Adaptation of a System of Treatment for Substance Use Disorders During the COVID-19 Pandemic

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The Grayken Center for Addiction at Boston Medical Center includes programs across the care continuum for people with substance use disorders (SUDs), serving both inpatients and outpatients. These programs had to innovate quickly during the COVID-19 outbreak to maintain access to care. Federal and state regulatory flexibility allowed these programs to initiate treatment for people experiencing homelessness and maximize patient safety through physical distancing practices. Programs switched to telehealth with high levels of acceptability and patient retention. Some programs also maintained some face-to-face clinic visits to see patients with complex problems and to provide injectable medications. Text-messaging proved invaluable with adolescent and young adult clients, and a mobile-health outreach program was initiated to reach mother/child dyads affected by SUDs. A 24-hour hotline was implemented to support seamless access to treatment for hundreds released from incarceration early due to the

pandemic. Boston Medical Center also launched the COVID Recuperation Unit to allow patients experiencing homelessness to recover from mild to moderate COVID-19 infection in an environment that took a harm-reduction approach to SUDs and provided rapid initiation of medication treatment. Many of these innovations increased access to treatment and retention of patients during the pandemic. Maintaining the revised regulations would allow flexibility to provide telehealth, extended prescriptions, and remote access to buprenorphine initiation to support and engage more patients with SUDs.

Key Words: addiction, buprenorphine, COVID-19, substance use disorder, telemedicine

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The Grayken Center for Addiction at Boston Medical Center (BMC) includes inpatient and outpatient programs across the care continuum, addressing active substance use through sustained remission (Fig. 1). These programs made multiple adaptations during the early months (Spring 2020) of the novel coronavirus (COVID-19) pandemic, when most in-person outpatient medical services were discontinued in Boston, in order to maintain access to care for patients with SUDs who were exposed to new stressors that increased their risk of relapse and overdose.

The Grayken Center was established with funding from a 2017 philanthropic donation to BMC for the purpose of establishing a center focused on treatment of addiction.¹ The Center functions as an umbrella over BMC's many SUD-focused programs, with initiatives aimed at forging a system of high-quality treatment and fostering workforce development, a shared research platform, and a strategic approach to advocacy. The Grayken Center does not fund BMC's clinical addiction programs, which are supported via clinical revenue and grant support.

Three programs act as entry points into the system of care to address substance use: Project TRUST, which provides harm reduction services and engagement through community outreach; Faster Paths, which is a "bridge clinic" offering temporary low-barrier SUD treatment services and linkage to care for patients referred from the emergency department, local service providers, or who walk in without an appointment; and the Addiction Consult Service, BMC's highest-

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FIGURE 1. Programs offered by Boston Medical Center's Grayken Center for Addiction that address substance use on the continuum of Active Use, Engagement, and Stabilization.

volume inpatient consult service, which provides SUD evaluation and treatment-planning for hospitalized patients.

Five main programs provide tailored treatment for patients with a variety of SUD-related needs. OBAT (Office Based Addiction Treatment) is an outpatient nurse-care manager led program that integrates evidence-based addiction treatment and primary care for adults.² CATALYST focuses on engaging adolescents and young adults with SUDs. Project RESPECT works with pregnant women, and SOFAR works with parent/child dyads of infants or toddlers born to parents who have SUDs. ABOVE is for patients with SUD and co-occurring mental illness.

As the region's largest safety-net hospital, BMC cares for patients from marginalized communities, regardless of insurance status or ability to pay. Among patients with SUDs who seek care in the BMC emergency department, 62% are unhoused.³ The combination of homelessness and SUD can place individuals at heightened risk of SARS-CoV-2 transmission due to congregate shelter environments, as well as

poor outcomes due to health comorbidities, and other social barriers to health.⁴ Given the high rates of co-occurring homelessness and SUDs, those experiencing homelessness were identified as needing intensive intervention and novel options for infection control during the COVID-19 pandemic. BMC Addiction Medicine specialists collaborated with many other service providers at BMC and in Boston to establish a temporary treatment facility, the COVID Recuperation Unit, which offered patients with COVID-19 who were unhoused a place to isolate and recover.

ADAPTATIONS IN CARE IN RESPONSE TO THE COVID-19 PANDEMIC

In response to the pandemic, BMC closed many outpatient clinical services and restricted walk-in access to clinical buildings. BMC's main harm-reduction/outreach program, Project TRUST, closed its drop-in center because of concerns about SARS-CoV-2 transmission due to inadequate space for physical distancing. Services transitioned to a sidewalk

canopy and street outreach delivered by roving harm-reduction specialists.

Clinical program leaders became concerned that patients needing urgent treatment for SUDs would not know how to obtain care. Therefore, the harm-reduction/outreach specialists from Project TRUST collaborated with Addiction Medicine Specialists from the Faster Paths “bridge” clinic.⁵ When the harm-reductionists encountered people who use drugs and were interested in treatment, they used video and telephone connections from mobile devices to arrange an impromptu telehealth visit with a medical provider at Faster Paths. Because of federal regulatory changes that allowed for telehealth initiation of buprenorphine treatment,⁶ this interdisciplinary team was able to start medication treatment for new patients who had never had an in-person office visit for addiction treatment services. They also provided COVID-prevention education and supplies, and harm-reduction interventions such as naloxone for overdose prevention and sterile injection equipment. Because of this new method of engaging with patients, the total number of Faster Paths visits remained nearly constant between 2019 and 2020 for the 6-week period between mid-March and the end of April (298 visits in 2019 and 282 visits in 2020), despite decreased physical access to treatment services.

The COVID Recuperation Unit (CRU) was a second major innovation.⁷ The CRU was a temporary facility that provided “bedded outpatient” care for 8 weeks in Spring, 2020 to allow for the isolation of 226 COVID-infected individuals experiencing homelessness who were referred from inpatient hospitals, emergency departments, and community testing sites. In addition to COVID infection, many patients had active substance use and needed management of withdrawal and SUD treatment. The CRU provided patients with support from harm reduction specialists, counselors/social workers, and Addiction Medicine specialists. The treatment team focused on helping patients tolerate isolation, often providing same-day initiation of addiction treatment. In addition to medications for opioid and alcohol use disorders, addiction specialists continued patients on benzodiazepines if they had been using non-prescribed benzodiazepines before admission, and in some cases, patients with stimulant use disorder were prescribed stimulant medications to encourage continued isolation.⁸ Patients were connected with outpatient providers after discharge for ongoing SUD treatment.

BMC’s 5 programs that provide tailored outpatient treatment for patients with SUDs all moved the majority of their operations to telemedicine and largely suspended requirements for urine drug testing. However, each took a slightly different approach to maintain access for their patients:

- The OBAT program, which served approximately 800 patients before the pandemic, distributed donated cell phones to patients who lacked phone access. Prescription lengths were extended. The program increased use of extended-release injectable buprenorphine to decrease trips to the pharmacy and help patients adhere to medication in the face of increased stress, even though this required monthly in-person visits. OBAT created a 24-hour call-line which was disseminated broadly, including to Massachusetts Houses of

Corrections. Collaborations with the Massachusetts Houses of Corrections helped facilitate linkage to treatment-on-demand, (sometimes before the individual left the facility), and connected many individuals who were being released early to avoid infection. Approximately 600 (75%) of the original OBAT patients were retained in care, and the program added many new patients. Visits averaged 1121 per month before March of 2020, and in April there were 1636, for an increase in visit volume of 44%.

- The CATALYST program, for adolescents and young adults, received more referrals than usual starting in March and visit show-rates increased from approximately 60% to 70% after converting to telehealth. Text messaging or “on the fly” telehealth visits were also key to staying connected with young patients and helping to manage crises.
- Project RESPECT found that their pregnant patients appreciated telehealth visits, and reported that the care felt more focused and individualized. However, clinical staff reported finding it challenging to fully engage with patients via telehealth.
- Leaders of the SOFAR program, which cares for infants and toddlers of parents who have SUDs, became concerned about a dramatic drop in on-time rates of vaccination during the pandemic. They developed a mobile-visit program,⁹ in which an ambulance staffed by a pediatrician and nurse conducted curbside visits outside the patient’s residence for examinations and vaccines. These were particularly useful for families with transportation barriers or inconsistent treatment adherence, although the program relied on telehealth visits for simple check-ins on the well-being of families.
- The ABOVE program, for patients with co-occurring SUDs and mental illness, found that a majority of patients preferred telehealth visits but a minority of patients with serious mental illness required scheduled face-to-face appointments with regular urine testing, as well as drop-in appointments, to conduct adequate assessments and keep patients engaged.

The inpatient Addiction Consult Service also made key changes:

- To preserve personal protective equipment and minimize risk of viral spread, they minimized face-to-face consults and converted to calling patients’ phones (bedside or mobile, including, at times, providing donated phones). During COVID’s peak, the service had a nadir of 2 daily in-person encounters, instead of the typical >20 per day.

DISCUSSION

BMC’s SUD treatment programs converted most of their service delivery to telehealth during the pandemic. However, each program tailored adaptations to meet the unique needs of their patient population. Through a combination of establishing new programs to meet emerging needs (eg, the COVID Recuperation Unit) and adapting existing programs (eg, mobile outreach to mother/child dyads affected by SUDs), programs were able to reach their patients and provide harm-reduction and SUD treatment services during the COVID-19 pandemic.

Whether programs are able to continue to provide these useful innovations after the pandemic resolves depends partly on whether state regulatory changes (eg, elimination of prior authorization requirement for injectable buprenorphine) and federal regulatory changes (eg, authorization to initiate buprenorphine treatment in a patient who has not had an in-person visit) continue after the pandemic and are reimbursed at the same rate as in-person visits.

This brief description of program adaptations provides useful examples for SUD care providers and health system leaders across the country as they adapt addiction care in the face of COVID-19 and prepare for future pandemics or emergencies.

REFERENCES

1. Pfeiffer S. \$25m gift to Boston Medical Center will help launch opioid center - The Boston Globe. The Boston Globe; 2020. Published March 6, 2017. Available at: <https://www.bostonglobe.com/business/2017/03/06/bmc-gets-its-largest-gift-ever-fight-drug-addiction/mH0tpibKj2QLHXmMHtkbTM/story.html>. Accessed August 17, 2020.
2. Alford DP, LaBelle CT, Kretsch N, et al. Collaborative care of opioid-addicted patients in primary care using buprenorphine: five-year experience. *Arch Intern Med*. 2011;171(5):425–431.
3. Goldie J. SUD Optimization Project – Data & Analytics update. Published online January 7, 2020.
4. Baggett TP, Keyes H, Sporn N, Gaeta JM. Prevalence of SARS-CoV-2 infection in residents of a large homeless shelter in Boston. *JAMA*. 2020;323(21):2191–2192.
5. Harris M, Johnson S, Mackin S, Saitz R, Walley AY, Taylor JL. Low barrier tele-buprenorphine in the time of COVID-19: a case report. *J Addict Med*. 2020;14(4):e136–e138.
6. Drug Enforcement Administration. COVID-19 Information Page. COVID-19 Information Page. Available at: <https://www.deadiversion.usdoj.gov/coronavirus.html>. Accessed August 24, 2020.
7. Freyer F. When COVID-19 patients need to recuperate at home, but have no home. The Boston Globe; 2020. Published April 26, 2020. Available at: <https://www.bostonglobe.com/2020/04/26/metro/when-covid-19-patients-need-recuperate-home-have-no-home/>. Accessed August 17, 2020.
8. Ahamad K, Bach P, Brar R, et al. Risk mitigation in the context of dual public health emergencies: interim clinical guidance. Published online March 2020. Available at: <https://www.homelesshub.ca/resource/risk-mitigation-context-dual-public-health-emergencies-interim-clinical-guidance>. Accessed August 24, 2020.
9. Bailey M. How a pediatric vaccination van has upended the idea of care. HealthCity; 2020. Published June 9, 2020. Available at: <https://www.bmc.org/healthcity/population-health/how-pediatric-vaccination-van-has-upended-idea-care>. Accessed August 17, 2020.