Opioid Use Disorder: Online Workshop

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A. Abstract

This learning resource is a 2-hour online workshop that covers a variety of topics relevant to opioid use disorder, emphasizing the patient perspective. The opioid crisis is a significant public health crisis, stemming from complex causes, and associated with increasing deaths from overdose.[1] While treatment options have expanded, the stigma of opioid use disorder continues to hinder appropriate patient-centered care.[3] The majority of rising fourth year medical students have been involved in the care of patient with an Opioid Use Disorder diagnosis. [4] Given the prevalence of opioid use disorder, overdose and withdrawal in both the clinical and community setting, it is crucial to educate and prepare medical students to provide optimal patient care in their future practices.[2] This curriculum is tailored to second or third-year medical students in terms of content and clinical application, highlighting patient experiences and barriers to care for patients with opioid use disorder. Its innovative elements include a series of brief but concise educational videos covering a variety of topics to educate students in an efficient, memorable, applicable manner. In addition, this resource can be uniquely utilized based on the student's availability. These videos are designed similarly to TikTok videos, which have a limit of 60 seconds, aimed to capture the viewer's attention while providing quality information. This may be through standardized patient interview videos, didactic presentations, and engaging visuals. Included throughout the session are questions to test students' knowledge and perception of the topics discussed, and to also gain a glimpse of what other students and trainees are thinking regarding these topics. Practice board-style questions for students enable them to apply their learning, focusing on high-yield information in the format of multiple-choice answers. [5,6] This workshop can be completed in the student's own time, with a certificate available upon completion of all the components. Students may also receive a white coat pin, demonstrating their proficiency in the topic, as well as allyship to their patients.

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1. Vadivelu, N., Kai, A. M., Kodumudi, V., Sramcik, J., & Kaye, A. D. (2018). The Opioid Crisis: a Comprehensive Overview. Current pain and headache reports, 22(3), 16. https://doi.org/10.1007/s11916-018-0670-z
2. Webster L. R. (2017). Risk Factors for Opioid-Use Disorder and Overdose. Anesthesia and analgesia, 125(5), 1741–1748. https://doi.org/10.1213/ANE.0000000000002496
3. Wood, E., & Elliott, M. (2020). Opioid Addiction Stigma: The Intersection of Race, Social Class, and Gender. Substance use & misuse, 55(5), 818–827. https://doi.org/10.1080/10826084.2019.1703750
4. Zerbo, E., Traba, C., Matthew, P., Chen, S., Holland, B. K., Levounis, P., . . . Lamba, S. (2020). DATA 2000 WAIVER training for medical students: Lessons learned from a medical school experience. Substance Abuse, 41(4), 463-467. doi:10.1080/08897077.2019.1692323
5. Khairalla, H., Vaynerchuk, L., Sherer, J. C., Dikdan, S., Zerbo, E. A., & Levounis, P. (2017). Ward wisdom: Psychiatry questions for medical students. North Charleston, South Carolina: CreateSpace Independent Publishing Platform.
6. Naqvi, M., Bonanno, P., Fowlie, G., Hughes, M., Zerbo, E., & Levounis, P. (2020). Ward Wisdom: Psychiatry Questions for Medical Students Written by Medical Students (3rd ed.). Denver, Colorado: Outskirts Press

B. Educational Objectives

As a result of this curriculum:

- Students will be able to recognize psychosocial influences on patients with opioid use disorder and will be able to discuss related barriers to treatment with similar patients in the future.
- Students will compare their own attitudes surrounding the topic of opioid use with those of their peers via interactive audience response software that will be updated as more responses are collected.
- Students will be able to identify common beliefs, attitudes, and concerns of patients and their families related to opioids and/or opioid use.
- Students will be able to describe commonly shared values between physicians and patients with respect to their opioid use, and the student will appreciate this commonality as an opportunity to build a therapeutic alliance.
- Students will evaluate different interviewing techniques/approaches as they are applied to assess, support, and manage patients with opioid use disorder.

C. Introduction

The curriculum will be delivered through a modern and integrative “TikTok” style platform in which students will engage with the curriculum through short intervals. Students complete the topics at their own convenience, as each topic should be able to be completed in 5 minutes at most (pre-question-if applicable-, video, and multiple-choice question completion and explanation).

Curriculum facilitators can be given the option to utilize the curriculum in either a mandatory or elective fashion.

If the curriculum employed is to be mandatory, it can be integrated into the 2nd Year Psychiatry pre-clinical block or the 3rd Year Psychiatry clinical rotation. We suggest 2-3% credit based upon successful completion of the session. If the curriculum is to be elective/voluntary, students who complete the curriculum may receive a pin symbolizing the completion of the training, as well as a certificate of completion.

D. Curriculum Design

At the beginning of the program, students will be introduced to a summary of the learning objectives for the overall program. For each topic, a brief summary of the topic’s learning

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objectives will be mentioned prior to the start of the video. For example: “Topic: Sex, Intimacy and Opioid Use Goal: Understanding how opioid use can affect patient’s intimate relationships.” At various points throughout the session, students will be asked questions regarding their previous knowledge and biases regarding specific topics prior to the presentation of the topic. For example: Which substance withdrawal is most likely to cause seizures? A) Cocaine B) Opioids C) Benzodiazepines D) MDMA. This example question would be asked before the topic of withdrawal.

Students’ prior knowledge will be activated through the multiple-choice questions asked at the end of each topic. This will allow students to make connections between the newly presented topics, while connecting them to prior knowledge. Additionally, the MCQs may be designed in an NBME-style format to serve as practice problems for board-style examinations. The answers to the multiple-choice questions should aim to be detailed and draw connections to knowledge acquired prior to the completion of the curriculum.

Student learning will be guided through an index which presents the proposed topics at the start of the application (the index will list all topics). Additionally, after each MCQ explanation, relevant resources and articles should be provided for students to further explore and expand their understanding. To close, the program should present an appendix with different additional resources (e.g., journal articles and textbook excerpts), schematics (e.g., explaining the manifestation and presentation of opioid overdose and withdrawal), and diagrams (e.g., presenting statistics regarding population: comorbidities, concurrent substance use, statistics regarding population racial, ethnic, and geographical backgrounds).

The workshop will address the following topics. Please refer to the Appendix for additional resources.

- Barriers to Safe Use
- Use Cessation
- Opioid Use, Race, and Ethnic Identity
- Opioid Use and Cultural Backgrounds
- Opioid Use and LGBTQ Identity
- Opioid Use, Housing, and Unemployment
- Opioid Use and Social Stigma
- Opioid Use and Federal Aid
- Impact of COVID-19 on Opioid Use
- Opioid Use as a Substitute for Other Substances
- Opioid Use, Sex, and Intimacy
- Opioid Use and Financial Cost
- Patterns in Routes of Administration
- Family/Caretaker Involvement in Opioid Use Monitoring
- Opioid Use and Prison System

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- First Encounter with Opioids
- Chronic Pain Patient Perspective of Opioids
- Experiencing Withdrawal
- Experiencing Overdose
- Witnessing Overdose
- Opioid Overdose as a Suicide Attempt
- Substance Use and Spirituality
- Stigma in Healthcare
- Opioid Use Recovery Programs (12 Step)
- Opioid use, Pregnancy, and Labor
- Opioid Use and Psychiatric Comorbidities
- Barriers to Medical Treatment for Substance Use Disorder (Obtaining Buprenorphine or Methadone)

There are approximately 25 topics total. Each topic may have a 1-minute video that will portray patient experiences through dialogue between a student doctor and standardized patients. The video will focus on the patient experience rather than traditional didactics. Five videos are available for download to support the curriculum and demonstrate what students could create to contribute to their learning. (see Appendix 1). Some may include occasional blurbs of text that connect the topic to broader areas of study and keep the student engaged.

If the session is delivered live and in smaller settings, interactive dialogue/discussion can be used after each topic and/or as time permits. Otherwise, the information would be on a website where students can begin and pause their learning as desired. Given that the information can be viewed through a web browser, the workshop can be accessed through phones, tablets, and computers for the convenience of the learner.

To assess whether medical students achieved the desired results, student knowledge, attitudes, and perceptions will be measured pre- and post-workshop. A questionnaire with items on a Likert may be administered before and after completion of the curriculum. Checks of understanding may be presented to the student as they work through the curriculum. Typically, this would be a multiple-choice question (MCQ) after the student completes the content associated with a particular topic. If the sessions are live, an audience response system may be employed throughout the curriculum to solicit student answers restricted to a word or phrase in response to a posed question. These answers can be compiled and shared back with the audience in an organized format (e.g., word cloud) to allow students to reflect on how their own knowledge, perceptions, and perspectives compare to those of their peers at one point in time.

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Appendix 1

Brief videos on these topics are available for download:

1. Methadone and Hesitancy
2. Opioid Use and Pregnancy
3. Opioid Use as a Suicide Attempt
4. Withdrawal from Patient's POV
5. Safe Use

Download from here:
https://drive.google.com/drive/folders/16arJfNmEV_NELrLosT5YtwkxOOp4u-OM

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Appendix 2

Topic	One/ Two liner	Useful references/web link / citation
Barriers to Safe Use	1) Injection vs. non-injection: IDUs show a higher rate of dependence, and co-occurring physical and psychological diagnoses/complaints 2) Needle exchange programs: needle and syringe exchange programs are effective in reducing risky behaviors related to injecting drug use, hence they are effective in reducing the spread of HIV	1) Injections vs. non injection: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3225003/ 2)Needle Exchange Programs: https://pubmed.ncbi.nlm.nih.gov/19949245/
Use Cessation	Patients looking to stop or reduce opioids may hope for better quality of life. Common concerns around opioid tapering relate to increased pain, lower quality of life, and withdrawal.	https://journals.sagepub.com/doi/full/10.1177/2049463720974053
Opioid Use, Race, and Ethnic Identity	"The percentage of substance use disorders and racial/ethnic minority status was unexpectedly highly correlated in the present treatment research samples."	https://doi.apa.org/doiLanding?doi=10.1037%2Fa0033161
Opioid Use and Cultural Backgrounds	Minority/Ethnically diverse patient populations may struggle to adhere to opioid use disorder treatment due to underlying feelings and emotions pertaining to vulnerability or other deeply held cultural beliefs. Providers, upon working with African American, Latino and other underrepresented communities should prescribe and pursue	https://nam.edu/the-american-opioid-epidemic-in-special-populations-five-examples/

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	various treatment models with a shared decision-making process at the center while also including significant others (e.g., family members, religious leaders), where appropriate.	
Opioid Use and LGBTQ Identity	Lifetime and past-year opioid misuse is elevated among LGB adults. Bisexual women are particularly at-risk, uniquely exhibiting disparities on high-risk injection use and OUD. Lower perceived risk of and greater access to heroin among LGB women may play a role in the onset or continuation of opioid misuse. Opioid misuse disparities among LGB adults are of substantial concern given the resultant elevated risk for fatal and non-fatal opioid overdose.	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6612451/
Opioid Use, Housing, and Unemployment	Despite a high correlation between OUD and housing instability, very few programs are currently aimed at addressing both aspects of patient centered care. The Housing First model emphasizes immediate access to housing with intensive supports and case management without the preconditions of sobriety or participation in supportive services. If Housing First services are integrated or coordinated with provision of MAT and substance use disorder (SUD) treatment, the model shows promise for assisting individuals with OUD and other SUDs to remain housed and attain recovery.	https://aspe.hhs.gov/basic-report/choice-matters-housing-models-may-promote-recovery-individuals-and-families-facing-opioid-use-disorder

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Opioid Use and Social Stigma	Stigma surrounding opioid use disorder treatment remains widespread even amongst the staff present at safe injection sites for example with some resources describing patients who rather unsafely use or receive drugs elsewhere at the risk of their own life to reduce shame triggers. The stigma spreads towards clinics and providers who declare their practice a "no opioid prescription zone" thus further isolating patients coupled with the lack of providers currently trained to prescribe buprenorphine.	https://www.drugabuse.gov/about-nida/noras-blog/2020/04/addressing-stigma-surrounds-addiction https://www.aha.org/bibliographylink-page/2018-09-28-addressing-stigma
Opioid Use and Federal Aid	There are two federal grants that states are eligible for from the SAMHSA: Opioid State Targeted Response grants and State Opioid Response grants. These grants are to go toward opioid addiction services. The case study referenced argues that continued federal support is likely to have an impact on reducing opioid misuse across the U.S.	https://pubmed.ncbi.nlm.nih.gov/31303359/
Impact of COVID-19 on Opioid Use	The COVID 19 pandemic has hurt strides made in the opioid epidemic, with figure from across the country showing a jump in deaths due to opioid overdose. Several factors are pointed to in explaining the regression: cancellation of support groups, less attention from public health officials, cash-strapped health care systems cutting addiction treatment, additional stressors taking a toll on patients in recovery driving them to relapse, drug supply	https://www.statnews.com/2021/02/16/as-pandemic-ushered-in-isolation-financial-hardship-overdose-deaths-reached-new-heights/ https://www.statnews.com/2020/07/16/opioid-overdoses-have-skyrocketed-amid-the-coronavirus-but-states-are-nevertheless-slashing-addiction-treatment-program-budgets/

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	chains becoming "unsettled" leading people to turn to unknown suppliers and counterfeit drugs unknowingly. Isolation-"addiction thrives in secrecy." Pandemic leaving individuals too frightened to seek care for addiction.	
Opioid Use as a Substitute for Other Substances	Study suggesting that decreases in heroin use was not associated with increase in use of other drugs.	https://www.sciencedirect.com/science/article/pii/S0376871606000743?casa_token=7WFX05jVF_MAAAAA:crH6CBBJy8Nmy5hOsxx561ou04qIu9C5tQvQEXoVjmKdd2iTgmrS5X_d78wMYBskYQLQ0juJ7eU
Opioid Use, Sex and Intimacy	“Insecure attachment, high fear of intimacy and low self-differentiation appear to characterize users enrolled in addiction treatment programs. Such characteristics may reflect a predisposition to substance problems, an effect of chronic substance problems, or conceivably both.”	https://pubmed.ncbi.nlm.nih.gov/15970395/
Opioid Use and Financial Cost	Average yearly cost to the opioid use disorder patient for obtaining drugs depends on use frequency, geographic location, and which prescription and synthetic opioids are available at the time... "Taken 3 times daily, an oxycodone prescription may cost about $361.35 per year without insurance, or $3,285 per year if purchased on the street;" " A 'baggie' (or small, single-use bag) of heroin typically costs between $5 and $20. In 2016, the United Nations Office on Drugs and Crime (UNODC) reported the average price of heroin in the U.S. was $152 per gram (which is usually divided into 20 bags)."	https://www.addictioncenter.com/drugs/how-much-do-drugs-cost/

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Patterns in Routes of Administration	"Pills may be crushed in the mouth, insufflated, smoked, or injected with few physical barriers to use, and a transdermal patch's active pharmaceutical ingredients may be chewed, sucked, or extracted and prepared for injection. It is well substantiated that drugs used by insufflation and injection enter the bloodstream and hasten the opioid's crossing of the blood–brain barrier, generating a faster onset of action, which in turn is associated with a greater risk of overdose and of developing OUD."	https://www.ncbi.nlm.nih.gov/books/NBK458661/#
Family/Caretaker Involvement in Opioid Use Monitoring	Patients and their family report better outcomes when the patient, caregiver, and physician develop shared treatment plans. But family involvement in opioid monitoring can also be a source of relationship stress, especially when there are differing perspectives about what constitutes effective pain management vs misuse and abuse.	https://www.tandfonline.com/doi/full/10.1080/08897077.2015.1124479
Opioid Use and Prison System	In this carefully conducted systematic review, we found that correctional facilities should scale up OAT among incarcerated persons with OUD. The strategy is likely to decrease opioid-related overdose and mortality, reduce opioid use and other risky behaviors during and after incarceration, and improve retention in addiction treatment after prison release. Immediate OAT after prison release and additional preventive strategies such as the distribution of NLX	https://pubmed.ncbi.nlm.nih.gov/31891578/

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	kits to at-risk individuals upon release greatly decrease the occurrence of opioid-related overdose and mortality. In an effort to mitigate the impact of the opioid-related overdose crisis, it is crucial to scale up OAT and opioid-related overdose prevention strategies (e.g., NLX) within a continuum of treatment before, during, and after incarceration.	
First Encounter with Opioids	Opioid analgesic prescribing and associated overdose deaths both peaked around 2011 and are in long-term decline; the sharp overdose increase recorded in 2014 was driven by illicit fentanyl and heroin. Nonmethadone prescription opioid analgesic deaths, in the absence of co-ingested benzodiazepines, alcohol, or other central nervous system/respiratory depressants, are infrequent. Within five years of initial prescription opioid misuse, 3.6% initiate heroin use.	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6018937/
Chronic Pain Patient Perspective of Opioids	Opioids are perceived by many patients as "serious" prescriptions-- controlled substances with associations to terminal diseases, or related to drugs and addiction, but despite this, the patients may still accept opioids due to intensity of their pain. Due to their concerns, many patients with severe chronic pain will use a variety of strategies to evaluate, avoid, reduce, self-regulate, and replace opioids. This can be a crucial element in the	https://onlinelibrary.wiley.com/doi/full/10.1111/hex.13089 https://pubmed.ncbi.nlm.nih.gov/26349901/

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	therapeutic alliance between clinician and a patient with opioid use disorder.	
Experiencing Withdrawal	Narrative published in Health Affairs written by a patient's experience with opioid withdrawal. The second link is a recent paper on clinically significant opioid withdrawal phenotypes and how they may inform treatment.	https://www.healthaffairs.org/doi/full/10.1377/hlthaff.2016.0347 https://onlinelibrary.wiley.com/doi/full/10.1111/adb.12680?casa_token=Qnn09sJUBSEAAAAA%3A_gEbfAKK7sK9uWhzNEQmBePYnUoFeS7nlbRfA_htVGKccWUyuQAfYrDyo_L7dlvjFjs6Xmn7Aryzlkc
Experiencing Overdose	This study relies on patient narratives to uncover factors that contributed to overdose from the perspective of the patient.	https://www.sciencedirect.com/science/article/pii/S0955395919302348?casa_token=jxWOHWQlf7gAAAAA:E5qms7JKcFVLjQ950CR5tFwkCYxuQyc3uWg255HqPZNJq1ApzztEraiJhSrxvBnnixRq-k30Alc
Witnessing Overdose	Importance and value of educating/training laypeople on how to recognize and treat overdose.	https://pubmed.ncbi.nlm.nih.gov/26086633/
Opioid Overdose as a Suicide Attempt	There has been a highly corelated association between patients suffering from chronic pain and cases of depression. Risk factors for suicidal ideation are so high in this population that it must be assumed that some proportion of those who die of drug overdoses might have intended to end their lives, not just temporarily relieve their pain. Based on clinical interview of depression interviewing, of note is that drug overdose was the most reported plan for committing suicide (75%). Two prime candidates for mediating the relationship between pain and suicidal ideation are sleep disorders and catastrophizing.	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3125689/

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Substance Use and Spirituality	In a study, the most prevalent factors associated with opioid dependence relapse consist of relation with an individual who uses opioids (friend), "unemployment, living expenses, family conflicts, and somatic pain." Furthermore, patients who have relapsed scored significantly lower on spiritual well-being in comparison to non-relapse patients ($p<0.001$).	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5427411/
Stigma in Healthcare	The stigma of drug addiction is associated with negative perceptions and can be a barrier to treatment. With the rise in opioid overdose deaths, understanding stigmatizing attitudes towards individuals who use opioids is a crucial matter.	https://pubmed.ncbi.nlm.nih.gov/29499554/
Opioid Use Recovery Programs (12 step)	it is feasible to administer medications, including partial opioid agonists like buprenorphine, within the context of 12-step based treatment and taking these medications as prescribed is associated with favorable outcomes.	https://pubmed.ncbi.nlm.nih.gov/31370985/
Opioid use, Pregnancy, and Labor	Screening for substance use should be a part of comprehensive obstetric care and should be done at the first prenatal visit in partnership with the pregnant woman. Providers must be ready to engage in a longitudinal relationship with their patient which requires multidisciplinary long-term follow-up and should include medical, developmental, and social support. The care	https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2017/08/opioid-use-and-opioid-use-disorder-in-pregnancy

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	provided during pregnancy must be adjusted to account for higher rates of co-morbidities such as expanded sexually transmitted infection [STI] testing, additional ultrasound examinations to assess fetal weight if there is concern for fetal growth abnormalities, and consultations with several types of health care providers.	
Opioid Use and Psychiatric Comorbidities	(1): At an opioid clinic, it was found that over 80% of patients surveyed described significant depression and 60% significant anxiety (2): ADHD was found to be present in ¼ patient with SUD who was surveyed.	(1)(https://journals.sagepub.com/doi/full/10.1177/2049463720974053) + (2): https://www.sciencedirect.com/science/article/pii/S0376871611005291
Barrier to Medical Treatment for Substance Use Disorder (Obtaining Buprenorphine or Methadone)	1) Methadone: "financial barriers related to methadone treatment, lack of awareness about methadone treatment, negative attitudes regarding using methadone, worries about methadone's side effects, social stigma ascribed to methadone therapy, and systemic barriers to methadone treatment" are all barriers to receiving methadone treatment. 2) Provider buprenorphine barriers: "(1) insufficient training and education on opioid use disorder treatment, (2) lack of institutional and clinician peer support, (3) poor care coordination, (4) provider stigma, (5) inadequate reimbursement from private and public insurers, and (6) regulatory hurdles to obtain the waiver needed to prescribe buprenorphine in non-addiction specialty treatment settings".	1) Methadone: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5996552/ 2) Buprenorphine (provider barriers): https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6330240/

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References

Bezrutczyk, D. (2020, September 18). How much do drugs cost: The steep price of addiction. Retrieved March 09, 2021, from https://www.addictioncenter.com/drugs/how-much-do-drugs-cost/

Blanco, C., Ali, M. M., Beswick, A., Drexler, K., Hoffman, C., Jones, C. M., . . . Coukell, A. (2020). The American opioid epidemic in Special Populations: Five examples. NAM Perspectives. doi:10.31478/202010b

Bonnie, R. J., Ford, M. A., & Phillips, J. (2017). Pain management and the opioid epidemic: Balancing societal and individual benefits and risks of prescription opioid use. Washington, DC: The National Academies Press.

Chang, J. S., Behar, E., & Coffin, P. O. (2019). Narratives of people who inject drugs on factors contributing to opioid overdose. International Journal of Drug Policy, 74, 26-32. doi:10.1016/j.drugpo.2019.07.038

Cheatle M. D. (2011). Depression, chronic pain, and suicide by overdose: on the edge. Pain medicine (Malden, Mass.), 12 Suppl 2(Suppl 2), S43–S48. https://doi.org/10.1111/j.1526-4637.2011.01131.x

Darke, S., Williamson, A., Ross, J., & Teesson, M. (2006). Reductions in heroin use are not associated with increases in other drug use: 2-year findings from the Australian Treatment Outcome Study. Drug and Alcohol Dependence, 84(2), 201-205. doi:10.1016/j.drugalcdep.2006.03.004

Dunn, K. E., Weerts, E. M., Huhn, A. S., Schroeder, J. R., Tompkins, D. A., Bigelow, G. E., & Strain, E. C. (2018). Preliminary evidence of different and clinically meaningful opioid withdrawal phenotypes. Addiction Biology, 25(1). doi:10.1111/adb.12680

Goodyear, K., Haass-Koffler, C. L., & Chavanne, D. (2018). Opioid use and stigma: The role of gender, language and precipitating events. Drug and alcohol dependence, 185, 339–346. https://doi.org/10.1016/j.drugalcdep.2017.12.037

Haffajee, R. L., Bohnert, A., & Lagisetty, P. A. (2018). Policy Pathways to Address Provider Workforce Barriers to Buprenorphine Treatment. American journal of preventive medicine, 54(6 Suppl 3), S230–S242. https://doi.org/10.1016/j.amepre.2017.12.022

High, P. M., Marks, K., Robbins, V., Winograd, R., Manocchio, T., Clarke, T., Wood, C., & Stringer, M. (2020). State targeted response to the opioid Crisis grants (opioid STR) program: Preliminary findings from two case studies and the national cross-site evaluation. Journal of substance abuse treatment, 108, 48–54. https://doi.org/10.1016/j.jsat.2019.06.008

Khazaee-Pool, M., Moeeni, M., Ponnet, K., Fallahi, A., Jahangiri, L., & Pashaei, T. (2018). Perceived barriers to methadone maintenance treatment among Iranian opioid users. International journal for equity in health, 17(1), 75. https://doi.org/10.1186/s12939-018-0787-z

Klein, A. A., & Seppala, M. D. (2019). Medication-assisted treatment for opioid use disorder within a 12-step based treatment center: Feasibility and initial results. Journal of substance abuse treatment, 104, 51–63. https://doi.org/10.1016/j.jsat.2019.06.009

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Levounis, P. Addiction: Not a Hangnail, But Not Poverty Either. Acad Psychiatry 42, 277–278 (2018). https://doi.org/10.1007/s40596-018-0893-7

Levounis, P., Arnaout, B., & Marienfeld, C. (2017). Motivational interviewing for clinical practice (2nd ed.). Washington, D.C: American Psychiatric Association Publishing.

Levounis, P., & Yarbrough, E. (2020). Pocket guide to LGBTQ mental health: Understanding the spectrum of gender and sexuality. Washington, D.C.: American Psychiatric Association Publishing.

Levounis, P., Zerbo, E. A., & Aggarwal, R. (2016). Pocket Guide to Addiction Assessment and Treatment. Washington, D.C.: American Psychiatric Publishing.

Malta, M., Varatharajan, T., Russell, C., Pang, M., Bonato, S., & Fischer, B. (2019). Opioid-related treatment, interventions, and outcomes among incarcerated persons: A systematic review. PLoS medicine, 16(12), e1003002. https://doi.org/10.1371/journal.pmed.1003002

McFarling, U. L. (2021, February 15). As the pandemic ushered in isolation and financial hardship, overdose deaths reached new heights. Retrieved March 08, 2021, from https://www.statnews.com/2021/02/16/as-pandemic-ushered-in-isolation-financial-hardship-overdose-deaths-reached-new-heights/

Noormohammadi, M. R., Nikfarjam, M., Deris, F., & Parvin, N. (2017). Spiritual Well-Being and Associated Factors with Relapse in Opioid Addicts. Journal of clinical and diagnostic research: JCDR, 11(3), VC07–VC10. https://doi.org/10.7860/JCDR/2017/22819.9587

Novak, S. P., & Kral, A. H. (2011). Comparing injection and non-injection routes of administration for heroin, methamphetamine, and cocaine users in the United States. Journal of addictive diseases, 30(3), 248–257. https://doi.org/10.1080/10550887.2011.581989

Paterson, C., Ledgerwood, K., Arnold, C., Hogg, M., Xue, C., & Zheng, Z. (2016). Resisting Prescribed Opioids: A Qualitative Study of Decision Making in Patients Taking Opioids for Chronic Noncancer Pain. Pain medicine (Malden, Mass.), 17(4), 717–727. https://doi.org/10.1111/pme.12921

Pfefferle, S. G., Karon, S. S., & Wyant, B. (2019, November 25). Choice matters: Housing models that may promote recovery for individuals and families facing opioid use disorder. Retrieved March 08, 2021, from https://aspe.hhs.gov/basic-report/choice-matters-housing-models-may-promote-recovery-individuals-and-families-facing-opioid-use-disorder

Quinlan, J., Willson, H., & Grange, K. (2020). Hopes and fears before opioid tapering: A quantitative and qualitative study of patients with chronic pain and long-term opioids. British Journal of Pain, 204946372097405. doi:10.1177/2049463720974053

Renner, John A., Jr., Petros Levounis, and Anna T. LaRose, Eds. Office-Based Buprenorphine Treatment of Opioid Use Disorder, Second Edition. Washington, D.C.: American Psychiatric Association Publishing, 2018.

Rieder, T. N. (2017). In opioid withdrawal, with no help in sight. Health Affairs, 36(1), 182-185. doi:10.1377/hlthaff.2016.0347

Rose M. E. (2018). Are Prescription Opioids Driving the Opioid Crisis? Assumptions vs Facts. Pain medicine (Malden, Mass.), 19(4), 793–807. https://doi.org/10.1093/pm/pnx048

Schuler, M. S., Dick, A. W., & Stein, B. D. (2019). Sexual minority disparities in opioid misuse, perceived heroin risk and heroin access among a national sample of US adults. Drug and alcohol dependence, 201, 78–84. https://doi.org/10.1016/j.drugalcdep.2019.04.014

Sokolow, A. (2020, August 03). States slash addiction treatment budgets, even as overdoses spike. Retrieved March 09, 2021, from https://www.statnews.com/2020/07/16/opioid-overdoses-have-skyrocketed-amid-the-coronavirus-but-states-are-nevertheless-slashing-addiction-treatment-program-budgets/

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De Sola, H., Maquibar, A., Failde, I., Salazar, A., & Goicolea, I. (2020). Living with opioids: A qualitative study with patients with chronic low back pain. Health Expectations, 23(5), 1118-1128. doi:10.1111/hex.13089

Stumbo, S. P., Yarborough, B. J., Janoff, S. L., Yarborough, M. T., McCarty, D., & Green, C. A. (2015). A qualitative analysis of family involvement in prescribed opioid medication monitoring among individuals who have experienced opioid overdoses. Substance Abuse, 37(1), 96-103. doi:10.1080/08897077.2015.1124479

Takács, I. G., & Demetrovics, Z. (2009). [The efficacy of needle exchange programs in the prevention of HIV and hepatitis infection among injecting drug users]. Psychiatria Hungarica : A Magyar Pszichiatriai Tarsasag tudomanyos folyoirata, 24(4), 264–281.

Thorberg, F. A., & Lyvers, M. (2006). Attachment, fear of intimacy and differentiation of self among clients in substance disorder treatment facilities. Addictive behaviors, 31(4), 732–737. https://doi.org/10.1016/j.addbeh.2005.05.050

Van Emmerik-van Oortmerssen, K., Van de Glind, G., Van den Brink, W., Smit, F., Crunelle, C. L., Swets, M., & Schoevers, R. A. (2012). Prevalence of attention-deficit hyperactivity disorder in substance use disorder patients: A meta-analysis and meta-regression analysis. Drug and Alcohol Dependence, 122(1-2), 11-19. doi:10.1016/j.drugalcdep.2011.12.007

Volkow, N. (2020, October 26). Addressing the stigma that surrounds addiction. Retrieved March 08, 2021, from https://www.drugabuse.gov/about-nida/noras-blog/2020/04/addressing-stigma-surrounds-addiction

Wheeler, E., Jones, T. S., Gilbert, M. K., Davidson, P. J., & Centers for Disease Control and Prevention (CDC) (2015). Opioid Overdose Prevention Programs Providing Naloxone to Laypersons - United States, 2014. MMWR. Morbidity and mortality weekly report, 64(23), 631–635.

Zerbo, E., Traba, C., Matthew, P., Chen, S., Holland, B. K., Levounis, P., Nelson, L. S., & Lamba, S. (2020). DATA 2000 waiver training for medical students: Lessons learned from a medical school experience. Substance abuse, 41(4), 463–467. https://doi.org/10.1080/08897077.2019.1692323

Funding for this initiative was made possible (in part) by grant no. 1H79TI083343 from SAMHSA. The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government.