

Opioid Use Disorder and the Opioid Epidemic

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Purpose

This project evaluated how the University of Maryland, Baltimore can better prepare students to address opioid use disorder. Through research and interviews with experts across the university, our team of interprofessional students developed a set of recommendations we believe the University should implement. We hope that the University of Maryland, Baltimore will use our findings to prepare students to become leaders in the response to the opioid epidemic.

Background

Epidemiology of the Opioid Epidemic

Opioid use disorder (OUD) is a treatable, chronic condition, with increasing prevalence in the United States. As of 2021 an estimated 5.6 million Americans had OUD.¹ OUD is clinically defined in the DSM-5 as a "problematic pattern of opioid use leading to clinically significant impairment or distress (Table 1: Full definition)." People living with OUD can effectively reach a remission or recovery state with comprehensive, evidence-based treatment, yet estimates suggest fewer than 35% of people with OUD receive substance use disorder treatment.² Medical intervention in the treatment of OUD saves lives; one study found that people who received treatment for OUD with buprenorphine or methadone had an 80% lower likelihood of dying from an opioid overdose during treatment as compared to people experiencing OUD in non-medication treatment.³

OUD remains a fatal condition for many Americans despite the potential for successful treatment. In the United States, fatal opioid overdoses have quadrupled from 21,089 deaths in 2010 to 80,411 deaths in 2021 with a sharp increase during the pandemic.⁴ Maryland has the sixth highest death rate from drug overdose in the country, with the greatest number of state opioid overdoses in the city of Baltimore.⁵ Last year. 938 people died from an opioid-associated drug overdose in Baltimore City, nearly 40% of total deaths from opioid overdose in the state.⁶ Across the state, fentanyl use has factored into a 590% increase in opioid overdose deaths, with the rate of fentanyl-associated deaths steeply increasing since 2015, eclipsing heroin and prescription opioids as primary substances leading to fatal overdoses (Figure 1).⁶

Persistent stigma and judgment towards people experiencing opioid use disorder impedes a systematic approach to prevention and treatment of this condition. Men, people with low socioeconomic status, people living with a disability, and White and American Indian and Alaskan Native people are at increased risk of fatal opioid overdoses.⁷ The COVID-19 pandemic further exacerbated long-standing health inequalities in the United States and contributed to a rapid increase in drug overdose deaths among Black (44% increase) and American Indian and Alaska Native people (39% increase) from 2019 to 2020.⁸ While evidence of prior substance use treatment is markedly low (14.3%) among all people who died from drug overdose, Black people were least likely to receive treatment (8.3%).⁸

The Role of Healthcare in the Opioid Epidemic

The healthcare system has played a major role in perpetuating the opioid epidemic. When Purdue Pharma first introduced the opioid medication OxyContin, the company deceptively marketed the drug as a safe and effective analgesic with a low risk of addiction, despite having evidence of the medication's potential for addiction and abuse. Regulatory and healthcare organizations, such as the American Pain Society, further contributed to the widespread prescription of OxyContin by perpetuating a view of pain as the "fifth vital sign" and encouraging providers to use opioid medications to aggressively treat pain.⁹

TABLE 1 DSM-5 DEFINITION OF OPIOID USE DISORDER

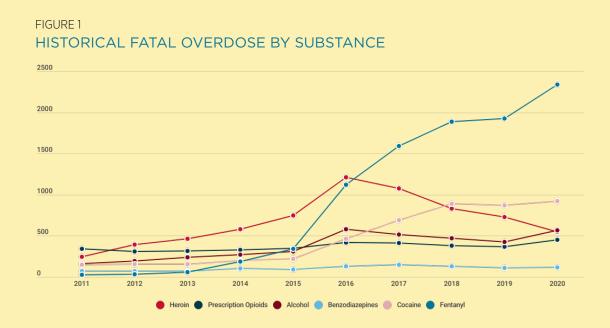
A problematic pattern of opioid use leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period:

Opioids are often taken in larger amounts or over a longer period of time than was intended.
There is a persistent desire or unsuccessful efforts to cut down or control opioid use.
A great deal of time is spent in activities to obtain the opioid, use the opioid, or recover from its effects.
Craving, or a strong desire or urge to use opioids.
Recurrent opioid use resulting in a failure to fulfill major role obligations at work, school, or home.
Continued opioid use despite having persistent or recurrent social or interpersonal problems caused by or exacerbated by the effects of opioids.
Important social, occupational, or recreational activities are given up or reduced because of opioid use.
Recurrent opioid use in situations in which it is physically hazardous.
Continued opioid use despite knowledge of having a persistent or recurrent physical or psychological problem that's likely to have been caused or exacerbated by the substance.
 "Tolerance," as defined by either of the following: A need for markedly increased amounts of opioids to achieve intoxication or desired effect A markedly diminished effect with continued use of the same amount of an opioid
 "Withdrawal," as manifested by either of the following: The characteristic opioid withdrawal syndrome The same—or a closely related—substance is taken to relieve or avoid withdrawal symptom

As a result, opioid prescription ran rampant, peaking in 2012 and leading to a significant rise in opioid addiction that has damaged communities across the country.¹⁰ While prescription drug monitoring programs (PDMPs) have led to a decrease in opioid prescriptions in states such as Maryland, in 2017 there were still about 58 opioid prescriptions for every 100 people nationally, which continues to expose people to the potential of addiction, exploration of illicit drugs, or overdose.^{11,12} In 2010, over 60% of heroin users reported abusing prescription opioids first, and in the same year, prescription opioids were directly responsible for over 16,000 overdose deaths.^{13,14}

Although there has been more emphasis on reducing opioid prescribing in recent years, there is still evidence of inappropriate opioid prescribing in pain settings such as post-operatively.¹⁵ While many factors contribute to this trend, a relevant factor for UMB is inadequate training of healthcare providers in how to manage pain and taper opioid prescriptions. A qualitative study of primary care providers revealed that many feel they have not received adequate training in managing chronic pain and reducing opioid medications.¹⁶

Healthcare providers often stigmatize OUD patients, and existing racial biases further compound poor treatment. To ensure patients receive high-quality care, they have to feel welcome and safe to disclose vulnerable parts of their lives that are relevant to the medical care they need. Thus, providers must foster an accepting, respectful space for patients, particularly those experiencing OUD. One study found that when healthcare staff use stigmatizing language such as "addict," it decreases patient engagement with treatment.¹⁷ Poor treatment discourages patients from seeking care and adhering to treatment plans, which impacts a patient's potential remission from OUD. Negative provider biases are often magnified when a patient is a minority. A large study of outpatient care in the United States found that Black patients have a lower likelihood of receiving buprenorphine for opioid use disorder.18



Federal Policy Response to Opioid Use Disorder

The national response to the opioid epidemic in the United States currently favors a treatment-based approach to address OUD. This response stands in stark contrast to the War on Drugs, launched during the 1970s, that criminalized drug use predominantly within communities of color. As lawmakers have moved from a punitive model to a public health approach, more national programs have received support for treatment, research, and prevention of OUD and related morbidity and mortality.

The US Department of Health and Human Services declared the opioid crisis a national public health emergency in October 2017, nearly two decades after the first wave of opioid overdoses from prescription opioids began. A year before, Congress passed the first Comprehensive Addiction and Recovery Act of 2016, which funded a multi-pronged approach to the prevention and treatment of opioid use disorder and overdose. In 2018, Congress passed the Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities Act (The "SUPPORT" Act), which included 70 bills related to OUD prevention and treatment. This act partially lifted the ban on Medicaid reimbursement for substance use disorder treatment at Institute for Mental Disease (IMD) facilities and expanded non-physician provider authority to treat OUD with

buprenorphine. In December 2022, Congress passed the Mainstreaming Addiction Treatment (MAT) Act, which removed a significant barrier to Medication for Opioid Use Disorder (MOUD) by no longer requiring an X-waiver to prescribe buprenorphine, and the Medication Access and Training Expansion (MATE) Act, which will increase training for healthcare providers to treat substance use disorders.

Opioid Education at UMB

The University of Maryland, Baltimore (UMB) is a renowned public research institution located in Baltimore, Maryland. Comprised of multiple schools and programs, including the School of Medicine, the School of Pharmacy, the School of Nursing, the School of Social Work, the School of Dentistry, the School of Law, and the Graduate School, UMB recognizes the pervasive nature of the opioid crisis in its community. Its impact extends beyond Baltimore City limits, affecting individuals, families, and communities nationwide. However, each institution at UMB is actively working to address the epidemic, with a range of initiatives aimed at mitigating the impact of opioid addiction. The Schools at UMB offer varying levels of required and elective education around OUD. The School of Nursing and the School of Social Work offer specializations or elective coursework focused on substance use disorder and OUD. The School of Nursing offers a Substance Use Disorder Certificate to develop nursing students' understanding of addiction and treatments and the School of Social Work hosts various behavioral fellowships, such as BHWISE, that provide specialized training in OUD treatment. The School of Medicine includes education on OUD screening and treatment in the first-year curriculum and mandates addiction training in clinical rotations, and the School of Dentistry requires D2 students to attend a lecture on prescription opioid abuse. The School of Pharmacy Post-graduate trainees and the Schools of Nursing and Medicine can also participate in buprenorphine waiver training.

Findings

While UMB schools currently provide some education on substance use disorder and offer ad hoc lectures on OUD treatment; there is a lack of consistency in required curriculum content and variable integration of material in core coursework focused on OUD. In order to effectively address the opioid epidemic, it is integral to leverage and build upon existing programs to cultivate interdisciplinary and interprofessional collaboration, while implementing strategies to mitigate the pervasive stigma surrounding OUD. UMB is committed to providing students with the tools necessary to manage and prevent opioid addiction, ultimately contributing to a healthier society. To develop a comprehensive set of recommendations to tackle OUD, our team conducted research on intrainstitutional programming through both interviews and available published information.

Through interviews with University Deans and faculty, we learned about barriers that hinder students' preparedness for addressing OUD. Most salient was the need to include students who have not historically been included in these conversations, and the notion of building interprofessional education from scratch. UMB can facilitate these developments by hiring and training multidisciplinary faculty and researchers with expertise in OUD, as well as integrating community partnerships into the school's programs. Creative approaches to the logistical challenges of course timelines across UMB must be developed.

Methods

We, the President's Fellows, met with leaders from across the institution to gather perspectives on the role of the University of Maryland, Baltimore in response to the opioid crisis. Deans and faculty members from the Schools of Social Work, Medicine, Dentistry, Pharmacy, Nursing, and Law were interviewed using a semi-structured protocol. These interviews aimed to gain insights into the University's past and presentday role in the opioid epidemic and identify areas of improvement in the ways that UMB prepares students for their future roles in addressing this crisis.

We used a thematic analysis approach to analyze the interviews and identify key themes related to the university's response to the opioid epidemic. To ensure the reliability and validity of our findings, we subjected the interviews to a rigorous analysis by first coding each interview transcript, identifying common themes and patterns, and subsequently identifying recurring themes and sub-themes across the interviews based on the research questions. We then compared and discussed their findings to ensure consistency and agreement on the final themes and sub-themes. The interviews revealed four primary themes: curriculum, faculty resources and sustainability, co-curriculars for students, and school partnerships. These themes informed the White Paper's recommendations on how the University of Maryland, Baltimore and its institutions could prioritize their efforts to address the opioid epidemic effectively.

Recommendations

The University of Maryland, Baltimore can prepare future healthcare and human service professionals to address the opioid epidemic by implementing a university-wide strategy that incorporates a standard opioid curriculum, increases student exposure to opioid prevention and treatment practices, and prioritizing funding for opioid-related research and education. Through interviews with Deans and faculty, we learned that barriers to preparing students to address OUD include a lack of funding for faculty and researchers with expertise in OUD, rigid professional standards and requirements for clinical education and curricula, logistical challenges to establishing interprofessional education on OUD (i.e., scheduling, funding, and variable course timelines), and inadequate funding for multidisciplinary research and community partnerships focused on OUD. Therefore, we recommend the University implement the following actions to address these barriers; doing so will improve student preparation and increase healthcare provider readiness to prevent and treat OUD:

1	Develop a university-wide center for the prevention and treatment of OUD.
2	Convene a university-wide task force to examine existing curricula for OUD-relevant instruction, evaluate the components for consistency and accuracy across disciplines, and recommend bi-annual curriculum improvements focused on OUD.
3	Launch an annual workshop to create and evaluate a standard, interdisciplinary approach to the assessment and treatment of patients with OUD that is integrated in care settings throughout UMB-affiliated practices.
4	Establish a legal clinic that exposes students to criminal, administrative, and policy-related laws and practices that commonly impact people with OUD and provide relevant legal aid to the local community.
5	Implement a mandatory, UMB-sponsored naloxone training for all graduate-level education and health professionals.
6	Develop an early exposure, clinical shadowing program for students in their pre-clinical years that exposes students to multimodal treatments of OUD (i.e., behavioral, medical, and community treatment approaches) and includes education on attitudes and stigma towards patients with OUD.
7	Recruit faculty who specialize in substance use disorder (SUD) and OUD and ensure a competitive compensation and tenure package.

Recommendation 1:

Develop a university-wide center for the prevention and treatment of opioid use disorder.

The complex nature of the opioid epidemic necessitates a robust, multi-modal approach that addresses both the factors leading to opioid use disorder, as well as the treatment of individuals with OUD. The University of Maryland, Baltimore plays a vital role in preparing health and human service professionals to respond to the opioid epidemic. To streamline the university's approach and maximize campus resources, we recommend the University of Maryland, Baltimore utilizes the upcoming Kahlert Institute for Addiction Medicine, to develop a university-wide strategy that creates education, research, and extracurricular engagement opportunities for students across UMB's health and human service schools. UMB cannot effectively lead the response to the opioid epidemic in our community without committed university leadership, involvement of interdisciplinary faculty, and dedicated funding to support a university-wide strategy.

Challenges to implementing a cross-curriculum approach include disparate education requirements across disciplines, as well as a need for a sustainability plan. Furthermore, there is limited financial support for staff members initiating and maintaining programmatic efforts that integrate community engagement and new research. The planned Kahlert Institute could serve as a fulcrum for student interprofessional learning, shadowing, participation in research teams, and engaging in community interventions. It is imperative that the Kahlert Institute is provided adequate staffing and funding resources to engage in UMB policy, curriculum, faculty development and recruitment, and provide the necessary support to healthcare and legal trainees in offering opportunities integrating the various domains of both prevention and treatment in service to our immediate community.

The aim for the Kahlert Institute is to minimize the fracturing of institutional systems by providing a centralized resource dedicated to the mission of addressing OUD by developing, directing, and facilitating strategies and targets that meet the comprehensive nature of the disease. The establishment of an integrated interdisciplinary approach is critical to enhancing collaboration in the treatment and prevention of OUD. This center advances these efforts by optimizing the allocation of resources and preventing the duplication of efforts across Schools. Therefore, we call on the Kahlert Institute to create an interprofessional advisory board to facilitate these action items and to develop a coordinated and unified approach incorporating perspectives across professional domains.

To achieve its mission and effectively address OUD, the proposed center must prioritize key areas: (1) the advancement interdisciplinary curricula integration centered on OUD; (2) the expansion of research and practice opportunities for trainees and professionals, including alternative pain management strategy; (3) policy and advocacy initiatives and options for healthcare and legal trainees to aid them in understanding and applying health law in both treatment and prevention; and (4) collaborate with the interdisciplinary task force to prioritize the development of a comprehensive approach that addresses core competencies involved in the treatment of OUD.

Recommendation 2:

Convene a university-wide task force to examine existing curricula for OUD-relevant instruction, evaluate the components for consistency and accuracy across disciplines, and recommend bi-annual curriculum improvements focused on OUD.

Given the broad impact that the integration of curriculum could have on the development of students, we recommend prioritizing this as the university's main objective. To address this, we implore the university to create an interdisciplinary task force dedicated to evaluating current curricula across Schools and develop opportunities for interdisciplinary education with a focus on opioid use disorder. This task force would be made of faculty members and university leadership from each of the schools at UMB, and would strongly focus on interdisciplinary education. This group would evaluate current curricula and seek to leverage existing frameworks and subject matter taught across Schools to create opportunities for interdisciplinary education where diverse students could work and learn alongside one another. For example, the integrated curriculum might adapt best practices from the School of Dentistry, which has strict outlines and courses dedicated to patient assessment prior to prescription of opioids to reduce unnecessary exposure to them. The nature of these objectives necessitates a sustainable and consistent team, whereby faculty members on this task force meet regularly, and conduct meetings in advance of all major scheduling periods for university students.

It is imperative that UMB staff this task force with qualified and compensated faculty members who specialize in these subject areas and have an interest in fostering connections between graduate schools. In addition, the task force must establish a dedicated position responsible for coordinating and facilitating student activities, with a focus on developing and curating content, as well organizing interdisciplinary activities that are pertinent and beneficial for healthcare trainees. This position should play a vital role in fostering a structured and cohesive learning environment in which trainees can garner relevant and invaluable exposure and experiences in interdisciplinary collaboration and education in the treatment and prevention of OUD.

Throughout the university's curriculum, there are already classes available to students from multiple graduate schools. Given the complexity of opioids use disorders, and the often multifaceted approach needed to effectively treat the condition, it is important that students can experience learning and working across disciplines early on in their professional development.

Recommendation 3:

Launch an annual workshop to train students to implement an integrated, team-based, interdisciplinary approach for assessing and treating patients with OUD in care settings throughout UMBaffiliated practices.

Healthcare professionals utilize a team-based approach across specializations to care for patients, yet the preparation of healthcare students remains siloed by

discipline. While health and human service students at UMB receive instruction on their disciplinary approach to care delivery, they lack sufficient education and exposure to the application of their respective clinical method within a team-based care delivery model. From communicating pain management strategies between providers and pharmacists to integrating behavioral, integrative, and medication therapies, the prevention and treatment of OUD necessitates a biopsychosocial approach across disciplines to ensure patients receive timely and appropriate care.¹⁹⁻ ²¹ In addition to poor integration of clinical care, persistent stigma among healthcare professionals towards individuals with OUD remains a barrier to treatment.²²⁻²⁵ Therefore, multi-disciplinary, teambased learning opportunities are imperative to equip health and human services trainees to deliver nonstigmatizing, patient-centered care. Patient-centered care includes active listening, empathy, respect for patient preferences, effective communication, and collaboration with patients and their families and team members in decision-making.

In order to meet this aim, we recommend the University of Maryland, Baltimore launch an annual, interprofessional workshop to train students on a standard, interdisciplinary approach to OUD treatment across the university. The workshop should include training on self-appraisal and identification of negative attitudes toward OUD to identify potential biases that may impede effective patient care and contribute to stigma. This workshop should also include the development and execution of a treatment plan for OUD that integrates multiple disciplinary approaches and offers ample opportunities to hone practical, patient-centered skills in an interprofessional team setting.

Successful programs have included the development of interprofessional, multidisciplinary corecompetency scales to evaluate effective skills and knowledge attainment in OUD workshop settings²⁶, and have demonstrated increased perceived-abilities and knowledge in humanistic, patient-centric treatment domains, as well as practical experience in team-based managed care. By developing interprofessional core-competency scales, facilitators can address training gaps across disciplines while maintaining a framework that enables an interdependent workforce to address patient needs.

Recommendation 4:

Establish a legal clinic that offers students exposure to criminal laws, administrative practices, and policies that commonly impact people with OUD and provide relevant legal aid for the UMB patient base.

One area that is often overlooked in the education of healthcare providers is the relationship that patients may have with the legal system. Many patients are reluctant to disclose relevant healthcare information due to circumstances that could have legal repercussions; in particular, individuals experiencing OUD may face unique legal and structural challenges during active use of opioids and throughout their treatment process.²⁷ To provide UMB students with firsthand perspectives on these issues, we recommend the creation of a legal clinic designed to promote dialogue between students and people experiencing OUD. The clinic would also provide legal services to help people with OUD address legal issues surrounding unemployment, housing, and criminal or civil allegations. Given that the law school already operates a robust network of legal clinics staffed by both faculty and students, students at The Carey School of Law would primarily operate the clinic.²⁸

While the School of Law previously housed the Drug Policy and Public Health Strategy Clinic, the new clinic's primary focus would be to serve the community and provide the best outcomes for individuals dealing with OUD. The clinic would also be designed to give future health educators a more thorough understanding of the law and how patients' lives are impacted by our country's legal systems. Through participating in the clinic, students from healthcare professional schools at UMB would gain an acute awareness of circumstances that could affect the continuity of care and how they can best aid their patients in navigating through these difficult circumstances.

Additionally, this clinic presents an exciting opportunity to connect curious students with the potential to learn more about relevant policy issues and enable them to become more effective advocates. While advocacy training is an existing element of the core law school curriculum, exposure to these skills is limited in the curriculum of UMB's health professional schools. Therefore, we recommend including experiential training focused on the development of advocacy skills that is tailored to health professional students. Leveraging existing coursework material from the schools of law and social work, these trainings would provide a more in-depth understanding of the legislative process, prepare students to engage in advocacy, and connect students with experiential learning opportunities at the local, state, and federal level.²⁹

Recommendation 5:

Implement a mandatory, schoolsponsored naloxone training for all graduate-level health and human services professional students.

The overdose-reversal drug naloxone is a crucial part of combating the opioid overdose epidemic. The naloxone nasal spray is easy to administer and the average training takes under one hour to complete. The FDA has recently approved the first over-thecounter naloxone spray, but concerns remain about the accessibility and affordability of the medication. Different schools across UMB have offered ad hoc naloxone administration training through courses or clinical placements, but only some students have managed to gain exposure to it. Occasionally, schools will host open naloxone training for interested students, such as the School of Social Work's lunch and learn naloxone training and the UMB Community Health and Addiction Team naloxone training held at the School of Medicine. However, these trainings are not routinely available, nor are they coordinated with other schools. To prepare more student bystanders to respond to opioid overdose on and around campus, we recommend UMB implement free and regular naloxone training to the entire student body.

UMB should also increase the availability of naloxone on campus. Research suggests that naloxone training is most effective when it is accompanied by distribution of naloxone kits.³⁰ Similar to the current model of the University of Maryland, College Park³¹, we recommend UMB include the distribution of naloxone in the free and regular naloxone training, as well as make naloxone readily accessible at the student health center. To further increase accessibility and convenience of naloxone kits, UMB should consider installing a naloxone vending machine in a high-traffic location, such as the SMC Campus Center-a successful distribution model currently in practice in western Maryland. UMB should also consider utilizing the Office of Enterprise Resilience to determine how best to implement a system-wide naloxone strategy as part of emergency response planning.

Recommendation 6:

Develop an early exposure, clinical shadowing program for students in their pre-clinical years that exposes students to multimodal treatments of OUD (i.e., behavioral, medical, and community treatment approaches) and includes education on attitudes and stigma towards patients with OUD.

Most UMB health professional schools offer a clinical elective or internship that includes exposure to the prevention and treatment of opioid use disorder. These applied learning opportunities strengthen the university and could be utilized to further expose students to best practices with OUD prevention and treatment. In our interviews, we observed that students already interested in the field of substance use disorder treatment are more likely to participate in the existing clinical electives and internships. We recommend offering a shadowing program to students early in their educational career that will expose them to the field and the number of future healthcare providers interested in OUD prevention and treatment. This shadowing program could leverage existing clinical and community-based partnerships to provide a window into the treatment of OUD, and offer flexible scheduling options, such as week-long rotations or potentially just an afternoon commitment. These opportunities would expose a broader segment of the student population to people experiencing OUD, and could provide a way for students to gauge interest in the field without having to make the time commitment of a rotation or internship.

UMB should also utilize the shadowing program to increase exposure to people with OUD across the spectrum of recovery. OUD is heavily stigmatized,

and many healthcare professionals only have a very siloed view of what it means for someone to have an OUD. When people are exposed to OUD in classes or internships, it may only be an individual going through severe withdrawal symptoms or someone actively in crisis. It is important to also give students exposure to what OUD might look like many years in remission and to show the importance of learning not just about prevention and treatment but about best practices in recovery as well.³²

"To get a sense of what this is all about [students should] be able to see patients that are doing well, not just [those] that are doing poorly. I've seen the most impact on community members and students when they get to come to the clinic [on a day] where I'm seeing like 8 or 9 people in a row that are on medication for opioids. They're living a normal life... raising their kids and working. They're actually in a hurry to get the heck out of the appointment because they have things to do... I think what happens to a lot of people, [especially] that work in acute care type settings, is that they just see treatment failures." UMB FACULTY MEMBER

The population of people with OUD is as diverse and dynamic as any other population, and clinical shadowing opportunities with an emphasis on exposure to people with OUD across the recovery spectrum can be an important way to recognize and respect that diversity. OUD is present across different patient populations, necessitating that all students have a baseline familiarity with screening and treatment even if addiction is not their primary focus. As a result of this education and subsequent interactions with the community during clinical placements, we believe this will reduce the incidence of stigma surrounding OUD and empower our community through early exposure and connection with patients.

Recommendation 7: Recruit faculty who specialize in SUD and OUD and ensure a competitive compensation and tenure package

Students graduating from all UMB schools should enter the workforce with the knowledge and competency to help those suffering from opioid use disorders within their scope of practice. To prepare students adequately, UMB faculty must equip themselves with knowledge, tools, and expertise surrounding opioid use disorder as well. Currently, UMB offers no formal curriculum specifically geared towards opioid use disorder and addiction treatment. The few faculty who specialize in OUD receive no recognition via pay for efforts made in teaching. One interviewee commented on UMB's stance and contribution to combating the opioid epidemic, indicating:

If OUD education is provided, it is touched on briefly through clinical experience or discussed early on in programs which have pharmacology curricula built in. This highlights an urgent need at UMB for recruitment, dedication and compensation of faculty who specialize in substance use disorder and opioid use disorder.

"In order to have educators, we need the University to pay for teaching time...if you're a faculty member, you do not get any salary covered for teaching time. So, everything that I do that I mentioned—is unpaid time."

UMB FACULTY MEMBER

UMB should pay current faculty for training, education, and teaching time, specifically for curricula regarding substance use disorders to ensure this content is sustainably taught in the curriculum. Leaders from each school across UMB must commit to the recruitment and hiring of faculty and staff who will contribute to the curriculum of opioid and substance use disorders in order to maintain best practices in each respective field. We recommend that all UMB schools invest in the recruitment and retention of faculty dedicated to educating students around OUD. "We need more bodies...we need to invest in our educators if we want to be able to educate our students." UMB FACULTY MEMBER

OUD will not only help UMB remain a competitive graduate institution, it will also put the institution in compliance with the recently passed MATE Act, which awards grant funding to clinical education programs for integrating substance use disorder training into relevant curricula³³.

Conclusion

UMB has the opportunity to take a leadership role in tackling the opioid epidemic by equipping health and human services students with the tools necessary to prevent and treat OUD. Our location in a city and state heavily impacted by opioid use disorder, as well as our proximity to state and federal organizations focused on this public health issue, makes us uniquely poised to take a multi-faceted approach to preparing future leaders to respond to the crisis. The mission of UMB is "To improve the human condition and serve the public good of Maryland and society at-large through education, research, clinical care, and service", and mitigating the opioid epidemic is necessary in our local West Baltimore community and across the state. While each UMB school has already made substantial efforts, we believe that UMB can make a greater, more sustainable impact by championing an interdisciplinary, coordinated strategy across the institution.

Given the increasing prevalence of opioid use disorder in Baltimore and throughout the nation, most UMB graduates will likely have to address opioid use in some fashion throughout their career. Thus, it is imperative that UMB equips graduates with the skills to prevent and treat OUD by increasing institutional investment in education, research, and community engagement for all students. Our research and interviews have shown that the path forward revolves around providing opportunities for students across disciplines to engage with the Kahlert Institute, enhancing experiential opportunities in clinical shadowing, legal support, and advocacy, providing workshop opportunities to improve care, training students to respond to opioid overdose, and enhancing the curriculum through interdisciplinary education. In this way, we can also address root causes to prevent future substance-use epidemics.

We, the President's Fellows, believe that implementing the above recommendations will prepare UMB students to change the narrative of opioid use disorder and turn the tide of the opioid crisis in Baltimore, throughout Maryland, and wherever their careers may take them.

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Meet the Fellows



ALICE GRAHAM

She/her/hers University of Maryland School of Social Work & University of Maryland School of Medicine

Alice is dual degree student in the Master of Public Health and Master

of Social Work. She believes that the pervasive nature of the opioid epidemic and its continued impact on communities already subject to marginalization illustrates how social determinants of health interact with power dynamics, structural, institutional, and systemic racism and classism, reinforcing learned helplessness and the addiction cycle. A critical issue of this magnitude requires a large-scale effort, and UMB is uniquely positioned to effect change in how we face the opioid crisis in the region with multi-modal techniques and solutions, including understanding the interaction between biological, social, environmental, and psychological systems that contribute to these drug-seeking behaviors, and how clinicians and policymakers can collaborate to examine these complex issues. UMB has a particularly powerful role in addressing this crisis through its network of professionals with an interdisciplinary approach, including both rising trainees and current practitioners in the field. She is interested in how UMB, as a public institution, can explore opportunities to harness its power to address these matters of regional and national importance and how this project can act as a catalyst for future engagement in research.



CAMERAN BURT

He/him/his University of Maryland School of Medicine

Cameran is 4th year MD student applying into anesthesiology. He is excited to collaboratively develop a white paper on

the opioid epidemic because the knowledge and skills gained will serve as a great foundation to advocate for opioid stewardship as a physician.



CORINNE BOREL

She/her/hers University of Maryland School of Nursing

Corrine is a Doctorate of Nurse Practice Family Nurse Practitioner candidate '24, as well as a Maryland AHEC

scholar (a program designed to better address health disparities). She joined this effort to further professionals' accountability to ensure safe prescribing practices. It is also important to destigmatize those suffering from addiction. Many are suffering from depression and anxiety, as well, and it is important to provide more holistic services to support addressing personal and physical pain. She is a great fan of Surgeon General, Dr. V. Murthy's message on these topics.



JARED BOSS

He/him/his University of Maryland Francis King Carey School of Law

Jared is a JD/MPH. His interest in this year's topic stems from his passion for mental health. When he

studied neuroscience in undergrad, he realized that the United State's opioid epidemic was a pressing issue that would require an interdisciplinary effort to solve. The President's Fellows seemed like the perfect opportunity to have a tangible impact on this important issue."



KATHERINE SURKO

She/her/hers University of Maryland School of Social Work

Katherine is a MSW/MPH student at UMB and the Johns Hopkins Bloomberg School of Public Health. She is passionate about

the intersection between clinical counseling for opioid use disorder and public health policy and am also a BHWISE-IOWA (Behavioral Health Workforce Integration Service and Education-Interprofessional Opioid Workforce Advancement) fellow at the School of Social Work. She joined this project to learn more about the University's role in providing care for those with OUD, and looks forward to learning more from her peers across disciplines.



"JOHN" JI HUN YANG He/him/his University of Maryland School of Dentistry

John is a DDS student. He believes that equal opportunities for all individuals, regardless of racial, cultural, and

socioeconomic parameters, are crucial. His greatest point of interest when it comes to Diversity, Equity and Inclusion is to have an open dialogue between all individuals. During his time in the U.S. military he came to appreciate such open dialogues.



SARA CASE, MSPH She/her/hers University of Maryland School of Medicine

Sara is MD student. She believes the opioid epidemic is a public health emergency that necessitates an expansive,

multidisciplinary response to reduce exposure to opioids, curtail opioid overdose deaths, and treat people experiencing opioid use disorder with non-stigmatizing, person-centered care. Given the healthcare system's role in propagating the opioid epidemic, it is imperative to equip health and human services professionals with tools and resources to address opioid use disorder. She is excited to combine my passion for public health and medicine to advance UMB's response to the opioid epidemic and expose healthcare professionals to opioid use disorder early in their educational careers. She hopes the findings and recommendations inspire students across UMB to engage in research, advocacy, and clinical care that addresses the opioid epidemic in Baltimore and beyond.



SOMADINAUWA EZEKWU

She/her/hers University of Maryland School of Nursing

Somadinauwa is a BSN student. When thinking of Strategic Priorities for Diversity, Equity, and Inclusion, specifically in

terms of opioid use disorder, what comes to life is how socioeconomic factors play into opioid use disorder and how it may hinder the recovery process. She's learned how socioeconomic disparities impact individuals, and such individuals are more likely to develop opioid use disorder but she was very interested to learn how implementing measures to ensure diversity, equity, and inclusion leads to increased retention in treatment programs and will positively impact treatment efforts in individuals with opioid use disorder.



YVONNE IKHIDE

She/her/hers University of Maryland Graduate School

Yvonne is a student in the Regulatory Science program. Her interest in this year's topic stems from wanting to address

opioid addiction by tackling social inequity and poverty.



TAYLOR GRAHAM

She/her/hers University of Maryland School of Nursing

Taylor is in her final year of the DNP pediatric primary care program. Throughout her time as a nursing student, nurse,

and now nurse practitioner student, she has seen countless times how children and infants are affected and even influenced by parent and family illnesses, particularly those fighting opioid addiction. As pediatric providers, it is important to not only focus on the child but the family unit and dynamic as well, as they play an important role in the health and wellness of the child. She hopes to bring a fresh perspective to the symposium paper by focusing on how to not only fight the opioid epidemic but also find ways to prevent illicit drug use through our most vulnerable population.

