



Short Report

Telemedicine to improve access to medications for opioid use disorder in Illinois, 2022–2024



Kimberly Gressick^{a,b,*}, Maria Fiorillo^b, Sarah Richardson^c, Maria Bruni^c, Stacey Brenner^c, Miao Hua^b, Nik Prachand^b, Nicole Gastala^d

^a Epidemic Intelligence Service, Centers for Disease Control and Prevention, Atlanta, GA, United States

^b Chicago Department of Public Health, Chicago, IL, United States

^c Family Guidance Centers, Inc., Chicago, IL, United States

^d Illinois Department of Human Services, Chicago, IL, United States

ARTICLE INFO

Keywords:

Telemedicine

Buprenorphine

Methadone

Opioid use disorder (OUD)

Medications for opioid use disorder (MOUD)

ABSTRACT

Background: Globally, opioid use remains a major public health problem. In 2019, 480,000 deaths were related to opioid use. Locally, mortality from opioid-involved overdose is high among Illinois residents, with 83 % of ~4000 overdose deaths during 2022 involving opioids. Treatment for opioid use disorder with buprenorphine, methadone, and naltrexone is approved, safe, and effective. However, significant barriers to treatment remain for many persons.

Methods: In response to new prescribing policy flexibilities, in May 2022, the Chicago Department of Public Health and the Substance Use Prevention and Recovery Division of the Illinois Department of Human Services partnered with a statewide opioid treatment provider, Family Guidance Centers. The partnership started an immediate opioid use disorder treatment helpline program. We performed a descriptive analysis using aggregate data from all calls for assistance with substance use received by the Illinois Helpline during May 9, 2022–March 7, 2024.

Results: A total of 2649 unique calls were made to the helpline from persons seeking assistance with substance use, and 1698 unique callers were connected to Family Guidance Centers for treatment initiation. Most callers were prescribed buprenorphine by telemedicine, followed by methadone during in-person treatment. In total, 1515 (89.2 %) of 1698 callers with opioid use disorder were initiated on buprenorphine or methadone through the program.

Conclusion: A state-wide low-barrier access to medications by telemedicine program is an effective treatment model for the initiation of medications for opioid use disorder.

Introduction

Globally, over 600,000 persons died of drug overdose in 2019 with 80 % relating to opioid use (World Health Organization, 2023). In the United States, over 100,000 persons died of a drug overdose in 2022, the highest number yet recorded as the country continues to face an increasingly deadly opioid crisis (Spencer et al., 2024). Like the global percentage, approximately 80 % of these deaths in the U.S. were opioid-involved, most of which included synthetic and highly potent fentanyl or fentanyl analogues (Spencer et al., 2024). Approximately 4000 fatal drug overdoses occurred in Illinois in 2022, and of these, 83 % were opioid-involved (Illinois Department of Public Health, 2023).

Treatment for opioid use disorder (OUD) with buprenorphine, methadone, and naltrexone is approved by the U.S. Food and Drug Administration, safe, and effective at treating OUD (Degenhardt et al., 2023). Buprenorphine and methadone are highly effective treatments for OUD that retain patients in care and decrease the risk for fatal overdose, compared with nonpharmacologic therapies alone (Santo et al., 2021). However, only 25 % of persons with OUD receive these medications (Dowell et al., 2024). This is a result of structural barriers to access, including strict federal prescribing guidelines, a lack of providers to prescribe the medication, and stigma associated with medications for opioid use disorder (MOUD) (Volkow et al., 2014; Stone et al., 2021). Methadone presents additional barriers to access, requiring in-person,

* Corresponding author at: Centers for Disease Control and Prevention, United States.

E-mail address: uqv1@cdc.gov (K. Gressick).

<https://doi.org/10.1016/j.drugpo.2025.104729>

regular (often daily) dosing at certified OTPs, usually necessitating patient travel (Stroud et al., 2022).

In March 2020, in response to the COVID-19 pandemic, the U.S. Drug Enforcement Administration (DEA) and the U.S. Department of Health and Human Services' Substance Abuse and Mental Health Services Administration announced a policy change, allowing buprenorphine prescribing through audio-only telemedicine (Prevoznik, 2020). Additionally, they waived the Ryan Haight Act's requirement for an initial in-person examination before buprenorphine prescription (Prevoznik, 2020). The rule also allowed take home doses of methadone in some circumstances (Prevoznik, 2020). Lastly, the Office of Civil Rights allowed providers to use platforms not designed for Health Insurance Portability and Accountability Act compliance to reach patients (U.S. Department of Health and Human Services, 2021). On April 4, 2024, because of overwhelming public support, DEA finalized the rule, permanently extending the COVID-19 regulatory changes for MOUD prescribing by OTPs (Department of Health and Human Services, 2024).

In response to the policy changes, several programs have implemented telemedicine buprenorphine prescribing to facilitate access to MOUD (Tofighi et al., 2022; Clark et al., 2021; Tay Wee Teck et al., 2023). Similarly, the Chicago Department of Public Health and the Substance Use Prevention and Recovery Division of the Illinois Department of Human Services partnered with Family Guidance Centers, Inc. (FGC), an opioid treatment program (OTP) and the Illinois Helpline operator Health Resources in Action to start an MOUD helpline, known as Medication Assisted Recovery Now (MAR NOW). The pilot program served Chicago during May 9, 2022–August 31, 2022, and was expanded to serve the entire state of Illinois on September 1, 2022.

Methods

MAR NOW operates through the Illinois Helpline, an around-the-clock helpline established in 2017. The Illinois Helpline is staffed by trained specialists who provide referrals for substance use disorder (SUD) treatment and information on prevention and recovery. All callers seeking treatment for OUD (including withdrawal management) are offered a call transfer to MAR NOW, which is received by FGC.

Based on an initial assessment and patient preference, FGC links callers to one of three treatment options for OUD. First, callers can be connected with a provider for an immediate telemedicine prescription and unobserved home induction of buprenorphine with a 14-day supply of medication. Second, callers can be connected to same-day or next-day appointments in a clinic to begin methadone, no-cost buprenorphine, or long-acting naltrexone. Lastly, callers can be connected to residential treatment centers or other treatment options. Care is provided to all callers aged ≥ 18 years requesting treatment with MOUD for themselves, regardless of insurance status, immigration status, or ability to pay. During the first year, the program was staffed every day during 6 am–10 pm; during off-hours, call transfers from the Illinois Helpline to MAR NOW resulted in a voicemail for FGC staff to return. Beginning in March 2023, the program was expanded and FGC providers were available 24 h a day, 7 days a week, toward eliminating unanswered calls.

We performed a descriptive analysis using aggregate data from all calls for assistance with substance use received by the Illinois Helpline during May 9, 2022–March 7, 2024, from both the pilot program in Chicago and the expanded statewide program in Illinois. Calls related to treatment of OUD for the following categories were included in the analysis: medication for addiction treatment (MAT), withdrawal management, SUD residential and outpatient services, recovery support services, general resources and information, harm reduction services, and assessment and treatment access resources. Calls for topics unrelated to OUD treatment were excluded. Additionally, quick calls, where demographic information was not collected, were also excluded from the analysis. With the remaining calls, we analyzed descriptive variables including caller type, age, treatment category, and caller county for both Illinois and Chicago. We then describe treatment connection rates for

callers who initiated MOUD with FGC. This activity was reviewed by Centers for Disease Control and Prevention (CDC), deemed not research, and was conducted consistent with applicable federal law and CDC policy.¹

Results

The Illinois Helpline received 2649 unique calls from persons seeking assistance with substance use, including opioid, alcohol, and stimulant use disorders. After excluding 865 calls (858 calls lacked any caller information and 7 calls were ineligible for MAR NOW²), 1784 unique calls remained for the analysis. Most calls ($n = 1323$, 74.2 %) were from persons actively using followed by persons in recovery ($n = 219$, 12.3 %) (Table 1). Median age of callers was 40 years (range: 18–79 years) and the majority ($n = 979$, 54.9 %) were aged 25–44 years (Table 1). A total of 453 (25.4 %) calls originated from metropolitan Chicago. Persons from 90 of 102 (88.2 %) Illinois counties accessed the helpline (Supplementary Map). Most calls ($n = 1367$) were from persons

Table 1
Sociodemographic characteristics of helpline callers, May 9, 2022–March 7, 2024, Illinois ($n = 1784$).

Caller demographics	Illinois no. (%)	Non-Chicago no. (%)	Chicago no. (%)
Total	1784 (100 %)	1331 (74.6 %)	453 (25.4 %)
Age (yrs)			
18–24	112 (6.3 %)	90 (6.8 %)	22 (4.9 %)
25–34	483 (27.1 %)	407 (30.6 %)	76 (16.8 %)
35–44	496 (27.8 %)	399 (30.0 %)	97 (21.4 %)
45–54	329 (18.4 %)	220 (16.5 %)	109 (24.1 %)
55–64	261 (14.6 %)	158 (11.9 %)	103 (22.7 %)
≥ 65	97 (5.4 %)	53 (4.0 %)	44 (9.7 %)
Unknown	6 (0.3 %)	4 (0.3 %)	2 (0.4 %)
Caller type			
Persons actively using	1323 (74.2 %)	1002 (75.3 %)	321 (70.9 %)
Persons in recovery	219 (12.3 %)	183 (13.7 %)	36 (7.9 %)
Friend, relative, spouse, or partner	114 (6.4 %)	87 (6.5 %)	27 (6.0 %)
Professionals or providers	109 (6.1 %)	51 (3.8 %)	58 (12.8 %)
Court officer, police, fire, or DUI caller	18 (1.0 %)	7 (0.5 %)	11 (2.4 %)
Unknown	1 (0.1 %)	1 (0.1 %)	0
Treatment Category*			
Medication for addiction treatment (MAT)	1367 (76.6 %)	1044 (78.4 %)	323 (71.3 %)
Withdrawal management services	431 (24.2 %)	299 (22.5 %)	132 (29.1 %)
SUD residential services	64 (3.5 %)	46 (3.4 %)	18 (4.0 %)
SUD outpatient services	47 (2.6 %)	31 (2.3 %)	16 (3.5 %)
Recovery support services	13 (0.7 %)	7 (0.5 %)	6 (1.3 %)
Resources and information	4 (0.2 %)	4 (0.3 %)	0 (0.0 %)
Harm reduction services	1 (0.1 %)	1 (0.1 %)	0 (0.0 %)
Assessment and treatment access services	1 (0.1 %)	0 (0.0 %)	1 (0.2 %)

* Each unique call could have requested more than one treatment category; therefore, sum of percentages is >100 %.
SUD, substance use disorder.

¹ 45 C.F.R. part 46.102(l)(2), 21 C.F.R. part 56; 42 U.S.C. Sect. 241(d); 5 U.S.C. Sect. 552a; 44 U.S.C. Sect. 3501 et seq.

² Calls were ineligible when person seeking treatment was aged <18 years or call category was not related to treatment of OUD.

seeking MAT, followed by persons calling for withdrawal management ($n = 431$). Unique calls could include ≥ 1 treatment category; therefore, sum of percentages is $>100\%$. Race, ethnicity, and gender data were largely incomplete and were not analyzed.

One thousand six hundred ninety-eight unique callers were prescribed treatment for OUD through FGC providers or were referred for other treatment services. Of these, 1288 (75.8 %) persons were recommended to start buprenorphine, 312 (18.3 %) to start methadone, and 98 (5.7 %) to start nonpharmacologic OUD treatment (Supplementary Figure). Of the callers prescribed buprenorphine, 1211 (94.0 %) were prescribed buprenorphine by telemedicine without an initial in-person visit, and most ($n = 1190$, 98.2 %) initiated the medication (Supplementary Figure). Of the persons who completed home induction, 1170 (98.3 %) attended a visit with a community provider for ongoing care. In total, 73 of 77 persons (94.8 %) who preferred in-person initiation were able to initiate buprenorphine in a clinic (Supplementary Figure). Of the total callers recommended to start methadone, 252 (80.7 %) initiated treatment with methadone (Supplementary Figure). Two patients experienced an allergic reaction to buprenorphine. In total, 1515 of 1698 (89.2 %) callers with OUD initiated buprenorphine or methadone through the MAR NOW program.

Discussion

In the United States, MOUD continues to be an underutilized treatment despite strong evidence of efficacy (Dowell et al., 2024). While pandemic-era flexibilities around telemedicine prescribing of MOUD partially mitigated access barriers exacerbated by movement restrictions, there is evidence that telemedicine did not improve care access compared to pre-pandemic levels (Hailu et al., 2023). MAR NOW is the only statewide telemedicine MOUD program in the United States, that we are aware of, which has operated toward lowering MOUD access barriers that have persisted through the COVID-19 pandemic and beyond (Tay Wee Teck et al., 2023).

While the COVID-19 prescribing flexibilities provided the initial impetus behind the MAR NOW program, its reach and accessibility as a single, statewide portal of low-barrier MOUD has depended on government partnering with a provider with broad reach. Positioning an existing OTP as the provider has also ensured that the program model is stabilized within the framework of the 42 CFR Part 8 Final Rule (Department of Health and Human Services, 2024). Flexibility for other healthcare providers to prescribe controlled substances, including MOUD, through telemedicine continues to depend on the DEA's temporary exception to the Ryan Haight Act, which has been extended through December 31, 2025 (Drug Enforcement Administration, 2024). Preserving these flexibilities beyond OTPs may significantly expand access to MOUD.

Through MAR NOW, the state of Illinois enabled 95 % of callers connected to FGC seeking MOUD to access treatment. Multiple features of the MAR NOW program facilitate medication access and might contribute to the high rate of MOUD initiation. First, MAR NOW relies on around-the-clock care managers who engage callers and conduct extensive follow-up during the home initiation period. This engagement ensures that callers can connect to ongoing treatment after initiation of medication. Care managers also facilitate linkage to insurance enrollment and transportation support and conduct follow-up phone calls to support callers in attending their first methadone clinic appointment. Second, the program relies on providing no-cost transportation to the pharmacy or clinic and conducting robust pharmacy engagement and follow-up. Moreover, the program offers methadone by mobile van on weekends, extending access to this medication to provide more immediate dosing for callers requesting methadone. Unique barriers to MOUD access in rural areas might include geographic isolation and availability of MOUD providers and OTPs, which can hinder timely, accessible treatment for OUD (Gregory et al., 2021).

Discrepant systems of data collection and incomplete collection of

call data posed challenges for our analysis. First, because the Illinois Helpline records the number of unique calls, but FGC tracks the number of unique callers, no straightforward method is available for merging the data because callers are known to access the helpline multiple times. Second, the call transfer system might prompt incorrect referrals or miss correct referrals. Calls to the Illinois Helpline might have been transferred to FGC in error. For example, when relatives or friends called on behalf of the patient, treatment might not have been initiated consequent to that call if the patient was not also on the line. Approximately one in every three calls also lacked demographic information and were excluded from our analysis. In the future, more complete collection of demographic data requires balancing a low-barrier approach to MOUD access while collecting enough information to assess program reach and improve program quality. Despite these limitations, our data show that during 22 months of the statewide rollout of MAR NOW in Illinois, nearly 90 % of callers initiated OUD treatment with buprenorphine or methadone.

The long-term sustainability of the program is an important consideration when evaluating its effectiveness in connecting persons to MAT. The program is currently funded through a combination of the Centers for Disease Control and Prevention Overdose Data to Action Local cooperative agreement with the Chicago Department of Public Health, as well as a grant from the Substance Use Prevention and Recovery Division of the Illinois Department of Human Services. Moving towards a more sustainable funding source, such as health insurance reimbursement or state-sponsored funding, may provide additional stability, while ensuring access for patients who are unable to pay.

Conclusion

This report offers evidence that the prescribing flexibilities adopted for buprenorphine and methadone during the COVID-19 pandemic facilitated effective, low-barrier access to life-saving medications and should be continued. Treatment of OUD with methadone and buprenorphine is well documented to greatly reduce the risk for overdose (Santo et al., 2021). Lowering barriers to this care through statewide programs like MAR NOW is crucial to initiating MOUD with the possibility of reducing fatal overdoses and improving the health of persons living with OUD.

CRediT authorship contribution statement

Kimberly Gressick: Writing – review & editing, Writing – original draft, Visualization, Methodology, Formal analysis, Conceptualization. **Maria Fiorillo:** Writing – review & editing, Writing – original draft, Visualization, Formal analysis, Data curation. **Sarah Richardson:** Writing – review & editing, Project administration, Funding acquisition, Conceptualization. **Maria Bruni:** Project administration, Funding acquisition, Data curation, Conceptualization. **Stacey Brenner:** Writing – review & editing, Formal analysis, Data curation, Conceptualization. **Miao Hua:** Writing – review & editing, Writing – original draft, Project administration, Methodology, Funding acquisition, Formal analysis, Data curation. **Nik Prachand:** Writing – review & editing, Formal analysis. **Nicole Gastala:** Writing – review & editing, Writing – original draft, Supervision, Project administration, Methodology, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgments

The findings and conclusions in this report are those of the authors

and do not necessarily represent the views of the Centers for Disease Control and Prevention.

The program described was supported by funding from the Centers for Disease Control and Prevention's Overdose Data to Action: LOCAL cooperative agreement.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at [doi:10.1016/j.drugpo.2025.104729](https://doi.org/10.1016/j.drugpo.2025.104729).

References

- Clark, S. A., Davis, C., Wightman, R. S., Wunsch, C., Keeler, L. A. J., Reddy, N., & Samuels, E. A. (2021). Using telehealth to improve buprenorphine access during and after COVID-19: A rapid response initiative in Rhode Island. *Journal of Substance Abuse Treatment*, 124, Article 108283. <https://doi.org/10.1016/j.jsat.2021.108283>
- Degenhardt, L., Clark, B., Macpherson, G., Leppan, O., Nielsen, S., Zahra, E., Larance, B., Kimber, J., Martino-Burke, D., Hickman, M., & Farrell, M. (2023). Buprenorphine versus methadone for the treatment of opioid dependence: A systematic review and meta-analysis of randomised and observational studies. *The Lancet Psychiatry*, 10(6), 386–402. [https://doi.org/10.1016/S2215-0366\(23\)00095-0](https://doi.org/10.1016/S2215-0366(23)00095-0)
- Department of Health and Human Services. (2024). Medications for the treatment of opioid use disorder. 42 CFR 8, 7528–7563. <https://www.federalregister.gov/documents/2024/02/02/2024-01693/medications-for-the-treatment-of-opioid-use-disorder>
- Dowell, D., Brown, S., Gyawali, S., et al. (2024). Treatment for opioid use disorder: Population estimates—United States, 2022. *MMWR Morbidity and Mortality Weekly Report*, 73, 567–574. <https://doi.org/10.15585/mmwr.mm7325a1>
- Drug Enforcement Administration. (2024). Third temporary extension of COVID-19 telemedicine flexibilities for prescription of controlled substances. *Federal Register*, 89(223), 91253–91258. <https://www.federalregister.gov/documents/2024/11/19/2024-27018/third-temporary-extension-of-covid-19-telemedicine-flexibilities-for-prescription-of-controlled>
- Gregory, H. M., Hill, V. M., & Parker, R. W. (2021). Implications of increased access to buprenorphine for medical providers in rural areas: A review of the literature and future directions. *Cureus*, 13(11), e19870. <https://doi.org/10.7759/cureus.19870>
- Hailu, R., Mehrotra, A., Huskamp, H. A., Busch, A. B., & Barnett, M. L. (2023). Telemedicine use and quality of opioid use disorder treatment in the US during the COVID-19 pandemic. *JAMA Network Open*, 6(1), Article E2252381. <https://doi.org/10.1001/jamanetworkopen.2022.52381>
- Illinois Department of Public Health. (2023). Illinois statewide semiannual opioid report. Prevoznik, T. W. (2020). *DEA dear registrant letter*. Drug Enforcement Administration. Retrieved July 1, 2023, from [https://www.deadiversion.usdoj.gov/GDP/\(DEA-DC022\)\(DEA068\)%20DEA%20SAMHSA%20buprenorphine%20telemedicine%20\(Final\)%20+Esign.pdf](https://www.deadiversion.usdoj.gov/GDP/(DEA-DC022)(DEA068)%20DEA%20SAMHSA%20buprenorphine%20telemedicine%20(Final)%20+Esign.pdf)
- Santo, T., Clark, B., Hickman, M., et al. (2021). Association of opioid agonist treatment with all-cause mortality and specific causes of death among people with opioid dependence: A systematic review and meta-analysis. *JAMA Psychiatry*, 78(9), 979–993. <https://doi.org/10.1001/jamapsychiatry.2021.0976>
- Spencer, M. R., Garnett, M. F., & Miniño, A. M. (2024). Drug overdose deaths in the United States, 2002–2022. *NCHS data brief*. Hyattsville, MD: National Center for Health Statistics. <https://doi.org/10.15620/cdc:135849>
- Stone, E. M., Kennedy-Hendricks, A., Barry, C. L., Bachhuber, M. A., & McGinty, E. E. (2021). The role of stigma in U.S. primary care physicians' treatment of opioid use disorder. *Drug and Alcohol Dependence*, 221, Article 108627.
- Stroud, C., Norris, S. M. P., & Bain, L. (Eds.). (2022). *Methadone treatment for opioid use disorder: Improving access through regulatory and legal change*. Washington, DC: National Academies Press (US).
- Tay Wee Teck, J., Butner, J. L., & Baldacchino, A. (2023). Understanding the use of telemedicine across different opioid use disorder treatment models: A scoping review. *Journal of Telemedicine and Telecare*, 0(0). <https://doi.org/10.1177/1357633X231195607>
- Tofighi, B., McNeely, J., Walzer, D., Fansiwal, K., Demner, A., Chaudhury, C. S., Subudhi, I., Schatz, D., Reed, T., & Krawczyk, N. (2022). A telemedicine buprenorphine clinic to serve New York City: Initial evaluation of the NYC public hospital system's initiative to expand treatment access during the COVID-19 pandemic. *Journal of Addiction Medicine*, 16(1), e40–e43. <https://doi.org/10.1097/ADM.0000000000000809>
- U.S. Department of Health and Human Services. (2021). Notification of enforcement discretion for telehealth remote communications during the COVID-19 nationwide public health emergency. Retrieved July 1, 2023, from <https://www.hhs.gov/hipaa/for-professionals/special-topics/emergency-preparedness/notification-enforcement-discretion-telehealth/index.html>
- Volkow, N. D., Frieden, T. R., Hyde, P. S., & Cha, S. S. (2014). Medication-assisted therapies—Tackling the opioid-overdose epidemic. *New England Journal of Medicine*, 370(22), 2063–2066.
- World Health Organization. (2023). *Opioid overdose*. World Health Organization. Retrieved January 22, 2025, from <https://www.who.int/news-room/fact-sheets/detail/opioid-overdose>