing). UniteVA is a similar resource system overseen by the Virginia Department of Health that CHC staff use. The Patient Navigators will be trained in using these online resources for this project.

4. **Changes in cancer screening, including UDS data, and changes in referral for care and treatment in the service area between 2019 and 2021 that may be attributed to the COVID19 pandemic**.

The COVID-19 pandemic put a strain on community health center services throughout Virginia and the US. The pandemic impacted mammograms and the ability to get patients their mammograms while at the clinic, since clinicians often focused on vaccination instead. Also, there has been a requirement to delayed mammograms to 6 weeks post COVID-vaccine to get into to be screened. As Table 8 below shows, at CVHS the CRC screening rate dropped 4% from 2019 to 2021, and the breast cancer screening rate dropped 4%, as of 2021. At TACH CRC screening rate has dropped gradually, from 45.9 in 2019, to 44.9 in 2020, to 41% in 2021. The breast cancer screening rate at TACH dropped 3% as of 2021.

Table 8. Changes in screening due to Covid-19 (UDS)	**CVHS (all sites)**			**TACH**		
	2019	**2020**	**2021**	**2019**	**2020**	**2021**
Colorectal Cancer	55.79%	52.85%	51.55%	45.9%	44.9%	41%
Breast cancer	--	55.13%	51.03%	--	41%	38.00%

Changes in referral patterns and care in services: CVHS experienced a decrease in patient volume, especially during 2020. One of the most significant impacts of COVID-19 on CVHS related to workforce challenges. Turnover of nurse practitioners and the loss of a physician assistant created staffing shortages and challenges as clinicians were often replaced by less experienced providers. Most sites remain short-staffed, which combined with the impact of COVID-19 exposures, further strains CVHS resources. Cancer screening, along with other preventive services, suffered due to these COVID-related workforce impacts.

TACH also saw a decrease in patient volume during 2020, but it increased in 2021. TACH did not experience the same workforce shortages as CVHS, but the COVID protocols put in place to protect patients and staff led to a reprioritization of efforts and many patients were seen by telehealth instead of in person, and screening that would have taken place in person was skipped in many telehealth appointments.

During the COVID-19 Pandemic local hospitals suspended all non-elective surgeries and procedures, including health maintenance screenings. Thus, it was hard to get a preventative screening scheduled. There was also fear on the patient's side of being exposed to COVID, so they were reluctant to keep scheduled appointments. The hospital restrictions were lifted in early 2022 as things moved back to normal in the region. Referral sites where patients of both CVHS and TACH normally complete their follow up care also have experienced workforce shortages

exacerbated by COVID-19. For example, the wait time for a colonoscopy appointment previously was 6 months but has since increased to a year wait to get patients in for care. Although capacity has increased since the height of the pandemic, wait times remain a significant access barrier.

RESPONSE

1. **Describe how AxCS-supported activities, as outlined in the Workplan, will increase cancer screening and referral for care and treatment**: The detailed Project Work Plan that outlines activities, focus areas, timeframes, anticipated outcomes, and staff responsible is included in this application at Attachment 1.

a) **Address unmet needs or barriers in achieving the increases in cancer screening and referral for care and treatment**

The unmet needs and barriers that patients of the Health Centers encounter are fully detailed throughout this section of the application, and in the following sections that cover collaboration and resources/capabilities. CVHS is uniquely poised to address our patients' cancer screening and follow up needs while collaborating with one of our neighboring CHCs, TACH. Although the organizations have differences in patient populations, ultimately, both rural-serving centers have similar needs and barriers that must be addressed to increase cancer screening and follow up within our rural service areas. Together, with leadership from UVACC, we will launch the *Virginia Community Health Center Cancer Screening Collaborative*, to improve cancer screening and follow up by utilizing evidence-based approaches and sharing best practices. As is evident when reviewing the CVHS and TACH data, many needs are common across health centers and solutions can be adapted to each without the need to recreate new solutions. UVACC is committed to providing leadership and resources to the collaborative and has buy-in from at least three other CHCs, with support from our state-level colorectal cancer roundtable, to join the Collaborative, so the project can have a significant impact on cancer burden in Virginia. Through this Collaborative, CVHS, TACH, and UVACC will improve cancer screening rates within our patient population and increase the number of patients assisted with accessing appropriate follow up care within 30 days. These objectives will be achieved by developing and integrating comprehensive navigation from the community to the point of diagnosis. To accomplish increased screening and follow up, we will work to:

Enhance the use of and standardize processes for stool-based colorectal cancer screening (and increase access to screening mammograms for breast cancer – as fully described below) Currently CRC screening is underutilized at CVHS and TACH despite strong evidence that regular screening can reduce cancer mortality. By enhancing utilization and standardizing processes for stool-based colorectal cancer screening, we anticipate an increase in uptake of CRC screening in the patient populations. Given the limited access to Gastrointestinal physicians in the service areas, stool-based testing will help maximize spaces available for colonoscopy by referring only positive FIT patients to colonoscopy. Currently, TACH relies solely on colonoscopy, and access is hampered by financial and transportation barriers and a limited number of available slots for uninsured patients in the region. By moving to using FIT, colonoscopy slots can be prioritized for patients with positive FITs. Although CVHS does use

stool-based tests now, completion and return of those tests remains lower than quality care objectives adopted by its clinical team. Navigation of positive FITs for both health centers will be key to increasing return rates of FIT tests and ultimately, increasing CRC screening. To enhance the use and standard processes for stool-based CRC screening we propose:

Process Mapping: UVACC's COE team will work with each center's quality improvement (QI) teams to complete process mapping to better understand the current state for FIT test distribution in CVHS clinics and how systems can be improved for the use of FITs. Likewise, process mapping at TACH will show how the current screening and colonoscopy referral process can be changed to maximize use of FITs. Because FITs will be newly introduced into TACH's workflow, additional efforts will go into CRC screening process mapping, including selection of the appropriate FIT test and processing laboratory. At both centers, process improvements may include nurse-led orders for FITs, EHR flags, and prepared labelling of kits for distribution. Working with the Health Centers' QI staff, UVACC COE will undertake process mapping for breast cancer screening to introduce workflow improvements within those systems, using data system tools, navigation, and partner relationships (explained under section b) below).

Optimizing Population Health Tools: Optimization using Population Health Tools (including i2i) will be included in QI activities for breast and colon cancer screenings. Both CVHS and TACH use E-clinical Works as their EHR and will use the same flagging system within that data management system to alert providers of patients who are not up to date with their CRC screening. For community members who are not yet patients, a different navigation system will be set up to create a list for targeted outreach, to raise awareness about the importance of screening, options for screening and how to schedule a clinic appointment. The health center Navigators will use this list, developed through the population health tool (i2i) to implement a new protocol for communication and navigation for these individuals.

Workforce Training: As is documented in the literature, a strong provider recommendation can increase uptake of FIT testing. UVACC has piloted education with primary care providers (PCPs) at UVA Health and as a result, FIT orders have increased. Education sessions cover topics such as options for screening, efficacy of CRC screening by test type, current screening rates, and best practices to improve rates. UVACC will adapt these successful provider education trainings and deliver them to providers at both health centers.

CRC Navigation: A 2018-21 pilot between CVHS and UVACC to mail FIT tests to age-eligible patients resulted in an increase in the number of completed FITs. However, a primary barrier to test completion was sufficient individualized patient follow up, including reminders and help with removing barriers (i.e., transportation, financial assistance). These issues will be addressed through navigation that leverages existing strong community partnerships and trust in the health centers. Both TACH and CVHS will hire Patient Navigators dedicated to this project to coordinate all aspects of navigation related to CRC screening. A UVACC Navigator will work with the health center Navigators and other center staff to develop a standard navigation protocol for patients receiving a FIT test from the clinics. The newly developed process map and feedback from community listening sessions will inform the protocol and address common barriers preventing completion. Also, UVACC will provide training on best practices in navigation and

assist in the role of navigation services and documentation. The UVACC Navigator will work with CVHS and TACH Navigators to adapt newly developed protocols to provide similar navigation services for mailed FITs.

Mailed FIT Campaign: To address current barriers faced by the health centers to get patients screened, including transportation issues, lack of access, and low health literacy, a large-scale mailed FIT campaign with embedded systematic processes and navigation will be conducted at CVHS. Mailed FITs are a proven, cost-effective way to increasing CRC screening rates and can address health disparities faced by rural community members. Launching this mailed FIT campaign will decrease the burden on the CVHS providers, who are pressured to address competing health needs during short in-clinic visits. The return rate from CVHS' recent pilot was low partly due to the lack of standardized, evidence-based communication and navigation. The UVACC COE team and Navigator will adapt best practices from the Mailed FIT Implementation Guide from the National Association of Chronic Disease Directors and CDC to establish a program that connects with a broad, hard to reach population, to yield a higher return of FITs. Using CVHS' population health data management system, patients will be identified who are age-eligible (45+), overdue for colorectal cancer screening, and do not have an upcoming in clinic appointment. The data management system will be built to track these patients through each step of the mailed FIT campaign. The campaign will have key steps such as mailing out a primer letter to eligible patients, sending a high-quality FIT that is pre-labeled for return to the lab, mailing a reminder, making phone calls to non-completers, and navigation by the health center Navigator for patients with abnormal results. CVHS will develop a process that can be sustained and conducted annually. Once these protocols are in place, they will be adapted for implementation at TACH. CVHS Navigators and other health center staff will work with TACH to establish best practices and share lessons learned. TACH will provide a similar mailed FIT campaign for patients in their service area. Through the mailed FIT campaigns, completion of CRC screening is expected to increase significantly in rural populations at both centers who would not be seen in clinics for screening assessments.

Improve access to screening mammograms for breast cancer

Uninsured rural women face multiple barriers in receiving a screening mammogram. Travel distance and commute time to get to screening sites are exacerbated by the absence of public transportation options, decreasing the likelihood that women will complete their recommended breast cancer screenings. Health centers, such as TACH and CVHS, with strong community connections can play a vital role in reducing disparities related to transportation and access by providing mammography closer to where their patients live and reducing financial burden associated with completing screening. To improve access to screening mammograms we propose:

Optimizing EHR and Population Health Tools: To enhance the use of supportive technology, both CVHS and TACH will optimize their EHR and population health tools. Best practice indicates that the addition of patient flags within the EHR can increase the likelihood that healthcare providers discuss and order appropriate screening tests. They will work together to leverage CVHS's experience use the data tools. In addition to EHR flags to help for in-clinic visits, the centers will together develop processes for easily identifying screening-eligible women over 40

who are overdue for breast cancer screening. CVHS recently integrated an advanced version of the i2i tool for identification and reporting. TACH will work with CVHS to adapt processes within their EHR using a different version of i2i to generate a list of their patients who are due for screening. These lists will be routed to the health center Navigators. The Navigators will develop a protocol to connect these patients with the appropriate site for mammography.

Navigation for Breast Screening: As improvements are made to the EHR system and established referral pathways, there will be another need to help overdue women navigate to the correct pathway to complete their breast cancer screening. To address this, the TACH and CVHS Navigators will help in all aspects of navigation related to breast cancer screening. The UVACC Navigator will collaborate with the health center Navigators and other health center staff, such as the referral teams, to develop a standard navigation protocol for patients who need mammography - whether from within the Center, from mobile mammography, Every Woman's Life, or a regional provider referral site. Additionally, UVACC will provide training on best practices in navigation and assist in the roll-out of navigation services and documentation.

Mobile Mammography: Accessing mammography is a top need to for breast cancer screening because of the geographic location of services and insufficient transportation to screening sites. Although CVHS has a mammography unit at its Buckingham clinic, women from other CVHS sites must travel up to two hours to be screened there. TACH does not have a mammography unit, so must refer all women off-site for screening. The closest sites to TACH for mammograms are through Ballad Health and Carilion, located over an hour away for most TACH patients. Given the distance to screening mammography, UVACC proposes to establish routine visits from the UVA Mobile Prevention Coach. The mobile coach will bring comprehensive breast screening closer to home for women seen at the rural clinics. The self-contained coach uses the latest technology, including 3D imaging. It has the capacity to perform up to 25 exams in one day. UVACC will work with the health centers to develop a rotating schedule for the coach to visit, also deploying the EHR/i2i system to identify and schedule women to the mobile coach. Women who are provided mammography by the mobile coach will receive navigation services from the UVA Navigator in coordination with the Navigators at the health centers.

Every Woman's Life*:* In addition to bringing improved access through the mobile coach, TACH and CVHS will become referral sites for Every Woman's Life (EWL), which helps uninsured, low-income women gain access to free breast cancer screening services. For TACH, EWL is available at Carilion Clinic and through local health districts including Mount Rogers, New River Valley, and West Piedmont. Women from CVHS will be referred for enrollment to the UVACC EWL program. Women seen on the mobile coach at the clinics will be screened for eligibility for EWL by UVA. For women unable to be seen on the mobile coach, who get a screening appointment with another provider, the health centers will provide financial assistance to reduce the debt burden, through a new FindHealth.com partnership with Uber (CVHS subscription with the SDOH tool used by CHCs) or with gas cards provided to the patient or caregiver. These cards will be managed by the Navigator, who will work with women to navigate to the mammography site that best fits their needs. UVACC will train health center Navigators in the EWL program to assure best practices for enrollment and follow up are consistent across sites.

Implement clear and accessible pathways for breast and colorectal cancer referrals and follow up

Many patients from health centers face long wait times due to a limited appointment spots and complex referral systems. Although the need for streamlined access is more prevalent for colorectal cancer because of the limited number of Gastrointestinal providers in rural areas, similar needs exist for breast cancer screening follow up. To address this barrier, we propose the following activities:

Streamlined and Expanded Referral Pathways: Developing a relationship between health centers and referral practice sites is critical to the provision of timely, quality care. Establishing a trusted relationship will result in improved communication, smooth patient handoffs, and efficient turnaround and documentation of screening results. Improved quality of care has been demonstrated through CVHS' established relationship with UVA Health's Breast Center. Referral staff have a smooth referral process due to this relationship with staff at UVA Health's Breast Center. Better communication has resulted between CVHS and UVA, with faster follow up times, and ease of accessing findings.

To mirror the connection CVHS has with UVA Health, UVACC will work with CVHS and TACH referral staff, outreach coordinators, and patient Navigators to identify providers for both breast and colorectal services. Activities will include current referral sites and potential new sites. A list of providers will be created with relevant information on each service provider including payment and insurance types accepted, location, transportation options, and services offered. UVACC will assist each health center's referral team in establishing a point of contact at each provider practice if one does not already exist. Together, the health center and key contacts will work to streamline the process for making referrals at established sites. When possible, a single contact point will be identified. And, using the referral sites list, the health centers will connect with potential new sites to introduce referral processes. By enhancing the referral process and expanding the number of referral sites, CVHS and TACH expect to see an increase in patients seen for follow up in a timely manner, and a decrease in wait times.

Reserved Appointment Slots: There are long wait times for appointments for the uninsured at both health centers. Health center referral staff work diligently to schedule follow ups for breast and colorectal cancer, but available appointments often are over a year away. This barrier is exacerbated for the uninsured due to limited options for follow up. Many referral sites do not have extensive charity care or easy-to-navigate financial aid programs. To address the barriers, the health centers will work with UVACC to negotiate reserved appointments for uninsured patients at UVA Health and other health systems. In the CRC Fit to Colonoscopy pilot between CVHS and UVACC, patients entering UVA Health through the pilot were seen within three months compared to the traditional 6-12 month wait. Through this new collaboration to accelerate cancer screenings, the process developed under the pilot will be maintained and expanded to patients coming from TACH. UVACC and health center staff will attempt to establish similar processes at other health systems, especially those closer to TACH patients. UVACC will take the best practices applied to CRC and work within its Breast Center to establish the same standard, and work to get patients seen for follow up within the 30-day

window. As this process expands at UVA Health, UVACC also will begin to use its extensive networks to connect with hospital systems in TACH and CVHS's service areas to negotiate reserved appointment slots for patients need follow up care from these two centers. This will allow for increased and timely access to both breast and colorectal cancer follow up.

Increase financial assistance for breast and colorectal cancer screening and follow up
Strides have been made at the national level to eliminate gaps in coverage for breast and colorectal cancer screening follow up. In 2022, the gap for privately insured patients needing a colonoscopy after a positive FIT was closed when the Tri-Agencies finalized its coverage rule, requiring private insurance companies to cover follow up colonoscopies. Despite this positive change for one group of patients, there remains a barrier for patients who are on traditional Medicaid and Medicare plans or are uninsured. They are left with significant costs associated with colonoscopy. There are similar financial barriers for CHC patients related to breast cancer screening. These costs often deter patients from completing their screening, leaving some of the most vulnerable patients at greatest risk of late-stage diagnosis for breast and colorectal cancer. To address these barriers and financial gaps we will implement the following strategies.

Every Woman's Life Program: As stated above, EWL can help close breast screening and follow up financial gaps for uninsured women. The statewide program can enroll patients and connect them to a EWL site where they can not only receive a free mammogram, but also receive free diagnostic care as needed. Women enrolled in EWL are eligible for Medicaid if a cancer treatment is needed through the Virginia Medicaid Breast & Cervical Cancer Prevention and Treatment Act.

Transportation Assistance: Transportation is a well-documented barrier to completion of cancer follow up care. Given the rurality of both health center's service areas, public transportation is virtually nonexistent. As described above, this project will provide gas cards for patients' use to get to and from appointments at referral sites for diagnostic breast cancer services or for colonoscopies. Another solution newly available is for CVHS to pay for the transportation costs through its subscription with the FindHelp.com SDOH tool. Removing this barrier has a role as part of a multi-component intervention to increase screening and follow up. Gas cards and transportation cost coverage will be assigned based on needs identified through the patient navigation protocol. The health center Navigators will document both within the patient management system.

Funds to offset follow up expenses: The rate of completed follow up colonoscopy after a positive FIT is often low, as is evident in the pilot data presented above. Although there are many barriers to completion of a follow up colonoscopy, patients often face barriers related to the unexpected costs associated with the colonoscopy. To address this barrier, we will work with our UVACC partners to expand the option of a flat rate colonoscopy rate beyond UVA Health. The current rate is $1029, which includes all expenses, including the physician, labs, and pathology. This low rate allows CVHS to cover the costs for more uninsured patients who require follow up. Working with UVACC, which has extensive relationships with health systems across Virginia, the health centers will work toward implementing this flat rate model at other health systems in our service areas. When the new flat rate is established, TACH and CVHS will cover the costs of the follow

up colonoscopies for those who have no other financial means to have this procedure covered (in-kind). CVHS and TACH will work with UVACC to take the best practices for the reduced, flat fee from colorectal cancer and apply them within the UVA Breast Center (and other health systems) so that follow up care will be less burdensome on the patients.

Training on Financial Assistance/Charity Programs: Streamlining and training the CVHS and TACH outreach staff on the financial assistance programs at local hospitals will take place. CVHS and TACH have dedicated staff to help patients with their financial assistance needs. Outreach staff help them complete Medicaid paperwork and apply for financial assistance in various systems of care. However, the assistance application for each hospital that patients visit differs and is complicated for health center staff and patients. To overcome the challenges, UVA outreach specialists will work with outreach staff at CVHS and TACH to connect with local hospital financial assistance teams to train on their systems. After understanding the basics of these assistance programs, the UVA outreach specialist, health center enrollment staff, and the hospital teams will standardize paperwork required for applications. Process improvements will help patients with low-literacy, or who may be more transient, to complete necessary documents. TACH referrals for treatment are to the nearest hospital to the TACH clinic. For patients who are uninsured and/or low-income, the best options are Ballad Health and Carilion Clinic because they are nonprofit hospital systems, and thus have charity care programs.

b) **Enhance or expand strategies, including the use of enabling services, to improve the patient experience**

CVHS and TACH have long-standing ties to the communities they serve, contributing to an overall positive patient experience. Both health centers proactively contribute to the well-being of patients by being patient-centered, welcoming, and team-oriented. Over years CVHS has added enabling services and staff who are responsible for outreach, enrollment, health education, and raising awareness in the community. CVHS participates in health fairs, presents at community events throughout central Virginia with screenings and education, provides informational materials, including a presence on social media and newspaper articles, and offers providers who speak to community groups. At its Fredericksburg clinic, the Spanish-speaking providers and staff present at churches, civic groups. This team has a long relationship with the city's nonprofit that serves the homeless and immigrants. Likewise, TACH has been doing outreach to Hispanic communities, especially Spanish-only speakers, by sponsoring health screening and legal information fairs, as well as leading and participating in food, clothing, and shoe drives for children, older adults, and others in need. UVACC will enhance the already existing patient experience at both health centers by amplifying community capacity and bidirectional partnerships through its OCOE.

Community Participation Sessions: Before initiating the strategies to address the needs within the two health centers, UVACC will deploy its rural-focused outreach specialist to conduct listening and stakeholder interviews with existing CVHS and TACH community partners to identify specific community needs and barriers that may impact residents' ability to access or complete cancer screenings. The findings from the listening sessions will inform development of further outreach activities and will help to personalize and adapt navigation pathways at both centers.

Patient Education and Awareness: UVACC outreach specialists will work with community champions and the health centers' existing networks to provide Understanding Cancer, UVACC's evidence-based community cancer education program, at local faith-based organizations, civic groups, public libraries, worksites and for other interested groups.
Understanding Cancer covers the basics of cancer from its etiology, risk reduction, and screening guidelines, including breast and colorectal. In addition, the community champions and CHWs will undergo the facilitator training to be able to provide their own workshops within their community networks.

To increase referrals from the community into the health centers, a cancer screening guidelines checklist will be developed and implemented as part of the Understanding Cancer workshop. As community members complete UC, the facilitators will have participants complete the cancer screening guidelines checklist to identify if they are up to date with their own cancer screenings. For those who are not up to date with cancer screening for breast or colorectal cancers, the UVACC Navigator will connect with the participant and help navigate them into the closest health center to either establish care or schedule an appointment to meet with a care provider to discuss screening options.

In addition to the Understanding Cancer workshops, UVACC outreach specialists will help the health centers adapt their patient education tools for a low-literacy level and translate materials in Spanish for growing non-English speaking populations. These education tools will be available in the clinics and given to the CHW and community champions to share at community events.

c) **Promote equity in access to cancer screening and referral for patients, special populations, and other residents of the health centers' service area**

While cancer mortality has slowed across much of the U.S., cancer mortality decreases in rural areas continue to lag. With over 50% of CVHS', and all of TACH's, service area being rural, many of their patients face disparities related to cancer screening. Rural residents are facing inequities at all levels from patient, provider, community, state, and national level that result in consistently low screening and early-stage diagnosis, resulting in higher cancer mortality. Through this project CVHS and TACH will work with UVACC to implement strategies proven effective for increasing breast and colorectal cancer screening in rural communities. Leveraging the UVA team's extensive expertise in multi-level screening interventions for rural communities, CVHS and TACH will implement comprehensive navigation strategies to remove barriers typical of rural communities.

The various activities and strategies this collaborative project will implement to remove inequities and support increased access have been described above, and in the following sections. As stated above, CVHS has relationships with social service agencies and homeless center. Outreach staff of the two health centers regularly connected with public housing communities. Under the Collaboration section below, there is more information about the health centers' work to improve health care access for special populations.

d) **Addressing the impact of COVID-19 on cancer screening**:

As both health centers continue to rebound from the lasting impacts of COVID-19, we plan to leverage this Collaborative to improve systems that were negatively impacted during the height of COVID-19 and help increase screening for breast and colorectal cancer. A significant barrier that was created due to COVID-19 was a decrease in the CVHS workforce. Rural communities face health care provider shortages. The COVID-19 pandemic heightened this problem. To address this, CVHS will take our fragmented system for cancer screening and work toward efficient, streamline processes that take the workload off providers when possible. The integration of automatic systems, such as EHR alerts/flags will reduce additional work on the provider. Although TACH did not experience the same workforce issues, they also did not have the same level of sophistication with cancer screening and referrals and therefore can learn from CVHS's process enhancements. Additionally, by hiring a Navigator for each health system, communication will no longer be fragmented between the front desk, nurses, referral specialists, and providers. Instead, there will be one point for communication allowing clinical staff to work at the top of their certifications/licenses. The fact that referral sites shut down during the pandemic resulted in an increased wait time for many of our patients to receive their follow up care. To address this, we will work to re-establish or establish points of contact within the systems to streamline our referral processes.

We also will rely heavily on UVACC to assist with establishing standing appointment spots within our referral sites to increase our patients' capacity to get timely follow up care, with the goal of within 30-days. Finally, because of the COVID-19 pandemic, we relied heavily on connecting with patients outside of our health centers through telehealth and audio visits, because many patients were hesitant to come into the clinics and/or were not able to be seen in person because of COVID screening protocols. As a result, CVHS established a basic mailed FIT program. Although clinic volumes are rising to a pre-pandemic level, this mailed campaign can still benefit patients. CVHS plans to continue and standardize this program while assisting TACH in getting their mailed FIT program established.

e) **Leveraging health IT**

As stated above, both CVHS and TACH use e-Clinical Works as their EHR and the patient portal, plus Healow in communication with patients. CVHS has extensive experience with other projects using telehealth to reach its patients distantly. It has used the LUMA platform and other video tools for virtual visits since 2020. Until recently, almost all BH visits at CVHS were provided via telehealth, including access for rural patients into group counseling via video. CVHS and TACH have an established relationship to distant specialists at UVA, including radiology, OB-Gyn, and psychiatry. Some consults are supported through program at the UVa Office of Telemedicine. In terms of HIT, TACH can pull patient data on age, sex, and diagnosis for patients to bring them in for screenings. The reporting activity could also be completed as part of the patient's annual physical.

3. **Changes in scope required to implement your AxCS project**: There are no changes in scope required to implement this project.

4. **Proposed Personnel (as in Budget Narrative) essential to successfully implement the proposed project**

Patient Navigators (to be hired)*:* A key component of the success of this project hinges on establishing patient navigation within both CVHS and TACH. Neither center has an established Navigator. Instead, the centers rely on fragmented components of navigation by staff performing multiple roles. With these new positions there will be seamless communication around cancer screening internally with the centers' staff and externally with patients, referral sites and community partners. CVHS and TACH will each hire one Navigator assigned to this project. They will be responsible for tracking referrals and case management. They will be the direct contact with UVA and other cancer center Navigators in coordinating the referrals and follow up care for all patients with abnormal mammography and FIT test findings. They also will serve as the lead in the FIT Test implementation and getting the FIT tests returned in a timely manner.

Project Director (to be hired, 0.15 FTE): CVHS will hire a Project Director who will work with UVACC and help coordinate the activities of the Patient Navigators, in collaboration with the TACH leadership and clinical director. [redacted] the Clinical Director for CVHS, and will serve (in-kind) as the PI for this project, as stated in the collaboration documentation. He will work closely with the Project Director.

UVA Cancer Center Program Manager (contract): This incumbent of this position will be the main point of contact between CVHS and TACH and will work with the two health center Navigators and project director at CVHS. Also, this person will be responsible for synthesizing available evidence on cancer patient navigation interventions, developing navigation pathways, providing training and ongoing support to the health centers on best practices in navigation, collecting and analyzing data, and performing outreach. This person will oversee deployment of the UVA Cancer Center Navigators and outreach staff who will work directly with community members and patients to develop educational materials, provide lay cancer education sessions, and offer basic navigation to the health centers during community events.

COLLABORATION

1. **How project will leverage Cancer Center trained and supervised outreach specialists and patient navigators to improve cancer screening and referral for care and treatment within the service area**

UVACC will work with CVHS and TACH to develop patient navigation pathways for breast and colorectal cancer. UVACC will provide evidence-based best practice summaries of literature, collaborate with the on-site Navigators, Medical Directors, and other personnel at each Center to adapt the strategies for each clinic setting. The UVA team will assist in the development of the implementation protocols, provide training for clinic staff, and assist in developing tracking and monitoring tools. Health center teams who are responsible for referrals care coordination, and quality will be part of these activities.

CVHS and TACH will receive the same training from UVACC for their internal Navigators. Further, UVACC has committed to continuing to provide technical assistance and other training support beyond the funding period to both CVHS and TACH as well as other health centers who join the Collaborative. Also, at CVHS and TACH, associated staff such as Case Managers, Clinical Managers, and Office Managers will receive a briefer version of the training so that they can act as extenders of the Navigator.

The narrative sections below (and above) fully explain how the AxCS in Rural Communities project will leverage UVACC research, training, and OEO-supervised outreach specialists. Team members also will engage providers at the 12 clinic sites, who are supervised by the chief clinical officers. All will focus on improvement in screening and referrals in their respective service areas.

2. **Describe how project will leverage the resources of UVACC (Cancer Center Partner) to:**
a) **Build capacity of health center staff in the areas of outreach and patient navigators that will last beyond the funding period:**

Capacity building will be an important component of the work that the Cancer Center does with the health centers. CVHS and TACH have existing relationships with UVACC and have partnered on cancer-related outreach and education and some basic navigation in the past. Through this new collaboration, we are expanding on these existing relationships and improving the capacity to address the barriers for cancer screening in our rural populations. UVACC COE is founded in community-based principles, which help to develop capacity within communities to perform sustainable, high impact work.

Instead of solely relying on UVACC to do all the outreach and navigation, both health centers will instead learn and train our own staff on the best practices that they then will instill within our own systems and throughout the community. For example, UVACC will train health center staff in their community education program, Understanding Cancer, so that both health centers can have a broader reach and greater impact in our communities. Additionally, by hiring and training Navigators for the health centers, we will not need to rely heavily on the UVACC Navigator after we have developed and implemented our new processes and pathways for navigation. We will maintain our partnership with UVACC beyond the grant period; however, many of our processes and procedures will be institutionalized within our systems to allow for additional growth and expansion to other types of cancer.

b) **Facilitate referrals of individuals in need of cancer screening, referral for care and treatment, and other comprehensive primary care services to the health centers**

UVACC will draw upon its experience in developing referral pathways for colorectal cancer and adapt their best practices for breast cancer to help facilitate referrals for cancer screening and follow up for the Health Centers' patients. Additionally, UVACC will leverage its existing relationships with other hospitals throughout the service areas to negotiate appointments, assist in setting flat rates for follow up, and develop streamlined referral processes.

CVHS' pathways are different for its sites in various geographic areas. For example, its Fredericksburg clinic refers patients to two health systems serving its community. For the other 7 CVHS clinics involved in this project, UVa Health is a key referral partner, as stated several times in this application. CVHS works with several practices that are part of UVA physician groups, and through the UVA Office of Telemedicine.

Under this project TACH will develop pathways within its existing referral provider network through Ballad Health and Carilion Health Systems for patients with abnormal mammogram findings or a positive FIT test. These hospitals have charity care programs to assist low-income families and uninsured for their needed follow up care. TACH has a telemedicine contract with the UVA Office of Telemedicine and often can get referral appointments with specialists in Charlottesville quicker than a direct physician referral. The UVA charity program discounts

services for qualified low-income patients or the uninsured. The UVA referrals would be the default referral when all local referral attempts are exhausted.

As is noted throughout the document, the UVACC Outreach Specialists will be active in the CVHS and TACH service areas and will refer individuals who need screening, and may need referral for care and treatment, and/or need primary care services to CVHS or TACH, as appropriate. In this way, the UVACC Outreach Specialists will be able to extend the reach of health center staff further into the communities served by the two health centers.

c) **Share data on relevant cancer statistics (e.g., cancer prevalence, screening rates) to support health center program planning and quality improvement**

UVACC already has begun to work with CVHS and TACH to provide extensive cancer statistics and other relevant demographic data. The Cancer Center is committed to continuing to share existing and new data to guide program development. It can access cancer registry data as well as state and national databases to help the Health Centers fine-tune and guide the Collaborative's work. In return, we will be able to share Health Center patient data and outcomes to better understand our patient populations and implement innovative quality improvement strategies.

Over the years UVACC has shared relevant cancer statistics with CVHS and TACH as part of other project partnerships. These data have helped each health center to decide where to place staff time, energy, and resources regarding cancer-related efforts and quality improvement. As CVHS and TACH continue to work to improve cancer screening and treatment and referral rates, data provided by UVACC will help to properly target those most at need for assistance.

3. **How the project will leverage the resources of AxCS partners beyond UVACC, to**: This Collaborative project will take advantage of resource beyond UVACC to implement activities of the Workplan. As described more fully in the Response section, these activities have been planned by the three AxCS partners to a) Address patients' barriers to screenings and follow up; b) Strengthen and improve care coordination, community engagement and population health; and c) Share data on relevant cancer statistics in service area to support health center program planning and quality improvement.

Team members will engage with the following existing networks to implement the above listed activities to broaden the impact of this project and build sustainability.

Community Health Workers: The UVACC outreach specialist and Health Center navigators will work with existing community health worker (CHW) networks, such as the WellAware program in Albemarle that provides rural resource connections to clients to meet them "where they are and get them to primary care services." WellAware is an initiative developed by CVHS, the Charlottesville Free Clinic, and UVa Primary Care. CHWs, like the two who are employed by WellAware, live and work in the communities they serve and have established trusted relationships with community members. Through WellAware, CVHS has been able to build bridges to better health within their service area by enhancing patient-centered care coordination. Current CHW networks provide help to establish primary care, arrange transportation, and accompany community members to health appointments.

Community Champions: For TACH local community champions will be identified and will model practices like WellAware. Champions for TACH will be identified by working with its three local health districts, local partners, Relay for Life groups, and the Center's Outreach Coordinator.

UVA Cancer Center Without Walls: TACH is a member of the UVA CCWW Advisory Board. Their focus is on prevention and early detection of cancer in far Southwest Virginia. They have four primary areas of focus, including colorectal cancer screening. The CCWW has four workgroups that meet monthly to discuss outreach and patient education in the service area. The members of the CCWW include the UVA Cancer Center staff, local hospital networks, CHCs, Free Clinics, private providers, local health departments, and other ancillary service providers as well as patient support organizations, the American Cancer Society, and faith-based organizations. An Emory and Henry College Mass Media Class has prepared educational videos on the importance of colorectal screening for the targeted age group. The CCWW Advisory Board also provided introductions to the Ballad Cancer Center Navigators for the CCWW members. Ballad Health and Carilion Health Systems, along with UVA all have Charity Care Programs that discount services to qualified patients based on their ability to pay.

Migrant Health Network: TACH is a participating partner in this Network that is managed through a HRSA grant to Southwest Virginia Community Health Systems (SVCHS), a neighboring FQHC. They provide outreach to migrant and seasonal farmworkers in 8 counties in Southwest Virginia. They provide transportation, translation, and interpretative services in coordinating the health care of the migrant farm worker families in the area. In addition, TACH has been doing additional outreach and holding events promoting health screenings, including cancer, to Spanish-speaking residents of the service area.

d) **Building relationships with other potential partners** (i.e., VA Breast Cancer Association, Hitting Cancer Below the Belt, American Cancer Society): CVHS and its two partners who have planned this AxCS project decided to limit the number of partners participating in this funding opportunity. Instead, during Year 1 project leaders will explore the resources offered by statewide and national cancer-related groups and determine if bringing them on as partners for Year 2, or in the future, is mutually beneficial.

4. **Documentation of Partnership with NCI-designed Comprehensive Cancer Center**: Details of UVACC's partnership for this AxCS project are described in the Commitment Letter signed by the CEO of the UVACCC, as well as the contract agreement between CVHS and UVA provided at Attachment 2. These documents align with the content of the application's Collaboration section.

5. **Letter of Support from Partnering Health Center**: The letter from the CEO of TACH at Attachment 3 defines the relationship and describes the collaboration and coordinated activities in support of this project. TACH is a full partner serving as the equivalent of CVHS.

6. **Summary of Contracts and/or Agreements**: A list of CVHS' current contracts and agreements is provided at Attachment 4.

RESOURCES/CAPABILITIES

1. **Past efforts of the two Health Centers, alone or in collaboration with other partners, to increase the number and percentage of patients accessing cancer screening and referral for care and treatment.**

Currently CVHS is a partner under Project Coalesce, a two-year cancer education and awareness grant-funded project initiated by the VCU Massey Cancer Center. Massey is the other NCI-designated cancer center in Virginia. The project is focused on increasing cancer screenings to tackle the very high cancer incidence in southside Virginia, by raising public awareness and developing health education events, while engaging with community partners to execute activities. CVHS project is focused on its rural Brunswick County clinic, in partnership with Brunswick Health Ambassadors (BHA), a community group. In addition to CVHS, three other CHCs that serve different service areas (Richmond and southern Virginia) are partnering with VCU Massey CC under Project Coalesce. Through Project Coalesce, during 2021 and 2022 CVHS and BHA have participated in health fairs; organized an event for men to raise awareness about CRC and encourage screening, planned an education event for women to be held fall 2022 (focused on breast and cervical cancer), and are contributing a bi-weekly column on health for the local Brunswick newspaper. The partners anticipate a presence at the Southside Remote-Area Medical (RAM) in mid-August 2022.

TACH is a member of the UVA Cancer Center Without Walls and a staff member has served a Co-Chair for several years. As a result of this effort, TACH has partnered with others on advertising and outreach efforts. A video produced by Emory and Henry College Mass Media course students only been launched recently. Its impact cannot yet be determined. In the past, the UVA Mobile Mammography Unit has visited some TACH clinics to provide breast screenings, prior to the COVID pandemic.

2. **Capabilities and expertise of the two Health Centers to carry out the proposed project, including**

<u>Capacity to manage the collaboration with AxCS partners to accomplish AxCS objectives</u>: CVHS has a long-standing, productive relationship with TACH. As neighboring health centers, the organizations work to complement services. The CEOs of both Health Centers are in regular contact, on an almost weekly basis, consulting with each other, answering questions, and providing suggestions for resources. Also, senior leadership team members from each consult with their counterparts. For example, CVHS has the strongest pharmacy program in Virginia and the CVHS Pharmacy Director consults with the TACH Pharmacy Director. Similarly, TACH has a very mature BH program. The CEO of TACH is a psychologist. Consequently, various CVHS staff have reached out to TACH regarding BH questions.

As described above, and elsewhere in this application, CVHS' past partnership with UVACC focused on cancer screenings and follow up, and its present relationship with VCU Massey CC have informed this proposal. Over its 51 years, CVHS has partnered with the Virginia Department of Health (currently on a contraception program for uninsured women), with local health districts and mental health agencies, regional hospitals, state health associations, the

Virginia Health Care Foundation, and several private foundations to create and implement community-level public health initiatives.

Organizational systems of the two Health Centers for tracking and closing referral loops: There is a staff of 14 on the referral team for CVHS, based at the Buckingham site. All are trained to support the clinical team who need to refer their patients for services outside of the Health Center. One is dedicated to Fredericksburg, an equity response due to the high volume of uninsured who need primary care in that area. In addition to CVHS Referral director, there is a team leader who does most of the tracking and reporting. For TACH, in addition to having clinical staff at each clinic assigned to tracking and closing referral loops, the organization has two full-time Referral Coordinators, one of whom works on the referral side while the other works on getting the reports from referrals into the patient records.

Skills and experience of the proposed project personnel:

The personnel proposed for funding under this project have not yet been hired. Therefore, position descriptions identifying the required qualifications and experience are not yet in place. However, these will be produced in the first month of the project, in fall 2022. The Health Centers will consult with UVaCC OEO's director about requirement for the navigator positions. We plan is to complete recruitment for new hires within 90-days after the notice of funding award. In the last year CVHS has hired two Community Health Workers for the Petersburg area, and currently we are interviewing for two new Care Coordinator positions. The skills and experience level for these positions is comparable to qualifications needed for the navigators and to some extent, the project director.

Capability of key management staff to provide the operational and clinical oversight

The management team at CVHS is composed of the CEO, CFO, Chief Clinical Officer [redacted] and Director of Clinical Operations, along with the Dental and BH directors, and Pharmacy director. [redacted] has directed the medical department for over thirty years. In his clinical oversight capacity, he has initiated several collaborative projects to increase access to and quality of care, including the UVACC pilot. All CVHS leaders have decades of experience leading the Health Center. The site managers and lead medical providers for all 8 project sites will participate in this project, as will the Director of Nursing, EMR coordinator, QI/QA and Community Relations managers, and Outreach team.

TACH will have several senior leadership team members involved with this project, over and above the Clinical Managers at each clinic, Office Managers at each site, and Navigator. Specifically, the Organizational Excellence Officer (OEO), who is a medical provider, also serves as the QI Coordinator and helps lead the QI Committee with the Medical Director. The members of the Clinical Leadership Team (Medical Director, Behavioral Health Director, Pharmacy Director, and Clinical Operations Director) serve on the QI Committee so they will receive regular updates on the project in that capacity. In addition, the OEO is leading an improvement project around UDS clinical quality indicators, including colorectal and breast cancer screening, as described in the next section. She reports on the progress of these efforts to the Clinical Leadership Team. The Clinical Operations Director, who is an RN, will be involved because of her oversight of the referral process and the Navigator will be under her supervision. Finally, the CEO was Chair of the QI Committee at the health center where he was employed

prior to TACH. In that role he collaborated with UVACC on a cancer-related project there, including co-authoring a publication on colorectal cancer screening, so he has a strong interest in this project and will stay involved.

Ensuring the provision of culturally affirming care

Prior section of this narrative describe how the Health Centers work diligently to ensure that patients receive culturally affirming care. Indeed, cultural sensitivity for the individuals served at CVHS is stated clearly as an organizational value in its mission statements. CVHS has worked over the years to train its staff, including at orientation required for all new hires, about the importance of considering patient's individual needs and culture. Each year staff must complete cultural sensitivity training through its Relias platform. Interpretation services are available during visits for non-English speaking patients. All staff at the Fredericksburg site that serves a high number of these individuals are bilingual. Several tools, including online resources and telehealth technology, have been adopted to facilitate equitable access, and are used at all clinical sites, and available remotely.

Like CVHS, TACH is committed to providing culturally responsive care and one of the organization's core values is to provide a welcoming environment for patients and staff. TACH has a Welcoming Working Group that is led by a physician. TACH has some bilingual staff and is attempting to hire more. The advertisement for the Navigator position will include a strong preference for a person who is bilingual in English and Spanish. All clinic sites have access to the Stratus system for interpretation, material that has been translated to Spanish, and the website is available in Spanish. The Center has a Hispanic Advisory Team that meets every other week led by the CEO. Also, the CEO has been leading efforts to hold outreach events in counties with large Hispanic populations to provide screening, information, and referral information. Thus, the cancer screening and referral for care and treatment project described herein will be folded into these larger organization efforts to provide equitable access to care.

Resources that Health Centers will leverage to support project implementation in addition to the partnership with UVACC

Virginia has an active primary care association (VACHA) that also oversees the Health Center Controlled Network. CVHS is a founding member, and both Centers are very active. VACHA been proactive in providing culturally-appropriate resources to all health centers in the state. If this project is funded, CVHS will connect with VACHA for resources and ask for other referrals both in-state and nationally. TACH has been involved with the Relay for Life in its service area and can reach out to local collaborators who are concerned about cancer.

The UVA CCWW is a natural collaborator because they are a subunit of the UVACC and because TACH has been an active member for many years. In addition to the Relay for Life activities noted above, TACH has partnered with the American Cancer Society and has connections with their outreach personnel, including some with colorectal cancer expertise.

Plan of Health Centers to sustain increased cancer screening and enhanced referral tracking efforts if funding is not available beyond the two-year project period

As was noted earlier in this proposal, UVACC has committed to working with CVHS and TACH to establish a Collaborative with health centers around cancer screening and referral. In addition, the efforts that UVACC will contribute to establishing protocols at other health systems

will extend beyond the length of this award period. CVHS and TACH are committed to continuing the progress made through this project by continuing to use improved processes and workflows, having a Navigator on staff, and collaborating with other organizations.

EVALUATIVE MEASURES

1. **Baseline UDS data for calendar year 2021 and estimated data showing increases in the number and percentage of patients accessing cancer screening for each cancer type that you are proposing to address by December 31, 2023**

- Number and percentage of women screened for cervical cancer – N/A
- Number and percentage of women who had a mammogram to screen for breast
- cancer
- Number and percentage of adults screened for colorectal cancer: *See Table 9 below*
- Number of women assisted with accessing appropriate follow up care within 30 days of receiving an abnormal cervical cancer screening test result. – N/A
- Number of women assisted with accessing appropriate follow-up care within 30 days of receiving an abnormal breast cancer screening test result: *See Table 9 below*
- Number of adults assisted with accessing appropriate follow-up care within 30 days of receiving an abnormal colorectal cancer screening test result: *See Table 9 below*

2. **Provide baseline data for calendar year 2021 and estimated data showing increases by December 31, 2023, for each cancer type that you are proposing to address**:

Table 9. Evaluation Measures	**CVHS**		**TACH**	
	2021 baseline	**2023 estimate**	**2021 baseline**	**2023 estimate**
Colorectal cancer screening				
Number of FIT tests completed	1,056	1500	0	500
Percent of FIT tests returned	65%	70%	0	50%
Number of patients screened	3,887	4,550	1,489	2,000
Screening rate	49%	58%	41%	56%
Number of patients who received follow-up care within 30 days of abnormal screening result	51%[1]	56%	0	10%
Breast cancer screening				
Number of women screened	2267	2870	689	1000
Screening rate	47 %	60%	38%	56%
Number of women who received follow-up care within 30 days of abnormal screening result	61%[2]	67%	0	10%
Footnotes: 1. Follow-up care reported as referral for colonoscopy within 30 days, 2. Follow-up care reported as completion of a diagnostic mammogram with in 30 days				

Describe how the estimates were determined and why they are achievable by 12/31/23: Estimates are based on current patients of the two Health Centers and improving the screening of these patients for those twelve clinic locations. We plan to reach these patients by doing mass mailing of FIT tests to all the eligible patients and then using our best practices to get the FITs returned. For mammography, CVHS has reporting software to determine the patients out of compliance for their mammograms and will share its data management practices with TACH. We plan to use the two new Patient Navigators to do outreach and scheduling of these patients for screening mammograms with assistance for the logistics by UVACC and our partners. Then the Health Centers will follow-up to ensure the mammograms were completed and that there was follow-up on the results.

In a pilot project CVHS undertook with UVACC from 2018 through 2021, 54 uninsured CVHS patients with a positive FIT result received individualized follow up and navigation support to obtain a colonoscopy from the UVA CRC screening coordinator. These activities achieved a high-level of follow up: among the 54 patients, 43 completed (80%) their colonoscopy. The program involved mailing FIT kits to age-eligible uninsured patients and providing patients with individual follow-up, communications and barrier removal as well as accessing a set fee colonoscopy at UVA. The success of this prior program demonstrates effective collaboration between UVACC and CVHS. It employed evidence-based initiatives to increase screening rates and follow up. These will be applied and expanded within the proposed AxCSRC project.

TACH derived its estimate based on the changes already being made organizationally (see below) and the anticipated additional improvements that will be made with the hiring of the Patient Navigator, learning from CVHS, and collaboration with UVACC as described in the sections above.

Working closely with the UVA Comprehensive Cancer Center, over 6,550 patients of the two Community Health Centers (CVHS and TACH) will be screened for colorectal cancer by 12/31/23. By the same end date, an estimated 3,870 women will be screened for breast cancer by the two Health Community Health Centers, in collaboration with their partners.

3. **Describe how Quality Improvement/Quality Assurance (QI/QA) program of the two Health Centers will support the proposed AxCS project, including:**

a) **How the Health Centers will include or will incorporate cancer screening and referral for care and treatment activities and data into their QI/QA program**

CVHS has long had a Quality Improvement program, which is overseen by the Chief Clinical Officer, working with the QI Coordinator. There is a QI Committee composed of medical, dental, and BH clinicians that meets monthly to review UDS clinical data and health outcomes for all patients. The clinical data shared informs decision-making about changes in services and new activities CVHS will pursue. For 2022 CVHS has adopted a QI/QA goal to increase cancer screening. Some of the clinical sites are focusing on CRC, others on breast cancer – so the data for this project is already being incorporated into CVHS' program and will be included in its Strategic Plan which will be revised during later 2022.

TACH has implemented an overall organizational Fact-Based Management approach to decision-making. The first area of focus was the Quality Pillar of the Strategic Plan. This focus coincided with the submission of the 2021 UDS data. TACH noticed a trend in the data and

decided to institute a rapid cycle improvement project related to several clinical quality indicators, including colorectal and breast cancer screening. The 90-day cycle just ended and colorectal cancer screening rates improved from 41% to 46% while breast cancer screening rates increased from 38% to 45%. The QI Coordinator (who also is the TACH Organizational Excellence Officer), each site's improvement team, and the overall TACH QI Committee will continue tracking these indicators, and the other UDS items, on a regular basis. Thus, it will not be difficult to add tracking the referral for care and treatment metrics into the work they already are doing related to cancer screening.

b) **How the QI/QA program of the two Health Centers will support evolution of the project's cancer screening and referral for care and treatment activities commensurate with the evolving needs of Health Center patient populations and each service area**
Improving access to screening and referrals for treatment is one of the reasons that CVHS decided to invest in population health software (i2i) that is integrated with its EHR system. Enhanced data tools will support the growth of the Health Center, as it responds to the needs of clinic patients in its service area. The activities planned for this collaborative project, much like what CVHS found from its pilot with UVACC, are intrinsic to meeting objectives of its QI/QA program. All these efforts help to build a quality health care experience for the patient, customized to their individual need – and the new navigators will serve a critical role in making that happen.

As noted above, TACH is enhancing its utilization of data across the organization, including the QI program. Three other pillars of its Strategic Plan are Community, Access, and Service Experience. All of these relate to the current proposal. Increasing community outreach, external and internal navigation, and referrals are associated with these pillars and therefore will be measured and tracked. This information can be sent to the QI Coordinator, who then can use the data to determine whether QI efforts are necessary in one or more of these areas. The reciprocal nature of this data sharing will enhance each of the pillars, including Quality, while also positively impacting the quality of life of patients.

c) **How the two Health Centers will use QI/QA reports for AxCS project improvement**
CVHS' QI report is completed quarterly and shared with the management team. Thereafter, it is presented to the Board of Directors who meet monthly. These reports are used to inform decisions by the clinical team that are focused on improvement of services and will serve the same purpose for enhancing and strengthening the AxCS project. Given TACH's current focus on cancer screening, and the planned addition of more closely tracking referrals for care and treatment, there will be no difficulty in using QI reports for AxCS project improvement. The same people will be involved in the QI efforts as in the AxCS project.

d) **How the two Health Centers will include or incorporate into each organization's QI/QA procedures and processes, current clinical guidelines, standards of care, and standards of practice in the provision of cancer screening and referral for care and treatment** Consistent with what is expressed above, both CVHS and TACH have been focused on cancer screening for many months; this will continue. The additional emphasis on referral for care and treatment and the partnership with UVACC will only enhance the work that is already being done internally by each health center. As ideas and suggestions are presented

through collaboration of the three organizations, these will be discussed by both Center's QI Committees, the Medical/Clinical Directors and QI Directors, and each of the participating site's improvement teams. Thus, CVHS and TACH will be able to be at the cutting edge of cancer screening and referral for care and treatment because of their collaboration in advancing this project.

SUPPORT REQUESTED

The budget for this AxCS project has been completed consistent with other parts of this application, including the budget narrative and staff justification. It was developed based on CVHS' previous experience. The budget for each year of the project includes 3 staff members to be hired (2 patient navigators and 1 part-time project director), the cost of purchasing and mail distribution of FIT tests [redacted] to be used by each Health Center, the contract with UVACCC as NIC-designated partner [redacted], financial assistance for patients needing transportation [redacted], subscription for the i2i population health tool [redacted], and laptops, cell phones, and supplies for the patient navigators. Depending on how this project evolves, CVHS will use nonfederal grant funding to add positions with the knowledge and understanding that once those grants expire, the organization can sustain these screening, referral, and outreach activities to continue meeting the needs of people in its service area. CVHS is requesting [redacted] for each of two years.

Central Virginia Health Services, Inc.
Accelerating Cancer Screening Budget
Narrative

	Year 1			Year 2		
	Federal Grant Request	Non-Federal Resources	Year 1 Total	Federal Grant Request	Non-Federal Resources	Year 2 Total
Revenue:						
Grant Request	250,000	0	250,000	250,000	0	250,000
Total Revenue	250,000	0	250,000	250,000	0	250,000
Expenses:						
Personnel						
Patient Navigator/Project Director - CVHS	52,000	0	52,000	54,080	0	54,080
Patient Navigator - Tri Area Community Health Center	52,000	0	52,000	54,080	0	54,080
Project Director	12,000	0	12,000	12,000	0	12,000
Total Personnel	116,000	0	116,000	120,160	0	120,160
Fringe Benefits:						
FICA - 7.65% of wages	8,874	0	8,874	9,192	0	9,192
Tax Sheltered Annuity - 5% of wages	5,800	0	5,800	6,008	0	6,008
Health, Life & Disability Insurance	43,666	0	43,666	41,980	0	41,980
Total Fringe Benefits	58,340	0	58,340	57,180	0	57,180
Supplies						
Office Supplies	3,000	0	3,000	3,000	0	3,000
Laptops - 2 at $1500 each	3,000	0	3,000	0	0	0
FIT tests - 2000 kits at $18 per kit	36,000	0	36,000	36,000	0	36,000
Total Supplies	42,000	0	42,000	39,000	0	39,000
Contractual						
University of Virginia Partner payment	20,000	0	20,000	20,000	0	20,000
Total Contractual Other:	20,000	0	20,000	20,000	0	20,000
Telephone - 2 at $80 per month	1,920	0	1,920	1,920	0	1,920
i2i Population Health software subscription	4,740	0	4,740	4,740	0	4,740
Transportation Assistance for patients	7,000	0	7,000	7,000	0	7,000
Total Other	13,660	0	13,660	13,660	0	13,660
Total: All Budget	250,000	0	250,000	250,000	0	250,000

Table 7: Budget Justification for Staff - Year 1

				Page 2
				Federal Amount

Name	Position Title	% of FTE	Base Salary	Requested
To Be Hired	Patient Navigator	1.00	52,000	52,000
To Be Hired	Patient Navigator	1.00	52,000	52,000
To Be Hired	Project Director	0.15	80,000	12,000
	Totals	2.15		116,000

Table 7: Budget Justification for Staff - Year 2

Name	Position Title	% of FTE	Base Salary	Federal Amount Requested
To Be Hired	Patient Navigator	1.00	54,080	54,080
To Be Hired	Patient Navigator	1.00	54,080	54,080
To Be Hired	Project Director	0.15	80,000	12,000
	Totals	2.15		120,160

OMB Number: 4040-0019
Expiration Date: 02/28/2025

Project Abstract Summary

This Project Abstract Summary form must be submitted or the application will be considered incomplete. Ensure the Project Abstract field succinctly describes the project in plain language that the public can understand and use without the full proposal. Use 4,000 characters or less. Do not include personally identifiable, sensitive or proprietary information. Refer to Agency instructions for any additional Project Abstract field requirements. If the application is funded, your project abstract information (as submitted) will be made available to public websites and/or databases including USAspending.gov.

Funding Opportunity Number

HRSA-22-154

CFDA(s)

93.224

Applicant Name

Central Virginia Health Services Inc

Descriptive Title of Applicant's Project

Accelerated Cancer Screening in Rural Communities through Collaboration (AxCSRC)

Project Abstract

Central Virginia Health Services, Inc. (CVHS) is the applicant for this HRSA Accelerating Cancer Screenings Funding Opportunity. CVHS is Virginia's oldest and largest federally qualified community health center (FQHC). Currently the organization offers integrated primary medical, pharmacy and laboratory services, dental, and behavioral health (BH), including an addiction use disorder treatment program. Mammography and x-ray are available at the original health center located in rural Buckingham County. CVHS operates 20 sites covering a large service area that includes nineteen localities (15 counties and 4 cities). Over half of CVHS sites are in rural, medically underserved communities; the rest serve urban areas with low poverty populations. In 2021 CVHS served over 48,000 patients.

The focus of this Rural Communities Collaborative cancer screening project is breast and colorectal cancer (CRC). CVHS and its neighboring community health center, Tri Area Community Health (TACH), will work closely with the University of Virginia Comprehensive Cancer Center's Office of Community Outreach and Engagement to execute the project workplan. The goal is to increase screenings for breast and colorectal cancer and follow up across the combined 27 counties and 2 cities served by CVHS and TACH. The University of Virginia Cancer Center is one of two NCI-designated cancer centers in the state.

Tri Area Community Health operates 5 sites in the Blue Ridge Mountain region of Southwest Virginia. It has served the area for over 40 years. Comprehensive primary medical and BH services are provided at all sites except one, where BH is provided to complement medical care offered by the existing rural health clinic and free clinic. TACH's service area is in the economically depressed Appalachian region, with the median household income almost $30,000 lower than the Virginia median. TACH served over 10,000 patients in 2021.

Each of the communities served by the two Health Centers has unique characteristics, with clinics developed, over time, to meet the needs of people living in that region. Accessible primary care for all populations, especially for the medically underserved, is the goal. In rural communities, lack of primary care providers, distance, low health literacy, and poverty are major barriers to care, in addition to other social factors that may negatively impact health outcomes. Urban residents more frequently face poverty, linguistic challenges, poor educational achievement, or cultural barriers. Common themes include lack of insurance, health disparities, and the need for affordable care for prevention of diseases, including cancer.

The proposed project will address the needs of the targeted population at each of the thirteen project sites over a two-year period. Activities include the provision of information about the importance of cancer screening for breast and colorectal cancer; distribution and follow up of FIT tests; mammography services; expansion of referral relationships with UVACC, hospital systems serving southwest Virginia, and specialty practices; navigation customized for individual patients; outreach health education; financial assistance; and development of collaboration with community partners.

The budget includes hiring one Patient Navigator for each FQHC, and funding for a contract with UVACC. The Cancer Center will provide a Program Manager to work closely with the two Health Centers, and services of outreach specialists. Over 6,550 patients will be screened for colorectal cancer by 12/31/23, and an estimated 6,000 women

will be screened for breast cancer. CVHS and TACH expect to increase by 5-10% the percentage of patients who receive follow up within 30 days, after an abnormal screening result.

PROJECT WORKPLAN: HRSA 22-154 Accelerating Cancer Screenings (AxCS), Central Virginia Health Services

Screening Outreach, Education and Awareness						
Activity	**Overview**	**Focus Area**	**Cancer**	**Timeframe**	• **Anticipated Outcome**	**Staff Responsible**
Community Participation	Conduct listening sessions and interviews to identify community specific screening needs and barriers. Adapt navigation pathways to address these needs.	**Patient Experience**	Breast CRC	Y1, M1-2	• Specific community needs & barriers	UVA Outreach & Navigation Staff
Increase cancer screening awareness in CVHS and TACH service areas	Partner with faith-based and community organizations on events to promote resources and understanding of cancer screening guidelines.	**Patient Experience**	Breast CRC	Y1, M1 (Ongoing)	• Increased community awareness of screening guidelines & local resources	UVA Outreach Staff UVA Navigator Health Center Staff
Develop tailored patient education materials for community & clinic use.	Adapt current materials for low health literacy and other educational needs for both health centers. Materials will be translated and adapted for Spanish-speaking patients	**Patient Experience Access**	Breast CRC	Y1, M1-6	• Educational materials at a 6th grade reading level	UVA Outreach Staff
Identify Community Champions to disseminate resources for screening & identify community	Identify champions or local CHWs from the community to help in the dissemination of cancer education and resources at the lay level. Train as facilitators of community-based cancer	**Workforce Development** **Patient Experience**	Breast CRC	Y1, M1-6 (Ongoing)	• Increased awareness of cancer screening within the community	UVA Outreach Staff Health Center Staff

members overdue for screening.	education program, Understanding Cancer. Integrate the Cancer Screening Checklist into UC Workshops which will identify community members overdue for screening.				• Increased capacity for outreach provided by health centers	
Screening						
Engage in a process mapping activity	To better identify inefficacies in screening, a process mapping activity will be initiated within both centers to prioritize inferences.	**Workforce Development**	Breast CRC	Y1 M1	• Identification of unique inefficiencies and improvement areas	UVACC Health Center leadership
Navigate community members to FQHCs for cancer screening	Community members who are identified as overdue for screening by the community navigators and/or through the Understanding Cancer workshops will be navigated to CVHS and TACH to 1. Become a patient and/or 2. Get scheduled for appropriate screenings	**Access and Affordability**	Breast CRC	Y1/Y2 M3-Ongoing	• Increase in community members establishing medical home at health centers	UVA Navigators UVA Outreach Staff Health Center Navigator
Increase cancer screening capacity; provide mobile screening	Negotiate provider appointments and services for health center patients to complete mammograms. Twice monthly visit by the UVA mobile coach to provide mammograms at clinics with greatest need followed by navigation	**Access and Affordability**	Breast CRC	Y1, M3-12 Y2- Ongoing	• Increase capacity for screening services • Increase access to affordable screening	UVACC CVHS and TACH clinic site managers

	Enrollment in Every Women's Life Program					
Catalogue and Streamline Screening Referral Processes	Update current referral practices to include all care providers and establish key points of contact at referral sites, streamline process for making referrals	**Access and Affordability**	Breast CRC	Y1, M3-9	• Easier referral process for referral outreach specialist • Improved communication between outreach referral specialist and referral site	Health Center Outreach referral specialist
Optimize and implement EMR strategies to identify and engage patient populations internally that are overdue for cancer screening	Utilizing existing systems, TACH and CVHS will implement best practices (flags/alerts) to identify patients overdue for screening in clinic. Develop patient lists through population health systems (ex. I2i) to identify patients overdue for screening.	**Access and Affordability**	Breast CRC	Y1, M1-6	• Increase efficiencies that result in identifying patients with urgent needs and social determinants of health	CVHS staff, Clinical Director, EHR Manager TACH staff, Organizational Excellence Officer CVHS and TACH navigators

Develop & implement an evidence-based screening pathway adapted to each clinic for breast cancer screening	Identify patients needing screening. Implement EBIs such as huddles, chart scrubbing, EHR flags to identify and provide screening resources; connect to navigator to screen & enroll in Every Women's Life, schedule appointments, and connect to navigator who will implement the to be developed navigation protocol cancer screening Training in the newly developed protocols will be provided to the health center navigators and appropriate staff.	**Access and Affordability** **Screening** **Workforce Development**	Breast	Y1, M3-12 Y2, Maintenance	• Robust navigation services • Increase in patients identified for screening • Improvement in screening completion	UVACC navigator CVHS and TACH navigators CVHS Quality Improvement Committee, Risk Management TACH Organizational Excellence Officer
Develop & implement an evidence-based screening pathway adapted to each center for colorectal cancer screening	Identify patients needing screening. Implement EBIs such as huddles, chart scrubbing, EHR flags to identify and provide screening resources, schedule appointments, and connect to navigator who will implement the to be develop navigation protocol for colorectal cancer screening Training in the newly developed protocols will be	**Access and Affordability** **Screening** **Workforce Development**	CRC	Y1, M3-12 Y2, Maintenance	• Robust navigation services • Increase in patients identified for screening • Improvement in screening completion	UVACC navigator CVHS and TACH navigators CVHS Quality Improvement Committee, Risk Management

	provided to the health center navigators and appropriate staff.					TACH Organizational Excellence Officer
Provider education	Utilizing UVACC existing provider education to increase awareness of screening options, share current state screening rates and provide evidence of efficacy for stool-based screening modalities	**Workforce Development**	CRC	Y1, M2	• Increased acceptability of FITs • Increase in orders placed for FITs	UVACC
Develop and enhance existing systems for mailed FIT campaign for patients who are overdue for CRC screening	To enable patients who may not access the clinic annually. FIT kits will be mailed, and a navigation protocol will be developed and implemented by the UVA navigator. At CVHS expand current campaign, build in standard of work and navigation process. At TACH, the Organizational Excellence Officer and Quality Improvement Committee will develop and adapt implement plans from CVHS.	**Access and Affordability** **Patient Experience**	CRC	Y1, M6-12 Y2, M6-12	• Increase in FIT orders • Increase in FIT completion	UVACC navigator CVHS and TACH navigators Organizational Excellence Officer Quality Improvement Committee
Follow Up						

Adapt and tailor existing evidence-based navigation pathway for breast screening follow up	Adapt evidence-based strategies to get women requiring follow up to additional services (best practices to be determined) Training in the newly developed protocols will be provided to the health center navigators and appropriate staff.	**Access and Affordability ; screening** **Workforce Development**	Breast	Y1, M3-12 Y2, Maintenance	• Sustainable, tailored, evidence-based navigation pathway for FQHC	UVACC navigator CVHS and TACH navigators Organizational Excellence Officer Quality Improvement Committee
Adapt and tailor existing evidence-based navigation pathway for CRC screening follow up	Adaptation of the evidence based, Six Topic Navigation Protocol for follow up colonoscopy Training in the newly developed protocols will be provided to the health center navigators and appropriate staff.	**Access and Affordability ; screening** **Workforce Development**	CRC	Y1, M3-12 Y2, Maintenance	• Sustainable, tailored, evidence-based navigation pathway for FQHC	UVACC navigator CVHS and TACH navigators Organizational Excellence Officer Quality Improvement Committee

Build clinical capacity: Identify community/private practices for follow up services	Negotiate appointments and services for uninsured health center patients to complete necessary follow up for positive FITs and breast follow up; negotiate flat fees for colonoscopy follow up to positive FITs.	**Access and Affordability**	Breast CRC	Y1, M1-M9 Y2, M6-12 (expand)	• Timely follow up • Increased capacity for follow up	UVACC
Develop a streamlined process, training, and assistance for patients to sign up of financial aid	Working with community resources, develop a health center specific streamlined process/toolkit for enrolling into financial aid resources and help in completion of forms. Work with navigators at both TACH and CVHS, health center staff and other key enrollment specialist embedded within the Health Centers to set up trainings on local health systems financial processes.	**Access and Affordability** **Workforce Development**	Breast CRC	Y1, M6-12 Y2, Maintenance	• More patients obtaining financial assistance	UVA Screening Programs Manager UVA Navigator CVHS and TACH navigators Other Financial Aid staff at CVHS and TACH