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ORIGINAL ARTICLE

An Evaluation of STFM's National Addiction Curriculum

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ABSTRACT

Background and Objectives: Family physicians are well positioned to treat patients with substance use disorders (SUDs), expand access to care, destigmatize addiction, and provide a biopsychosocial treatment approach. There is a great need to train residents and faculty to competency in SUD treatment. Through the Society of Teachers of Family Medicine (STFM) Addiction Collaborative, we created and evaluated the first national family medicine (FM) addiction curriculum using evidence-based content and teaching principles.

Methods: After launching the curriculum with 25 FM residency programs, we collected formative feedback through monthly faculty development sessions and summative feedback through 8 focus groups with 33 faculty members and 21 residents. We used qualitative thematic analysis to assess the value of the curriculum.

Results: The curriculum enriched resident and faculty knowledge across all SUD topics. It changed their attitudes in viewing addiction as a chronic disease within the scope of FM practice, increased confidence, and decreased stigma. It nurtured behavior change, enhancing communication and assessment skills and encouraging collaboration across disciplines. Participants valued the flipped-classroom approach, videos, cases, role plays, ready-made teacher's guides, and one-page summaries. Having protected time to complete the modules and temporally coupling the modules with the live, faculty-led sessions enhanced learning.

Conclusion: The curriculum provides a comprehensive, ready-made, evidenced-based platform for training residents and faculty in SUDs. It can be implemented by faculty with all levels of prior expertise, cotaught by physicians and behavioral health providers, tailored to each program's didactic schedule, and modified based on the local culture and resource availability.

INTRODUCTION

The Problem

Substance use disorders (SUDs) are a leading cause of death, disability, and disease in the United States today. SUDs cost our society nearly half a trillion dollars every year and are implicated in various social determinants of health such as unemployment, crime, domestic violence, child custody battles, housing and food insecurity, and teenage pregnancy.[1] The COVID-19 pandemic further compounded the SUD crisis, resulting in a 30% rise in drug overdose deaths.[2] Patients with an active SUD struggle to engage in other preventive, acute, and chronic disease management until they are stable in recovery.[3] Thus, treating patients with SUDs is foundational in addressing overall health and quality of life.

In the United States, despite a growing need to treat patients with OUD, less than 20% of patients get medication treatment for opioid use disorder (MOUD), with an estimated gap of 914,000 patients that do not gain access to medication maintenance programs for addiction treatment.[4,5] Because the provision of addiction care has been historically siloed away from general medical care, specialized mental health professionals assume the majority of SUD care. This places a burden on patients who must then attend separate clinics and engage with an additional set of providers, resulting in poor access and stigma associated with seeking care.[3]

The American Council of Graduate Medical Education (ACGME) mandates making addiction and pain management core competencies for physician training.[6] Family physicians are particularly well positioned to address this treatment gap by increasing access to care, destigmatizing addiction, and

providing a biopsychosocial, team-based approach.[7] Additionally, family physicians receive specialized training in behavior change, such as motivational interviewing, stages of change theory, goal setting, and action plan development, which can help patients enter into a successful recovery. Finally, once a patient's SUD has stabilized, family physicians can care for their other primary care health needs.[6,8]

Despite this opportunity, research demonstrates that most physicians do not feel adequately trained to diagnose and treat addiction. A 2015 study found that, among the 49% family medicine residency programs that responded, only 28.6% had an addiction medicine curriculum and most graduates did not seek additional addictions training. Lack of faculty expertise was the most-cited barrier to not having a curriculum.[9]

Family medicine residency programs are primed for a national addiction curriculum that can be adapted and incorporated to fit their program, based on their current curriculum and faculty level of expertise.

METHODS

Our Response: Creation of STFM's National Addiction Curriculum

From 2018 to 2020, leaders of the Society of Teachers in Family Medicine (STFM) Addiction Collaborative created a Family Medicine National Addiction Curriculum using the Delphi method (surveying our panel of experts) to identify learning objectives and create 12 associated learning modules (Table 1 ; see Appendix A for learning objectives). Each module consists of three components: (1) an online module that employs both evidence-based content and evidence-based learning techniques using adult learning theory,[10–15] allowing learners to complete the module on their own time and at their own pace and engage in highly interactive material through questions/answers, reflections, cases, and demonstrative videos; (2) a live (either in-person or virtual) classroom session facilitated by faculty member(s) that places emphasis on application activities; and, (3) a teacher's guide to support faculty members with various levels of addiction expertise and teaching experience. Therefore, the curriculum is also designed to train the trainer, helping faculty members grow in their ability to teach addiction topics.

TABLE 1. Addiction Modules

Addiction as a Chronic Disease
Screening, Brief Intervention, and Referral to Treatment (SBIRT)
Taking a Substance Use Disorder (SUD)
History Safe Prescribing of Opioids
General Opioid Use Disorder (OUD)
Inpatient Management of OUD
OUD in Pregnancy
Tobacco Use Disorder (TUD)
Alcohol Use Disorder (AUD)
Inpatient Management of AUD
Urine Drug Screen (UDS)
Interpretation Health Equity, Vulnerable Populations, and Addiction

From January 2021 through December 2021, we launched the curriculum with 25 family medicine residency pilot sites teaching one module each month. The curriculum developers (R.S., M.M.) and research assistant (K.W.) held monthly faculty development sessions with the sites' teachers to both prepare them for their upcoming teaching session and collect feedback about the previous month's module. We also provided a website to support faculty development.

Research Question: Curriculum Evaluation

After completing the pilot launch of the STFM addiction curriculum including 12 modules across 25 family medicine residency programs over 12 months, we sought to understand the value and impact of this curriculum and how to improve it.

We obtained Cambridge Health Alliance's (CHA's) Institutional Review Board's approval for the study. We used the Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist[15] to ensure rigor in our methodology.

Participant Recruitment

The point person at each program invited residents and faculty to participate in a focus group. Residents and faculty who seemed engaged and those who were able to attend focus group sessions participated; thus, selection occurred through both purposeful and convenience sampling. During virtual monthly faculty development sessions, the principal investigator (PI [R.S.]) also made announcements to ask for faculty participation. Faculty and residents were under no obligation to participate. Each participant was offered a $25 DoorDash gift certificate for their involvement. All participants were informed of the risks and benefits of participating and provided verbal consent before the beginning of each focus group.

Data Collection

The PI conducted four 1-hour focus groups with residents who participated in the curriculum and four 1-hour focus groups with faculty members who taught the curriculum held via Zoom virtual meeting platform. We used focus groups to maximize the amount of data collected in a short period of time. Because focus groups are open-ended, broad, and qualitative, they allow for the collection of in-depth data on respondents' beliefs, experiences, attitudes, and opinions that align with the researchers' goal of understanding the perceived value of the curriculum. Focus groups are also useful to level the playing field between researchers and participants, allowing participants to feel more comfortable in expressing their viewpoints amongst others on their same level.[16] The eight focus groups included a total of 21 residents and 33 faculty members. Focus groups were conducted using a semistructured interview format with six open-ended questions (see Appendix B) and follow-up questions based on participants' previous responses (both in that particular focus group as well as from responses of participants in other focus groups). All interviews were audio recorded and then transcribed by a professional transcription service. Identifying names were deleted during transcription. The transcripts were not returned

to the participants for their feedback before analysis.

Data Analysis

Our research team included the PI (R.S., a female family medicine and addiction medicine physician), the program coordinator (K.W., a female undergraduate student), and four family medicine residents (J.A. [male]; B.P. [male]; P.R. [male]; A.T.W. [female]) at the PI's academic institute who were not involved in data collection. The PI has significant prior experience in qualitative methodological research and provided ongoing training, mentorship, and supervision to the research team members. We coded all data using Dedoose version 8.3.17 software (SocioCultural Research Consultants, Manhattan Beach, CA) and used grounded theory[17] to inductively analyze the eight focus group recordings. After 7 sessions of team coding, we developed a coding book that comprised 5 parent codes and 24 child codes and subsequently reached thematic saturation. The research team then broke into pairs with a primary coder and editor and used the code book to code the remaining transcripts and met to reconcile differences. After developing the initial code book, we reparented one child code, added two child codes, and removed one parent code. All team members agreed upon these changes and incorporated them into their coding schema. A complete codebook is available upon request.

RESULTS

We identified four overall themes (parent codes) that participants used to describe the value and impact of the curriculum. For each theme, we provide specific descriptions (child codes-italicized and capitalized) that further characterize how participants experienced the curriculum.

Changes in Residents and Faculty's Knowledge

Residents and faculty described how the curriculum increased their knowledge base around pain/addiction topics. Particularly, they describe gaining a richer understanding of *SUD-Related Definitions* that informed their patient assessments and treatment plans. They also shared that they became more familiar with T*reatment Options and Levels of Care*, having a better understanding of the SUD treatment ecosystem based on patient acuity and support needs, from medically managed withdrawal to inpatient to intensive outpatient programs (IOPs) to outpatient and methadone clinics to community programs like sober living houses and self-help groups.

Changes in Resident and Faculty Attitudes

Residents and faculty also shared how the curriculum impacted their attitudes toward patients who struggle with SUDs and their role in helping these patients. The curriculum shaped the way they view the *Relative Importance of SUDs and Their Interest in Addiction Medicine*. Participants described how the curriculum inspired residents and faculty to seek out additional training such as addiction electives, fellowships, board certification, and building buprenorphine prescribing into their practice. They also described how it *Increased Their Confidence Levels* in working with patients with SUDs. Participants also shared that how their feelings of increased knowledge level and associated confidence subsequently led to a sense of *Reduction in Bias* toward patients with SUDs. For many participants, the curriculum helped them shift their understanding to view *Addiction as a Chronic Disease* and hence fitting within the paradigm of how they manage other chronic diseases. As a corollary, many expressed how they began to view addressing SUDs within the *Scope of the Family Medicine Role*. Faculty members shared that, as a result of the residents' increased incorporation of addiction medicine into their clinical care, faculty members also felt pressure to increase their knowledge around SUDs.

Changes in Resident and Faculty Behaviors and Practices

Residents and faculty described how the curriculum impacted their behaviors and practices. They described *Increased Engagement*, providing more frequent screenings; once SUDs were identified, they offered more in-depth conversations and counseling with patients about treatment options, such as helping patients get to the appropriate level of care and offering medications, including MOUD. They also reported that the curriculum prompted *Standardization Around Treatment Practices* rather than each attending or resident approaching SUDs in their own way, such as following the same protocol for starting buprenorphine in the inpatient setting. Both residents and faculty also recognized that over the course of the pilot curriculum, residents demonstrated increased competence around C*ommunication Skills* among patients with SUDs, especially around motivational interviewing. Both residents and faculty also reported increased awareness about their language and began to make conscious efforts to use *Destigmatizing Language* among patients with SUDs. Finally, residents and faculty reported that the curriculum helped spur *Increased Interdisciplinary Collaborative Approach*, in which family physicians worked with other health providers (eg, psychologists, psychiatrists, social workers, nurses) both in teaching about and providing care to patients with SUDs.

User Experience

Residents and faculty described how they found the *Content* to be evidence-based and relevant and important to their clinical work. They valued the *Structure and Format*, particularly the flipped-classroom approach, which allowed them to take the modules on their own time and then apply the information in a live, faculty-led session. However, *Feasibility* in completing the module before attending the live session required protected time; otherwise, clinical responsibilities would take precedence. Faculty described that completing 12 modules over a 12-month period may not be feasible, given other curricular areas that also need to be covered. Residents and faculty also appreciated having *One-page Summaries* associated with each module, which helped them learn by consolidating the information and served as a quick reference for future use. They described value in the *Cases, Videos, and Role Playing* that featured patient scenarios and allowed for real-world application and practicing skills before putting them into action. However,

they reported role-play fatigue as the course went on. They also reported that they preferred depth over breadth—ie, choosing one or two cases and comprehensively discussing these rather than trying to complete more cases. Faculty shared that the R*eady-Made Teacher's Guides* were helpful in teaching the residents and required little preparation. However, because the teacher's guides were tailored to medical faculty, behavioral faculty found them more challenging to use. While using the teacher's guides, faculty described how they *Personalized* the activities, such as coteaching with residents, soliciting resident cases, coteaching across disciplines, developing QI projects, and revising current policies and protocols in their clinics and hospitals.

DISCUSSION

Summary

After piloting the Addiction Curriculum with 25 family medicine residency programs over a 12-month period, responses from faculty and residents indicate that the curriculum was well-received overall. Both faculty and residents found the content to be interactive, evidence-based, practical, and comprehensive. A strong focus on communication skills through video demonstrations and role-playing activities also increased resident confidence in communicating with patients with SUDs and encouraged residents to examine and revise their own biases. For many, the curriculum prompted their viewing addiction as a chronic disease that should be incorporated into the scope of family medicine care and empowered them to be able to offer long-term treatment to patients.

The flipped-classroom approach allowed learners to create foundational knowledge at their own pace that they could later apply through various faculty-led exercises. However, this format did require protected time for learning that many programs found challenging to incorporate into their curriculum. Faculty indicated the curriculum prompted uptraining of their colleagues and expressed that it could be used as is or modified by faculty with varying levels of experience and expertise, from novice to expert. It also facilitated co-teaching by faculty with different backgrounds, particularly between physicians and behavioral health providers.

Recommendations

Based on the feedback from the eight focus groups and the twelve faculty development sessions, we recommend the following guidance to programs planning to implement this curriculum:

- Residents need protected time to complete the online modules. Each module takes 1-1.5 hours. Coupling online learning with the 1-1.5 hours of live faculty-led session is optimal. If a program cannot feasibly provide this amount of protected time, other options for ensuring resident completion include faculty completing the modules with the residents or spacing the module and live session over a span of a few weeks while providing summary slides at the beginning of the live session to review the information.
- The 12-module curriculum can be completed over any length of time and with any level of resident learner. In our pilot program, residents completed all 12 modules in a 12-month time period, but this could be completed over three or four years of a residency program. Some programs targeted one cohort, while others targeted all residents. Each program's didactic structure, allocated time for learning, and competing curricular needs will determine the best implementation strategy.
- Programs can vary in how they choose to implement the modules based on their current addiction curriculum and level of faculty expertise. Some programs may choose to complete all the modules; others may pick and choose. While the modules repeat small components of information to build upon and reinforce concepts, they do not need to be completed in any particular order; each is considered a stand-alone set of informational material. Some programs may choose to adhere exactly to the teacher's guide; others may decide to choose a few cases and focus on depth over breadth, since many residents and faculty found that approach valuable. Programs may also introduce their own activities, such as identifying local addiction resources, reviewing and revising local outpatient and inpatient policies and protocols, or discussing real clinical cases.
- Teaming up with other faculty members, such as behavioral health providers, physicians, pharmacists, and social workers, can serve to make the discussions more robust and encourage residents to further engage in an interdisciplinary approach to caring for a patient population that is psychosocially complex. This model also serves to continually train faculty around a biopsychosocial approach to care.

This curriculum is now available on the STFM website, free of charge, for residency programs to use.

Limitations

This study is limited by lack of observational data, such as direct observation of residents caring for patients with SUDs or discussing their assessments and plans with their faculty preceptors. We also did not observe the faculty during their teaching sessions to assess the quality of teaching and the residents' engagement levels. Additionally, we did not compare this curriculum to other addiction curricula that programs already had in place.

Because the focus groups were led by the PI who also helped develop the curriculum, reporting bias may have occurred in which participants shared positive over negative feedback or embellished its impact to appease the data collector. Similarly, selection bias may have occurred in which the residents and faculty who were more invested and interested in the curriculum chose to participate in providing feedback. Group think could also have dampened the diversity of feedback elicited. Despite these limitations, all participants were specifically

asked to share ideas about improving the curriculum; they provided a range of responses on its impact on them personally and with patient care.

Additionally, because we provided ongoing faculty development support, programs that subsequently adopt the curriculum (and do not have this degree of support) may find it more challenging to implement, and responses from learners may differ from those presented here. However, the teacher's guide was designed so that faculty with any level of addiction and/or teaching expertise can teach the modules with no to little preparation.

Future Directions

While this qualitative study focused on assessing resident and faculty knowledge, attitudes, and behaviors, we plan to examine quantitative behavioral changes that resulted from curriculum completion. For example, measuring addiction diagnostic codes before and after curriculum implementation will help quantify if and how the curriculum leads to increased recognition and treatment of SUDs. Future studies could also assess the percentage of family physicians who incorporate addiction care into their primary care practice, comparing those who graduated from residency programs that utilize this curriculum to those that did not utilize this curriculum or to national averages.

We plan to review existing modules to consolidate high-yield content and add new content as the evidence base for SUDs continues to evolve. For example, future modules will include stimulant use disorders, the impaired physician, and will explore cannabis use disorder and vaping in more depth.

Finally, as more programs utilize the curriculum, we hope to learn how its implementation connects to ACGME Milestones and resident performance evaluations.

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