

Development and Implementation of a COVID Recuperation Unit at Boston Medical Center for People Experiencing Homelessness

October 2020

Miriam Komaromy, MD

Medical Director, Grayken Center for Addiction

Mary Tomanovich, MA

Program Manager, Grayken Center for Addiction

This report was funded by a grant from RIZE Massachusetts Foundation, Inc., a foundation committed to ending the opioid epidemic and reducing its devastating impact on people, families, and communities

Table of Contents

INTRODUCTION.....	2
People experiencing homelessness are at increased risk of COVID-19 and complications of substance use disorders.....	2
The COVID-19 pandemic in Boston, Massachusetts.....	3
DEVELOPMENT AND SUPPORT.....	6
Building the resolve to address a pressing public health need.....	6
Rapid deployment was assisted by crisis status.....	6
Development and Support: Successes and Improvements.....	6
OPERATIONS.....	10
Staffing.....	10
Supplies.....	11
Admissions & Discharges.....	11
Financial Costs.....	12
Success and improvement.....	12
Defining a focused model.....	14
Medical Treatment.....	14
Adaptations to SUD care.....	15
Protocol Development.....	17
Implementing a Harm Reduction Framework: A Clash of Cultures.....	17
Clinical Operations: Successes and Challenges.....	20
UNIT COURSE.....	22
Referrals.....	22
Population Characteristics.....	22
Outcomes and Disposition.....	24
Impact of the COVID Recuperation Unit on the BMC inpatient census.....	24
CONCLUSION.....	27
Lessons learned.....	27
Advice for future implementation projects.....	27
Summary.....	29
Appendix.....	33
Protocol: Approach to Substance Use Disorders.....	33
Protocol: Infection Control.....	35
Harm Reduction Menu.....	41

From April to June of 2020, Boston Medical Center operated the COVID Recuperation Unit – a respite facility for people experiencing homelessness and infected with COVID-19. In this publication, the authors describe their experience designing and operating this facility, with a focus on caring for patients with substance use and mental health disorders. The purpose of this document is to describe these efforts and provide guidance to municipalities or health systems interested in supporting people experiencing homelessness.

INTRODUCTION

People experiencing homelessness are at increased risk of COVID-19 and complications of substance use disorders

People experiencing homelessness (PEH) have a higher risk than the general population of infection from COVID-19,¹⁻³ and usual infection control measures are less likely to be feasible in this population.⁴ For instance, frequent handwashing may be impossible, shelters are densely crowded, and physical distancing is not a viable option; beds often have no barriers between them and are located in large rooms where transmission of infection is likely. Personal protective equipment (PPE) was not routinely available for shelter staff, especially in the early days of the pandemic, which increases transmission risk for guests and staff. When people are unsheltered (i.e., sleep on the streets or in encampments), physical distancing is even more difficult, as

unsheltered PEH often group together for safety and comfort. PEH are not only at high risk of contracting contagious diseases, but are also at increased risk for other chronic health conditions like hypertension and diabetes,⁵ which are associated with severe COVID-19 symptoms.

When COVID-19 infection occurs in PEH, they are often unable to isolate in a home, and may lack dedicated caregivers or familial supports. Although some may have family or friends who are willing to shelter them when they are ill, PEH may be unwelcome during the pandemic because of fear of contagion. These patients need additional support in order to recover from COVID-19, and, from a public health standpoint, it is essential that they isolate in order to reduce the risk of transmitting COVID-19 infection to others.

PEH are known to have higher rates of substance use disorders (SUDs) and severe mental health disorders than the general population.⁶ According to 2019 estimates gathered by the US Department of Housing and Urban Development, 18% of PEH in Massachusetts reported experiencing a mental illness, and that percentage increases to 46% among people who are unsheltered. About 14% reported using drugs or alcohol, but, as with mental illness, this is more common among unsheltered people with about 40% reporting use.⁶ In contrast, serious mental illness is estimated to affect 4.5% of all US adults,⁷ and about 11% of US adults reported active illicit drug use.^{7,8} SUD management and treatment providers face special challenges during the COVID-19 pandemic.⁹ Harm reduction approaches traditionally rely on in-person interactions (e.g., drop-in centers, mobile outreach)¹⁰ to build relationships and disseminate supplies for overdose reversal and safer substance use. SUD treatment often requires, sometimes by law,¹¹ providers to see patients physically in order to prescribe or administer medication treatments. The physical distancing that is mandated during COVID-19 challenges harm reduction and addiction treatment programs' normal operations, risking greater incidence of complications like overdose and sharing of injection equipment. In isolation or quarantine settings, people with SUD are at risk of withdrawal while confined without access to substances or treatment.

PEH are also more likely to have severe mental illnesses (SMIs) that impact their ability to comply with physical distancing requirements, infection control guidelines, and telemedicine utilization. An estimated 21% of PEH have a psychotic disorder,¹² the characteristics of which make it challenging to adapt to new changes to shelter and service schedules. Changing expectations and limited access to support systems can also exacerbate symptoms of trauma disorders which are very common among SUD and PEH populations.¹³ The emergency department (ED) is a frequent point of care for patients at the intersection of SUD, SMI, and homelessness¹⁴; as EDs changed their workflows and protocols to adjust for the pandemic, this vulnerable patient population was at risk of care disruption and mental health crises.

The COVID-19 pandemic in Boston, Massachusetts

The first Massachusetts case of COVID-19 was reported in Boston on February 1, 2020.¹⁵ In late March, public health and homeless service leaders began daily meetings with a group of organizations that provide care for PEH in Boston, including the Boston Public Health Commission

(BPHC), the Department of Neighborhood Development, the Bureau of Recovery Services, Boston Medical Center (BMC), community harm reduction programs, leaders of large Boston shelter programs (including Pine Street Inn, St. Francis House, Rosie's Place, and BPHC shelters), and Boston Health Care for the Homeless Program to forecast care needs and develop possible alternative care sites. The BPHC convened daily telephone calls, and the group tracked local data on COVID-19 infections in the general population and PEH; oversaw the establishment of COVID-19 testing-sites for PEH; erected temporary shelter sites for patients in isolation and/or awaiting test results; and contracted to arrange transportation for PEH who were COVID-19-infected or quarantined between shelters, testing sites, and care facilities. Communication among the aforementioned groups during these phone calls also resulted in BMC donating PPE to several of the larger shelters so that shelter staff were protected from infection.

The group also worked together to identify possible sites for PEH to be housed in non-congregate settings, and for the quarantining of PEH who had been exposed to COVID-19. This included multiple unsuccessful attempts to secure hotel space for this purpose, however, the group was able to secure a college dorm for the temporary housing of approximately 180 PEH who were identified as being at particularly high risk of COVID-19 infection. A decommissioned hospital was also secured temporarily for the purpose of quarantining PEH who had a known exposure to COVID-19 and were awaiting the results of testing. The location of this facility, about a 20-minute drive from the majority of shelters downtown and difficult to access via public transportation, was not acceptable for some shelter guests who relied on services downtown.

Infectious disease specialists from BMC also worked closely with Boston Health Care for the Homeless to develop symptom screening metrics and testing schedules for shelter guests. Boston Health Care for the Homeless organized a testing strategy that included testing for symptomatic, asymptomatic, and/or exposed guests; and periodic universal testing. In late-March, universal testing among PEH at the largest Boston shelter revealed high prevalence (36% positive rate)³ of COVID-19 infection in shelter guests, and shelters were struggling to maintain operations in the face of staff becoming ill or otherwise unavailable to work. It became clear that larger facilities with expanded care capacity were needed for PEH who were infected with COVID-19 in order to mitigate a public health crisis caused by rampant viral transmission.



Key Takeaways – Introduction:

- People experiencing homelessness, especially those with substance use and mental health disorders, are at increased risk of COVID-19 infection
- Traditional infection control measures may be inadequate at preventing coronavirus transmission in this population
- Collaboration between multiple organizations involved in caring for people experiencing homelessness resulting in a decision to open a COVID Recuperation Unit

DEVELOPMENT AND SUPPORT

Building the resolve to address a pressing public health need

Boston Medical Center has served as a safety net hospital in Boston since its founding in 1855. Approximately 10% of patients admitted to BMC are experiencing homelessness, and 2% have no insurance.¹⁶ Most patients at BMC are covered by public insurance. The majority of patients (65%) seen at BMC are patients of color, and many endorse a primary language other than English.¹⁶

BMC's leadership recognized the impact the novel coronavirus and decreased financial resources would have on their patients. Addiction and infectious disease specialists on the BMC faculty raised alarms about the growing crisis among PEH and urged the hospital to take action to address the need for a special care unit for PEH. Clinical and operational leaders raised reasonable concerns about diverting members of BMC's workforce in anticipation of increased inpatient and ICU staffing needs during the predicted surge in COVID-19 hospitalizations. However, the hospital CEO advocated for the importance of BMC's role in addressing this public health need in Boston. Hospital leadership were also unified around a goal of preserving BMC's ability to serve the community through the crisis.

Like many hospitals, BMC expected to meet or exceed maximum bed capacity during the COVID-19 surge, and leadership was motivated to identify alternate care sites for patients who needed isolation, but did not need to occupy inpatient beds. Such an alternative care site could also serve as a discharge option for patients who no longer needed inpatient care, but did not have a safe place to continue their quarantine. Additionally, an alternative care site would address the challenge of caring for patients with behavioral health and substance use treatment needs who are often complicated to discharge, especially during a time when treatment programs were limiting admissions or not admitting new patients at all. For these reasons, hospital leadership requested that the Commonwealth of Massachusetts loan BMC a vacant hospital building (East Newton Pavilion) near BMC's campus. This facility is located approximately 2 blocks from BMC's emergency department. On March 24, 2020, state leaders agreed to loan the property to BMC.

Rapid deployment was assisted by crisis status

The COVID Recuperation Unit (CRU) admitted its first patients on April 9, 2020. In the two weeks between March 24 and April 9, several features of the crisis allowed for rapid implementation of the CRU (see *Table 1*).

Development and Support: Successes and Improvements

The CRU model was designed based on the community's needs in March and April of 2020. The continuous communication with shelter leaders and the Boston Public Health Commission during the beginning of the pandemic informed BMC of the need for a quarantine and isolation site. The

hospital's relationships with the Mayor's and Governor's offices allowed for the uninhabited East Newton Pavilion to be outfitted for COVID-19 isolation and care.

Aside from communication and strategic relationships, one of the most powerful factors in the launch of the CRU was BMC leadership's commitment to responding to the pandemic. The virus' spread was seen as a real threat to the health and safety of patients, hospital staff, and the community. The political environment in Massachusetts and Boston was conducive to this rapid response and provided public support for the project.

Challenges:

The crisis circumstances described in **Table 1** were unprecedented and came with challenges related to the interpretation and scope of emergency regulations. The CRU operated under the Boston Medical Center's license granted on an emergency status by the State. This emergency license allowed for hospital operations outside of hospital grounds, but also came with the perception that regulations that are applied to hospitals also applied to the CRU. For example, BMC's policy regarding discharge against medical advice was invoked by nursing and administrative staff, and applied to the patients in the CRU. The hospital's authority over clinical care, and the unclear liability over adverse events, were challenging to understand and navigate and often ended in compromise.

Table 1: Crisis circumstances that allowed for rapid resource allocation

State Approval of Unlicensed Space
The Massachusetts Department of Public Health (DPH) licensure for the CRU was obtained under the <i>Authorization and Guidelines for Use of Alternate Space for Treatment of Patients During the COVID-19 2020 State of Emergency</i> ¹⁷ issued by the DPH pursuant to the Commonwealth’s Emergency Declaration. This allowed the hospital to perform clinical care in unlicensed space not owned by BMC, after submission of an attestation to the DPH.
Classification as Bedded Outpatient Shelter
The CRU was classified as a medicalized shelter by DPH, and as a “bedded outpatient” unit by the Drug Enforcement Administration (DEA), avoiding the need to qualify for inpatient levels of care and allowing for medications to be prescribed on an outpatient basis. This, in turn, allowed the CRU to operate without an inpatient pharmacy; the bedded outpatient status also allowed for the administration of methadone to patients for the purpose of treating opioid use disorder.
Financial Relief
Anticipation of emergency state and federal funding allowed for simplified processes and documentation, since billing was not required. BMC’s Information Technology Services (ITS) team created a simplified instance of the electronic health record that allowed for clinical coordination, but did not support coding or subsequent billing.
Personnel Availability
Staffing was available, in part, because the health system paused non-essential services. BMC researcher-physicians and other medical staff were available to work in the CRU because clinical research activities and many clinical and educational programs were suspended. Massachusetts Governor Charlie Baker also allowed for newly graduated and senior nursing students to practice without a license, and also extended all license renewals that were due to expire.
Crisis Resource Allocation
The CRU was able to utilize many of BMC’s existing systems and relationships. Clinical programs under the umbrella of BMC’s Grayken Center for Addiction, such as harm reduction teams, addiction treatment programs, and counseling/social work, came together to support clinical services. The CRU also leveraged BMC’s preparations for the COVID-19 crisis, by, for example, utilizing supplies of PPE and support from Operations, Facilities Management, Information Technology Services, infection control, and Admitting. In addition, BMC’s Development Department received donations for the CRU including donated beds, televisions, chairs, new clothing, and prepackaged meals delivered three times per day for all patients and staff.

While BMC was preparing the East Newton Pavilion for the launch of the CRU, a parallel effort was underway by the city to open the Boston Hope facility. Boston Hope was a 500-bed unit in a convention center downtown that could accept PEH as well as overflow from other hospitals that met their surge capacity. These two facilities served the same purpose, and the duplication caused some confusion about where shelter guests should go if they tested positive. Ultimately, neither facility operated at capacity.

Key Takeaways – Development and Support:

- Surge planning and universal testing indicated a need for a respite facility for people experiencing homelessness
- The City of Boston and State of Massachusetts governments worked with Boston Medical Center to find solutions to challenges facing people experiencing homelessness
- The relaxed regulatory environment facilitated the launch of non-traditional medical sites, but also created some confusion about how these regulations could be interpreted

OPERATIONS

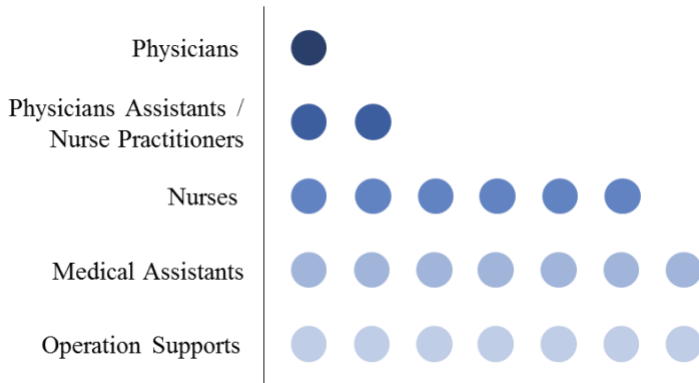
Staffing

Clinical leadership of the CRU was provided by a Medical Director who is an addiction medicine specialist, a Director of Infection Control who is an infectious disease specialist, and a Director of Addiction Treatment who is also an addiction medicine specialist. There was no nursing director. There was a Director of Operations, and operational staff in the CRU had a designated team lead.

The CRU was staffed with physicians, physician assistants (PAs), nurse practitioners (NPs), nurses, medical assistants, clinical social workers, harm reduction personnel, and operational support staff (see **Figure 1**). Most physicians were BMC faculty who volunteered to take on additional clinical duties in the CRU; a few were physicians from outside organizations who offered to help, and were paid by the hospital on a contract basis. Other staff were recruited in a variety of ways. Volunteers were organized using a form developed in Qualtrics and distributed through BMC's Development mailing list and partnering medical and public health universities. Volunteers who reported skills, credentials, and availability that met the CRU's needs were referred to BMC's Human Resources team, who created a rapid credentialing and hiring process to onboard temporary staff. Most of the staff recruited from the volunteer list were medical assistants and operations staff, but some nurses and Advanced Practice Providers (APPs) were brought on using this method. Some non-physician BMC staff were reassigned from their standard clinical duties or volunteered to work extra hours at the CRU and were paid a premium over their usual hourly rate. Some furloughed ambulatory staff were offered work in the CRU instead of being furloughed. Finally, some teams, like the harm reduction and case management teams, donated their staff's time during regular working hours.

All physicians worked 12-hour shifts to cover the CRU's 24-hour-per-day operations. PAs and NPs staffed the unit 12-14 hours per day in 8 hour overlapping shifts. Medical assistants, nurses, and operations staff were present 16-24 hours per day. Harm reduction/outreach specialists and clinical social workers were available at least 8 hours per day.

Figure 1: Staffing Ratios (1 floor / 33 patients)



A challenge of rapidly launching a unique model of care for a novel virus was the inability to train staff on the needs of PEH. Many of the direct care team members had no experience working with people who were experiencing homelessness or who have SUDs, especially in an environment where ongoing substance use was anticipated. Setting expectations for staff around substance use and how to deescalate patients in crises remained a challenge while the CRU was operational.

Supplies

BMC’s Facilities and Development Teams quickly leveraged existing supply chains to supply the CRU. The Development team obtained corporate donations for food, clothing, furniture, toiletries, and Tracphones. Medical equipment and supplies were purchased through hospital vendors and servicers. Maintenance, delivery, security, housekeeping, and sanitation contracts were negotiated and expanded to include the CRU’s facilities.

The Information Technology Services team quickly built a simplified version of Epic to allow for medical documentation. This version’s capabilities included bed planning; charting; lab and testing orders; and medical histories. It did not support medication ordering or coding/billing. This resource was very helpful, especially in instances in which patients were coming from more intensive levels of care and had complex needs.

Admissions & Discharges

Most admissions were referred from the BMC ED or from BMC inpatient units. However, patients were admitted from a variety of sources outside of Boston Medical Center, including other hospitals, COVID testing sites, and shelters. As previously described, the CRU was an integral piece of the Boston Public Health Commission’s pandemic response, and had to be available to any person experiencing homelessness who required isolation. Providers, within or outside of the hospital, called a triage number to arrange admission for a patient. An admissions counselor reviewed the information and determined in consultation with the medical director if the patient was appropriate for admission or needed a higher level of care. Characteristics that were taken into consideration included vital signs, date that the patient tested positive, level of respiratory

distress, history of violent behavior, and active withdrawal symptoms. If the patient was appropriate for admission, the admissions counselor would alert a cab company contracted with the Boston Public Health Commission to transport COVID-positive patients. Once the patient arrived to the CRU, they would check any necessary belongings at the security desk, receive a booklet of information about the CRU, and be shown their room.

During the 8 weeks that the CRU was in operation, discharge protocols changed along with CDC guidance. Initially, Massachusetts was facing a shortage of nasopharyngeal swabs, so the CRU used a symptom-based discharge criteria of 7 days after the initial positive test, which was then changed to 10 days because of concern that patients who were being discharged to a congregate living situation could still be contagious. Once the swabs became more available, patients were offered swab-based testing requiring 2 consecutive negative swabs in order to be eligible for discharge, but this became problematic because so many patients' swabs remained positive for many weeks after their symptoms resolved. Finally, the policy reverted to symptom-based discharge criteria.

Financial Costs

The cost to BMC of operating the facility was approximately \$2.4 million to prepare, operate, and take down the CRU, not including important contributions from the Commonwealth of Massachusetts in readying the facility for occupancy. These costs reflect the extra staffing required for BMC to be prepared for sudden influxes of patients when mass testing was performed at Boston shelters. The resources to fund these operations were secured through government relief funding streams, as well as through philanthropic support from donors aiding in BMC's COVID response programming. Operations also benefitted greatly from donated goods and services like food, furniture, electronics, and clothing for patients.

Success and improvement

The CRU was implemented in the context of a national and local public health crisis. BMC was able to leverage existing personnel and operational resources to set up what was essentially a satellite medical unit within 2 weeks. The planning workgroups met remotely multiple times a day in order to get the facility ready for launch, and problem-solved daily while the CRU was in operation. BMC's team of addiction specialists, infectious disease experts, operations managers, technology specialists, nurse leaders, facilities managers, lawyers, and executive leadership worked together to build and staff the CRU.

The launch team operated under a framework of "disaster medicine." When the infection disease and medical teams were developing their protocols and plans, they were working with the best guidance and resources available at the time. These guidelines were constantly changing – for example, universal masks were not recommended for the general public in April when the Unit was launched, but became state mandated in early May. Testing capability varied during the early months of the pandemic, which impacted the discharge criteria and the universal testing abilities of local shelters.

Key Takeaways – Operations:

- Training new and redeployed staff on the unique needs and challenges faced by people experiencing homelessness, people who use drugs, and people with severe behavioral health needs is important when operating a quarantine/isolation unit
- Changing local, state, and federal guidance was challenging for both patients and providers, and made expectation setting difficult
- Communication between referring agencies about their testing plans and surge capacity was important to plan for staffing and resource needs

CLINICAL CARE MODEL

Defining a focused model

The guiding principle of care in the CRU was to help patients remain at the facility throughout their period of isolation, both to directly benefit the patient and to reduce infection transmission in the community. This approach was three-pronged.

- It necessitated a safe place for isolating and mitigating COVID-19 symptoms, as well as monitoring for clinical deterioration.
- Because many PEH were at risk of withdrawal from substances, secondary to sudden isolation and quarantine, a second clinical focus included management of substance use disorders (e.g., harm reduction interventions, treating acute withdrawal, continuing and initiating medications to treat SUD). Similar to a traditional hospital stay, the patients who were admitted to the CRU did not come to the facility to receive treatment for their addiction, but to treat a secondary medical condition. Active use of substances was anticipated and addressed through the integration of harm-reduction supports into the clinical care model.
- Many patients who were admitted to the CRU had chronic mental illness. Most of these patients had behavioral health diagnoses in their electronic health record (EHR), but some did not, and many had been incompletely evaluated in other settings, such as the ED. Similarly, some had been engaged in psychotherapeutic or pharmacological treatment for their disorders, and many had not. As a result, a third important focus of care in the CRU was the treatment of co-occurring mental illness. Clinical social workers or counselors were available to patients at least 8 hours a day, both with in-person staff and through telemedicine. Tablets were provided to patients in order to facilitate these remote therapy sessions.

The CRU was designed to provide a level of care in between outpatient and inpatient intensity. While acute exacerbations of other medical or mental health issues were addressed in the CRU, there was less focus on managing patients' chronic health problems. In the case of SUDs, engagement in treatment was not an admission requirement; rather, the team focused on addressing patients' cravings, minimizing discomfort, and reducing substance use while in the facility. The overarching goal of the facility was to keep patients within the walls of the unit, and this guided substance use disorder management as well (see **Appendix**).

Medical Treatment

The CRU was implemented on multiple floors of the East Newton Pavilion. The first floor was used for admissions, discharge, and security check-ins, and the second floor was used for staff spaces including locker rooms and donning/doffing stations. There were three floors available for patients, with each floor made up of three wings. While three floors were prepared for patients,

only two ended up being used. Men and women were housed in separate wings. Each wing had a common room with televisions, chairs and couches, games, magazines, and crafts.

All staff wore full PPE at all times, including scrubs, double gloves, gown, N95 mask, and face shield. Because all patients were COVID-infected, patients were not required to wear masks or PPE. PPE was available both on the second floor with the scrubs in the donning area, as well as immediately off the elevators. This section of the floor was tarped off with instructions on the wall about how to properly don and doff PPE (see **Appendix**).

Each floor had a locked medication room where over-the-counter medications were stored, along with select controlled medications. In order to comply with DEA regulations, methadone was kept separate from other controlled substances and dispensed each morning. In some cases in which benzodiazepines were prescribed to patients with reported benzodiazepine addiction or who were in alcohol withdrawal, these medications were also stored in this locked room. Each floor had three nursing stations in their corresponding wing. These nursing stations were equipped with equipment for emergency resuscitation, computers for charting, paper charts for each patient, printers, fax machines, phones, and a book of protocols.

The medical care provided on the unit was consistent with a medicalized shelter model. Patients had their vital signs checked once daily unless otherwise indicated by a doctor. Vital signs were taken by medical assistants who escalated abnormal vital signs to nurses, who then assessed the patient. At least one APP, such as a doctor, nurse practitioner, or physician assistant, was available for assessments as well. The medical provider would attend rounds on each unit and make any additional care recommendations. Additionally, this provider would attend admission/discharge rounds each morning to advise the case management teams about upcoming or complicated discharge cases. Oxygen was available via concentrators for patients who had pulmonary compromise from COVID infection, but patients could not be intubated in the CRU, and it was not possible to run a full medical code if a patient were to experience cardio-pulmonary arrest. The emergency protocol involved basic stabilization and ambulance transport to BMC.

Patients self-administered the medications that they had brought with them at the time of admission whenever possible, and kept their medications in a medication locker at their bedside. Most medications administered on the unit were over-the-counter medications including fever and pain reducers; antacids; cough drops and suppressants; melatonin; anti-diarrheals; and oral nicotine replacement therapies. Additional medications could be ordered through the hospital pharmacy by fax, and a courier delivered these medications daily. Methadone was stored with multiple days available (estimated based on the average dose of 80 mg per patient and the number of patients with OUD on the unit), and could also be ordered through the inpatient pharmacy.

Adaptations to SUD care

Many patients (42%) admitted to the CRU reported active use of substances, in addition to tobacco and marijuana. When patients reported active or recent substance use, they were

screened for likelihood of withdrawal. When harm reduction staff were available on the unit, patients with SUDs were offered a “Harm Reduction Menu” (see **Appendix**) in order to assess their hygiene needs, although this practice was discontinued after several weeks due to objections by hospital administration.

Several aspects of the COVID-19 pandemic drove adaptations to SUD care:

- **Goal of SUD management:** In this setting, the overarching goal of medical management for SUDs was to help patients tolerate isolation and quarantine. At times, this necessitated adaptations of usual practice. For instance, whereas the goal of medication treatment for OUD might usually be to avoid intoxication or withdrawal, in this setting minor intoxication was accepted according to individual patient needs and preferences. Additionally, addiction specialists could offer stimulant or benzodiazepine prescriptions for severe stimulant or benzodiazepine use disorders, respectively, to reduce discomfort, decrease cravings, and reduce the need to leave the unit for substance use. Our goal was to minimize use of illicit substances by offering prescribed alternatives while the patient was admitted to the CRU and offering low-barrier treatments.
- **Frequent withdrawal:** Withdrawal was common because patients were suddenly confined in a hospital unit for isolation and quarantine after testing positive for COVID-19 at a community testing site or ED. All patients were assessed at the time of admission for risk of withdrawal, and medical treatment of withdrawal was available 24 hours per day.
- **Addiction consultation:** Some medical staff were not comfortable managing SUDs because they had been redeployed from shut-down ambulatory clinics. Because of increase regulatory flexibility,¹⁸ addiction specialists were routinely available for telehealth consults, including for the management of buprenorphine and methadone inductions, with any patient that required SUD evaluation.
- **Methadone treatment:** Initially, methadone was obtained via take-home doses for patients who were already enrolled in a local opioid treatment program (OTP). This was operationally challenging, and required guest-dosing for any patient who was enrolled in other OTPs across the state. Some patients who had opioid withdrawal were not enrolled in methadone treatment at the time of admission, but buprenorphine was contraindicated (if, for instance, they had been using illicitly-obtained methadone or longer-acting fentanyl analogs). Therefore, medical staff pursued the ability to start methadone on-site by consulting with DEA agents, BMC’s inpatient pharmacy team, and nurses trained in methadone administration. Even though this was implemented shortly before the unit closed down, this allowed 6 patients to initiate methadone maintenance for OUD, which they planned to continue after discharge from the CRU.
- **Harm reduction:** A harm reduction philosophy was especially important because patients were typically not seeking treatment for SUDs when they were admitted. Harm reduction specialists were onsite for immediate consultation, support, staff education, and provision of Naloxone and rapid HIV tests. Safe injection supplies were offered to patients at the

time of discharge. Harm reduction staff also worked closely with the security team to de-escalate patients and navigate challenges in this population.

Protocol Development

The clinical protocols were written in a collaborative effort by infectious disease, behavioral health, harm reduction, and addiction medicine teams. Experts collaborated on drafting the protocols before finalizing them with the Medical Director. These protocols were published on a cloud-based file-sharing system that staff could access anywhere. The protocols were also printed and placed in binders at the nursing stations.

Protocols were written based on federal, state, and local guidelines for COVID care at the time that the policy was written. During the course of the unit, the Centers for Disease Control and Prevention (CDC) changed their discharge recommendations and testing guidelines, which created challenges for the patients and providers. The infectious disease team recommended testing and discharge criteria that favored continued isolation, given that patients were likely to return to congregate shelter environments.

Implementing a Harm Reduction Framework: A Clash of Cultures

Implementing a harm-reduction approach in a setting such as the CRU, where patients are expected to remain isolated from the outside world for periods of a week or more, was quite challenging. During the planning phase, the CRU's medical leadership recognized that many CRU patients would not be prepared to suddenly stop using all substances, and they outlined a number of steps that were intended to create a harm-reduction environment in the Unit, with a goal of helping patients to be safe and to tolerate isolation. Some of these steps were successfully implemented, but others had to be modified due to competing concerns.

Below is a list of harm reduction measures that were planned, as well as the results during the implementation phase.

1. Confiscation of substances

- **Plan:** At the time of admission, patients and their luggage would be “wanded” to detect any weapons, but their belongings would not be searched or confiscated.
- **Implementation:** Security staff adamantly refused to accept this recommendation and were supported by administrative leaders. Therefore, patients and their belongings were searched and items confiscated at times, although this was applied inconsistently (in part due to fears of contagion by security and admissions staff).

2. Cigarette smoking

- **Plan:** Cigarette smoking would be allowed in a private outdoor area, and cigarettes would be supplied so that patients did not leave the building to purchase them. Tobacco withdrawal is often a significant factor in patients' refusal

to remain contained in a facility, even when medications are used to reduce nicotine withdrawal symptoms. In an inpatient setting, patients are often so ill that they do not choose to leave the hospital in order to smoke, but in the CRU many patients had minimal symptoms, and there was concern that nicotine withdrawal symptoms would prompt patients to leave isolation.

- **Implementation:** Smoking areas and scheduled breaks were implemented for patients who wished to smoke. This raised a number of concerns: patients who did not want to smoke objected to being exposed to smoke in the outdoor area, and staff were ambivalent about providing and allowing the use of tobacco, a substance with such severe adverse health consequences. It was also a substantial time burden on staff to accompany patients to the smoking courtyard, and there was tension over how often patients would be escorted outdoors. Many patients expressed appreciation that they were not required to abruptly stop using cigarettes, and some commented that they planned to use the enforced decrease in their consumption of cigarettes as an opportunity to stop smoking once they were discharged.

3. **Overdose prevention and provision of sterile injection equipment**

- **Plan:** Harm reduction measures would be implemented throughout the respite stay in order to decrease the risk of adverse effects from injection drug use. This would include the dispensing of safe injection and consumption supplies, naloxone, and harm reduction counseling.
- **Implementation:** Harm reduction specialists helped to staff the CRU and interacted extensively with patients. Initially they provided naloxone and sterile injection supplies at the time of admission to any patients who were interested. However, hospital leadership became concerned that this put the hospital at risk of violating federal restrictions on operating a “supervised injection facility,” thus distribution of sterile injection supplies was offered only at the time of discharge from the CRU. Naloxone was widely distributed to staff and patients on the unit, and was used to reverse at least 7 overdoses over the course of 8 weeks.

4. Allowing patients to store and self-administer medications

- **Plan:** The initial plan was to allow patients to store all medications, including controlled substances, in a locking cabinet at their bedside. This was the strategy that was adopted by an isolation site operated by the City of Boston (Boston Hope). The goals of this plan were several-fold. First, this strategy would accommodate the very minimal nursing staffing that was available for the CRU, and thus the limited ability to administer and record the use of medications. Second, locked cabinets would allow patients to store any non-prescribed substances and belongings to avoid theft by other patients. And third, allowing patients to manage their own ingestion of medications was not believed to pose undue risk, under the assumption that patients would take their outpatient medications just as they had been doing prior to admission to the CRU.
- **Implementation:** There were numerous challenges to implementing this approach. The lack of standardized training and supervision for nursing staff and medical assistants meant that different staff took widely varying approaches to managing medications at the time of admission. Sometimes patients were simply allowed to keep their medications; at other times the medications were logged but returned to the patient; and at other times some or all of the medications were confiscated and locked in a medication room. Most patients who had their medications returned to them appeared to be able to self-administer them. However, some were clearly not able to manage their outpatient medications in a safe or effective way, such as patients who had been prescribed a complicated insulin regimen by an outside provider but were not able to administer it to themselves safely (resulting in hypoglycemia or extreme hyperglycemia). Other patients who brought in controlled substances apparently ingested them in a way that caused complications, such as intentional or unintentional overdoses of benzodiazepines. Finally, controlled substances that were newly prescribed by the CRU medical staff, such as benzodiazepine taper to treat alcohol withdrawal, could not be safely managed by patients. Over time, an approach was adopted which minimized demands on the few nurses staffing the units, while also decreasing potential harms to patients; namely, methadone and benzodiazepine tapers were maintained in a medication room and administered by nursing staff, while almost all other medications were managed by patients.

5. Addressing patient use of non-prescribed substances in the CRU

- **Plan:** In order to maximize the goal of supporting patients in their isolation, we planned not to discharge patients for use of non-prescribed substances. Whenever possible, addiction specialists would offer treatment or maintenance medications to control symptoms and cravings (like prescribed stimulants).
- **Implementation:** When operational and clinical support staff observed or suspected patients of using substances, they commonly contacted security officers.

This often resulted in confrontation and enforced discharge of the patient, posing a contagion risk to others outside of the CRU. In order to avoid this, we implemented a policy that ongoing substance use by patients should be addressed by a medical or mental health provider or harm reduction staff member, with a goal of making it possible for the patient to stop using the substance by addressing their symptoms in other ways (e.g., using medical or counseling techniques to address anxiety or cravings). Substance use continued to pose challenges, including several overdoses and concerns about drug distribution in the CRU to patients who were attempting to avoid relapse.

6. Managing patients' desires to leave the unit

- **Plan:** Patients would be asked not to leave the Unit until they were cleared from infection precautions. Harm reduction and low-barrier addiction treatment options would be in place to minimize the need for patients to leave the facility.
- **Implementation:** In spite of this request, some patients did leave the unit early, although in at least a third of cases they returned voluntarily to continue isolation. Their stated reasons for leaving varied, but various patients returned to the CRU visibly intoxicated. If patients returned within 2 hours, they were accepted back into the CRU; if more than 2 hours had passed, then they were directed to present to the emergency department for re-evaluation. Overall, 11 (5%) patients left the Unit against medical advice (AMA) without returning in time. In these cases, the public health department and shelter system were notified.

Clinical Operations: Successes and Challenges

Successes:

By many traditional metrics, the clinical care provided at the CRU was a success and met the needs of the population served. Few patients left AMA, despite the sudden nature of their isolation and generally mild symptoms. There were no deaths, COVID-related or otherwise, in the CRU, and cases in which the patient decompensated were escalated to a higher level of care in the hospital. The case management team was able to place 24 patients in substance use or behavioral health programs after their isolation. And many patients were able to continue or initiate substance use and mental health treatment, and were connected to follow up appointments by the case management team.

The infection control measures put in place at the CRU also proved successful. At the time of writing this report, we are unaware of any staff infections related to time spent at the CRU.

Challenges:

The CRU was launched at a time when CDC guidance was shifting around mask policies, discharge criteria, and testing requirements. Communicating these and other policies to rotating groups of staff members proved logistically complicated. Because of the rapid onboarding process (described below), some staff members did not have access to the cloud-based system that

housed the most up-to-date information. Early in the CRU's course, this was especially problematic. If the need arose to re-open the CRU, having both physical and electronic copies of the completed protocols would be a priority.

Finally, implementing a harm-reduction framework in a hospital setting was not a simple task. The federal prohibition against safe consumption sites complicated our desire to optimize the safety of people who continued to use drugs while in the CRU. Our expectations often clashed with the realities of the system in which we needed to operate.

Key Takeaways – Clinical Care Model:

- The care model implemented at the COVID Recuperation Unit was safe and resulted in no patient fatalities
- Substance use and behavioral health counseling was important and highly utilized by patients at the COVID Recuperation Unit
- Implementing a harm reduction framework in a medical setting is very challenging, and requires widespread support from clinical leaders and on-the-ground staff

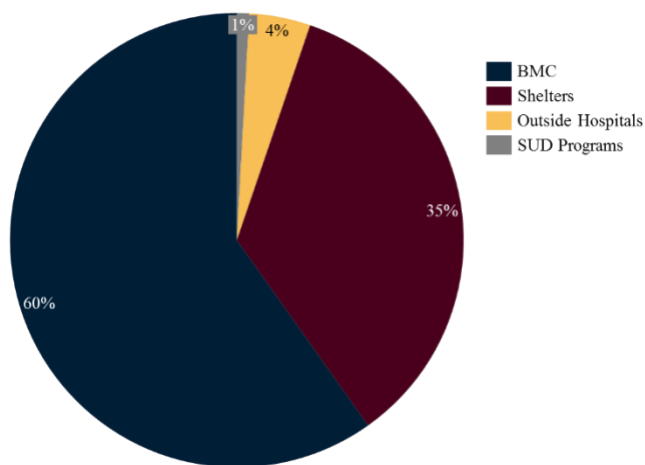
UNIT COURSE

Between April 9, 2020 and June 4, 2020, 226 unique patients were treated in the CRU, with an average length of stay of 7.3 days. There were no deaths on the Unit. At least 7 patients experienced a non-fatal overdose and 5% of patients developed serious complications of COVID-19. Seven percent of patients left prior to being medically cleared from isolation precautions, but one third of those who left AMA subsequently returned. After completion of isolation, 24 patients were discharged to addiction treatment or mental health programs, 28 to stay with family members, and the rest to shelters.

Referrals

The majority of patients admitted to the CRU were referred from BMC’s inpatient units and emergency department (see **Figure 2**). Seven percent of all discharges between April and June 2020 were to the CRU, and the ED was able to divert 8% of patients who otherwise would have been admitted to the hospital. Shelter testing efforts were the second highest contributor to admissions, which presented challenges in predicting demand. Boston Health Care for the Homeless Program obtained tests in batches from the state and organized waves of testing at various shelters. The CRU team would be made aware of these testing plans and would project needed beds. Often, BMC would project a need for up to 20 beds over the course of 2 days. However, the prevalence of COVID-19 infection in the sheltered population varied greatly. As previously described, the first round of universal testing revealed a 36% prevalence rate in the sheltered population, but only a few weeks later the prevalence approached 0%. Staffing based on these projections was very challenging, especially as BMC clinics reopened and the staffing pool shrank.

Figure 2: Sources of Referral to the COVID Recuperation Unit

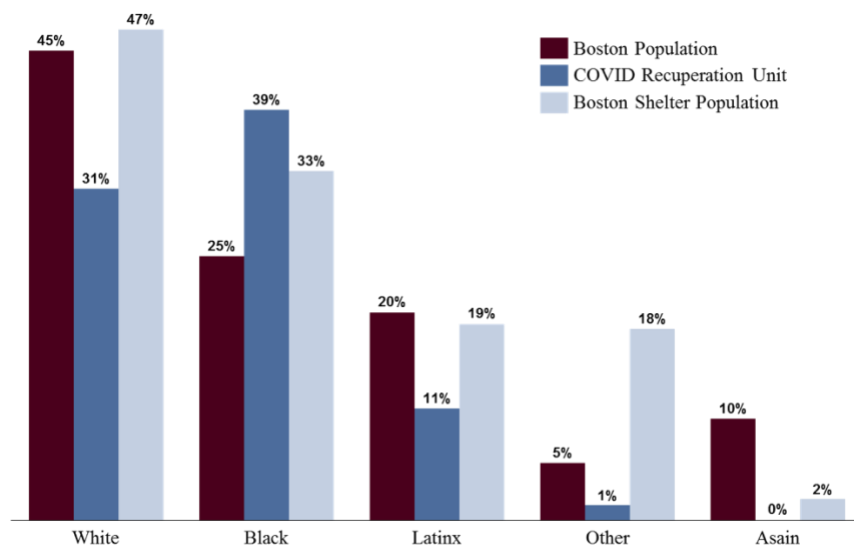


Population Characteristics

Race/Ethnicity

Overall, the patients treated at the CRU reflected the patient population served at BMC, with some notable exceptions. The racial breakdown of the CRU included more Black (39%) and White (33%) patients, and fewer Hispanic/Latinx patients (11%) than are served by Boston shelters (see **Figure 3**). Seventy-two percent of admitted patients were male; a population sample drawn from Boston shelter guests and PEH at BMC during the same period had a similar gender profile.³

Figure 3: Race/Ethnicity in Boston, COVID Recuperation Unit, and Shelter Populations



Black and Hispanic/Latinx communities were hit hard by COVID-19 in Boston – a pattern seen across the country. Data from the spring and early summer of 2020 recorded disproportionate infections among Black and Hispanic/Latinx communities, and lower infection rates than expected in White residents.¹⁹ Despite a high infection rate in Latinx patients, the CRU admitted fewer Latinx patients than would be expected based on the COVID infection rate in that community.

Behavioral Health and Substance Use

The patients treated at the CRU had high levels of mental health and substance use disorders. Seventy-nine percent had at least 1 psychiatric diagnosis listed in their medical record or noted during their stay in the CRU. Depression and anxiety were most common, but PTSD also occurred commonly (19%), as did bipolar affective disorder (16%) and schizophrenia/schizoaffective disorder (12%). Ultimately, 7 patients were referred to the ED for further psychological evaluation, such as florid psychotic symptoms or acute suicidal ideation.

Active substance use was reported on admission by 42% of patients, with alcohol the most common, followed by opioids and cocaine. Overall, 30% of patients had at least 1 psychiatric diagnosis plus active use of substances at the time of admission. Caring for patients who had such a high prevalence of both serious mental illness and substance use was an unfamiliar experience for many of the staff who were deployed from ambulatory and specialty clinics within the

hospital. Our recruiting and training strategy did not allow for preparation and guidance for these staff, which may have impacted the patients' experience. This finding also highlights that care programs cannot meet the needs of many, if not most, patients experiencing homelessness unless substance use and mental health are at the forefront of treatment planning.

Outcomes and Disposition

Most patients who were admitted to the CRU were referred by BMC after testing in the ED. Others were referred after testing positive at universal testing drives at local shelters. Many of these patients reported mild symptoms, or an absence of symptoms entirely, and only required once a day vital monitoring to detect clinical decompensation. Others, such as those who were transferred from an inpatient unit at BMC, had symptoms that had already partially or completely resolved by the time they entered the CRU. Some patients admitted to the CRU did have moderate symptoms of COVID-19 infection; supplemental oxygen and inhalers were available.

Vitals were taken on a schedule set by the admitting physician or advanced practice provider, depending on the severity and risk of developing further symptoms. Patients had daily contact with staff, but did not have formal daily medical or nursing visits unless they had moderate or unstable symptoms. Most patients remained medically stable throughout their stay in the CRU, but a small number needed to be transferred to the BMC emergency department for evaluation. Symptoms that appeared to be related to COVID exacerbation resulted in 5% of patients being transferred to the ED. Other types of medical exacerbation, such as seizures, urinary obstruction, or chest pain caused another 4% to be transferred, and 3% were transferred to the BMC ED for a psychological evaluation or crisis management.

Impact of the COVID Recuperation Unit on the BMC inpatient census

BMC bore a disproportionate share of the burden of caring for patients infected with COVID in Boston, having a much higher percentage of inpatient and ICU beds devoted to COVID patients, compared with other Boston hospitals.²⁰ BMC leaders were concerned that the hospital's bed capacity would be exceeded during the COVID-19 surge in spring 2020, and this was part of the motivation to implement the CRU.

As illustrated in **Figures 4** and **5**, analyses in late May 2020 illustrated the impact of the ability to discharge COVID infected patients to the CRU and to divert a significant number of COVID infected patients from the ED to the CRU rather than admitting them to BMC. The CRU clearly helped to avoid a prolonged period of BMC exceeding available bed capacity, and combined with the Boston Hope facility which the City of Boston launched during the same period, these COVID recuperation facilities were responsible for BMC being able to care for all patients who sought hospital care for COVID at BMC (data not shown).

Figure 4: BMC Inpatient, COVID-Positive Discharge Locations

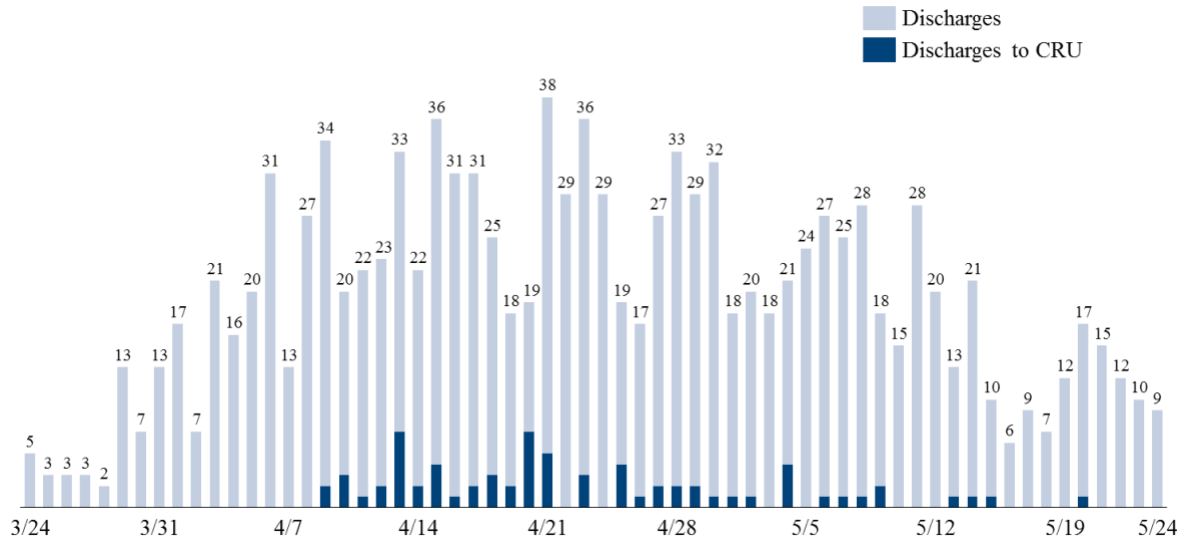
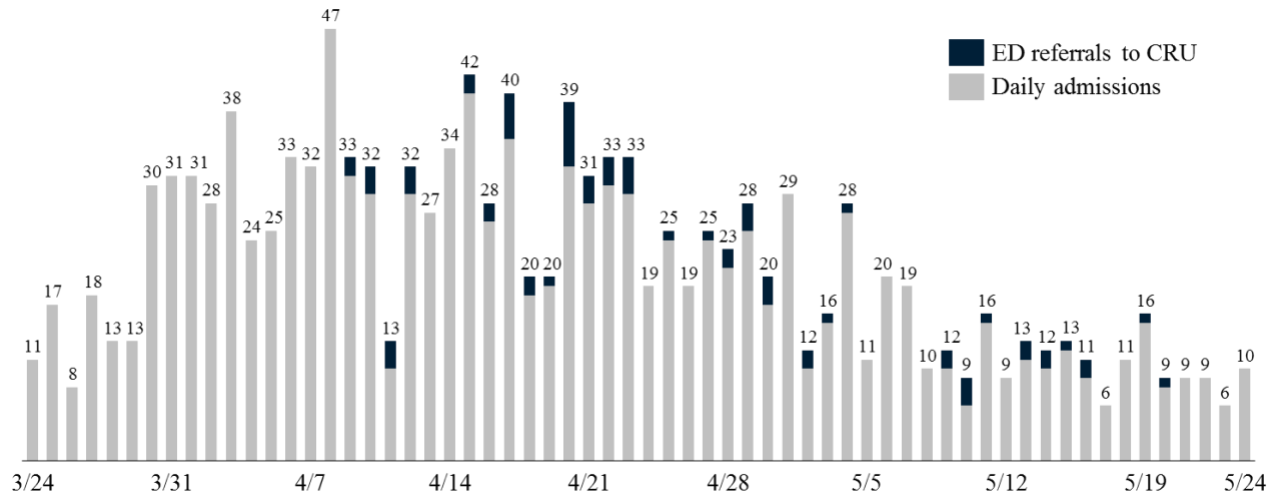


Figure 5: BMC's Daily Admissions from Emergency Department



Key Takeaways – Unit Course:

- The COVID Recuperation Unit admitted a higher proportion of Black patients and a lower proportion of white and Latinx patients compared with the population of Boston.
- Some patients did require transfer to higher levels of care during their admission
- Programs and facilities that seek to address the needs of people experiencing homelessness need to be prepared to support substance use and mental health treatment

CONCLUSION

Lessons learned

- In the setting of the enormous public health crisis posed by COVID, BMC was able to very rapidly implement a large respite facility for a patient population with complex medical and behavioral health problems and a highly contagious illness, and to operate the facility safely.
- Acute substance-related problems were common, and required more clinical attention than did patients' COVID symptoms or chronic medical conditions.
- Patients who have serious mental health disorders and are experiencing homelessness were particularly difficult for hospitals to discharge when they were COVID-infected, and the CRU was a unique resource in the Boston area because we were willing to accept and care for these patients.
- It is very difficult to implement a harm-reduction approach and to manage patients who are engaged in active drug use at the time of admission to a CRU, when the program is implemented in a hospital-type environment.
- It was helpful to have immediate access to acute medical services at BMC ED when patients' clinical condition deteriorated.
- A large number of clinical staff worked 1 or more shifts in the CRU, and were drawn from across the organization. They were not grouped in teams that worked together consistently in the CRU. These factors made it difficult to provide uniform care and to influence attitudes and behaviors of staff. This was particularly apparent in the challenges of allaying the anxiety of those staff members who had little experience working with patients who have contagious diseases, or poorly controlled substance use disorders or mental illness.
- A few staff members expressed stigmatizing attitudes toward patients with SUDs or severe mental illness. Finding ways to combat these perceptions and attitudes is important. Leaders of the CRU pointed out to staff that these patients were voluntarily choosing to remain confined in isolation primarily because of their desire to avoid infecting others outside of the unit. Stigmatizing attitudes seemed to decrease as staff members gained more experience working with the CRU patients.

Advice for future implementation projects

As COVID-19 continues to devastate the United States, many communities are grappling with the issue of how to provide care for people experiencing homelessness when they develop COVID infection. The experience in the CRU offers a few lessons for others who are planning to implement their own COVID recuperation units.

Choosing between different models

Several models of care are being implemented in various parts of the US. One of the most common approaches appears to be the use of hotels or motels to provide isolation units. In some cases, patients have little contact with clinical staff, and receive meals delivered to their doors, and medical care only upon request. The Commonwealth of Massachusetts implemented a number of facilities of this type, and the authors of this report spoke with a contracted evaluator for that program, Dr. Traci Green from Brandeis University, to learn about the experience with the hotels. This model has much lower need for staff and PPE, decreases patients' interactions with each other, and probably decreases risk of infection for staff compared with a hospital-based model. Patients generally have less restricted movement, and are able to continue to obtain and use substances if they feel the need to do so. On the other hand, the social isolation is likely very difficult for the patients, and it seems that it would be difficult to prevent overdose deaths. The risk of contagion of people outside of the program is also increased when patients are able to interact in an unrestricted way with members of the general public. Close medical monitoring is probably less possible, and Dr. Green shared that patients who had more than minimal symptoms of COVID were generally not accepted in the hotels.

BMC's CRU was implemented in a decommissioned hospital building, and provided a congregate living environment for patients. This allowed for patients to have social interactions and much more interaction with staff members. Clinical staff were able to address many of the patients' medical needs, including management of COVID-related symptoms, clinical needs related to substance use disorders, and treatment of exacerbations of underlying medical or psychiatric illness. Staff were also available to reverse overdoses when they occurred. On the other hand, the need for staff to wear full PPE was burdensome, and there were significant challenges related to harm-reduction approaches and to managing patients' wishes to leave the unit temporarily. It was also challenging to address substance use on the unit. Although we do not have data available for direct comparison, it seems that the cost of BMC's CRU was likely much higher than the cost of the hotel-based model of medical respite. The publicly reported cost of implementing the Boston Hope facility was much higher than the cost of the hotels or the BMC CRU.

The choice of a particular model of care will also depend on available resources. Leaders of BMC, Boston Health Care for the Homeless Program, and the City of Boston made extensive efforts to secure a hotel that would be willing to lease space for the purpose of housing these patients, but no hotel owners were willing to do so.

Careful assessment of other resources available to meet the need

We ended up in a position with too much capacity for this type of care in Boston due to the simultaneous launch of the COVID Recuperation Unit and the Boston Hope facility. It is clearly important for future implementers to learn about all available resources for providing respite care for COVID-infected people experiencing homelessness so that they can coordinate efforts and perhaps differentiate services so that they are complementary, rather than duplicative.

Socializing plan for harm reduction

Harm reduction principles and clinical approach are very important in safely caring for this patient population, both to prevent fatal overdoses and to address the reality that some patients

will continue to use substances or leave the facility in order to be able to do so. If time allows, we recommend convening all decision-makers involved in implementing a COVID recuperation program, and providing education about harm reduction. If possible, developing consensus on the approach prior to implementation will reduce conflict and misunderstanding, and will improve patient care.

Ongoing training for staff and scheduled staff meetings

Particularly in situations in which staff from diverse professional backgrounds are brought together to staff a COVID recuperation unit, it is important to prioritize communication and provide education for staff who are unfamiliar with the types of care that are needed in this setting. In retrospect, we wish that we had provided weekly education sessions for staff and had frequent all-staff meetings to allow staff to raise concerns and increase their level of comfort and understanding.

Evaluation of options for discharge

The nursing and case management staff of the CRU worked very hard to arrange appropriate discharge options for patients, and it was gratifying to be able to send more than 20% of patients, who had previously been unhoused, to live with family or enter a facility for treatment of mental health disorders or addiction. On the other hand, the fact that we did not have options for housing to offer most patients was a stark and painful reality. It is important to work to develop alternative discharge options for patients coming out of a COVID recuperation unit. In addition to all of the other reasons why we need to help people find housing, many patients are frail following COVID infection, and being on the street is even more difficult than usual.

Summary

Boston Medical Center, New England's safety net hospital, succeeded in creating a safe and supportive respite facility to serve patients who are COVID-infected and experiencing homelessness. Community partners played an essential role in preparation and planning. The CRU program was developed and implemented over the course of approximately 2 weeks after BMC received notice that the building was available. The CRU served 226 patients who had an average length of stay of more than 1 week. The patients who were served were predominantly men, and nearly 40% were Black. Fewer Latinx patients (11%) were served than would have been predicted, given the patterns of infection seen in the pandemic more broadly. Most patients had co-occurring behavioral health diagnoses, and more than 42% were actively using substances at the time of admission. Medical care focused on the monitoring of COVID-19 symptoms, harm reduction and treatment of withdrawal, as well as stabilization of acute exacerbations of behavioral or physical health conditions. Most patients did well, and there were no deaths on the unit. However, at least 7 non-fatal overdoses occurred and were reversed. Approximately 11% of patients were transferred out of the CRU for clinical evaluation. In spite of efforts to make patients comfortable on the unit, 7% left before their period of isolation was complete (although 1/3 voluntarily returned to complete their isolation period). Most patients returned to living on

the street or in shelters after discharge, but 23% were able to go to the home of a family member or to a facility for treatment of addiction or mental health disorders. The availability of the CRU made a significant contribution to keeping BMC from exceeding peak bed capacity during the first COVID-19 surge.

Patients experiencing homelessness are at high risk of COVID infection and need an opportunity to isolate and receive medical care when they are infectious. BMC played an important role in Boston's COVID response by rapidly implementing the COVID Recuperation Unit where patients could receive care for COVID-19 and co-occurring physical and mental health challenges. We hope that this report is useful to others who may be considering implementing a similar program in their own communities. Special thanks to all of the members of the BMC community who worked so hard to make this happen.

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Appendix

Protocol: Approach to Substance Use Disorders

Substance use disorders (SUDs) are often chronic, including relapsing and remitting. The COVID Recuperation Unit strives to make effective treatment for SUD available during people's stay, including withdrawal management. At the same time, we recognize that not all people coming to the unit are ready or willing to engage in SUD treatment. People who use substances do not forfeit their right to treatment for COVID infection or other health conditions. The unit staff will do their best to provide a safe and dignified environment for people with COVID infection to recuperate, regardless of their motivation to engage in treatment for SUDs or other health conditions. We will utilize our clinical staff to engage these clients and offer support.

We also recognize that use of non-prescribed drugs, especially by injection, often poses health risks, including overdose and transmission of infection.

When patients are known to be or suspected of using drugs on the unit, it is appropriate to intervene in the following ways:

1. Ask them to stop using drugs on the unit
2. Offer them alternate ways of coping with symptoms
3. Offer them treatment

In general, addressing drug use on the unit is best done by a member of the Harm Reduction team or a clinical staff person (behavioral health clinician or physician/nurse practitioner/physician assistant). If you are one of these clinicians, other staff may ask you for help to address this.

1.1 Steps to Intervene

1. Wait until the patient is not in the act of ingesting/injecting a drug
2. Plan which staff member will intervene
 - a. If Harm Reduction is onsite – include them in the conversation
 - b. If behavioral health is onsite – include them in the conversation
 - c. Make sure there is a medical provider also included in the conversation
 - d. Some patients may have better rapport with certain staff members – consider including those staff members in this conversation
 - e. Decide which 1 or 2 staff members will go talk with the patient directly
3. Approach the patient, being careful to avoid hostile body language; speak calmly and professionally
 - a. If the patient appears to be too intoxicated or altered to be able to talk, you may need to wait a little while and try again
 - b. You may want to ask the patient to move into a safe and confidential space; discussing drug use can be highly stigmatizing and we want to respect their confidentiality, and it may not be appropriate to do in open settings such as during a smoke break
4. Engage the patient in conversation; raise the topic of the drug use and ask for more information.

- a. For example, you might say, “Can you tell me about your drug use? Our team is worried about you.” Very often, patients will respond by telling you about their situation, and perhaps telling you about the feelings or circumstances that led to the drug use
5. Express understanding, acknowledgment, and validation of their experience
6. Explain to the patient that drug use is not allowed on the unit; again, speak calmly and respectfully
 - a. We want the patient to know the expectations and rules on the unit without being threatening; you can let them know there are policies to keep everyone safe and the team works together to support clients
 - b. If the patient is less receptive, you can say, “I understand that you are not happy about the rules here on the unit and that you are not allowed to use drugs here. Please let me know if you are interested in treatment. In the meantime, please remember that drug use is not allowed.”
 - c. If the patient is expressing hostility or defiance it is best to stop trying to talk with the patient at this time. Do not get in a power-struggle with them; you may want to return later to see if the patient is calmer and more receptive, and you may want to ask for help from another clinician to approach the patient with you or instead of you
7. Offer help and treatment; let the patient know we can offer counseling and medication treatment
 - a. You do not need to be an addiction expert in order to do this; you can say, “We offer treatment for substance use disorder here. How about if I ask the medical provider and harm reduction team to meet with you to see if they can help?”
 - b. If you can, tie your comments back to what the patient has told you (e.g., if the patient said, “I’m really stressed out about losing my job and now having this coronavirus infection,” you could respond, “You’re feeling a lot of stress and anxiety right now. Can we talk about other ways to deal with these feelings?”)
 - c. The behavioral health team and the harm reduction specialists can assist the patient with identifying current and historical stressors, triggers, and coping skills as well as possible co-occurring mental illness to help them better manage if they wish to engage in these conversations

1.2 Tips for Success

- In general, involving security staff in the situation is likely to exacerbate it and make the patient defensive or hostile. Unless the patient is threatening you or others, involving security personnel is not recommended.
- If you are not a medical professional and you are worried someone may be overdosing or medically unsafe, get help immediately from a qualified staff member.
- Communicate with your team! If there are concerns about an individual using substances on the unit, discuss it with team members, and together come up with a plan on who will have an initial conversation with the patient. Let the team know how the conversation went and if there are further steps that need to be taken. Decide who will check in later on with the patient, and who will pass on relevant info to the medical, behavioral health, and harm reduction teams.

- If you're in a role that documents in the electronic medical record (EMR), document the intervention/conversation so other shifts and team members can have this information.
- If you're worried someone is unable to remain safely on the unit after the team has tried to intervene, bring these concerns to the medical provider who will help decide if the patient needs to be moved to a different level of care.

Protocol: Infection Control

2.1 Procedure for Screening Susceptible Staff for COVID

All staff will sign-in and sign-out at the beginning and end of their shifts. Shift supervisors should ask about any new COVID symptoms at the beginning of the shift. Staff members should also monitor for COVID-19 symptoms such as fever, cough, shortness of breath, or more mild symptoms such as sore throat, and should notify their supervisor promptly and contact employee health if any symptoms are present. They will put on a mask (if not already on), clean hands, and move to a designated area away from others.

2.2 Procedures for Personal Protective Equipment

The COVID ward will use enhanced (airborne, droplet, and contact) precautions for the management of COVID positive patients (**Appendix B**). Mask use will be determined based on availability of PPE. If possible, 1 N95 will be used for the entire shift. At the end of the shift, staff will doff their N95s including Gershon's. If surgical masks are used, then these should be replaced at least once during the shift (during a break). Face shields may be decontaminated with each doffing and reused on subsequent days if needed. All employees donning and doffing will do so with a "PPE monitor" whose job is to ensure consistent and effective technique, including use of recommended PPE based on availability. The most recent guidance from the Centers for Disease Control and Prevention (CDC) regarding PPE and COVID-19 will be used. Donning will occur in the designated anteroom, and doffing will occur immediately prior to exiting the ward. All staff will don/doff in the designated donning and doffing areas. The donning and doffing areas are adjacent to elevators that will be designated as "cold" and "hot."

Staff should remain in the same set of PPE, unless it is soiled (or to change a surgical mask as above), for the duration of their time in the designated COVID ward. They will use new gloves and gowns between breaks from the ward. They should change outer gloves after aerosolizing procedures and swabbing patients. **They should sanitize inner gloves with an alcohol-based sanitizer between providing direct patient care.**

Items such as cell phones, stethoscopes, pagers, or walkie-talkies, which may be required to perform work responsibilities during an individual's shifts, should be fully decontaminated with disinfectant wipes in the doffing area prior to leaving the COVID ward. Staff should use plastic bags to contain their cell phones for the shift. These should be decontaminated with disinfectant wipes in the doffing area prior to leaving the COVID ward. Staff should change out of scrubs

used while on the COVID ward and place them in the designated areas for soiled scrubs after finishing their shift.

Procedure for Donning PPE (To be posted at Donning and Doffing Stations)

- 1) Perform hand hygiene
 - Sanitizer, or
 - Wash with soap and water for at least 20 seconds
- 2) Don first pair of gloves (clean, non-sterile)
 - Inspect for tears or holes
- 3) Don gown
 - Make sure you, or spotter, ties gown
- 4) Don second pair of gloves
 - Pulled over sleeves of gown
- 5) Don mask
 - N95, mask on face, bottom strap, top strap, check fit
- 6) Don face shield (if not connected)

Procedure for Doffing PPE (To be posted at Donning and Doffing Stations)

- 1) Do a time out and have someone observe you; take it slow
- 2) Doff outer gloves
 - Grasp OUTSIDE of the outer gloves with opposite hand, peel off and hold in double gloved hand. With single gloved hand, slide finger UNDER the outer glove of opposite hand at wrist and peel off. Discard.
- 3) Doff gown
 - Grab gown at shoulders and tear (or untie at neck), pull down from the top/shoulder area and peel away and down touching the inside only. Roll up gown in trash. Do not compress the trash down.
- 4) Sanitize gloves
- 5) Remove face shield
- 6) Sanitize gloves
- 7) Remove gloves
 - Use same technique as above (#2)
- 8) Perform hand hygiene
 - Sanitizer, or
 - Wash with soap and water for at least 20 seconds
- 9) Doff mask
 - N95, do not touch the front of the mask, remove from the strings, bottom first then top

10) Perform hand hygiene

- Sanitizer, or
- Wash with soap and water for at least 20 seconds
- Bring reused mask and/or face shield (either the reusable or disposable ones) to designated holding area to be used with next donning

2.3 Procedure for Trash Disposal

Trash (PPE, patient trash) that is non-hazardous should be placed in designated waste receptacles on the COVID ward making sure that these receptacles are not filled more than 3/4 of the way full. When a receptacle is full, the bag should be removed and tied using the ‘gooseneck’ technique. Care should be taken so as not to manually compress the trash inside the receptacle. The contaminated bag should be placed in an uncontaminated bag and brought to a mobile trash can, which will be wheeled to the trash room.

2.4 Admission Procedure

Referring provider will call the admissions office. Admissions to the ward can be taken between 8 a.m. and 10 p.m. Patient presents to patient entrance for admission wearing a mask and gloves (mask and gloves will be provided if patient is not already in these). If the patient is brought by wheelchair, then the wheelchair will need to be wiped cleaned with disinfectant prior to returning to another patient care area. If patient is escorted by staff, staff will escort at 6 feet distance in mask and gloves. After the admitting RN is contacted, the patient will be escorted by staff to the COVID ward and their assigned room. Admissions and security wearing PPE will greet patient in the lobby and perform weapons screen. Security will clean any tools used in the search with bleach wipes.

Admitting nurse or unit staff member, wearing full PPE (surgical mask, 2 pairs of gloves, gown, and face shield), takes the patient into the patient elevator and brings them to their ward.

2.5 Procedures for Patients who wish initiate discharge prematurely

As part of admitting procedures, all patients in COVID-19 units receive a welcome guide and printed Policies and Procedures. Staff members should counsel patient on the risks of leaving and inform patient of desire to address patients stated concerns during the hospitalization.

If patient wishes to self-initiate discharge, the team will immediately contact their local public health department and inform them that a patient is leaving an area of isolation with confirmed COVID-19. **A staff member on the COVID unit should also contact the Medical Director of the unit.**

COVID unit staff member calls Charge RN/Nursing Supervisor and informs them that patient is leaving against medical advice (AMA). Charge RN/Nursing Supervisor calls Security, to inform them that a patient will be escorted out.

COVID unit staff member places mask and gloves on patient. A staff member who is not working on the COVID unit dons clean PPE and escorts patient out from ENP.

Security and staff member should doff PPE in designated receptacles.

COVID unit staff should document the above in a progress note including efforts that were made to prevent the patient from leaving.

Patient room will then need to be cleaned and turned over prior to using again using the same cleaning procedures as BMC.

IMPORTANT NOTE FOR SECURITY: If the patient presents again following a self-initiated discharge, they can be admitted through the same procedure.

2.6 Staff Bathroom Use and Eating

Staff must fully doff with the exception of their mask prior to using the restroom. Masks should stay on. There are staff bathrooms located in the “clean zones”. Staff will not be able to eat or drink while on the floor. In order to do so, they will doff their PPE and proceed to designated eating and drinking areas.

2.7 Procedure for Transport

In the event that a patient needs to be transported off of the COVID unit, the patient should be given a mask and gloves. If the patient is ambulatory, they should walk out of the ward accompanied by staff who will first doff PPE. If a patient is being sent out of the hospital, wait inside the unit for EMS who will come with proper PPE. They can take the patient on a stretcher with a mask and clean sheet over them. If the patient needs a wheelchair, they should be placed in the wheelchair and wheeled out of the ward.

If a patient needs to be transported for medical reasons including imaging, dialysis, etc., then a transport cab should be called and the patient should be transported to and from in the cab. They should not walk unaccompanied.

2.8 Procedure for Visiting Smoking Area

Staff wearing PPE will accompany patients to and from the courtyard designated as a smoking area, using patient elevators. Staff will design a schedule with designated smoking breaks so as to minimize staff needed for this. Patients should be offered nicotine replacement therapies.

2.9 Procedure for Weapons

Patient will be provided with a mask and gloves prior to entering the building. All patients will be asked to turn over any weapons (including, but not limited to, knives and guns) for the duration of the admission. A public safety officer in appropriate PPE will store weapons in a bag in a locked

area which will be returned to patients upon discharge. The officer can perform a search for weapons in circumstances where there is concern for violence based on prior clinical notifications. The patient will then be escorted to the designated floor via the process above.

2.10 Procedure for Fire Drill

In the event of a fire drill:

1. Patients will shelter in place in their rooms
2. All staff working on the COVID ward at the time will return to the ward
3. Staff will take attendance of the patients and staff present on the ward and report this to the nursing supervisor

In the event of a fire on the COVID-19 ward, the patients will be masked and gloved and escorted by nursing staff out of the building through the main entrance and congregate across the street.

2.11 Procedure for Discharge and Discontinuing Isolation

Patients will be discharged and isolation will be discontinued according to **symptom-based clearance** guidelines:

1. Asymptomatic and COVID positive: At least 10 days following positive test
2. Symptomatic and COVID positive: At least 10 days from symptom onset, and at least 3 days from symptom resolution
3. Subsequent testing for severe COVID-19 and immunocompromised patients: if required intensive care unit treatment, received experimental treatments for COVID-19 (e.g., Remdesavir), have an immune-compromising condition, or are on an immunocompromising medication, then they need to be retested before discharge when they meet the above “Symptomatic and COVID positive” stage. They require 2 negative tests at least 24 hours apart.

2.12 Emergency Procedure:

The goal is to provide safe and effective emergency care for patients on the COVID Recuperation Unit while minimizing viral exposure to staff. An automated external defibrillator (AED) and 4 naloxone rescue kits will be available on every patient ward and in the designated smoking area.

In the event of an emergency situation on the COVID-19 ward or in the smoking area, the following steps should be taken

1. Assess the patient
2. Call for help (911, emergency code team)
3. COVID team members should put on PPE and go to the emergency situation

4. The nursing supervisor, or designee, will go to the end of the ward (patient side) and communicate verbally with the team
5. Care for the patient should be administered as you would usually do in an emergency, with the following caveats
 - i) Should CPR be needed, 2 staff should be designated for direct patient care; these 2 staff members should take the following steps
 - (i) Make sure CPR/emergency kit is open and N95 is within reach
 - (ii) Take off outer glove
 - (iii) Don N95 mask over the surgical mask
 - (iv) Put on new pair of gloves
 - (v) Place face shield
 - (vi) Ensure bag mask has HEPA filter
 - (vii) Begin bagging the patient and administering CPR
 - ii) In the event of a seizure and IM lorazepam is needed
 - (i) The team should communicate this request to the nursing supervisor
 - (ii) The nursing supervisor or designee will bring the lorazepam to the ward
 - (iii) The nursing supervisor or designee will don PPE, enter COVID unit, and hand Ativan to staff member
 - (iv) The Nursing Supervisor or designee will doff PPE per protocol
 - iii) In the event of a suspected overdose
 - (i) All staff members should have intranasal naloxone on their person at all times
 - (ii) First dose should be administered
 - (iii) Nursing supervisor or designee should bring resuscitation kit from floor, which should include AED, ambu-bag, and medications including additional naloxone
6. If needed, EMS will enter the ward

2.13 Procedure for Phlebotomy

Trained staff in the phlebotomy suite draw blood in the usual manner and transport the samples.

COVID staff drop each tube of blood into hazard bag.

Phlebotomist brings bag to dirty utility room.

Phlebotomist removes each tube, wipes clean with disinfecting wipe and leaves on dedicated rack to dry for at least 30 seconds for each tube.

Phlebotomist changes gloves and places tubes in centrifuge while wearing face shield and mask.

Harm Reduction Menu

Please select your items with a check mark and place in the box at the Nursing Station in your pod.

<p><u>Hygiene</u></p> <p><input type="checkbox"/> Hand sanitizer</p> <p><input type="checkbox"/> Razor</p> <p><input type="checkbox"/> Shaving cream</p> <p><input type="checkbox"/> Toothbrush</p> <p><input type="checkbox"/> Toothpaste</p> <p><input type="checkbox"/> Tampons</p> <p><input type="checkbox"/> Pads</p> <p><input type="checkbox"/> Deodorant</p> <p><input type="checkbox"/> Shampoo</p> <p><input type="checkbox"/> Soap</p> <p><input type="checkbox"/> Chapstick</p>	<p><u>Injection supplies</u></p> <p><input type="checkbox"/> Biggie Smalls (28g, 1/2")</p> <p><input type="checkbox"/> Ultra Fines (30g, 1/2")</p> <p><input type="checkbox"/> Bigs (27g, 5/8")</p> <p><input type="checkbox"/> Alcohol pads</p> <p><input type="checkbox"/> Cookers</p> <p><input type="checkbox"/> Water packet</p> <p><input type="checkbox"/> Cottons</p> <p><input type="checkbox"/> Tourniquet</p> <p><input type="checkbox"/> Sharps box</p> <p><input type="checkbox"/> Vitamin C</p>
<p><u>First Aid/Sexual Health</u></p> <p><input type="checkbox"/> Band aids</p> <p><input type="checkbox"/> 4x4 gauze</p> <p><input type="checkbox"/> Antibiotic ointment</p> <p><input type="checkbox"/> Condoms</p> <p><input type="checkbox"/> Lube</p> <p><input type="checkbox"/> HIV Rapid Test</p>	<p><u>Smoking supplies</u></p> <p><input type="checkbox"/> Pipe</p> <p><input type="checkbox"/> Chore Boy</p> <p><input type="checkbox"/> Rubber mouth piece</p> <p><input type="checkbox"/> Nicotine patch</p> <p><input type="checkbox"/> Nicotine lozenges</p> <p><input type="checkbox"/> Naloxone rescue kit</p>