

## CONCEPTS

The Practice of Emergency Medicine

# Advancing emergency department–initiated buprenorphine

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## Abstract

Opioids are the main driver of drug overdose deaths in the United States, and there has been a marked increase in opioid-related overdoses during the COVID-19 public health emergency. Many emergency departments (EDs) across the country are implementing ED-initiated buprenorphine programs, and this is a method to address and prevent opioid overdoses. Resources are available to overcome barriers and take action.

## KEYWORDS

ED-initiated buprenorphine, medication for opioid use disorder, opioid use disorder, treatment engagement

## 1 | EMERGENCY DEPARTMENT–INITIATED BUPRENORPHINE

In 2019, 70,630 drug overdose deaths occurred in the United States.<sup>1,2</sup> Provisional data show that approximately 86,001 drug overdose deaths occurred in the 12 months ending in July 2020.<sup>3</sup> Emergency departments (EDs) are in a prime position to address the overdose crisis, and a key intervention is establishing community referral partners for follow-up care and starting medication for opioid use disorder (MOUD) in the ED.

Treatment of opioid use disorder (OUD) with buprenorphine is associated with a lower risk of overdose and better outcomes.<sup>4,5</sup> The

1-month (1.1%) and 1-year (5.5%) mortality rates of patients treated in the ED for nonfatal opioid overdose are high. The first month, and particularly the first 2 days after overdose, is the highest risk period (0.25% died within 2 days).<sup>6</sup>

ED initiation of buprenorphine/haloxone and referral to treatment for patients with moderate to severe OUD has been shown to improve engagement in treatment, resulting in less self-reported opioid use and less use of inpatient services at 30 days compared with brief behavioral intervention or usual care.<sup>7</sup> ED-initiated buprenorphine (EDIB) is cost-effective<sup>8</sup> and has an ongoing impact; more patients who receive medication for OUD in the ED are engaged in treatment at 2 months.<sup>9</sup>

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## 2 | THE TIME IS NOW

People are dying of opioid overdoses at a staggering pace, so EDs should not wait to act. The need to treat OUD is even more acute because of the COVID-19 pandemic. Use of non-prescribed fentanyl, cocaine, heroin, and methamphetamine has significantly increased since before COVID-19 was declared a national emergency in the United States on March 13, 2020.<sup>10,11</sup> Overdose deaths have increased, and experts are concerned about the impact the pandemic is having on mental health and substance use.<sup>12-14</sup> Many individuals with substance use disorders have chronic illnesses or behaviors that are risk factors for developing or worsening a COVID-19 infection, and individuals with OUD are especially at risk for adverse COVID-19 outcomes.<sup>15-17</sup>

## 3 | WIDESPREAD SUPPORT AND IMPLEMENTATION

Initiation of buprenorphine in the ED has received support from major professional associations,<sup>18</sup> and an increasing number of EDs treat patients with OUD with buprenorphine and dispense take-home naloxone to at-risk patients and their companions.<sup>19</sup> The American College of Emergency Physicians (ACEP) has developed a Pain and Addiction Care in the ED Accreditation Program. The program ensures that patients receive quality pain management and provide the tools for an ED to initiate treatment for patients with OUD.<sup>20,21</sup> In 2018, Massachusetts passed legislation requiring all EDs to have the capability to initiate medication for OUD. Efforts are in motion to implement EDIB across the country, and large federally funded EDIB implementation and effectiveness research projects are underway.<sup>22-29</sup>

## 4 | RESEARCH IS INFORMING IMPLEMENTATION

Surveys of clinicians indicate concerns that include (1) limited training; (2) access to follow-up care, insurance coverage, and prior authorization requirements; (3) scope of practice and competing priorities; and (4) patient transportation limitations for follow-up care, perceptions of limited patient interest in treatment, and patient preference for alternative treatments.<sup>30-32</sup> Initial misgivings about implementation often include concerns that people with OUD will inundate EDs. Importantly, sites note that this is not the case, and research has shown that EDIB programs are not associated with increased rates of patients presenting with requests for treatment.<sup>33</sup> People also worry about potential diversion of medication; however, the risk of fatal overdose associated with not receiving medication outweighs the risk associated with potential diversion.<sup>34</sup>

Research shows that facilitators of initiating buprenorphine in EDs include (1) education and training; (2) access to treatment; (3) support including care coordinators, social workers or peer counselors, pharmacist consultation, local protocols, and order sets; and (4) feedback on patient experiences.<sup>32</sup>

## 5 | EDUCATION AND QUALITY IMPROVEMENT RESOURCES ARE AVAILABLE

Clinicians may dispense or administer buprenorphine in the ED but are currently required to apply for a Drug Addiction Treatment Act (DATA) 2000 X-waiver to prescribe buprenorphine. Free training and ongoing support are available through the Providers Clinical Support System,<sup>35</sup> and free emergency medicine-focused training is available through the ACEP.<sup>36</sup> There is momentum to remove the separate waiver that is required for buprenorphine prescribing for physicians, which could improve access to medication.<sup>37,38</sup>

A quality framework can guide efforts to improve care in EDs.<sup>39,40</sup> Comprehensive efforts are needed that include starting MOUD, overdose education, and naloxone distribution. Structured quality improvement programs could require training and initiation of medication before hospital discharge for patients with moderate to severe OUD. Process quality measures could include the proportion of patients with OUD who are provided with buprenorphine before discharge from the ED. Pennsylvania introduced the first statewide financial incentive to engage patients with OUD in treatment after hospital discharge from the ED or inpatient care. In future years, hospitals participating in the program can earn payments for improvement in the rate of OUD follow-up treatment.<sup>41</sup>

The ACEP Emergency Quality Network Opioid Initiative,<sup>42</sup> Yale,<sup>43</sup> the California Bridge Program,<sup>24</sup> and the National Institute on Drug Abuse<sup>44</sup> have resources for quality improvement activities. The Centers for Medicare and Medicaid Services (CMS), through the quality improvement organizations<sup>45</sup> and other associated improvement networks, have been working to reduce opioid-related harms in every state in the United States and to identify, develop, and spread best practices for addressing OUD.

## 6 | ACCESS TO TREATMENT IS IMPROVING

With increased funding and attention to the overdose epidemic in recent years, community access to care is improving.<sup>46,47</sup> However, the adoption of medications in some settings remains low,<sup>48</sup> there are regional differences in the distribution of medication,<sup>49</sup> and a large treatment gap remains.<sup>50-52</sup> Continuing efforts are needed to enhance access, and EDIB programs offer an opportunity to build connections with community clinicians and to engage people in treatment.

## 7 | NEW FORMULATIONS COULD ENHANCE LINKAGE AND RETENTION IN CARE

New extended-release buprenorphine formulations may help to address concerns about the transition to follow-up care in the community. US Food and Drug Administration-approved buprenorphine and naloxone daily formulation products<sup>53</sup> can result in cravings near the end of a 24-hour cycle. A buprenorphine monthly extended-release injection supports long-term abstinence from illicit opioid use. New injectable extended-release buprenorphine-only formulations to

be available in the US in 2021, which allow for immediate induction and treat symptoms for up to 7 days, then monthly, are ideally suited for use in EDs and could address many of the challenges that patients face more effectively than daily medication formulations. A weekly injection would allow consistent dosing and time to connect with outpatient follow-up care. New formulations promise a higher level of opioid receptor occupancy, and a higher steady blood level, which should reduce cravings and provide a consistent blockade of the effects of illicit opioids.<sup>54</sup>

## 8 | INNOVATION AND TECHNOLOGY CAN IMPROVE CARE

Solid linkages with physicians, physician assistants, advanced practice nurses, and nurse practitioners providing MOUD in the community who can see patients quickly are of the utmost importance. Telehealth technologies have the potential to enhance access to treatment for those limited in ability to attend appointments because of limited transportation options, burden of time and effort associated with frequent in-person clinic visits, or not having treatment available locally.<sup>55,56</sup>

Electronic health record integration of order sets or clinical decision support is needed to operationalize roles, processes, and policies. Referral processes need to be streamlined, and research has indicated that specific patient identifiers, encrypted emails, and electronic health records are the preferred methods of communication for these linkages.<sup>57</sup>

## 9 | FUTURE RESEARCH

Current research is limited in that studies have predominantly been conducted at academic medical centers with few studies conducted in community EDs. Gaps exist in our knowledge about patient attitudes toward MOUD and the best practices, protocols, and workflows for EDIB.<sup>19,58</sup> Also, research is needed to improve real-time identification of at-risk patients using electronic health record machine learning and/or screening.<sup>59,60</sup>

Research on innovative payment models may be necessary to improve care and coverage for people with OUD. The CMS recently announced 2 new payment models<sup>61,62</sup> as the next steps in a multi-pronged strategy to combat the nation's opioid crisis. In addition, the CMS has committed \$50 million to assist states<sup>63</sup> with substance use disorder treatment and recovery as a demonstration project authorized under the Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment (SUPPORT) for Patients and Communities Act of 2018.<sup>64</sup>

## 10 | CALL TO ACTION

Opportunities exist in EDs to impact the morbidity and mortality associated with the opioid overdose epidemic. There is an urgent need to

create more public demand for MOUD and to further engage the emergency medicine community and hospitals to address the overdose crisis. Many tools and resources are now available to address clinician concerns and assist EDs in initiating medication for OUD and facilitating linkage to community treatment.

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### DISCLAIMER

The views and opinions expressed in this manuscript are those of the authors only and do not necessarily represent the views, official policy, or position of the US Department of Health and Human Services or any of its affiliated institutions or agencies.

### CONFLICT OF INTEREST

The authors declare no conflict of interest.

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