

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. Contents lists available at ScienceDirect



Journal of Substance Abuse Treatment



journal homepage: www.elsevier.com/locate/jsat

Telehealth sustains patient engagement in OUD treatment during COVID-19

James R. Langabeer II^{*}, Andrea Yatsco, Tiffany Champagne-Langabeer

Houston Emergency Opioid Engagement System, The University of Texas Health Science Center, Houston, TX, United States of America

ARTICLE INFO

ABSTRACT

Keywords: Medications for opioid use disorder (MOUD) Coronavirus COVID-19 Telehealth The coronavirus disease pandemic of 2019 (COVID-19) has created significant economic and societal burden, with mortality currently exceeding 615,000 and millions of others affected worldwide. For those with opioid use disorder (OUD), however, the impact on this vulnerable population could be even more severe. The objective of this study was to outline our organizational telehealth adaptations that enabled virtual counseling, peer support, groups, and provider care during COVID-19 in one community-based opioid treatment program. We utilized an observational study design during March to June 2020, during the initial peak of COVID-19 in the U.S. After we closed our facility for the first five business days, we rapidly enacted virtual care with telehealth for peer coaching, counseling, groups, and provider visits. While we lost patient volume during the initial weeks, we observed an overall increase in patient engagement over time. Future state and federal policy should focus on maintaining less stringent policies around the use of telehealth, prescribing, and in-person exams for medication for OUD.

1. Introduction

The opioid epidemic continues to be the largest cause of accidental death, with more than 47,000 deaths last year (Wilson et al., 2020), and some researchers project an additional 700,000 deaths from 2016 to 2025 (Chen et al., 2019). Building capacity to engage individuals in treatment involving medication for opioid use disorder (MOUD) is necessary; yet, simultaneously, the coronavirus disease of 2019 (COVID-19) has necessitated the physical closure of many nonemergency clinical and health care facilities. Since COVID-19 is a highly transmittable virus, controlling the spread of infection requires social distancing and quarantines to keep people out of stores, offices, and nearly all other forms of business (Hartley & Perencevich, 2020). The result is a clash between two major epidemics (Volkow, 2020).

Prior to the viral pandemic, MOUD waitlists were lengthy in much of Texas, which is already capacity-constrained (Langabeer et al., 2019), especially for the vulnerable population who lack health insurance, employment, and financial resources. Technology can play a role in improving access and outcomes for OUD, but Ryan Haight Act regulations prohibit the use of telehealth for prescribing controlled substances during "normal" times, without rigorous processes and infrastructure (Huskamp et al., 2018). As the two epidemics simultaneously escalated, on March 31, 2020, the Drug Enforcement Agency (DEA) provided updated guidance that allowed for telehealth in broader terms without an in-person medical exam (Drug Enforcement Administration, 2020).

Telehealth is the delivery of remote care through a variety of audio or video telecommunication tools, such as mobile devices, telephones, and personal computers (Dorsey & Topol, 2016). It has not garnered significant traction in substance use treatment (Huskamp et al., 2018). There is a need for expanded utilization, especially in those geographic areas that are particularly underserved or deficient in DEA-waivered providers, and where a large number of overdoses occur (Andrilla et al., 2019; Jones et al., 2018; Langabeer, Chambers, et al., 2020). Despite the potential utility of telehealth for treatment of OUD, it seems to be both underutilized and understudied.

2. Programmatic adaptation and response

Our program, the Houston Emergency Opioid Engagement System (HEROES), serves as an emergency response for individuals who have recently overdosed, are financially vulnerable, or have been discharged from an affiliated hospital emergency department (Langabeer, Champagne-Langabeer, et al., 2020). The program provides initial screening and diagnosis, induction and stabilization on buprenorphine

https://doi.org/10.1016/j.jsat.2020.108215

Received 18 May 2020; Received in revised form 24 September 2020; Accepted 20 November 2020 Available online 24 November 2020 0740-5472/© 2020 Elsevier Inc. All rights reserved.

^{*} Corresponding author at: University of Texas Health Sciences Center, 7000 Fannin Street, Suite 600, Houston, TX, 77030, United States of America. *E-mail address:* James.R.Langabeer@uth.tmc.edu (J.R. Langabeer).



Fig. 1. Suspected opioid-related overdoses, March to June 2019 vs. 2020.



Fig. 2. Patient volumes during COVID-19, March through June 2020.

for 4–6 weeks, professional behavioral counseling with licensed chemical dependency counselors, and peer recovery support services. In our case, counselors refer to degreed professionals that are licensed at the state level to provide chemical dependency counseling, while peer specialists are individuals who have first-hand knowledge of the disease (i.e., lived experience) and available community resources. Our program staff includes two half-time advanced practice providers, five on-call physicians, two full-time licensed counselors, and four full-time peer recovery support specialists. Our primary goal is to stabilize patients in ambulatory treatment before transitioning them to other providers, which requires maintaining patient engagement during this critical time. This generally requires extensive face-to-face contact.

As the spread of COVID-19 escalated, we prepared for potential closure of all nonemergency clinics at our institution. We report here on

the period from March 1 through June 30, 2020, during the initial peak of COVID-19. We also had to pause our face-to-face outreach program, where paramedics and recovery specialists physically knock on doors of survivors of a nonfatal overdose, guided by emergency medical services (EMS) data. We noticed a change in the average pattern of community overdoses over the prior year, initially dipping during April and May below prior year numbers, and then a significant increase in June. Fig. 1 shows the suspected opioid-related overdoses reported by year for the March through June study period.

We quickly transitioned the team to virtual operations, to stabilize those already in the program while continuing to register new patients. We already had used a commercial telehealth system for communication between nurses and physicians, but had not yet used it for other aspects of the program (i.e., tele-coaching, tele-counseling, tele-support

J.R. Langabeer II et al.

groups). Peer recovery specialists and counselors expressed concerns about lack of physical contact, although this seemed to improve over time. Providers were relatively satisfied with telehealth given their prior experience and training with it over the last few months, but were less comfortable without the in-person medical exam.

Surprisingly, we have seen an increase in the mean number of attendees (from an average of 14 in the prior three months to 24 in May and June) at our peer-led recovery group meetings. We also observed a small increase in overall patient engagement, measured by number of weekly contacts and an increase in attendance at individual counseling sessions. We did observe a reduction in new patients, which is largely due to temporary closure and fewer overdoses in the first few weeks. Today, volume has stabilized and has returned to pre-pandemic levels. Fig. 2 shows the trend from March through June 2020 in our patient volumes.

There are a several lessons learned during this period. First, we observed that certain individuals were initially much less comfortable transitioning to a virtual environment than others who had prior experience with tele-conferencing. Launching video conferences and learning to interact with their clients virtually requires different skills. Their experience suggests that connections, primarily physical, sustains recovery and therefore virtual sessions posed a constant challenge. Second, although we saw an increase in the number of patients who requested services, we have not achieved any significant economies of scale by using telehealth services so far. Our ability to manage patient volumes was nearly identical to our traditional in-person interactions. Finally, we learned that it is important that we document procedures for handling tele-coaching and counseling remotely, to ensure patients are engaged but also to maintain confidentiality. As this pandemic continues, additional changes to streamline virtual services will have to be explored.

3. What will this mean for the future?

It is a paradigm shift to imagine replacing face-to-face contact with virtual telehealth encounters, especially for those patients with substance use disorder (SUD) that require intensive resources and are often high-touch. Yet we have learned that it is possible to provide virtual patient care, to engage patients through tele-peer coaching and counseling, and to conduct large virtual groups. In some cases, our view into the patient's home during a telehealth counseling session has enabled us to gain more insight into the patient's living conditions, surroundings, and support system. This also has consequences for the patient's privacy, which will have to be fully considered as providers move toward greater use of telehealth. At the very least, virtual sessions should be incorporated into traditional practices once "normality" resumes.

To support the inclusion of telehealth more comprehensively, state and federal policies around treatment, and specifically updates to the Ryan Haight Act of 2008, need to be considered beyond this current public health emergency. While well-intentioned, these policies are a barrier to embracing telehealth for MOUD. The mandatory in-person requirement continues to pose undue hardship to treatments of SUDs that utilize evidence-based medication treatment plans. Of course, to maintain privacy and security amid video-conferencing, practitioners will have to remain vigilant. Curbing the opioid epidemic in the longrun, and especially in the presence of other co-occurring public health emergencies, may well be dependent on our ability to adapt and embrace technology for treatment of SUD.

References

- Andrilla, C. H. A., Moore, T. E., Patterson, D. G., & Larson, E. H. (2019). Geographic distribution of providers with a DEA waiver to prescribe buprenorphine for the treatment of opioid use disorder: A 5-year update. *Journal of Rural Health*, 35(1), 108–112.
- Chen, Q., Larochelle, M. R., Weaver, D. T., Lietz, A. P., Mueller, P. P., Mercaldo, S., ... Chhatwal, J. (2019). Prevention of prescription opioid misuse and projected overdose deaths in the United States. JAMA Network Open, 2(2), Article e187621. https://doi.org/10.1001/jamanetworkopen.2018.7621.
- Dorsey, E. R., & Topol, E. J. (2016). State of telehealth. New England Journal of Medicine, 375, 154–161.
- Drug Enforcement Administration. (2020). The DEA letter. Retrieved from https://www. samhsa.gov/sites/default/files/dea-samhsa-buprenorphine-telemedicine.pdf.
- Hartley, D. M., & Perencevich, E. N. (2020). Public health interventions for COVID-19: Emerging evidence and implications for an evolving public health crisis. JAMA.. https://doi.org/10.1001/jama.2020.5910.
- Huskamp, H. A., Busch, A. B., Souza, J., Uscher-Pines, L., Rose, S., Wilcock, A., ... Mehrotra, A. (2018). How is telemedicine being used in opioid and other substance use disorder treatment? *Health Affairs*, *37*(12), 1940–1947.
- Jones, C. W., Christman, Z., Smith, C. M., Safferman, M. R., Salzman, M., Baston, K., & Haroz, R. (2018). Comparison between buprenorphine provider availability and opioid deaths among US counties. *Journal of Substance Abuse Treatment*, 93, 19–25.
- Langabeer, J., Champagne-Langabeer, T., Luber, S. D., Prater, S. J., Stotts, A., Kirages, K., ... Chambers, K. A. (2020). Outreach to people who survive opioid overdose: Linkage and retention in treatment. *Journal of Substance Abuse Treatment, 111*, 11–15. https://doi.org/10.1016/j.jsat.2019.12.008.
- Langabeer, J. R., Chambers, K. A., Cardenas-Turanzas, M., & Champagne-Langabeer, T. (2020). County-level factors underlying opioid mortality in the United States. *Substance Abuse*, 1–7. https://doi.org/10.1080/08897077.2020.1740379.
- Langabeer, J. R., Gourishankar, A., Chambers, K. A., Giri, S., Madu, R., & Champagne-Langabeer, T. (2019). Disparities between U.S. opioid overdose deaths and treatment capacity: A geospatial and descriptive analysis. *Journal of Addiction Medicine*, 13(6), 476–482. https://doi.org/10.1097/ADM.000000000000523.
- Volkow, N. D. (2020). Collision of the COVID-19 and addiction epidemics. Annals of Internal Medicine. https://doi.org/10.7326/M20-1212.
- Wilson, N., Kariisa, M., Seth, P., Smith, H., & Davis, N. L. (2020). Drug and opioidinvolved overdose deaths - United States, 2017-2018. MMWR Morbidity and Mortality Weekly Report, 69(11), 290–297. https://doi.org/10.15585/mmwr.mm6911a4.