



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



Addressing racial & socioeconomic disparities in access to medications for opioid use disorder amid COVID-19

Max Jordan Nguemeni Tiako ^{*}

^a Yale School of Medicine, United States of America

^b Center for Emergency Care and Policy Research, Perelman School of Medicine at the University of Pennsylvania, United States of America

The coronavirus disease 2019 (COVID-19) pandemic has created a devastating public health crisis, posing significant challenges for health care delivery in the US. The changes that the health care system implemented and the changes in the provision of social services have impacted efforts to address the ongoing opioid epidemic, and may worsen existing racial/ethnic and socioeconomic disparities in access to treatment for opioid use disorder (OUD). Pre-COVID-19, research overlooked and the media excluded from its coverage the racial disparities in access to medications for OUD (MOUD) and the increasing rates of opioid overdoses in Black communities surrounding the opioid epidemic (James & Jordan, 2018). Along with the disproportionately high rates of COVID-19 deaths among Black, Hispanic, and Native people (Gross et al., 2020), the social conditions that the pandemic has brought about are adding to the worsening impact of the opioid epidemic with documented overdose spikes. A recent study showed that people with a recent diagnosis of substance use disorder (SUD), and even more so those with OUD, were at significantly increased risk of COVID-19 compared to people without SUDs. The study also found that Black people with OUD were at greater risk of COVID-19, and Black people with OUD and COVID-19 had greater odds of hospitalization and mortality compared to their white counterparts (Wang et al., 2020). The preexisting disparities in access to MOUD may be contributing to the increased risk of COVID-19 among Black people with OUD.

This commentary seeks to address the latter, and is organized in three parts. First, I give an overview of the history and existing landscape of disparities in access to opioid agonist therapies in the U.S. Then, I provide an overview of changes to the provision of MOUD in response to the COVID-19 pandemic. Last, I propose short- and long-term solutions to address racial and socioeconomic disparities in access to MOUD.

Historical context

Methadone, buprenorphine, and naltrexone are the cornerstone of FDA-approved treatments for OUD (Edelman et al., 2018). Methadone, a

full opioid agonist, and buprenorphine, a partial opioid agonist, are associated with decreased OUD mortality (Wakeman et al., 2020). The U.S. federally regulates the dispensing of methadone and buprenorphine. Most patients who receive methadone attend certified opioid treatment programs (OTPs) most days of the week and must take their medication under supervision. Some are able to receive a multi-day supply (“take-homes”) at their providers’ discretion. Patients who are treated with buprenorphine are able to receive office-based therapy (OBT) from waived providers, much like any other clinic visit, and retrieve their prescription from a pharmacy (Hansen & Roberts, 2012). Their provider determines the frequency at which they see the provider to monitor symptoms and renew their prescription, and this is subject to change based on the patient-provider relationship.

The expansion of methadone and buprenorphine use has contributed to improved treatment for OUD within a medical model: like for other chronic diseases, evidence-based treatment occurs with medications (Volkow et al., 2019). Yet the “medicalization” of OUD treatment is situated in a long history of differential marketing and access along racial lines. The FDA approved buprenorphine for OUD treatment in 2002 (Diversion Control Division, 2019). Reckitt-Benckiser pharmaceuticals’ marketing strategy for buprenorphine involved an Internet-based campaign with a physician referral service (“Patient/Provider Matching System- TreatmentMatch.org,” n.d.) and public service announcements featuring white, middle-class people with OUD (“Mike’s Story - Buprenorphine Public Service Announcements and Short Web Stories,” n.d.). Decades prior, in 1972, upon its FDA approval for opioid addiction treatment (Rettig & Yarmolinsky, 1995), methadone was wielded as a disciplining mechanism: one of the measures of success was that it reduced crime (Bourgeois, 2000). This approach, in addition to protests from neighborhood associations at the time of the creation of methadone clinics, led to today’s prevalence of OTPs in majority Black and Hispanic communities. Certainly, methadone is the most suitable treatment option for some: among patients with severe OUD requiring high doses of opioid agonists, methadone is more efficacious in

^{*} Yale School of Medicine, 367 Cedar St, New Haven, CT 06511, United States of America.

E-mail address: Max.tiako@yale.edu.

achieving retention in treatment (Mattick et al., 2014). Still, among those for whom buprenorphine and methadone are equally effective, patients deem buprenorphine a tool of freedom and normalcy, given the restrictive nature of methadone treatment programs. Some patients even describe methadone as liquid shackles, while those transitioned from methadone to buprenorphine express feeling “freed” and “normal again” (Harris, 2015). This research shows that the medicalization of OUD is tiered along racial lines.

Disparities in access to MOUD

Racial disparities in overall MOUD access are a significant feature of the current addiction treatment landscape. Among patients who experience non-fatal overdoses, Black patients are half as likely to obtain follow-up appointments for OUD care after discharge from the emergency room (Kilaru et al., 2020). In terms of access to buprenorphine compared to methadone, a recent nationwide county-level evaluation of access to methadone and buprenorphine showed that racial segregation predicts differences in access to both medications (Goedel et al., 2020), and even at the regional level, neighborhood demographic makeup drives disparities in access to both medications (Hansen et al., 2013). While there has been an overall uptake of buprenorphine as a treatment for OUD, a 2018 study showed that it remains primarily accessible to white people, and to people who are beneficiaries of employer-based insurance (Roberts et al., 2018). Still, many buprenorphine prescribers only accept cash payments (Grimm, 2020; Stein et al., 2018). These disparities are particularly concerning in light of recent reports of drug overdose spikes during the pandemic, disproportionately affecting Black and Hispanic communities (“Drug Overdoses Spike During Pandemic: Coronavirus Live Updates: NPR,” n.d.).

Response to the COVID-19 pandemic

Key strategies to reduce the spread of COVID-19, such as social distancing, have led to significantly reduced in-person health contact, and an uptake of telemedicine. The Substance Abuse and Mental Health Services Administration (SAMHSA) released temporary guidelines regarding the provision of methadone, in which it recommended that providers allow 14- to 28-day take-homes depending on their patients’ risk profiles; however, implementation is variable among individual states (Samhsa, n.d.). Furthermore, these new guidelines do not lift the requirement for in-person patient assessment prior to initiation of methadone. With take-homes, there is an increased risk of overdose not only for the patients, but for their families as well: Methadone is a potent and long-acting, full opioid agonist, and dosing is important to prevent overdose, especially in the first month of initiation (Sordo et al., 2017). Safe storage of take-homes and easy access to naloxone are paramount to safety, especially for children in the home (Finkelstein et al., 2017; Khan et al., 2019). Conversely, due to its partial agonist properties, buprenorphine (prescribed and nonprescribed) is associated with lower risk of overdose (Carlson et al., 2020; Wightman et al., 2020). Additionally, providers who prescribe buprenorphine are able to use telemedicine to initiate and refill prescriptions for their patients (Davis & Samuels, 2020). For patients who were previously treated with buprenorphine, there is thus relatively less potential for disruption in their access to MOUD, while hurdles and safety concerns remain for patients treated with methadone. Relatedly, a study from the largest nonprofit health system in Massachusetts showed that during the COVID-19 surge, there was an increase in mental health/SUD visits (driven by telehealth) but only among white patients, whereas during the partial reopening of in-person visits, there was a decrease in such visits among Black and Hispanic patients (Yang et al., 2020).

Proposed solutions

The COVID-19 pandemic is producing a “new normal” in the

provision of medical care that poses challenges and opportunities for addiction treatment. Opportunities remain to expand access to buprenorphine, and to reduce the burden associated with methadone provision to reduce racial disparities in access to MOUD, and also reduce the risk of undue exposure to the SARS-COV-2 virus. I propose three guiding principles for OUD treatment reform in the context of COVID-19 that will address racial disparities in treatment. First, in the short term, we must expand the workforce of providers who can prescribe buprenorphine: The American Society of Addiction Medicine and the American College of Medical Toxicology have previously endorsed lifting restriction that require providers to complete an 8- (for physicians) or 24-h course (for nurse practitioners and physician associates) to be able to prescribe buprenorphine (Knopf, 2019; Marino et al., 2019). For providers who cite time constraints and regulatory barriers as hurdles to prescribing buprenorphine and treating OUD, lifting this requirement would likely give them the opportunity to initiate treatment with buprenorphine, and either continue, or refer patients to addiction specialists after initiation (Andraka-Christou & Capone, 2018).

Second, patients newly diagnosed with OUD must be offered the full range of MOUD options, which increases patient choice and, therefore, may enhance treatment adherence (Yarborough et al., 2016). Patients who currently receive methadone must be offered the option to transition to buprenorphine if clinically feasible, as this transition is complex and may be unfavorable to some patients. Individuals who are incarcerated and on parole should be given the same options, as evidence shows that currently, access to MOUD in detention centers is considerably low (Sufrin et al., 2020), and court personnel attitudes toward MOUD may influence which services people access based on referrals (Reichert & Gleicher, 2019). For instance, a study showed that court personnel’s attitudes toward naltrexone were significantly more positive compared to their attitudes toward buprenorphine and methadone (Andraka-Christou et al., 2019); however, while FDA-approved for OUD, naltrexone does not confer mortality benefits, unlike buprenorphine and methadone do (Morgan et al., 2019; Wakeman et al., 2020).

Third, for patients who wish to continue receiving methadone, local health departments and OTPs should organize home deliveries, such as the initiative launched in New York City (“NYC Begins Home Methadone Deliveries. Will It Have Lasting Impact on the Rules?,” n.d.). Such a procedure would improve accessibility for people with disabilities, limited transportation, and otherwise limiting responsibilities such as child and elder care. In the long term, policies should change in favor of making methadone available in pharmacies, as is the case in Canada. A study showed that pharmacy-led methadone dispensing would significantly reduce the rural-urban disparity in access to MOUD, as rural census tracts have disproportionately long drive times to OTPs, many of which are located in urban settings (Joudrey et al., 2020). Furthermore, this would contribute to addressing the stigma associated with receiving MOUD, especially through OTPs.

Call to action

The introduction of telemedicine in the provision of buprenorphine, including treatment initiation, puts patients at the center of policy-making and health care decisions, but there is more to do. Expanding the workforce of providers who can prescribe buprenorphine, lowering barriers to access to MOUD, and undoing systems that further stigmatize OUD and people who use drugs are important steps that we need to take to reduce racial and socioeconomic disparities in access to MOUD, while minimizing each patient’s risk of contracting the SARS-CoV-2 virus in the process of seeking care. These changes, while important during the pandemic, should not be limited to this moment; providers and treatment programs should expand upon them to further increase access to MOUD. Decades of national drug policy have failed to address disparities in access to evidence-based treatment and outcomes. As health care organizations renew their commitment to stand against systemic racism in light of ongoing social movements (“Medical Organizations Against

Police Brutality - Physicians for Criminal Justice Reform," n.d.), policymakers and health systems must enact relevant policies to successfully fight the opioid epidemic and bring equity to treatment access and patient outcomes.

Funding

None.

CRediT authorship contribution statement

Max Jordan Nguemeni Tiako, MS was responsible for the conceptualization, writing (original draft, reviewing & editing).

Conceptualization

Writing - Review & Editing

Visualization

Writing - Original Draft

Declaration of competing interest

None.

Acknowledgements

The author thanks Benjamin Oldfield, MD, MHS; Zachary Meisel, MD, MPH, MSHP, Helena Hansen, MD, PhD for helpful comments.

References

- Andraka-Christou, B., & Capone, M. J. (2018). A qualitative study comparing physician-reported barriers to treating addiction using buprenorphine and extended-release naltrexone in U.S. office-based practices. *International Journal of Drug Policy*, 54, 9–17. <https://doi.org/10.1016/j.drugpo.2017.11.021>.
- Andraka-Christou, B., Gabriel, M., Madeira, J., & Silverman, R. D. (2019). Court personnel attitudes towards medication-assisted treatment: A state-wide survey. *Journal of Substance Abuse Treatment*, 104, 72–82. <https://doi.org/10.1016/j.jsat.2019.06.011>.
- Bourgeois, P. (2000). Disciplining addictions: The bio-politics of methadone and heroin in the United States. *Culture, Medicine and Psychiatry*, 24(2), 165–195. <https://doi.org/10.1023/A:1005574918294>.
- Carlson, R. G., Daniulaityte, R., Silverstein, S. M., Nahhas, R. W., & Martins, S. S. (2020). Unintentional drug overdose: Is more frequent use of non-prescribed buprenorphine associated with lower risk of overdose? *International Journal of Drug Policy*, 79, 102722. <https://doi.org/10.1016/j.drugpo.2020.102722>.
- Davis, C. S., & Samuels, E. A. (2020). Opioid policy changes during the COVID-19 pandemic - and beyond. *Journal of Addiction Medicine*, 14(4). <https://doi.org/10.1097/ADM.0000000000000679>.
- Diversion Control Division, D. (2019). *BUPRENORPHINE (Trade Names: Buprenex®, Suboxone®, Subutex®)*.
- Drug Overdoses Spike During Pandemic :: Coronavirus Live Updates :: NPR. (n.d.). Retrieved August 29, 2020, from <https://www.npr.org/sections/coronavirus-live-updates/2020/08/13/901627189/u-s-sees-deadly-drug-overdose-spike-during-pandemic>.
- Edelman, E. J., Oldfield, B. J., & Tetrault, J. M. (2018, July 1). *Office-based addiction treatment in primary care: Approaches that work*. Medical Clinics of North America. W. B. Saunders. <https://doi.org/10.1016/j.mcna.2018.02.007>.
- Finkelstein, Y., MacDonald, E. M., Gonzalez, A., Sivilotti, M. L. A., Mamdani, M. M., & Juurlink, D. N. (2017). Overdose risk in young children of women prescribed opioids. *Pediatrics*, 139(3). <https://doi.org/10.1542/peds.2016-2887>.
- Goedel, W. C., Shapiro, A., Cerdá, M., Tsai, J. W., Hadland, S. E., & Marshall, B. D. L. (2020). Association of racial/ethnic segregation with treatment capacity for opioid use disorder in counties in the United States. *JAMA Network Open*, 3(4), Article e203711. <https://doi.org/10.1001/jamanetworkopen.2020.3711>.
- Grimm, C. A. (2020). *Geographic disparities affect access to buprenorphine services for opioid use disorder*.
- Gross, C. P., Essien, U. R., Pasha, S., Gross, J. R., Wang, S.-Y., & Nunez-Smith, M. (2020). Racial and ethnic disparities in population-level Covid-19 mortality. *Journal of General Internal Medicine*, 1. <https://doi.org/10.1007/s11606-020-06081-w>.
- Hansen, H. B., & Roberts, S. K. (2012). Two tiers of biomedicalization: Methadone, buprenorphine, and the racial politics of addiction treatment. *Critical Perspectives on Addiction*, 14, 79–102. [https://doi.org/10.1108/S1057-6290\(2012\)0000014008](https://doi.org/10.1108/S1057-6290(2012)0000014008).
- Hansen, H. B., Siegel, C. E., Case, B. G., Bertollo, D. N., DiRocco, D., & Galanter, M. (2013). Variation in use of buprenorphine and methadone treatment by racial, ethnic, and income characteristics of residential social areas in New York City. *Journal of Behavioral Health Services and Research*, 40(3), 367–377. <https://doi.org/10.1007/s11414-013-9341-3>.
- Harris, S. (2015). To be free and normal: Addiction, governance, and the therapeutics of buprenorphine. *Medical Anthropology Quarterly*, 29(4), 512–530. <https://doi.org/10.1111/maq.12232>.
- James, K., & Jordan, A. (2018). The opioid crisis in black communities. *Journal of Law, Medicine and Ethics*, 46(2), 404–421. <https://doi.org/10.1177/1073110518782949>.
- Joudrey, P. J., Chadi, N., Roy, P., Morford, K. L., Bach, P., Kimmel, S., ... Calcaterra, S. L. (2020). Pharmacy-based methadone dispensing and drive time to methadone treatment in five states within the United States: A cross-sectional study. *Drug and Alcohol Dependence*, 107968. <https://doi.org/10.1016/j.drugalcdep.2020.107968>.
- Khan, N. F., Bateman, B. T., Landon, J. E., & Gagne, J. J. (2019). Association of opioid overdose with opioid prescriptions to family members. *JAMA Internal Medicine*, 179(9), 1186–1192. <https://doi.org/10.1001/jamainternmed.2019.1064>.
- Kilaru, A. S., Xiong, A., Lowenstein, M., Meisel, Z. F., Perrone, J., Khatri, U., ... Delgado, M. K. (2020). Incidence of treatment for opioid use disorder following nonfatal overdose in commercially insured patients. *JAMA Network Open*, 3(5), Article e205852. <https://doi.org/10.1001/jamanetworkopen.2020.5852>.
- Knopf, A. (2019). ASAM supports eliminating the x-waiver for buprenorphine. *Alcoholism & Drug Abuse Weekly*, 31(29), 6–7. <https://doi.org/10.1002/adaw.32440>.
- Marino, R., Perrone, J., Nelson, L. S., Wiegand, T. J., Schwarz, E. S., Wax, P. M., & Stolbach, A. I. (2019). ACMT position statement: Remove the waiver requirement for prescribing buprenorphine for opioid use disorder. *Journal of Medical Toxicology*, 15(4), 307–309. <https://doi.org/10.1007/s13181-019-00728-9>.
- Mattick, R. P., Breen, C., Kimber, J., & Davoli, M. (2014, February 6). Buprenorphine maintenance versus placebo or methadone maintenance for opioid dependence. In *Cochrane database of systematic reviews*. John Wiley and Sons Ltd. <https://doi.org/10.1002/14651858.CD002207.pub4>.
- Medical Organizations Against Police Brutality - Physicians for Criminal Justice Reform. (n.d.). Retrieved August 29, 2020, from <https://pcfjreform.org/medical-organizations-against-police-brutality/>.
- Mike's Story - Buprenorphine Public Service Announcements and Short Web Stories. (n.d.). Retrieved June 15, 2020, from <http://naabt.org/mike/>.
- Morgan, J. R., Schackman, B. R., Weinstein, Z. M., Walley, A. Y., & Linas, B. P. (2019). Overdose following initiation of naltrexone and buprenorphine medication treatment for opioid use disorder in a United States commercially insured cohort. *Drug and Alcohol Dependence*, 200, 34–39. <https://doi.org/10.1016/j.drugalcdep.2019.02.031>.
- NYC Begins Home Methadone Deliveries. Will it have lasting impact on the rules? (n.d.). Retrieved June 14, 2020, from <https://filtermag.org/new-york-home-methadone-delivery/>.
- Patient/Provider Matching System- TreatmentMatch.org. (n.d.). Retrieved June 15, 2020, from <https://www.treatmentmatch.org/patients.cfm>.
- Reichert, J., & Gleicher, L. (2019). Probation clients' barriers to access and use of opioid use disorder medications. *Health and Justice*, 7(1), 10. <https://doi.org/10.1186/s40352-019-0089-6>.
- Rettig, R. A., & Yarmolinsky, A. (1995). Federal regulation of methadone treatment. Retrieved from <http://www.nap.edu>.
- Roberts, A. W., Saloner, B., & Dusetzina, S. B. (2018, July 1). Buprenorphine use and spending for opioid use disorder treatment: Trends from 2003 to 2015. In *Psychiatric services*. American Psychiatric Association. <https://doi.org/10.1176/appi.ps.201700315>.
- Samhsa. (n.d.). Opioid Treatment Program (OTP) guidance. Retrieved from www.samhsa.gov.
- Sordo, L., Barrio, G., Bravo, M. J., Indave, B. I., Degenhardt, L., Wiessing, L., ... Pastor-Barriuso, R. (2017). Mortality risk during and after opioid substitution treatment: Systematic review and meta-analysis of cohort studies. *BMJ (Clinical Research Ed.)*, 357, j1550. <https://doi.org/10.1136/bmj.j1550>.
- Stein, B. D., Dick, A. W., Sorbero, M., Gordon, A. J., Burns, R. M., Leslie, D. L., & Pacula, R. L. (2018). A population-based examination of trends and disparities in medication treatment for opioid use disorders among Medicaid enrollees. *Substance Abuse*, 39(4), 419–425. <https://doi.org/10.1080/08897077.2018.1449166>.
- Sufirin, C., Sutherland, L., Beal, L., Terplan, M., Latkin, C., & Clarke, J. G. (2020). Opioid use disorder incidence and treatment among incarcerated pregnant people in the U.S.: Results from a national surveillance study. *Addiction*, 0–3. <https://doi.org/10.1111/add.15030>.
- Volkow, N. D., Jones, E. B., Einstein, E. B., & Wargo, E. M. (2019). Prevention and treatment of opioid misuse and addiction: A review. *JAMA Psychiatry*. <https://doi.org/10.1001/jamapsychiatry.2018.3126>.
- Wakeman, S. E., Laroche, M. R., Ameli, O., Chaisson, C. E., McPheeters, J. T., Crown, W. H., ... Sanghavi, D. M. (2020). Comparative effectiveness of different treatment pathways for opioid use disorder. *JAMA Network Open*, 3(2), Article e1920622. <https://doi.org/10.1001/jamanetworkopen.2019.20622>.
- Wang, Q. Q., Kaelber, D. C., Xu, R., & Volkow, N. D. (2020). COVID-19 risk and outcomes in patients with substance use disorders: Analyses from electronic health records in the United States. *Molecular Psychiatry*, 2020, 1–10. <https://doi.org/10.1038/s41380-020-00880-7>.
- Wightman, R. S., Perrone, J., Scagos, R., Krieger, M., Nelson, L. S., & Marshall, B. D. L. (2020). Opioid overdose deaths with buprenorphine detected in postmortem toxicology: A retrospective analysis. *Journal of Medical Toxicology*, 1–6. <https://doi.org/10.1007/s13181-020-00795-3>.
- Yang, J., Landrum, M. B., Zhou, L., & Busch, A. B. (2020). Disparities in outpatient visits for mental health and/or substance use disorders during the COVID surge and partial reopening in Massachusetts. *General Hospital Psychiatry*, 67, 100–106. <https://doi.org/10.1016/j.genhosppsych.2020.09.004>.
- Yarborough, B. J. H., Stumbo, S. P., McCarty, D., Mertens, J., Weisner, C., & Green, C. A. (2016). Methadone, buprenorphine and preferences for opioid agonist treatment: A

qualitative analysis. *Drug and Alcohol Dependence*, 160, 112–118. <https://doi.org/10.1016/j.drugalcdep.2015.12.031>.