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Telemedicine increases access to buprenorphine initiation during the COVID-19 pandemic

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ABSTRACT

Federal regulatory changes during the COVID-19 pandemic allow buprenorphine to be prescribed without an initial in-person evaluation. Prior to COVID-19, numerous barriers limited broad uptake of buprenorphine among people who use drugs at the system, provider, and patient levels, including lack of available DATA 2000 waived clinicians to prescribe, stigma, and competing livelihood priorities. As two harm reduction primary care programs in New York State that care for people who use drugs and offer buprenorphine, one rural (Ithaca) and one urban (Manhattan), we have rapidly adopted telemedicine to initiate buprenorphine treatment. Our collective experience suggests that telemedicine for buprenorphine initiation is eliminating many traditional barriers to treatment, in particular for individuals leaving incarceration, and people who use drugs and access syringe service programs. Future models of buprenorphine treatment should incorporate telemedicine for buprenorphine initiation, which can be done in collaboration with community-based outreach and peer networks to engage people who use drugs. This regulatory change must be sustained beyond COVID-19, and is vital to increasing access to buprenorphine, closing the opioid use disorder treatment gap, and achieving greater health equity for people who use drugs.

When the U.S. government declared a public health emergency on January 31, 2020, in response to the COVID-19 pandemic, federal lawmakers invoked an exception to the rule set forth in the 2008 Ryan Haight Act requiring in-person evaluation to prescribe a controlled substance, including buprenorphine for the treatment of opioid use disorder (OUD). DATA 2000 waived clinicians can now prescribe buprenorphine after conducting an initial telemedicine visit, using either audio-visual or telephonic communication ([Drug Enforcement Administration, 2020, March](#)). Though this exception is only effective for the duration of the public health emergency, a new bill was recently introduced in Congress, which would amend the Ryan Haight Act to allow schedule III or IV controlled substances to be prescribed without an initial in-person evaluation ([S.4103, 2019–2020](#)). While the Ryan Haight Act was passed to prevent rogue Internet pharmacies from selling controlled substances online, its telemedicine exceptions were not clearly defined and have presented a major barrier to increasing access to OUD treatment via telemedicine. Available literature demonstrates the viability of telemedicine for buprenorphine to improve treatment

outcomes, including reduced illicit drug use and increased patient retention and satisfaction ([Eibl et al., 2017](#); [Lin et al., 2019](#); [Zheng et al., 2017](#)). Since the pandemic, telemedicine has provided new and existing patients with low-barrier access to buprenorphine at the moment people express interest, often with same-day evaluations and prescriptions without additional barriers, such as presenting to a traditional medical setting for a scheduled appointment ([Harris et al., 2020](#)).

Before COVID-19, numerous barriers limited broad uptake of buprenorphine among people who use drugs (PWUD) in both rural and urban settings: at the system level, limited availability of waived clinicians, racial disparities in access to buprenorphine versus methadone treatment ([Hansen et al., 2013](#); [Lagisetty et al., 2019](#)), and long wait times for treatment ([Roy et al., 2020](#)); at the provider level, stigma regarding drug users and lack of education about OUD treatments; and at the patient level, competing livelihood priorities (i.e., housing, food security), lack of transportation, childcare, and history of experiencing stigma and discrimination in medical settings. Such barriers contribute to disparities in access to buprenorphine based on income, education,

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county of residence, and race. Our clinical experiences during COVID-19 convince us that telemedicine for buprenorphine initiation is eliminating many of these barriers to treatment. We have witnessed that this regulatory change is vital to achieving greater health equity for PWUD and advocate that it should be permanently maintained to save more lives.

Working at two harm reduction primary care programs in New York State that care for PWUD and offer buprenorphine, one located in Ithaca and the other in Manhattan, we share our first-hand experiences and recommendations after rapidly transforming our in-person practices to telemedicine practices during this crisis. While we serve distinct populations—one rural, younger and predominantly white (Ithaca); and one urban, older, and predominantly people of color (Manhattan)—there are parallels in our experiences. The following case examples of patients who we successfully initiated on buprenorphine through telemedicine during the pandemic illustrate how this regulatory change has increased access to buprenorphine treatment.

We have conducted several video and telephone visits to initiate buprenorphine immediately after a person's release from incarceration. People leaving incarceration are at elevated risk of drug use-related death, and while there is growing evidence supporting medication for opioid use disorder treatment in correctional settings to reduce post-correctional overdose death, access remains limited. Ensuring immediate access to buprenorphine upon release from incarceration is a critical step to mitigate this risk (Binswanger et al., 2007; Green et al., 2018; Marsden et al., 2017; Merrall et al., 2010). In Ithaca, a 32-year-old woman with OUD and prior successful treatment with buprenorphine was released from state prison without being restarted on buprenorphine. Shortly after coming home, she experienced a nonfatal overdose, which motivated her to contact our on-call line over a weekend to get back on treatment. After a telephone visit, the clinician prescribed buprenorphine (and naloxone for overdose reversal), with close follow-up during regular business hours. Without telephonic initiation, she would have had to wait several days before an in-person visit was possible, creating a delay that would have put her at risk for repeat overdose and death.

We have also rapidly engaged patients referred to us from syringe service programs (SSPs) who do not always have access to waived clinicians, via telemedicine. During COVID-19, many of these SSPs had limited on-site services. In Manhattan, a 40-year-old man was referred from an SSP that had temporarily closed many of their on-site services, including buprenorphine treatment. The patient had previously been in methadone treatment, but due to lack of flexibility regarding take-home doses (the patient wished to leave New York due to concerns about COVID-19 exposure), he called our program line to switch to buprenorphine as soon as possible. Our nurse care manager, working with a waived clinician, was able to evaluate the patient by telephone, review home induction instructions, and send buprenorphine the same day to a nearby pharmacy in less than an hour. Medical students also provided telephonic training on overdose prevention with naloxone, and we mailed a naloxone kit to his home. In Ithaca, a partnership with a SSP in far northern New York, more than 3 h away by car, led to buprenorphine initiation via telemedicine for 32 out of 55 clients on the SSP's waitlist due to lack of available clinicians.

In both examples, telemedicine allowed patients seeking buprenorphine to be rapidly started on treatment without delaying initiation until an in-person evaluation was possible. Such a delay, which in pre-COVID times was on average 12 weeks in upstate New York and one week in New York City, would mean people have little choice except to continue using nonprescribed opioids, often illicit fentanyl. At the height of the COVID-19 pandemic, limited in-person clinical services and clinician availability threatened to further delay time to buprenorphine initiation, placing PWUD seeking treatment at higher risk of overdose-related mortality. The Ryan Haight Act was intended to promote safe controlled substance prescribing, but its requirement for an in-person visit prior to initiation limits access to buprenorphine. While the

advantages of an initial in-person visit may include perceived increased patient engagement and motivation, as well as the ability to obtain urine toxicology, currently no evidence exists that in-person visits are more effective than telemedicine visits in improving treatment outcomes or minimizing diversion. The COVID-19 pandemic has likely exacerbated the opioid epidemic, and increasing linkage to buprenorphine treatment is more important than ever. In-person visits remain an important part of clinical care and should be used in conjunction with telemedicine to promote treatment retention. However, the option of telemedicine for buprenorphine initiation removes significant barriers to starting treatment and moves us closer to closing the OUD treatment gap. As such, we assert that telemedicine's ability to increase access outweighs the potential risk of buprenorphine misuse.

In addition to providing a low-barrier treatment model, telemedicine creates the potential to innovate existing models of referral and engagement of PWUD in buprenorphine treatment. In Ithaca, we equipped our community health worker with a smartphone to facilitate telemedicine visits during outreach to a local homeless encampment, and have engaged 7 homeless patients and started them on buprenorphine for the first time. In Manhattan, we are developing a program where peer responders to nonfatal overdoses in the community can connect interested individuals with a clinician via telemedicine to initiate buprenorphine at the moment it meets the needs of the client as opposed to the schedule of the health care facility.

Challenges exist in increasing the delivery of buprenorphine via telemedicine. First, we recognize that inequities exist in telemedicine access for all disease management: rural residents, racial minorities, older adults, and those with low income have limited access to digital technology and limited digital literacy, and Internet coverage or cell service is limited in rural areas (Nouri et al., 2020; Rodriguez et al., 2020). Many of our patients who are older, with limited English proficiency or of low socioeconomic status do not have reliable smart phone access. To address this in Manhattan, we have obtained 120 iPhones with unlimited data and texting plans and are distributing them to patients in need. Medical students and patient navigators remotely educate patients on how to use the devices to access telemedicine services. Second, clinicians need evidence-based telemedicine protocols regarding how often to see patients (remotely or in-person), how many refills to give, how to counsel patients on appropriate initiation to avoid precipitated withdrawal, and when to use urine toxicology. Clinicians may also have concerns that telemedicine may provide limited treatment structure or lead to increased medication diversion. Third, which patients may benefit more from telemedicine versus in-person care is unclear, as is which approach may lead to improved retention in care.

Our experiences in both rural and urban settings highlight the potential for telemedicine for buprenorphine to increase access to OUD treatment at a critical moment when pandemic stress, increased trauma due to racial injustice, financial hardship, and loss of housing may trigger nonprescribed opioid use. There has never been a more important time to ensure that PWUD have low-barrier and continuous access to buprenorphine. But even after COVID-19 is no longer a public health emergency, the opioid epidemic will continue to be one; telemedicine will be vital to closing the OUD treatment gap and reducing mortality. We plan to continue advocating for structural changes to remove barriers to prescribe buprenorphine, reduce racial disparities in buprenorphine access, and dismantle stigma around drug use. We will also support policy change at local, state and federal levels to improve digital access and literacy, as well as pay parity for telephone and video visits for all payers. Buprenorphine initiation via telemedicine made possible during the COVID-19 pandemic has rapidly become a critical tool for providing OUD treatment to PWUD. We call on researchers, clinicians, policy-makers, and activists to advocate for this regulatory change to remain permanent.

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References

- Binswanger, I., Stern, M., Deyo, R., Heagerty, P., Cheadle, A., Elmore, J., & Koepsell, T. (2007). Release from prison—a high risk of death for former inmates. *New England Journal of Medicine*, *356*(2), 157–165.
- Drug Enforcement Agency. Letter to DEA qualifying practitioners. [https://www.deadiversion.usdoj.gov/GDP/\(DEA-DC-022\)\(DEA068\)%20DEA%20SAMHSA%20buprenorphine%20telemedicine%20%20\(Final\)%20+Esign.pdf](https://www.deadiversion.usdoj.gov/GDP/(DEA-DC-022)(DEA068)%20DEA%20SAMHSA%20buprenorphine%20telemedicine%20%20(Final)%20+Esign.pdf). Published 2020, March 31. Accessed April 15, 2020.
- Eibl, J., Gauthier, G., Pellegrini, D., Daiter, J., Varenbut, M., Hogenbirk, J., & Marsh, D. (2017). The effectiveness of telemedicine-delivered opioid agonist therapy in a supervised clinical setting. *Drug and Alcohol Dependence*, *176*, 133–138.
- Green, T. C., Clarke, J., & Brinkley-Rubinstein, L. (2018). Postincarceration fatal overdoses after implementing medications for addiction treatment in a statewide correctional system. *JAMA Psychiatry*, *75*(4), 405–407.
- Hansen, H., Siegel, C., Case, B., Bertollo, D., 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.
- Harris, M., Johnson, S., Mackin, S., Saitz, R., Walley, A., & Taylor, J. (2020). Low barrier tele-buprenorphine in the time of COVID-19: A case report.
- Lagisetty, P., Ross, R., Bohnert, A., Clay, M., & Maust, D. (2019). Buprenorphine treatment divide by race/ethnicity and payment. *JAMA Psychiatry*, *76*(9), 979–981.
- Lin, L., Casteel, D., Shigekawa, E., Weyrich, M., Roby, D., & McMenamin, S. (2019). Telemedicine-delivered treatment interventions for substance use disorders: A systematic review. *Journal of Substance Abuse Treatment*, *101*, 38–49.
- Marsden, J., Stillwell, G., Jones, H., Cooper, A., Eastwood, B., Farrell, M., & Hickman, M. (2017). Does exposure to opioid substitution treatment in prison reduce the risk of death after release? A national prospective observational study in England. *Addiction*, *112*, 1408–1418.
- Merrall, E., Kariminia, A., Binswanger, I., Hobbs, M., Farrell, M., Marsden, J., Hutchinson, S., & Bird, S. (2010). Meta-analysis of drug-related deaths soon after release from prison. *Addiction*, *105*(9), 1545–1554.
- Nouri, S., Khoong, E., Lyles, C., & Karliner, L. (2020). Addressing equity in telemedicine for chronic disease management during the Covid-19 Pandemic | Enhanced Reader. Retrieved from NEJM Catalyst <https://catalyst.nejm.org/doi/full/10.1056/CA.T.20.0123>.
- Rodriguez, J., Lipsitz, S., Lyles, C., & Samal, L. (2020). Association between patient portal use and broadband access: A national evaluation. *Journal of General Internal Medicine*, *35*(12), 3719–3720.
- Roy, P., Choi, S., Bernstein, E., & Walley, A. (2020). Appointment wait-times and arrival for patients at a low-barrier access addiction clinic. *Journal of Substance Abuse Treatment*, *114*. <https://doi.org/10.1016/j.jsat.2020.108011>.
- TREATs Act, S.4103, 116th Cong. (2019–2020). <https://www.congress.gov/bill/116th-congress/senate-bill/4103>.
- Zheng, W., Nickasch, M., Lander, L., Wen, S., Xiao, M., Marshalek, P., ... Sullivan, C. (2017). Treatment outcome comparison between telepsychiatry and face-to-face buprenorphine medication-assisted treatment for opioid use disorder: A 2-year retrospective data analysis. *Journal of Addiction Medicine*, *11*(2), 138–144.