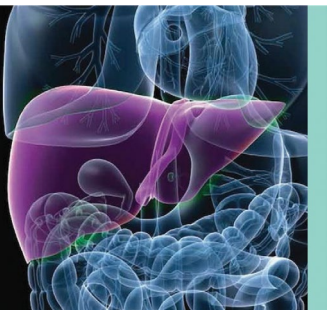

Joining the Fight: Enhancing Alcohol Treatment Education in Hepatology

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The burden of alcohol-associated liver disease (ALD) in the United States has increased precipitously,[1,2] paralleling the increasing prevalence of high-risk alcohol use and alcohol use disorder (AUD).[3] Between the years 2001 and 2012, the prevalence of AUD increased by 50% in the United States, with an astonishing 84% increase in women. Patients with ALD are initially seen at more advanced stages than other liver diseases, contributing to its disproportionate health care utilization and costs.[1,4] Furthermore, ALD is now the most common indication for liver transplantation in the United States.[5] This burden is likely to increase significantly in the wake of the coronavirus disease 2019 (COVID-19) pandemic.[6]

The only proven and durable therapy for ALD is abstinence from alcohol, which requires screening for and treatment of comorbid unhealthy alcohol use and AUD through behavioral interventions and/or pharmacotherapy. Unfortunately, less than 10% of individuals with AUD living in the United States receive any treatment within 12 months of diagnosis.[7] Treatment of coexisting AUD in patients with cirrhosis has been shown to reduce mortality and interval decompensation.[8] Effective treatment of AUD and ALD often requires a multidisciplinary approach,[9] involving specialists in addiction, psychiatry, gastroenterology, hepatology, and social work, which is not available in all practice settings. In a survey-based study of providers

Abbreviations: AASLD, American Association for the Study of Liver Diseases; ALD, alcohol-associated liver disease; ASAM, American Society of Addiction Medicine; AUD, alcohol use disorder; CME, continuing medical education; COVID-19, coronavirus disease 2019; ECHO, Extension for Community Healthcare Outcomes; EPA, entrustable professional activity; SBIRT, On-Site Screening, Brief Intervention, Referral to Treatment; TH, transplant hepatology.

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treating patients with liver disease, nearly 80% reported low levels of addiction education during their training, and 84% felt uncomfortable prescribing AUD pharmacotherapy.[10] Underlying these results is the fact that there are no standard addiction-related competencies for training programs in internal medicine,[11] gastroenterology,[12] and transplant hepatology (TH).[13] Although there are opportunities for interested physicians and providers to further their knowledge of addiction medicine independent of their institution (Table 1), the awareness of and ability to attend are likely very limited.

Most patients with addiction do not receive addiction-related care from a physician.[14] There is a desire among providers treating patients with liver disease to address this unmet need, because more than 85% agree that addiction/AUD education curricula should be incorporated into gastroenterology and TH fellowships.[10,15] Ideally, AUD education should be introduced during training with opportunities for patient management and more intensive experiences during elective rotations. In this article, we propose enhancing alcohol treatment education into TH fellowship training, outline examples of targeted curricular interventions described in the literature, and highlight novel avenues for training of both fellows and faculty. Given the heterogeneity of programs and institutional resources, a variety of options drawing from a curriculum with centralized competencies should be explored.

POTENTIAL ALCOHOL TREATMENT CURRICULA

On-Site Screening, Brief Intervention, Referral to Treatment Training

SBIRT is an important, efficient, and effective intervention that has been shown to reduce alcohol use when performed by primary care providers in the outpatient setting.[16] The components of this 5- to 10-minute intervention include universal screening to identify high-risk use, providing a brief intervention using tools such as motivational interviewing, and starting or placing a referral for addiction treatment for those who are likely to have AUD.[17] Notably, there are examples of successful SBIRT curriculum implementation among providers in nonmental health specialties, including within hepatology.

In a study of nearly 700 patient encounters from a Veterans Affairs hepatology clinic made up of 17 providers, including 9 fellows, dedicated training on the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM-5) criteria for AUD and Alcohol Use Disorders Identification Test (AUDIT-10) increased rates of formalized screening for AUD by 56% and the number of alcohol-related interventions performed by 21%.[18] Neither the specific intervention nor the time commitment were specified, but it is nonetheless an encouraging result among providers treating liver disease. A 2014 study compared intensive one-time 4- to 6-hour training sessions using multimedia and role play

TABLE 1. ADDICTION MEDICINE TRAINING OPPORTUNITIES

Program Type	Program Title	Details
Immersion programs	Fellow Immersion Training Program in Addiction Medicine Host: Boston University School of Medicine Sponsor: National Institute on Drug Abuse	• Multiple-day immersion training for clinical subspecialty fellows to learn state-of-the-art skills to integrate addiction medicine into clinical research
	ASAM: Fundamentals of Addiction Medicine	• 40-hour CME program to help clinicians recognize, screen, treat, and refer patients with substance use disorders through interactive, case-based learning
Conferences	ASAM National Conference American College of Academic Addiction Medicine Annual Meeting International Society of Addiction Medicine	• Multiple-day conferences, featuring oral and poster sessions, with a focus on high-quality, innovative addiction medicine education
Fellowship	Addiction Medicine Fellowship	• 12-Month clinical fellowship for those who have completed residency training in 24 primary specialties • Greater than 80 addiction medicine fellowships are accredited by the Accreditation Council for Graduate Medical Education • Those who complete the fellowship may sit for the addiction medicine certification examination by the American Board of Preventive Medicine. • Trainees able to accrue 1920 hours of addiction medicine practice over at least 24 months may sit for the certification examination through 2025.

delivered to internal medicine and pediatric trainees against a 1-hour didactic lecture given to emergency medicine trainees.[19] Both interventions were delivered by a licensed social worker certified for training in motivational interviewing. The more intensive training had higher satisfaction rates, although both groups were equally very likely to perform alcohol-related interventions as a result. The total cost to the institution was the $37/hour fee of the trainer. This kind of one-time training offers an ideal approach for a center that lacks access to in-house addiction medicine specialists.

Clinical Elective in Addiction Medicine

For centers fortunate enough to have robust addiction medicine services, an addiction-focused rotation for trainees has been shown to improve provider knowledge across several important domains.[20] Over a year-long period, 48 medical students and trainees from internal medicine, family medicine, and emergency medicine were enrolled in a 2- to 4-week substance use disorder elective and completed presurveys and postsurveys. Participants saw inpatient addiction consults, followed these patients longitudinally, and arranged for postdischarge care. The rotation also featured didactic sessions and journal clubs. Significant improvements in knowledge regarding addiction treatment (medication prescribing, relapse prevention, history taking) were seen. A similarly brief alcohol-focused elective would also likely be effective.

On the outpatient side, addiction medicine has been successfully integrated within a primary care clinic.[21] Internal medicine residents spent four half-day sessions in an addiction clinic, staffed by two addiction medicine specialists, as part of an outpatient immersion rotation. All trainees rotating through the clinic rated the experience highly. The creation of multidisciplinary clinics involving addiction providers specifically designed for patients with ALD is an enviable target for institutions with TH programs. For example, at the University of Michigan, an integrated, multidisciplinary clinic to specifically treat ALD serves as a potential model for other institutions.[22]

Distanced Education Model for Alcohol Treatment

Given the lack of addiction-related resources at many GI and TH fellowship programs, a distanced education model with outside experts is an advantageous alternative. A notable example of such a program is Project ECHO (Extension for Community Healthcare Outcomes), designed to overcome financial and systemic barriers to specialty care, such as hepatitis C treatment, in underserved communities.[23] Through this program, the primary provider engages in regularly scheduled telehealth "clinics" through which individual cases are discussed with specialists, allowing the provider to retain autonomy while their skills and confidence grow.[24] This model has been successfully adopted by a number of different institutions to cover a number of topics, including substance use disorder.[24] There are a number of Project ECHO "hubs" located across the United States.

The American College of Gastroenterology sponsors the Edgar Achkar Visiting Professorship, which strives to connect GI fellowship programs at smaller institutions with visiting experts in fields of unmet needs. This program was run virtually during the COVID-19 pandemic, serving as a potential model for distance learning. A similar program could be facilitated and widely advertised by gastroenterology, hepatology, or addiction societies either separately or jointly, aimed at institutions that do not have local experts. Program directors should be up to date with current and upcoming web-based learning opportunities from professional gastroenterology and hepatology societies to encourage fellow participation and to introduce this form of postgraduate education.

The American Society of Addiction Medicine (ASAM) offers hands-on workshops during their virtual annual meeting that highlight fundamental topics in addiction medicine, such as motivational interviewing and SBIRT. ASAM also offers an 8-hour virtual addiction medicine workshop throughout the year, either as a 1-day intensive experience or split into four 2-hour days. Objectives of this workshop include use of screening tools, motivational interviewing, and prescribing pharmacotherapy for addiction disorders.

A PROPOSAL AND FUTURE DIRECTIONS

We propose establishing a formal alcohol treatment curriculum for the TH fellowship with defined core competencies. This curriculum could be organized through an entrustable professional activity (EPA) for the TH fellowship, focused on the key competencies of medical knowledge, patient care, and systems-based practice. EPAs are descriptions of work that are structured to translate competencies into daily clinical practice. These individual competencies could be adapted from those established

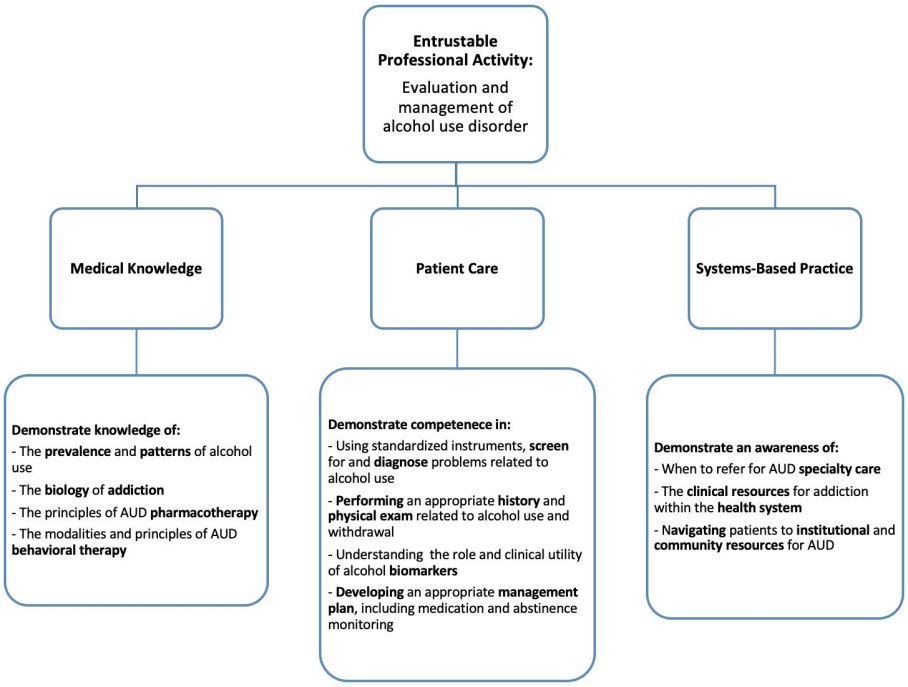

FIG 1 A proposed EPA schema, highlighting core competencies.

for traditional addiction medicine training.[25] A proposed schema outlining this EPA and pertinent competencies is shown in Fig. 1. Although not exhaustive, these are crucial topics that we feel an alcohol treatment curriculum should include. Incorporation into internal/family medicine residency and/or gastroenterology fellowship would also be good options. Opportunities for faculty involvement should be encouraged to enhance their skills and comfort level in treating patients with AUD.

American Association for the Study of Liver Diseases's (AASLD's) Liver Learning (https://liverlearning.aasld.org/) is an ideal platform to host a didactic series addressing these alcohol treatment competencies for the hepatologist. This programming would be particularly useful for institutions that lack local experts or the ability to create a more hands-on experience. Notably, Liver Learning is a free resource for all AASLD members or is available as a standalone yearly subscription, increasing its accessibility. The ASAM e-Learning Center, for example, has a host of AUD programming, but, in contrast, many of these sessions require payment regardless of training level or member status. A future collaborative effort by gastroenterology/hepatology/addiction professional societies producing an updated "living document" like the AASLD/Infectious Diseases Society of America guidance on hepatitis C (http://www.hcvguidance.org) would be a much-needed and readily identifiable resource for both fellows and faculty.

Finally, a combined TH/addiction medicine training program is another potential avenue for interested trainees to help meet the growing need for AUD care for patients with liver disease. The success of the combined gastroenterology/TH pilot program, which was approved as a dual certification pathway by the American Board of Internal Medicine in 2019, provides an important example of progressive change to traditional training pathways. The Accreditation Council for Graduate Medical Education's Advancing Innovation in Residency Education offers the ability to create new hybrid pilot programs to address outstanding needs in medical education.

CONCLUSION

The increasing incidence of AUD and ALD demonstrates the need for gastroenterology and hepatology providers to join the fight. Recent surveys have identified the need and desire of more specialized addiction medicine training. Opportunities for furthering alcohol treatment knowledge should be highlighted by institutions for both faculty and fellows. We propose that alcohol treatment curricula, developed around an alcohol treatment EPA, be incorporated

into TH fellowship programs to train future generations of hepatologists to help stem the tide of AUD and ALD.

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