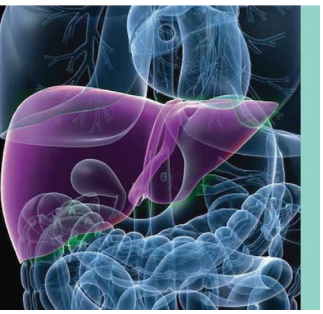

Working Toward Elimination of Hepatitis C: The Kentucky Hepatitis Academic Mentorship Program

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Kentucky has 54 of the 220 counties in the United States at high risk for human immunodeficiency virus (HIV) or hepatitis C virus (HCV) outbreaks and a high prevalence of persons living with HCV infection.[1] By June 2018, Kentucky Medicaid plans increased access to treatment by eliminating fibrosis, sobriety, and drug-testing requirements as preconditions for prescription of HCV medications[2] Yet, specialist prescribing restrictions remained in place.[2] In July 2018, universal testing and reporting of HCV infection during pregnancy became law.[3] With a large number of HCV-infected individuals and very limited numbers of skilled HCV treatment specialists, stakeholders from the Kentucky Rural Health Association (KRHA) and University of Louisville recognized the need to engage primary care, addiction care, and women's health providers in HCV treatment scale-up. The KRHA and University of Louisville created the Kentucky Hepatitis Academic Mentorship Program (KHAMP) to quickly increase the number of HCV treatment providers.

KHAMP is an in-person and telementoring-based training program inspired by the need to increase access to HCV care and treatment resources in high-risk, low-resource areas. KHAMP faculty developed a structured curriculum for in-person and distance-based training administrated by the KRHA. KHAMP's goal is to improve the health of individuals in underserved communities throughout the Appalachian region by building a workforce trained by

Abbreviations: HCV, hepatitis C virus; HIV, human immunodeficiency virus; KHAMP, Kentucky Hepatitis Academic Mentorship Program; KRHA, Kentucky Rural Health Association; SVR 12, Sustained Virologic Response at 12 weeks; WV-HAMP, West Virginia Hepatitis Academic Mentorship Program.

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experts to screen, diagnose, treat, and care for persons infected with HCV.[4]

From February to April 2018, the KHAMP planning committee recruited faculty from Kentucky and neighboring states, including Three Rivers Gastroenterology (Louisa, KY), Walgreen Specialty Pharmacy (Louisville and Lexington, KY), RTI International (Research Triangle Park, NC), the KRHA (Henderson, KY), Cincinnati Children's Hospital (Cincinnati, OH), and the University of Louisville (Louisville, KY). Faculty members teach an area of the KHAMP curricula based on their expertise and provide ongoing mentorship. The KHAMP curriculum is comprehensive and includes the following seven components:

1. HCV virology
2. HCV epidemiology with a focus on the relationship of HCV transmission to injection drug use
3. Recommended HCV testing, care, and treatment
4. HCV among pregnant women and children
5. Assessment of liver disease and fibrosis staging
6. Introduction to treatment and specialty pharmacies (both academic and commercial)
7. An overview of HCV treatments for persons who inject drugs

After several months of program experience, participants receive a second day of a KHAMP curriculum with four components, including:

1. Additional training in management of HCV and other liver diseases
2. Harm reduction (safe injection practices and drug treatment access)
3. Naloxone training and overdose response
4. Drug-drug interaction avoidance strategies

On August 1, 2018, the KRHA launched KHAMP following the 5th Annual Kentucky Hepatitis Conference. Funding was secured through sponsorships from pharmaceutical companies. KHAMP faculty were not paid, and the program was free for attendees. Approximately 30 providers from 17 counties attended the inaugural KHAMP training for physicians in family medicine, internal medicine, obstetrics and gynecology, and emergency medicine, as well as physician assistants and nurse practitioners.

Expectations for KHAMP participants include completion of both in-person KHAMP sessions and participation in bimonthly webinars for 1 year. KRHA provides participants additional resources to assist HCV clinical management. Participants communicate with faculty primarily via a secure, Health Insurance Portability and Accountability Act of 1996–compliant electronic fax platform using a consultation form (Fig. 1). The form contains basic information about the patient the provider intends to treat, including age, fibrosis stage, concomitant medications, intended HCV treatment, hepatitis A and hepatitis B immunity status, and HIV infection status. KHAMP faculty review the consultation forms and provide expert coaching/guidance to participants. This helps ensure drug-drug interactions are addressed, patients are receiving needed vaccines, fibrosis staging is complete, and treatments are well matched to individual patient needs. KHAMP participants are encouraged to reach out to faculty with any questions or concerns via e-mail or telephone. KHAMP consultation sheets are used in the prior authorization process to satisfy Medicaid prescriber-type requirements and to aid in bidirectional communication between faculty and participants for each patient. The completed consultation form is sent back to the KHAMP participant, who then includes it in the prior authorization process with the insurance plan as needed.

From August 1, 2018, to April 1, 2020, KHAMP faculty, which includes two hepatologists, two specialty trained nurse practitioners, two clinical pharmacists, a pediatric infectious disease specialist, and a public health analyst have trained approximately 190 participants from Kentucky, as well as participants from Virginia (n = 1), Ohio (n = 1), and West Virginia (n = 9) over eight in-person sessions and five webinars. KHAMP attendees have written more than 900 consultations for treatment. Prior to KHAMP, none of the participating clinicians had prescribed HCV treatment. The KHAMP framework has been adapted to the US Hepatitis Academic Mentorship Program so that other states may adopt the model and adapt it to local needs. West Virginia was the first state to do so, holding a West Virginia Hepatitis Academic Mentorship Program (WV-HAMP) on March 5, 2020. Their first meeting included 53 attendees. As of April 22, 2020, more than 20 West Virginia consultations had been received. In light of the coronavirus disease 2019 (COVID-19) pandemic, both KHAMP and WV-HAMP used videoconferencing technology to continue peer-to-peer and faculty-to-participant training. WV-HAMP had 16 participants and KHAMP had 25 for their most recent sessions, both held on World Hepatitis Day (July 28, 2020).

KHAMP HEP C: KNOW MORE
Kentucky Hepatitis Academic Mentorship Program

CONSULTATION FORM
Please send to secure fax: 833-496-6214

KHAMP Scholar/Provider Name:	**Fax:** **Phone:**	**NPI:**

PATIENT INFORMATION

Patient Last Name:	**Patient First Name:**	**Patient M.I.:**	**Patient Zip Code:**
Date of Birth: / /	**Sex:** ☐ Male ☐ Female ☐Transgender	**Height:**	**Weight:**
Current Medications:			
Medical History:		**Payer Source:** ☐Medicaid ☐Medicare ☐Private Ins ☐Uninsured	**If Female, Pregnant:** ☐ Yes ☐ No ☐ Unknown **Postpartum (≤6 weeks):** ☐ Yes ☐ No ☐ Unknown
Est. Delivery Date:	**Perinatally acquired:**☐Yes☐No☐Unknown		
Substance Use Disorder: ☐ Yes ☐ No ☐ Unknown	**Behavioral Health Referral:** ☐ Yes ☐ No ☐ Unknown	**If Referred, to whom:**	

LABORATORY INFORMATION

Date of Test	Type of Test	Results	RNA Results	
	☐ HCV Antibody ☐ HCV RNA	☐ + ☐ -	Quantitative Result:	Genotype:

CBC:	**CMP:**	**PT/INR:**
HBV: ☐ Immunity ☐ Vaccinated	**HAV:** ☐ Immunity ☐ Vaccinated	**HIV:** ☐ + ☐ - *(refer HIV/HCV + to specialist)*

Encephalopathy: ☐ Yes ☐ No	**Ascites:** ☐ Yes ☐ No	**Hx of GI Bleed:** ☐ Yes ☐ No	**Advanced Cirrhosis:** ☐ Yes ☐ No

FIBROSIS ASSESSMENT

☐ **FibroScan** ☐ **FibroSure**	**Results:** *(refer fibrosis score of 3 or greater to specialist)*

Cirrhosis Status: ☐ No Cirrhosis ☐ Compensated Cirrhosis(Child-Pugh A/B) ☐ Decompensated Cirrhosis(Child-Pugh C)

TREATMENT

Date Started: / /	**Treatment Status:** ☐ Naïve ☐ Experienced	**Medication Prescribed:**	**Duration:** ☐ 8 weeks ☐ 12 weeks
Date Completed: / /	**If treatment not completed, why?** ☐ Lost to follow-up ☐ Incarcerated ☐ Deceased ☐ Other (explain) :		
Persistent Infection:			

KHAMP FACULTY CONSULTATION

KHAMP Faculty/ Consultant Name:		**NPI:**
Date Consulted: / /	**Facility:**	**Specialty:** ☐ Gastroenterology ☐ Hepatology ☐ Infectious Disease

REFERRAL TO SPECIALISTS FOR EVALUATION

Provider:	**Date Referred:** / /

FIG 1 KHAMP consultation form.

One of the biggest challenges in implementing this program has been outcome determination. Despite the large number of KHAMP participants and consultations, relatively few participants have communicated patient outcomes (n = 84). Of the 84 outcome reports, 81% (n = 68) completed treatment. Of the 68 patients completing treatment, all achieved SVR 12 (HCV cure). The remaining 13 patients were lost to follow-up, incarcerated, deferred treatment, or lost insurance. Reasons for provider-level difficulty in outcome reporting include not having time to track outcomes and determining the point a patient is considered lost to follow-up.

Because KHAMP allows people with HCV to receive HCV care and treatment with their local provider, numerous challenges to health care access have been overcome. Patients encounter fewer transportation difficulties, have fewer expenses (primary care copay versus specialist copay), and receive care by a provider they already know. For patients receiving HCV care in the primary care setting, the chances for cure are comparable with specialists. KHAMP outcomes add to evidence demonstrating that HCV treatment services provided by nonspecialists are feasible and increase uptake of treatment.[5] KHAMP is an efficient mechanism to provide education and access to care to populations with scarce HCV specialist care. Because of the benefits of the program, we foresee its continuation, even if provider restrictions are lifted in Kentucky. Expanding to other states is now the focus of work while continuing education of providers practicing in Kentucky. KHAMP will continue providing services in Kentucky until reaching saturation with provider training, sponsorship termination, or HCV is eliminated from the state. More information regarding KHAMP may be found on the KRHA website (http://www.kyrha.org).

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