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Project Title	<p>Increase clinical capacity of medical providers to treat and manage populations with Hepatitis C and at high risk for HIV through the Extension for Community Health Outcomes project (Project ECHO).</p>
Rationale for the Project	
<p>The focus of this project is to provide the Accountable Communities of Health (ACH) and their provider networks access to the existing infrastructure of the Extension for Community Health Outcomes (ECHO) telemedicine project to build provider capacity to manage both persons infected with HCV and those at high risk for HIV who will benefit from pre-exposure prophylaxis (PrEP). Statewide access to either infectious disease providers or skilled hepatologists is a barrier difficult to overcome without extensive workforce development, cost and time. Additionally HCV and HIV are diseases with significant scientific evolution which can be challenging for primary care providers already taxed by practice demands. With the changing landscape of healthcare and a continual focus on cost effectiveness, ensuring that tools and resources are easily available for health care provider proficiency and treatment success is paramount. The Project ECHO model has proven successful in providing training opportunities utilizing a peer-to-peer telemedicine approach that builds provider proficiency for multiple chronic conditions including HIV and Hepatitis C. Research has shown that provider-to-provider case consultations delivered through telehealth technology is cost effective, improves quality of care and patient satisfaction. The University of Washington (UW) in collaboration with Department of Health is currently a center for excellence in both these conditions and hosts the ECHO module for HCV and PrEP for HIV. This existing system provides ACHs a cost effective opportunity to connect providers to the UW hub and improve patient outcomes for HCV and successful prevention of HIV for patients at high risk of HIV transmission. Numerous studies have been performed on ECHO provider training and show demonstrated return on investments through lower costs and improved outcomes in the treatment of chronic HCV in particular. Trainings and case consultations delivered through ECHO utilize best practices outlined by the US Public Health Service Pre-Exposure Prophylaxis for Prevention of HIV Infection in the United States – 2014 Clinical Guidelines. In a prospective cohort study using an experimental and active cohort, project ECHO was found to be an effective method of treating HCV infection in rural and underserved areas (Arora, et. al, 2011). The CDC MMWR, concluded that treatment for HCV infection delivered in community settings utilizing the ECHO model was just as effective as treatment provided to patients within an academic specialty medical center. Based on the results of the study completed by Arora, et. al., the CDC stated that ECHO model can enhance primary care provider capacity to treat HCV infection among underserved populations, including the use of newly approved medications (CDC, 2014). The Center for Information Technology Leadership Partners HealthCare Systems, examined specific telemedicine applications and found that provider-to-provider telehealth technology had both cost and financial benefits in managing patients with chronic conditions (ATA, 2014). Centers for Disease Control and Prevention. (2014). Expanding primary care capacity to treat hepatitis C infection through an evidence-based care model – Arizona and Utah, 2012 -2014. <i>Morbidity and Mortality Weekly Report (MMWR)</i>, May 9, 2014, 63(18); 393-398. Arora, S., Thorton, K., Murata, G., Deming, P., Kalishman, S., Dion, D., Parish, B., Burke, T., Pak, W., Dunkleberg, J., Kirsten, M., & Brown, J. (2011, June 1). <i>Outcomes of treatment for hepatitis C virus infection by primary care providers. New England Journal of Medicine</i>, 364, 2199-2207.</p>	
<p>Viral hepatitis (HCV) has been labeled as a silent epidemic and remains relatively unknown to many, including populations at risk for infection. Based on the Institute of Medicine (IOM) report and the Department of Health and Human Services (HHS) Viral Hepatitis Action Plan, an estimated 3.5-5.3 million persons are living, unknowingly with chronic hepatitis C (HCV) infection in the United States (U.S.). HCV is the leading cause of liver cancer and liver transplantation in the U.S., with rates of liver cancer tripling over the last several decades (HHS). Because liver cancer and other liver diseases caused by HCV affect some populations more than others, those at risk for and living with HCV face substantial health disparities.</p> <p>The Burden of chronic HCV in Washington is significant. Between 2000 and 2012, a total of 75,193 chronic HCV cases were diagnosed and reported to the Department of Health. It is estimated that more than 100,000 people could be living with chronic hepatitis C. While statewide surveillance remains underreported, we expect that Washington Medicaid carries the burden of approximately 20,000 cases of HCV. The U.S. Department of Health and Human Services' (HHS) Action Plan for the Prevention, Care, & Treatment of Viral Hepatitis and Washington State's Hepatitis C Strategic Plan outline specific strategies to strengthen our localized response to HCV. Both strategic plans highlight the need to build a health care</p>	

workforce that is prepared to diagnose, care for, treat and cure persons infected with hepatitis C. Washington State's strategic plan recommends expanding the capacity of providers to treat HCV by expanding the capacity of Project ECHO, a telehealth model that links front-line primary care clinicians with a team of specialists at the UW to manage patients with HCV.

Pre-Exposure Prophylaxis (PrEP) is a way for people who do not have HIV to help prevent HIV infection by taking a pill every day. Currently TRUVADA® is the only FDA approved drug for PrEP. When taken consistently, PrEP has been shown in clinical trials to greatly reduce (92% - 96%) the risk of HIV transmission in people who are at substantial risk. When used in combination with other prevention tools, such as condoms and clean needles, PrEP effectiveness increases. Recent models from [San Francisco](#), a jurisdiction comparable to Seattle, estimate that increased PrEP use among at-risk individuals can lead to a significant reduction in new HIV infections in the population. In order to provide a comprehensive and responsive PrEP support program for at-risk populations we must increase the number of providers in our state who prescribe PrEP and manage ongoing PrEP use. This management includes both clinical practice additions for regular HIV and STD testing as well as effectiveness at sexual history taking. This important assessment component should be accompanied by safe and sensitive patient interactions that encourage true risk identification without judgement that could present a barrier to PrEP uptake and adherence.

In Washington State an average of 517 persons are diagnosed with HIV each year, and it is estimated that approximately 14,000 persons are living with HIV (PLWH) in our state. HIV is highly concentrated, both geographically and by population group. Seventy-seven (77) percent of new diagnoses occur in the Central Puget Sound. Sixty-six (66) percent of cases occur among men who have sex with men (gay/bisexual men). Of these cases, 65 percent are among white men, 17 percent are among Hispanic men, and nine percent are among Black men. We estimate that HIV infection rates among all gay/bisexual men are more than 150-times higher than heterosexual men and women. In recent years, we have seen a statistical decrease in both the number and rate of new HIV diagnoses overall in our state, but rates remain constant among white gay/bisexual men and are increasing slightly among Hispanic and Black gay/bisexual men. Data modeling to determine an estimated number of Washington residents at risk for HIV is currently underway but the full population appropriate for PrEP within or outside of the Medicaid population is difficult to determine. However data modeling from [San Francisco](#) is being used within Washington to estimate both at risk populations and the number of individuals needed on PrEP to impact new HIV infections.

Project Description

Which Medicaid Transformation Goals are supported by this project/intervention? Check box(es)

- X Reduce avoidable use of intensive services
- X Improve population health, focused on prevention

Which Transformation Project Domain(s) are involved? Check box(es)

- X Health Systems Capacity Building

Project ECHO (ECHO) uses the tools of telemedicine to provide specialty care case consultations and patient management assistance for medical providers. ECHO is facilitated using video conferencing hardware and secured internet connections to provide live, in-person, case consultation for medical providers. Case management sessions support community provider's learning best practices in disease management through learning loops in which they co-manage patients with expert specialists from the UW. ECHO in Washington State is led by the UW who has proven expertise in the delivery of care and treatment for populations impacted by HCV and at high risk for HIV. In 2014, The Centers for Disease Control and Prevention (CDC) MMWR report found evidence of effectiveness in expanding the capacity of primary care clinicians to treat HCV infection through the utilization of ECHO. The project is intended for any Washington State licensed provider with special emphasis on practices that provide medical services for populations impacted by HCV or HIV or at high risk in areas with limited provider capacity. ECHO works towards achieving Washington's Medicaid transformation goals of; (1) increasing health system capacity by improving provider proficiency of implementing chronic disease activities and (2) improve population access to care in underserved areas. Project specific goals include; (1) increase knowledge of clinical capacity for medical providers for both HCV and HIV prevention through PrEP, (2) promote proper case management of clients being treated, and (3) provide ongoing education and clinical training to medical providers. Improving provider capacity to diagnose, care for and cure persons with HCV and provide PrEP for those at high risk for HIV, supports the National HHS Action Plan, the National HIV/AIDS Strategy, the WA State's HCV Strategic Plan and Governor Inslee's End AIDS Washington campaign.

Core Investment Components

Telemedicine has been shown through peer-reviewed research to be cost effective, improve quality of care and increase patient satisfaction. Research has shown that telemedicine works towards achieving the Institute for Healthcare Improvement's Triple Aim strategy of; (1) improve the patient experience of care, (2) improve the population health and (3) reduce the per capita cost of health care. The American Telemedicine Association (ATA) provides a comprehensive literature review of research outcomes which can be reviewed here, [ATA](#). This research also includes studies indicating return on investment for a variety of implementations of telemedicine. The [Department of Defense](#) released a study in 2013 indicating cost effectiveness on the ECHO program for pain management.

The initial infrastructure of the host site is operational and currently sits in the UW School of Medicine. Cost for implementation of Project ECHO is divided into two (2) components; (1) host site and (2) participating sites. Current host site project estimates (~\$150,000/year) include; personnel (salary/wages), supplies, travel, and indirect costs. Current cost estimates for the host site are projected on a yearly basis and current capacity needs. Estimated costs may vary dependent on resources needed to scale up existing programming to meet an increase in demand. Participating sites initial investment includes; IT costs, computer equipment, and software license (current cost estimates <\$5,000). This project is scalable based on provider interest since the technology can accommodate multiple providers during the online case discussion. Cost for participation is individual and is not impacted by the volume of participants.

Project Metrics

Specialty clinicians housed within UW provide outreach to existing and potential providers in WA in an effort to increase knowledge, awareness, HCV screening, HIV risk assessment, linkage to care, treatment, access to medications and adherence. This proposal aligns with the *WA State Common Measure Set on Health Care Quality and Cost* as listed below. It is important to note that while HIV and HCV are not specifically mentioned in the Core Measures, the interventions being proposed have connections to prevention, chronic conditions as well as cost effectiveness and savings for health care.

- **Measure 10** (Prevention) – *Adult Access to Prevention / Ambulatory Health Services*
- **Measure 37** (Chronic) – Medication Adherence – Proportion of Days Covered: 5 rates by therapeutic category.
- **Measure 50 – 52** (Chronic)

HCV Outcome: Reduce the number of new cases of HCV infection by 25% in WA State. (*HHS Goal*)

HCV Goal: Build a Washington health care workforce prepared to diagnose, care for, treat, and cure people infected with hepatitis C.

Activities/Indicators:

- **HCV Clinical Services achieved through provider to provider case consultations.**
 - Provide (X) HCV specific case consultations through the ECHO network for clinicians within WA State.
 - Number of new patients presented and connected to care
 - Number of patients completing treatment and achieving cure (sustained virological response)
- **HCV Provider Outreach.**
 - Provide (X) HCV in-person didactic presentations for clinicians within WA State.
 - Number of clinicians completing needs assessment
 - Number of didactic presentations provided to clinicians
 - Number of clinics connected to ECHO network

HIV Outcome: Reduce HIV incidence by 50% in Washington State by the year 2020. (End AIDS Initiative)

HIV Goal: Build a proficient statewide clinical workforce that can prescribe and manage populations on PrEP.

Activities/Indicators:

- **PrEP Clinical Services achieved through provider to provider case consultations.**
 - Provide (X)PrEP specific case consultations through the ECHO network for clinicians within WA State.
 - Number of patients screened for PrEP (outcome)
 - Number of patients prescribed PrEP (outcome)
- **PrEP Provider Outreach.**
 - Provide (X)PrEP in-person didactic presentations for clinicians within WA State.
 - Number of clinicians completing needs assessment
 - Number of didactic presentations provided to clinicians
 - Number of clinics connected to ECHO network
 - Number of clinicians adopting PrEP protocols within their clinical practice (outcome)