

## Concepts in Disaster Medicine

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# Treating an Epidemic During a Pandemic: Experience Treating Opioid Use Disorder at the Baltimore Convention Center Field Hospital

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## Abstract

During the COVID-19 pandemic, access to addiction treatment has plummeted. At the same time, patients with opioid use disorder are at higher risk of COVID-19 infection and experience worse outcomes. The Baltimore Convention Center Field Hospital (BCCFH), a state-run COVID-19 disaster hospital operated by Johns Hopkins Medicine and the University of Maryland Medical System, continues to operate 14 months into the pandemic to serve as an overflow unit for the state's hospitals. BCCFH staff observed the demand for opioid use disorder care and developed admission criteria, a pharmacy formulary, and case management procedures to meet this need. This article describes generalized lessons from the BCCFH experience treating substance use disorder during a pandemic.

## Introduction

Concerns about hospital capacity during the COVID-19 pandemic resulted in the construction of more than 70 US field hospitals in 2020.<sup>1</sup> These field hospitals differed in their admission criteria, acuity levels, and duration of operation.<sup>1</sup> Some field hospitals were equipped to provide an ICU level of care, including mechanical ventilation, whereas others were designed for low-acuity care.<sup>1,2</sup> For guidance on designing and implementing a field hospital (i.e., an alternate care site), the Federal Healthcare Resilience Task Force published the Alternate Care Site Toolkit in 2020.<sup>3</sup> This toolkit categorizes field hospitals by acuity level and makes recommendations on staffing, supplies, and pharmacological treatments. In this toolkit, the pharmacy formulary for a 50-bed, non-acute care field hospital includes 354 medications from multiple drug classes, however, the formulary does not include methadone or buprenorphine, which are 2 of the standard medications used to treat opioid use disorder (OUD).

As the COVID-19 pandemic continues, so does the opioid epidemic in the United States. The pandemic has exacerbated conditions such as deepening social isolation, economic despair, and the curtailment of addiction services, which have contributed to OUD relapse and a dramatic rise in overdose related deaths.<sup>4</sup> A study reported that those with OUD were 2.4 times as likely to have had COVID-19 compared with those without OUD.<sup>5</sup> Individuals with OUD were more likely to have comorbidities, such as obesity, chronic kidney disease, lung disease, and diabetes that put them at risk of severe COVID-19.<sup>6</sup> This complex relationship between COVID-19 and OUD has been described as a 'syndemic,' which involves 2 concurrent disease processes that interact synergistically.<sup>7</sup> However, the admission criteria at some field hospitals have excluded patients in active substance use withdrawal.<sup>2</sup> In this context, the staff of the Baltimore Convention Center Field Hospital (BCCFH), an alternate care site designed to treat patients with COVID-19, observed that many of its patients had a history of OUD. Additionally, the staff reached a competency level that allowed the team to accept and manage patients with acute withdrawal, and emergency departments were able to send such patients to alleviate their caseloads.

## Results and Discussion

### *Baltimore convention center field hospital experience*

The BCCFH opened in April 2020 as an alternate care site for patients with COVID-19, alleviating Maryland hospitals and emergency departments, particularly during the COVID-19 surges that occurred after the first wave of infections. Such field hospitals, used in a variety of disasters, operate under a sufficiency-of-care model. Sufficiency of care is defined by the

Joint Commission as care that is sufficient for need but may not be the same quality of care delivered under normal circumstances.<sup>7</sup> Although health care providers should ideally have the tools, training, and environment to provide the standard of care, it is permissible to operate under a sufficiency-of-care model in a disaster setting. Because the BCCFH was activated under a sufficiency-of-care model, it was permitted to rapidly hire and credential providers with valid medical licenses from any state in any specialty.

The BCCFH recruited medical doctors, nurse practitioners, and physician assistants from various backgrounds who could care for (with additional support as needed) acutely ill COVID-19 patients with comorbid medical conditions such as diabetes and hypertension. Many of these providers were employed in other, non-acute care settings and worked at the BCCFH because of reduced outpatient demand in these settings or on their days off. Although the physicians and advanced practice providers had the skills necessary to care for patients with COVID-19, many were uncomfortable treating patients with OUD. Patients voluntarily accepted transfer from other hospitals to the BCCFH, and many of these patients had unstable or group housing, limited financial resources, and little or no family support. Patients in these situations also have a higher risk of OUD and require drug withdrawal precautions and initiation or continuation of medication-assisted addiction treatment on admittance.<sup>8</sup> The longer the BCCFH has remained open, the better its providers have understood the importance of a focused effort to address this need.

Despite scarce resources compared with those of typical hospitals (e.g., initially the hospital had no consultants), the BCCFH team realized that deferring SUD treatment to outpatient or inpatient specialists would adversely affect care transition and the overall success of COVID-19 care. For example, patients with ongoing medical needs related to COVID-19 may leave against medical advice if their SUD is untreated. The BCCFH leaders also recognized that acute care providers on staff had relatively limited skills in the longitudinal management of SUD. However, the pandemic also motivated primary care doctors with experience in addiction medicine to sign up to provide care for COVID-19 patients at the BCCFH. BCCFH leaders leveraged these providers' skills, promoted them to leadership roles, and encouraged SUD training opportunities for providers. Although the field hospital was initially designed to solely treat the acute care needs of patients with COVID-19, BCCFH leaders realized a need to reconsider treatment plans and staff training to provide treatment for patients with SUD.

As BCCFH providers were continually adapting to changing COVID-19 protocols, an environment was fostered in which policy and procedure changes were made in response to provider feedback. As a new, temporary site with freedom to initiate novel approaches, the BCCFH had no institutional inertia or "culture of no." Institutional inertia is an institution's resistance to change stemming from internal protocols or lack of willing staff. "Culture of no" is the reflexive or almost automatic response given to staff wanting to create change. This collaborative environment contributed to the creation and success of its OUD treatment program. During the first wave of COVID-19 infections in the spring of 2020, BCCFH medical directors established an OUD care plan informed by provider feedback. BCCFH leaders then took advantage of the decline in COVID-19 hospitalizations during summer 2020 to refine the process in anticipation of autumn and winter surges in case volume.

### *Overview of SUD treatment at the BCCFH*

Treatment for patients with SUD at the BCCFH is carried out as follows. Providers at the BCCFH evaluate all patients for SUD before the patients are transferred to the BCCFH. Early identification of SUD allows multidisciplinary teams to proactively meet patient needs by reviewing care plans daily and assessing for adverse reactions to medications. This care coordination enables patients to continue with outpatient counseling via telehealth, ensures patients are discharged with naloxone in hand, and establishes patients with outpatient SUD follow-up.

During the summer and early autumn of 2020, when COVID hospitalization volumes were low, the BCCFH pharmacists and medical directors created an onsite pharmacy that can provide methadone, buprenorphine-naloxone, and medications for acute alcohol withdrawal. This pharmacy has allowed patients taking methadone or buprenorphine-naloxone to continue on their dosage during admission and after discharge, with buprenorphine-naloxone prescribed by a provider with an x-waiver. Additionally, the creation of the pharmacy has enabled the BCCFH to accept patients experiencing acute alcohol or opioid withdrawal or patients whose medication-assisted dosages were inadequate and adjust dosages as needed.

BCCFH's staff provide targeted SUD training for its providers through informal clinical rounds and formal presentations. Providers with extensive experience with SUD are "on call" for questions or requests to assess patients as needed through a Health Insurance Portability and Accountability Act-secure messaging system. These procedures allow providers to start, titrate, or continue medication-assisted treatment. Initially, only providers who had SUD experience treated patients with SUD. However, this training process has helped providers new to SUD care develop the competency needed to independently and safely initiate and titrate medication dosages for motivated patients.

Medication-assisted treatment is one of many therapeutic approaches that have been implemented by the BCCFH. The BCCFH social work department works closely with patients, usually seeing them within 24 hours of admission to address needs such as housing, rehabilitation, and outpatient appointments. This department coordinates telemedicine visits so patients can continue therapy with their outside SUD therapists, providing critical continuity of care. Many patients ask to initiate treatment, and with the leadership of the social work team, BCCFH providers have been able to discharge patients to outpatient and inpatient addiction treatment centers. BCCFH staff use multidisciplinary clinical rounds to discuss patient needs and plan for discharge, considering psychiatric comorbidities, past trauma, family and housing challenges, and ongoing physical therapy needs.

Although the BCCFH is a 'closed unit,' the hospital has experienced patients and even staff bringing in contraband, leading to the risk of patient overdose. To address this issue, BCCFH medical directors created rapid response drills and trained staff, including providers, nurses, support staff, and security personnel, to recognize and respond to opioid overdose.<sup>9</sup> At discharge, patients with OUD are given a naloxone kit. BCCFH leaders encourage team members to use a confidential reporting system for concerns regarding contraband. Staff supervisors follow up on all concerns. Nurses follow strict protocols for securing and tracking Schedule II medications. Nurses also redirect patient requests for as-needed narcotics and addictive sleeping medications, encouraging use of safer alternatives. Saline locks are removed when remdesivir

treatment is completed to reduce opportunities for the use of as-needed intravenous opioids.

As the COVID-19 pandemic continues, providers at the BCCFH will continue addressing the needs of patients with SUD. BCCFH leaders initiated a psychiatric nurse practitioner program which provides care for patients with comorbid mental health conditions. This program provides individual and group therapy, coordinates with outside psychiatry departments for telemedicine consultations, and communicates with patients' outpatient psychiatric and opioid treatment providers.

## Conclusion

The BCCFH, as an alternate care site for COVID-19 patients, has been at the forefront of treating the synergistic effects of COVID-19 and SUD. The field hospital's primary goal has been to alleviate the case burden on Maryland's hospitals and health system. Educating and training multidisciplinary teams to treat comorbid conditions like SUD was critical to achieving this goal. The experience of this field hospital shows that a comprehensive SUD treatment plan can be implemented in a non-traditional care setting. BCCFH providers, despite operating within a sufficiency-of-care model, use a multifaceted approach to decrease SUD-related morbidity and death in its patients. At the BCCFH, many providers have gained the skills and confidence necessary to treat OUD.

In a pandemic setting in which patients voluntarily accept transfer from acute care hospitals to field hospitals, transferred patients will disproportionately include those with unstable or group housing, limited financial resources, little or no family support, and comorbid OUD. If the care crisis and resources permit approaching standard of care, OUD care should be on the checklist of competencies needed at a field hospital where this condition is prevalent. Field hospitals can provide OUD treatment by building multidisciplinary teams, training providers, and partnering with experts to serve as consultants. Such preparation and training has the added advantage of increasing provider and team competency to address the burden of SUD beyond COVID-19 care. Thus, capability to treat OUD should be included in the Federal Healthcare Resilience Task Force's Alternate Care Site Toolkit and other disaster planning resources.

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**Abbreviations.** BCCFH, Baltimore Convention Center Field Hospital; OUD, opioid use disorder; SUD, substance use disorder.

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