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# A Novel Interactive Video Module for Providers Improves Knowledge of Best-Practices for Treating Alcohol Use Disorder

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## Abstract

Background: Despite the availability of efficacious treatment for alcohol use disorder (AUD), providers and patients are often unaware of available treatment options and how to pursue them. Prior studies have found that providers desire more training to effectively treat AUD. Our aim was to develop a standardized video to educate providers about AUD treatment.

Methods: Prospective single-center cohort study evaluating the impact of a novel, interactive educational video module (EVM) for providers about AUD treatment. The EVM discusses treatment, motivational interviewing (MI) and harm reduction strategies, and case examples. The EVM was hosted on our hospital's website, and available to all providers (faculty, trainees, and practitioners) within the departments of internal medicine, family medicine, psychiatry, and gastroenterology/hepatology. The EVM was optional to complete, but participants were incentivized using continuing medical education (CME) credit. Pre/post surveys solicited feedback and evaluated 1) knowledge of AUD treatments, 2) comfort prescribing medications, and 3) confidence with MI. Matched responses were evaluated using paired t-tests.

Results: 45 providers participated (31 faculty, 14 trainees), reporting significant improvements in their knowledge of AUD treatment (p=0.0001), comfort in prescribing medications (p=0.0002) and using motivational interviewing techniques (p=0.003) after viewing the EVM (Figure 1). Feedback was 89% positive, 2% negative, and 9% suggested ways to improve the EVM.

Conclusion: EVM can significantly improve provider knowledge and comfort in treating AUD. Further studies are needed to evaluate if EVM can improve treatment access and patient outcomes.



## Keywords

Alcohol use disorder, addiction treatment, quality improvement, provider education, video





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## Abstract

**Background:** Despite the availability of efficacious treatment for alcohol use disorder (AUD), providers and patients are often unaware of available treatment options and how to pursue them. Prior studies have found that providers desire more training to effectively treat AUD. Our aim was to develop a standardized video to educate providers about AUD treatment.

**Methods:** Prospective single-center cohort study evaluating the impact of a novel, interactive educational video module (EVM) for providers about AUD treatment. The EVM discusses treatment, motivational interviewing (MI), harm reduction strategies, and case examples. The EVM was hosted on our hospital's website and available to all providers (faculty, trainees, and advanced practice providers) within the departments of internal medicine, family medicine, psychiatry, and gastroenterology/hepatology. The EVM was optional to complete, but participants were incentivized using continuing medical education (CME) credit. Pre/post surveys solicited feedback and evaluated: 1) knowledge of AUD treatments, 2) comfort prescribing medications, and 3) confidence with MI. Matched responses were evaluated using paired t-tests.

**Results:** A total of 45 providers participated (31 faculty, 14 trainees), reporting significant improvements in their knowledge of AUD treatment ($p = 0.0001$), comfort in prescribing medications ($p = 0.0002$) and using motivational interviewing techniques ($p = 0.003$) after viewing the EVM (Figure 1). Feedback was 89% positive, 2% negative, and 9% suggested ways to improve the EVM.

**Conclusion:** EVM can significantly improve provider knowledge and comfort in treating AUD. Further studies are needed to evaluate if EVM can improve treatment access and patient outcomes.

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## Abbreviations

AASLD – American Association for the Study of Liver Diseases
AUD – Alcohol use disorder
CME – Continuing Medical Education
EVM – Educational video modules
FDA – Food and Drug Administration

## Introduction

Alcohol use disorder (AUD) is the seventh leading risk factor for premature death and disability worldwide.[1,2] American Association for the Study of Liver Disease [AASLD] guidelines recommend multidisciplinary management of AUD, including pharmacologic and psychosocial treatment.3 AUD treatment has been shown to reduce alcohol consumption and improve survival.[4-7]

Despite the efficacy of AUD treatment, utilization in clinical practice is low.[5] A survey of gastroenterology and hepatology providers found that only 61% of providers referred patients for behavioral therapy, 71% have never prescribed pharmacotherapy, 50% endorse a lack of knowledge about Food and Drug Administration (FDA) approved medications, and 90% desired more formal training on AUD treatment.[8] This highlights that providers lack the knowledge needed to counsel patients and provide treatment.

Educational video modules (EVM) leverage interactive visual and auditory features to enhance learning and improve knowledge retention.[9,10] By allowing learners to control the activity, it feels personalized, adapting to the learner's pace, which increases motivation to learn.[11] Providing EVM on a website that can be viewed from computers, tablets, or smartphones increases accessibility, flexibility, and convenience.[12]

Our primary aim was to develop an EVM that would improve providers' knowledge of AUD treatment. The secondary aim was to collect feedback about the EVM.

## Methods

**Study Design:** We performed a single-center prospective cohort study evaluating the impact of EVM on AUD treatment for providers from March 2023 to June 2023 at the University of Nebraska Medical Center in Omaha, Nebraska, United States of America.

**Provider Selection:** We recruited all providers (faculty, trainees, and advanced practice providers) from the departments of internal medicine, family medicine, psychiatry, and gastroenterology/hepatology. This group of providers was included, given their likelihood of caring for AUD patients. We excluded providers from other departments and providers from sub-specialty divisions of internal medicine unless they worked on the general internal medicine teaching service. All providers were recruited through an email invitation that included a brief description of the EVM along with the incentive of continuing medical education (CME) credit upon completion.

**Educational Video Module:** We developed an original, interactive EVM for providers using Articulate Storyline™. The EVM is 15 minutes in length and includes content about the epidemiology of AUD, treatment, motivational interviewing (MI) techniques and harm reduction strategies, plus case examples. The EVM was developed using best practices in instructional design along with content expertise from addiction psychiatrists, internists, and hepatologists to address typical care gaps with AUD patients. The EVM was developed using national standards for comprehension, readability, and understandability and was designed to be personalized so that content could be viewed at the learner's pace to maximize knowledge retention. The EVM was created in English with subtitles available and was hosted on our hospital's educational training website, which is accessible anytime

on a computer, tablet, or phone. Participation in the EVM was optional. This study was approved by the University of Nebraska Institutional Review Board.

**Survey Data:** Pre- and post-EVM surveys were collected to evaluate providers: 1) knowledge of AUD treatments, 2) comfort in prescribing medications, and 3) confidence with MI. The pre-survey also collected baseline demographic information about the providers, including practice level (faculty, trainee, mid-level provider). After viewing the EVM, providers were asked if the EVM was helpful in educating them about AUD, free from bias, used best practices, and was an effective way to deliver content.

**Statistical Analysis:** Descriptive statistics (counts and percentages) were used to summarize participants. Matched responses from the pre/post-surveys were evaluated using paired t-tests. A p-value less than 0.05 was considered statistically significant.

## Results

Four hundred and six providers were recruited, including 229 from internal medicine (including gastroenterology/hepatology), 123 from family medicine, and 54 from psychiatry. Forty-five providers completed the EVM (11% completion rate). Of the 45 respondents, there were 31 faculty and 14 trainees from the departments of internal medicine (31 respondents, 31/229, 13.5%), family medicine (8 respondents, 8/123, 6.5%), and psychiatry (6 respondents, 6/54, 11.1%). Participants experienced significant improvements in their knowledge of AUD treatment ($p = 0.0001$), comfort in prescribing medications ($p = 0.0002$) and using motivational interviewing techniques ($p = 0.003$) after viewing the EVM (**Figure 1**). Feedback on the EVM was 89% positive, 2% negative, and 9% suggested ways to improve the EVM. All providers (100%) thought the EVM was based on best-practices, 91% thought it was effectively delivered, and 100% thought it was free of commercial bias.

## Discussion

We present the first study to develop, implement, and measure the impact of an EVM on AUD treatment for medical providers. Our study found that a standardized EVM for providers is associated with significantly improved knowledge of available treatments, comfort in prescribing medications, and using MI techniques for harm reduction with alcohol use.

Given the knowledge gaps that exist in treating AUD, along with the growing prevalence of AUD, EVM provided an easily reproducible, accessible way for providers to expand their clinical skills with harm reduction and MI techniques, as well as prescribing AUD treatment for their patients in clinical practice. Our findings are consistent with previous studies about the benefits and advantages of EVM, including accessibility, convenience, content standardization, and using multimedia to engage providers and facilitate skill development for effectively treating AUD.[13-15]

Many medical providers are engaged in rigorous clinical practices, so web-based EVM provides the benefit of personalized, accessible education that is cost-effective, facilitates ongoing professional development, and is broadly scalable to larger online audiences and in different languages, regardless of practice level or prior experience with AUD treatment.[15] Web-based education is increasingly being utilized in academic training to maximize the translation of knowledge into clinical practice. Even for providers who are unable to provide AUD treatment within their own practice, refining skills in screening for AUD, performing brief interventions using MI, and applying knowledge about local resources and support groups for patients may help increase treatment uptake by patients.

**Limitations:** The response rate of our survey was 11%. Although this is considered an acceptable response rate for standard surveys, given that this was sent to a select group of providers who frequently care for this patient population, the participation rate was subpar. It is possible that providers felt the content was not relevant to them or a high priority in their practice. Future efforts with EVM should continue to utilize user-friendly formats with brief durations and consider the use of reminders or follow-ups along with additional or alternative incentives.

**Future Implications:** Future studies could assess alternative ways to deliver educational content to providers about AUD. Further defining the best provider populations who care for AUD patients and gaining a better understanding of how providers prefer to engage with EVM and be incentivized could help improve enrollment rates. Obtaining robust feedback on interventions would also help maximize educational efforts. Ensuring that future learning is accessible, sustainable, and continuously updated as new treatments become available is critical.

## Conclusion

A standardized EVM about AUD treatment is well-received and helps providers build knowledge about available treatment, comfort in prescribing treatment, and enhance motivational interviewing skills. The benefits of web-based learning in health professional training have become widely acknowledged and increasingly utilized. EVM provides a significant opportunity to improve provider knowledge, quality of care, and patient health outcomes, however, challenges exist in optimizing the engagement and implementation processes. ■

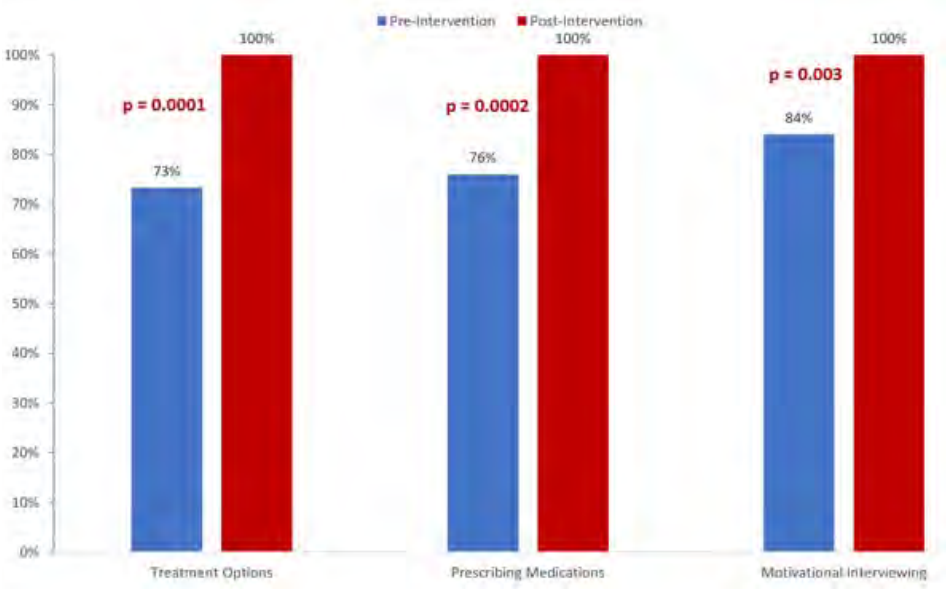


**Figure 1.** Comparing pre (blue) and post (red) intervention question responses, knowledge about treatment options for AUD (left), comfort in prescribing AUD medications (middle), and engaging in motivational interviewing with AUD patients (right).

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**Conflict of Interest**
All authors report no conflicts of interest. All authors had access to data and had an equal role in writing and revising the manuscript.

**Ethical Approval**
This study was approved by the University of Nebraska Medical Center Institutional Review Board, IRB-0342-22.

**Author Contributions**
PAT – study design, module development and implementation, data collection, writing and revising the manuscript. ZPS, AAB, NK, AA, TBP – study design, module development, revising the manuscript. KS, JW, JG – module implementation, data collection, revising the manuscript. TBP – study design, module development, revising the manuscript. All authors participated in interpreting the results, contributed to the writing of the manuscript, provided critical feedback to the manuscript, and approved the final manuscript draft for submission.

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