***1 - Project Lead/Key Contact:***

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***2 - Why are you interested in participating in the Improvement Scholars Program?***

In the ever-changing landscape of healthcare, it is critical for healthcare providers to advocate for their patients by identifying and overcoming gaps in our systems. Just as learning to assess an individual patient to help them with a specific problem takes years of training to correctly make a diagnosis and offer the correct treatment, assessing our systems and our patients at a population level is a skillset that must be learned and honed to "treat" deficits. I hope to find mentorship and training through the Improvement Scholars Program to prepare myself to better advocate for my patients and make positive change through this proposed initiative involving HCV and HIV screening as well as other future QI endeavors.

HIV is readily treatable, and HCV can be cured in >95% of cases with modern direct acting antiviral therapy; however, many patients do not have regular access to preventative healthcare and are unaware of their diagnosis or have difficulty connecting with appropriate care. As a hospitalist, my expertise with these pathologies is not particularly specialized, however, I am experienced in interacting with a broad spectrum of patients and linking them with appropriate care upon discharge. For this reason, I see hospitalized patients and hospitalist medicine as the next frontier in moving towards elimination of HCV and optimizing HIV care. I believe that by participating in the Improvement Scholars Program, I will gain the tools to make this goal a reality.

***3 - Which UNC Health improvement priority will your project address?***

This project will address several UNC Healthy Improvement priorities, including improving access to outpatient care by linking patients with newly diagnosed / untreated disease with appropriate care. Identifying untreated disease and preventing further progression by linking to appropriate therapy will not only reduce mortality and morbidity but also promote health equity by using hospitalization as a touchpoint for screening in populations less likely to access preventative care as an outpatient.

***4 - What is the problem or gap in quality you seek to improve?***

HCV and HIV are readily treatable infections, however, many patients living with these infections are unaware of their diagnosis and are untreated. Many patients at risk of infection do not have regular access to primary and preventative care where this screening usually occurs and often their only exposure to healthcare occurs during a hospital encounter. Hospitalization serves as a critical touch point with healthcare for at risk patients where if detection of the infection occurs and treatment could be initiated, the arc of a patient's disease process could be radically changed for the better.

Both the Centers for Disease Control (CDC) and United States Preventive Services Task Force (USPSTF) recommend screening for HIV and HCV[1-2]. The goal of this project is to bring this standard of care to the inpatient services.

***5 - Describe the patient population affected, scope, and impact of the problem (1 page) What is the specific patient population your project will impact? How many patients are in the population? How frequently does the problem occur. What is the impact of the problem?***

In North Carolina (NC) there were 12,313 new chronic hepatitis C virus (HCV) cases in 2020 with >200,000 persons living with HCV. Most acute cases occurred in persons aged 25-39 with a slight predominance in men. The population of acute cases is largely driven by intravenous drug use. The per capita HCV rate in NC is higher than the US population (116 vs 57 per 100,000). About half of patients (or greater than 100,000 persons) with HCV are unaware of their infection[3]. At the end of 2020, the number of people living with HIV who reside in North Carolina was estimated to be 38,900, with an estimated 10% of those patients who are unaware of their diagnosis[4].

There is currently a substantial gap in the percentage of inpatients at UNC Chapel Hill Hospital (UNCCHH) with up-to-date screening for HCV and HIV – Only 1 in 3 patients has undergone appropriate screening on presentation. Based on *SlicerDicer* survey data embedded in the EPIC@UNC electronic medical record (EMR), in 2021, UNCCHH cared for 20,421 adult (18–79-year-old) inpatients who would be eligible for screening. Of this cohort, 34.5% had prior HCV screening and 36.5% had prior screening for HIV. Of the screened population at UNC, 2.1% of patients had a positive HCV antibody and 0.294% had a positive HIV screen. Extrapolating these percentages to annual UNCCHH census, we suspect that an intervention to screen for HCV and HIV would identify an additional 16 new cases of previously undiagnosed HIV and 112 new cases of previously undiagnosed HCV annually, proportionally more at a system wide intervention. This percentage of unscreened population is similar to pre-intervention rates of screening from other centers who have implemented an inpatient screening models. With intervention and implementation of inpatient screening, other institutions have been successful at improving screening rates from the mid-30 percentile to nearly 70%[5].

The impact of untreated disease is significant primarily for patient health, but also from an economic standpoint. Untreated HCV can lead to progression from hepatitis to cirrhosis, hepatocellular carcinoma with associate morbidity and mortality or the eventual need for liver transplantation. Untreated HIV is associated with development of acquired immunodeficiency syndrome (AIDS) as well as numerous life-threatening opportunistic infections. Undetected and untreated disease is also associated with increased transmission of HCV and HIV to other persons.

Given the excellent record of treatment[6-7] for both HCV and HIV, both the United States Preventative Services Task Force (USPSTF) and the Centers for Disease Control (CDC) recommend screening adult populations. In addition, the World Health Organization (WHO) has issued a goal of HCV elimination by 2030[8] – the United States is currently not on track to meet this goal, however, several countries that have more readily incorporated inpatient screening are on track[9].

***6 - What do you think are the underlying causes of the problem? Why do you think the problem is happening? (1/2 page)***

The rising national incidence of acute HCV has been attributed in many ways to rising use of intravenous drugs. Many patients at risk for contracting or carrying HCV and / or HIV do not regularly follow with primary care where routine screening initiatives usually occur, and often the only exposure that many of these at-risk patients have to healthcare is in the emergency department or during a hospitalization. During hospitalization, the focus of care is often on more acute issues and screening is often deferred to outpatient care. Without dedicated efforts from both inpatient and outpatient providers as well as community-based initiatives, many patients may not receive timely diagnosis and treatment to prevent progression of these viral infections to more deadly and more costly presentations.

While there are efforts being implemented at many institutions around the country to introduce an inpatient avenue for screening and screening is recommended by multiple national and international health organizations, UNC Hospitals has not yet implemented inpatient screening. Challenges in implementing a screening program include developing a workflow within the electronic medical record as well as an infrastructure to process screening data and link patients to care.

***7 - What is the history of improvement or attempted improvement at UNC Health? What work will your proposed improvement build on? (1/2 page)***

While a widespread screening initiative has not been implemented to this point, there has been much work done through the years at UNC from multiple disciplines that will serve as a solid foundation to allow a screening program to succeed. My collaborator and former IHQI fellow Madeline McCrary MD conducted a quality improvement initiative on optimizing HCV treatment and linkage of care for patients with IV drug use hospitalized for long term antibiotics that has largely served as a foundation for this initiative. UNC Infectious Disease has multiple clinics throughout the area with a robust Ryan White program that cares for more than 3,000 patients living with HIV. UNC Hepatology has specialized HCV treatment including a pharmacist practitioner in clinic. Leadership from both Infectious Disease and Hepatology have expressed support of implementing an inpatient screening program and I am collaborating with multiple representatives from those divisions of project planning. In the last year, through the Division of Hospital Medicine, our team has implemented a pathway for linking patients who test positive to either infectious disease or hepatology via an e-consult model. Finally, we have a unit of nurses with specialized training and dedication to the care of patients with infectious diseases (6 Bedtower) who have expressed support to pilot a screening program on their floor.

While widespread screening for viral illnesses in inpatients is a new concept at UNC, similar nursing driven protocols have successfully been implemented in the past – notably – nursing routinely screen patients for vaccinations and offers needed vaccinations prior to discharge in all admitted patients.

8 – ***Measures Table***

| Measure Name | Measure Type | Measure Calculation | Data Source | Baseline | Goal | Collection Frequency |
|---|---|---|---|---|---|---|
| % Of Inpatients with HIV/HCV Screen | Process | Numerator: Patients with appropriate screening / Denominator: All patients eligible for screening | EMR | 35% | 65% | Monthly |
| % Of patients with untreated HIV/HCV linked to care | Outcome | Numerator: Patients with untreated HIV/HCV linked to care / Denominator: Patients with untreated HIV/ HCV | EMR | | 100 % | Monthly |
| # HCV Cures | Outcome | Number of Patients Linked with Care with HCV cure | EMR | | | Yearly |
| Nursing Satisfaction | Balancing | Nursing perceptions on inpatient screening | Survey | | | Yearly |

| Measure Name | Measure Type | Measure Calculation | Data Source | Baseline | Goal | Collection Frequency |
|---|---|---|---|---|---|---|
| Patient experience | Balancing | Patient perceptions on inpatient screening | Survey | | | Rolling |

***9 - What ideas do you have for changes that will result in improvement? (1-2 pages)***

We aim to address undiagnosed and untreated HCV and HIV in hospitalized patients by implementing a screening program embedded within the EMR that and a linkage to care model for patients who test positive.

***Screening:*** When an eligible patient (Adult patients 18-79 years old for HCV screening, 18-65 for HIV screening who have not previously had HIV and / or HCV screening documented in the EMR) is admitted to the hospital, a notice within the standard nursing intake assessment in the EMR will be generated and instruct the admitting nurse to inform the patients of routine HIV and HCV laboratory as part of the standard nursing intake assessment. A brief explanation and education paragraph will be included along with a script. The following options will be presented with corresponding radio button for the nurse to select: 1.) The patient acknowledges the screening and is amenable, 2.) Patient may opt-out for any reason, 3.) Questioning deferred until later at the nurse's discretion. An acknowledgement of the screening will serve as assent and will trigger the appropriate screening tests to be ordered. An opt-out selection will opt the patient out of future screening in the current encounter, but not in future encounters. Deferring will postpone until later in the encounter when assent can more appropriately be attained. Whenever possible, labs will "added on" to blood work already collected or will be timed for next routine blood draw. Blood will be drawn on site and results will be processed in the onsite lab. Labs will be billed to patient's payor source if one is in place. We plan to partner with the FOCUS program to offset cost of screening labs in unfunded patients (suspect 15% of patients screened).

***Management of Positive Results, Linkage to Care:*** Results of screening with be communicated to inpatient care teams and then on to the patient. The advantage of screening hospitalized patients is that patients' hospital stay (~5-days on average) provides the opportunity and time for patient navigators to arrange outpatient referrals and educate newly diagnosed patients about HCV and/or HIV, especially patients who are uninsured or underinsured that may require supplemental services and resources. The linkage to care algorithm currently being utilized by Department of Hospital Medicine (Figure 1, below) will be followed for new HCV cases and new HIV cases will be referred to the UNC Ryan White program. A list of community-based resources will also be generated and shared with inpatient teams. Patients who are discharged from the hospital before results occur will be contacted by telephone or MyChart regarding results by the discharging physician or by a patient navigator. We plan to work with UNC Patient and Family resource center to include perspective from patients living with HIV and HCV and their family members to help guide scripting for delivering positive test results and coordinating follow up.

***Navigator Role:*** In early phases of this project, our team as well as possible resident / medical student volunteers will review positive cases and aid inpatient teams in appropriate linkage to care; however, in

effort to provide sustainable support to inpatient care teams and to assist with patients who may discharge the hospital prior to return of results, especially when the initiative is occurring at a hospital wide / system wide level, we envision a role for a dedicated patient navigator. This navigator role will be a provider (likely a case manager, social worker, or RN) who will be knowledgeable in local resources to connect patients to care for HCV and / or HIV treatment. We plan to partner with the FOCUS program to fund the role of navigator.

***Phased Introduction:*** In effort to build the needed infrastructure for a successful screening program, we plan to initiate screening over several phases. The initial phase, "pilot phase", will occur on a single nursing unit, likely 6 Bedtower (6BT). 6BT has been chosen as an optimal unit to pilot our initiative given specialized infectious disease nursing and support from unit nursing leadership. 6BT had 1,395 eligible patients for screening in 2021, of those, 35.6% (497 patients screened, 898 unscreened) had prior HCV screening and 28.5% (398 patients screened, 997 unscreened) had prior screening for HIV. Utilizing Plan-Do-Study-Act (PDSA) cycles, we will optimize the screening and referral process. When the pilot initiative has shown sustainability, we will plan to expand the screening and referral program hospital wide and eventually system wide.

***Promotion of initiative:*** As the screening occurs during nursing assessment, support and participation from floor nurses will be critical to the success of the initiative. To optimize nursing participation, we will conduct an initial education session with each unit the initiative is introduced on as well as regular check ins with unit leadership. We will utilize visual management boards when possible on units for education and to incentivize participation.

***EMR Modification:*** We envision an addition to nursing admission workflow to incorporate the screening when the initiative is introduced hospital wide. In pilot phase, this will likely occur as a "supplemental" assessment before becoming part of the standard work queue. Funding for EMR medication will be supplemented by partnership with the FOCUS program.

***10 - How has this problem has been addressed successfully elsewhere? (1 page)***

Universal screening for HCV and HIV and treatment has proven cost efficacy [10-12]. While there have been significant improvements in outpatient screening for HCV and HIV in primary care and local health departments in recent years, many patients do not regularly receive care through these services and may only interact with the healthcare system through emergency department visits or inpatient hospitalizations. Many health care systems have sought to address this need by introducing universal, opt-out based screening in all emergency department patients with subsequent linkage to care – in our local region, this has been the approach of several systems (Atrium Health, Medical University of South Carolina, Prisma Health). Hospital based screening / screening of inpatients has also become an increasingly promising means to address the needs of undiagnosed and untreated patients. Initiatives aimed at hospital inpatients have been successfully implemented and reported on in multiple hospitals in the country[5,13-14] (Grady Health Systems, Atlanta GA; Sinai Health System, Chicago IL; Penn Medicine, Philadelphia PA) and abroad[15-19].

One of the key drivers of success for many screenings and linkage to care models has been partnership with industry sponsored public health outreach to offset costs of testing and infrastructure building. The FOCUS Program is a public health outreach sponsored by Gilead Sciences that collaborated with hospital systems, including those listed above, and local health resource groups (County health departments, syringe service programs, EMS providers, etc.) to bolster support for screening initiatives in different settings. FOCUS is "treatment agnostic" and funds initiatives in screening and linkage to care only. In

addition to financial support, the FOCUS program also connects providers at quarterly meetings to discuss initiatives in different settings.

We plan to partner with the FOCUS program to secure financial support for unfunded testing, funding for a full-time patient navigator(s), epic modification costs, as well as costs associated with promoting the initiative among nursing. As FOCUS is a subsidiary of Gilead, it is important to disclose that this company does manufacture therapies for HCV and HIV, however, prescribing therapy for HCV and HIV are outside the scope of our initiative and all decisions regarding choice of therapeutics will be deferred to appropriate providers after the patient has been linked with care.

***11 - How will high performance management tools be used to support the work?***

Over the last year, we have met regularly as a team of collaborators to guide progress on this initiative, we will plan to continue these huddles at monthly intervals. We will utilize visual management boards on units for education and to incentivize participation among nursing staff.

***12 -Please describe how your project addresses each of the 5 elements reflected in the Quintuple Aim for Health Care Improvement. (1 page)***

***Improved health –*** Incorporating HCV and HIV screening program into standard inpatient care first and foremost is an initiative aimed at improving the health of our patients and community. Earlier detection of HCV and HIV will allow for reduced medical complications of untreated disease and increase quality of life years for infected patients. Untreated HCV infection can progress to cirrhosis (end stage liver disease) which can lead to fatal complications and impaired quality of life. Patients with HCV cirrhosis may often require liver transplantation which is also associated with numerous comorbidities. Untreated HIV can lead to development of AIDS and associated opportunistic infections that can also be fatal.

***Enhanced patient experience –*** When patients seek care at our hospital, they expect a comprehensive evaluation. Testing for HIV and HCV in the inpatient setting provides our patients with more comprehensive care as recommended by CDC and USPSTF at no added cost to the patient. We suspect the overall result of this screening to promote an overall sense of "whole patient care" for hospitalized patients and in turn foster trust in the health care system. Given varying perspectives regarding these pathologies, particularly HIV, we recognize that some patients will be opposed to screening. In effort to optimize patient experience with screening, we plan to partner with UNC Patient and Family Resource Center to utilize inclusive language in scripting and empower patient autonomy.

***Enhanced clinician and staff experience –*** Providers and care teams can take pride in knowing they are providing comprehensive care to patients. In addition, by implementing screening and eventually decreasing the prevalence of untreated HIV and HCV in the population, we will reduce risk associated with needlestick injury and offer an added layer of protection to our providers from these two potential bloodborne viruses.

***Health equity –*** Many patients do not receive regular outpatient care and a hospitalization may be their only exposure to healthcare – we aim to use hospitalization as a touch point to provide important and easy screening that may not otherwise be completed and link those patients who screen positive to care, thus making HIV and HCV screening more equitable for patients who do not regularly follow with primary care outside a hospitalization.

***Reduced costs –*** On long scale projection, we anticipate this initiative to reduce costs associated with untreated disease (cirrhosis, liver transplantation, opportunistic infections) – this has been well proven at multiple other health systems[10-12]. Our partnership with FOCUS aims to reduce costs associated with unfunded testing.

***13 - Please describe the support and engagement you have from leadership for the work you are proposing. Please indicate leaders with whom you have consulted about this proposal. (1/2 page)***

Our project has been widely supported by UNC leadership. This project has arisen from collaboration between members of UNC Hospital Medicine, UNC Hepatology, and UNC Infectious Diseases and has support from respective division leaders. Turkeisha Brown, the 6 BT nurse manager has offered support on our initiative and is interested in helping pilot the initiative on the unit; she has also co-sponsored this application. We have support from the ISD office and Leo Marucci, Associate Chief Medical Informatics Officer will serve as co-sponsor of this application.

***14 - Who will comprise the project team?***

- Nicholas Piazza MD – Project Director. Dr. Piazza will oversee all aspects of the initiative as well as troubleshoot any issues that arise.
- Katherine Coury RN – Nursing Outreach Leadership. Katherine will provide day-to-day leadership and a nursing perspective on the initiative and help promote the initiative to bedside nursing.
- Carlton Moore MD – Informatics expert and QI Coach, will help procure and analyze data as well as direct PDSA cycles.
- Isha Mehta MD – Informatics expert, will help procure and analyze data
- Madeline McCrary MD – Infectious Disease / Addiction Medicine specialist, will serve as liaison with Infectious Disease division and offer clinical expertise.
- Neil Shah MD – Hepatology specialist, will serve as liaison with Hepatology / Gastroenterology division and offer clinical expertise.
- Jane Giang PharmD – Clinical pharmacist practitioner with hepatology, outpatient provider for HCV treatment, will offer clinical expertise.
- Turkeisha Brown RN– 6BT Nursing Manager, project co-sponsor.
- Leonardo Marucci MD – Associate Chief Medical Informatics Officer, project co-sponsor.
- Navigator Role – Position pending at this time, likely a dedicated individual with expertise in linkage to care. Will serve day-to-day implementation of initiative.
- Patient and family advocate(s) – Will offer the unique perspective of a patient in planning and particularly scripting of screening questionnaire.

***15 - How will you ensure sufficient time to dedicate to the project over the scholar year?***

As a hospitalist, I have a variable schedule but currently work 15 clinical shifts monthly. Over the last year I have had adequate time outside my clinical duties to dedicate several hours weekly to planning of this initiative. Meetings will be scheduled far in advanced to allow for scheduling adjustments as needed. The FOCUS initiative will also support 0.1% FTE for development of the initiative.

**16 - What factors do you anticipate will foster and hinder improvement? (1 page)**

I am overall very optimistic about the feasibility of initiating inpatient screening and excited about the benefits it will bring to our patients; however, I do foresee several challenges.

In support of this initiative, multiple governing bodies have advised this screening – USPSTF, CDC, and WHO all recommend screening all adults for HIV and HCV regardless of risk factors. In this regard, this initiative is bringing UNC up to pace to be in line with national recommendations for standard of care. Public perception of treatment and cure of viral diseases is generally very positive, especially in the wake of the COVID-19 pandemic. Physicians and other health care providers widely recognize the benefit in early detection and treatment of HCV and HIV.

A particular challenge stems from widely varying public opinions and unfortunately stigma associated with these chronic viral diseases, particularly HIV. Due to these stigmas, there is potential that screening may negatively impact the patient experience for a small group of patients. In discussion with colleagues at other institutions who have started similar screening initiatives, most patients are willing to participate in screening, however, a small proportion of patients may decline largely due to fear of repercussions

from screening or based on certain inaccurate biases about HIV. While it is necessary to be sensitive to various viewpoints on screening, I believe the patient dissatisfaction risk may be mitigated by full transparency with the option to forego screening without negative consequence in individuals who do not assent. Our health system has successfully integrated other opt-out, nursing driven protocols in other aspects of care often steeped in misinformation – specifically, inpatient administration of vaccinations. In effort to make language around screening as inclusive and transparent as possible, we plan to partner with UNC Patient and Family Resource Center to involve a patient perspective into scripting.

Nursing support will be essential for the success of this initiative. This will require active engagement with nursing as the initiative is being introduced – we plan to offer teaching sessions ("In-services") to each involved unit as well as periodic check ins and utilization of visual management boards when possible.

***17 - What ideas do you have for sustaining the improvement? How do you see the work you start with IHQI's support continuing? (1/2 page)***

We aim to permanently incorporate this screening into the standard hospitalization experience at UNC. Through the work supported by IHQI, I am hopeful to build and optimize an infrastructure for this screening that can be sustained for multiple years and replicated at other hospitals in the UNC system. In addition to the training through IHQI, all participants in the project have been trained or will be trained in Lean Six Sigma methodologies. Our team will develop PDSA cycles to regularly assess and optimize the project. We will regularly analyze data from the project, including the process and outcome measures listed above, to help revise the triage screening algorithm, patient navigator communication with hospital teams and patients, and referral processes for outpatient follow-up. Goals will be set, and the screening process will be incorporated into a monthly quality operations team meeting as we work to improve our effectiveness at HCV/HIV screening and referrals.

We plan to partner with the FOCUS program as we build a foundation for the screening initiative. FOCUS support is a multi-year partnership, but eventually when the initiative has proven to be cost-effective and beneficial to the hospital system and community, we hope that the screening infrastructure will be supported internally as a necessary component of inpatient care.

***18 - Implementation Timeline (1 page)***

**Pre-Pilot Phase – Current**

- Finalize agreements with FOCUS
- Post job for navigator, interview, and hire
- Work with UNC ISD to development pilot "supplemental" screening form, patient tracking list
- Meet with UNC Patient and Family Resource to develop scripting
- Meet with investigators at other hospital systems to discuss strategy

**Pilot Phase –** Month 0-6

- Introduce screening supplement to care on 6 BT
- Conduct In-Service training to educate nursing on supplemental screening form
    - This will occur early and regularly on 6 BT with frequent check ins
    - Towards end of pilot phase, will begin providing education to other units in the hospital in preparation of action phase
- Perform regular PDSA cycle assessment to optimize screening triage and linkage to care algorithm in small cohort of patients
- Compile list of resources for care linkage by county
- Train navigator in linkage to care
- Work with ISD to develop integrated screening

**Action Phase –** Month 6-12

- Introduce integrated screening in nursing admission workflow to all inpatient units in hospital
- Ongoing In-Service training to various nursing units
- Navigator will begin to manage linkage care independently; continue to compile resources for different counties for patients who test positive
- Continue to perform regular PDSA cycle assessment to optimize screening triage and linkage to care algorithm
- Begin writing manuscript on initial results / experience with implementation of initiative

**Sustainability and Expansion Phase –** Month 12+

- Continue to perform regular PDSA cycle assessment to optimize screening triage and linkage to care algorithm
- Expand initiative to other hospitals in UNC Health System
- Publish data and present and national conferences

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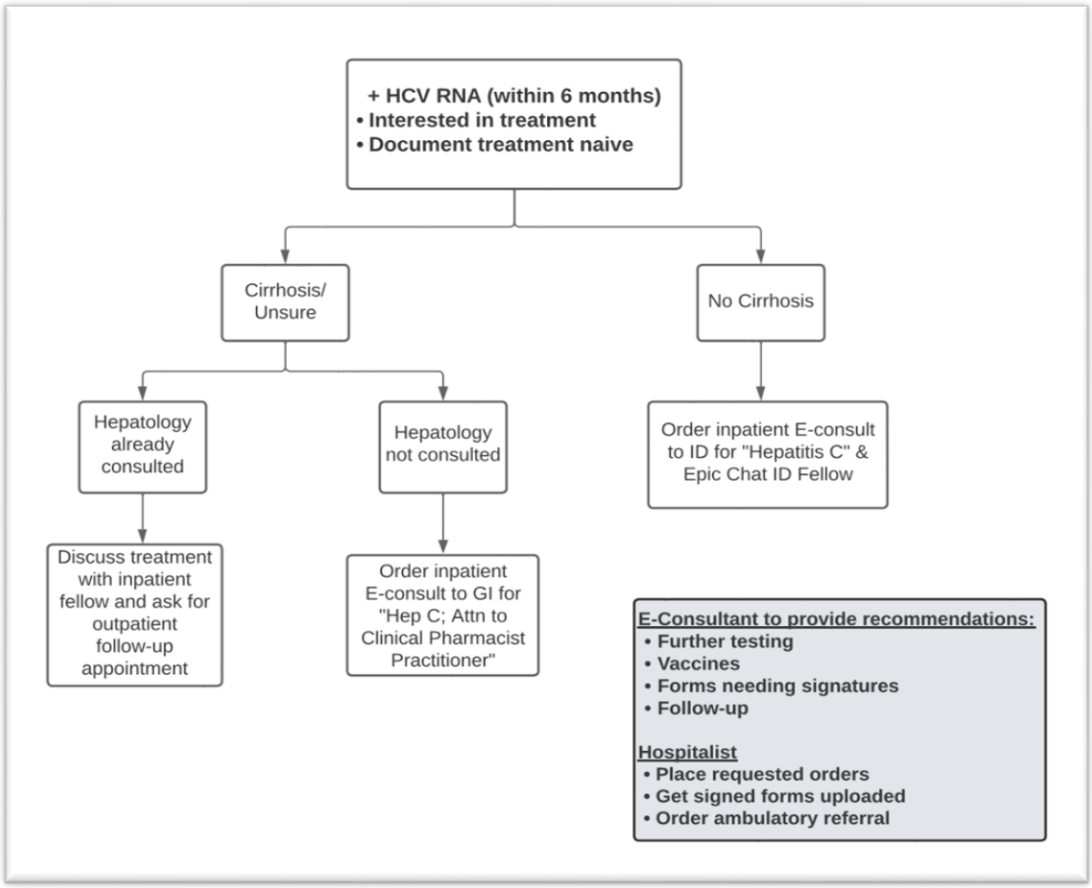
*Figure 1: Referral algorithm for new diagnosis HCV:*



Letters of Support: Two letters of support are required. One from the project sponsor (defined below) and one from your supervisor. Submit both letters with the application.

Co-Sponsorship Letters: Leonardo Marucci MD; Turkeisha Brown RN

Supervisor Letter: David Hemsey MD

UNC SCHOOL OF MEDICINE

**Leonardo Marucci, MD**
DEPARTMENT OF MEDICINE
DIVISION OF HOSPITAL MEDICINE
101 MANNING DR.
CAMPUS BOX 7085
CHAPEL HILL, NC 27599-7085

T 984.974.1931
F 984-974-2216

January 31, 2023

Dear Review Committee Members:

I am writing to express my strong support for Dr. Nicholas Piazza's IHQI Scholars Program application, "Inpatient Screening for Chronic Viral Diseases Initiative." As an Associate Chief Medical Informatics Officer (ACMIO) of UNC Healthcare, Physician Advisor with Case Management at UNC Hospitals, and a Hospitalist at the main campus, I am in the fortunate position to not only appreciate the value of this project in morbidity and mortality reduction for our medically complex patient population, but also welcome the long-term cost savings it can provide to our system.

By working to leverage standard intake assessments within of Epic@UNC, the investigators can start by reminding nursing and providers of recommended screening for HIV and HCV infection currently endorsed by both the Centers for Disease Control (CDC) and United States Preventive Services Task Force (USPSTF). Once testing is completed and patients are appropriately identified, prompt referral to ambulatory treatment can occur, with the hope that these individuals can be educated on their diagnosis and ultimately choose treatment options to improve both the quantity and quality of their life.

It would first seem reasonable to start on a single unit with a group of experienced staff, where the intake assessment responses can be tested for accuracy, consistency, and reliability. Lab processing and referral workflows can be optimized, and patient education can be adjusted to increase willingness to undergo treatment. The information gathered in this more controlled setting would be crucial for success of this project for UNC Healthcare at large.

ISD would agree that this project aligns perfectly with our mission to improve the overall health and well-being of those we serve, and does so through teaching, research, and collaboration.

Sincerely,

Leonardo Marucci, MD
Associate Chief Medical Informatics Officer, Information Service Division (ISD), UNC Health
Associate Medical Director and Physician Advisor, Care Management, UNC Hospitals
Assistant Professor of Medicine, Division of Hospital Medicine, UNC School of Medicine

Turkeisha S. Brown, RN
6 Bedtower Inpatient Nursing Unit
101 Manning Drive
Chapel Hill, NC 27514
T: 984.974.0065

January 30, 2023

Dear IHQI Project Selection Team:

As the Nurse Manager of 6 Bedtower, an adult inpatient care unit at UNC Hospitals, I fully support the proposed project to implement inpatient Hepatitis C Virus (HCV) and Human Immunodeficiency Virus (HIV) screening for all eligible patients. As a medical based unit with specialty care in infectious diseases at a quaternary academic medical center, we see many patients with end-stage liver cirrhosis secondary to chronic HCV infection and many patients with HIV and related disease processes. Universal HCV and HIV screening of adult patients and prompt referral to ambulatory treatment for patients with positive screening will reduce morbidity and mortality caused by chronic HCV infection as well as complications related to HIV.

Successful implementation of an inpatient HIV and HCV screening program through nursing admission workflow will require close collaboration with bedside nurses. Recognizing this as paramount to the success of the quality improvement project, the investigators have sought early involvement and perspective from nursing from the inception of the initiative. Nurses on 6 Bedtower are passionate about quality nursing care and treating patients with infectious disease, thus, our unit serves as an ideal setting for optimizing the screening protocol before going hospital wide.

This project has my full support and I plan to meet with the investigators on a regular basis to troubleshoot barriers and assess progress as well as lend expertise in nursing administration. I will be available as a liaison between the team and the unit nurses as well as other nursing leaders, help guide the investigators in the strategic aims of the organization and the unit, and provide resources and remove barriers on behalf of the team whenever possible. I look forward to working with members of this project to improve the quality of care for our patients.

On behalf of 6 Bedtower, patients and staff, thank you in advance for your consideration of this project proposal.

Sincerely,

TSBrown RN

Turkeisha S. Brown, MSN, RN, NE-BC
Nurse Manager, 6BT
UNC Hospitals

UNC SCHOOL OF MEDICINE

**David Hemsey, MD**
Professor of Medicine
Chief, Division of Hospital Medicine
UNC Department of Medicine
101 Manning Dr., CB 7085
Chapel Hill, NC 27599-7085

T 984-974-1931
F 984-974-2216

January 26, 2023

Dear Review Committee Members:

I am writing this letter to express my strongest support for Dr. Nicholas Piazza's IHQI Scholars Program application entitled: "Inpatient Screening for Chronic Viral Diseases Initiative." As Chief of the Division of Hospital Medicine, I will be able to support his efforts on this important project.

The UNC Hospital Medicine division provides care for a significant fraction of the inpatients being cared for across UNC Medical Center and the Hillsborough campus across multiple service lines and our faculty are very familiar with the significant overlap of patients with limited access to primary medical care and risk for undiagnosed HIV and Hepatitis C infections. With the development of improved treatments for these conditions which lead to significant long term morbidity and mortality, the development of more comprehensive screening becomes even more impactful in terms of reducing harms for a vulnerable population.

Our division will give its full support to the project and we look forward to working closely with Dr. Piazza. We will ensure that any team members from Hospital Medicine have sufficient time to attend required quality improvement training, conduct the improvement project, and monitor and report on project progress. As you know, our faculty have been committed to continuous quality improvement and have led multiple previous projects sponsored through the IHQI that have improved patient safety with placement of central lines, standardized care for patients with alcohol abuse disorders, syncope and opiate use disorder-related infections, and optimized communications during Rapid Response team interactions.

Thank you for considering this proposal and the UNC Division of Hospital Medicine looks forward to working on these efforts to improve the quality of care for our patients.

Sincerely,

David F. Hemsey, MD
Professor of Medicine
Chief, Division of Hospital Medicine