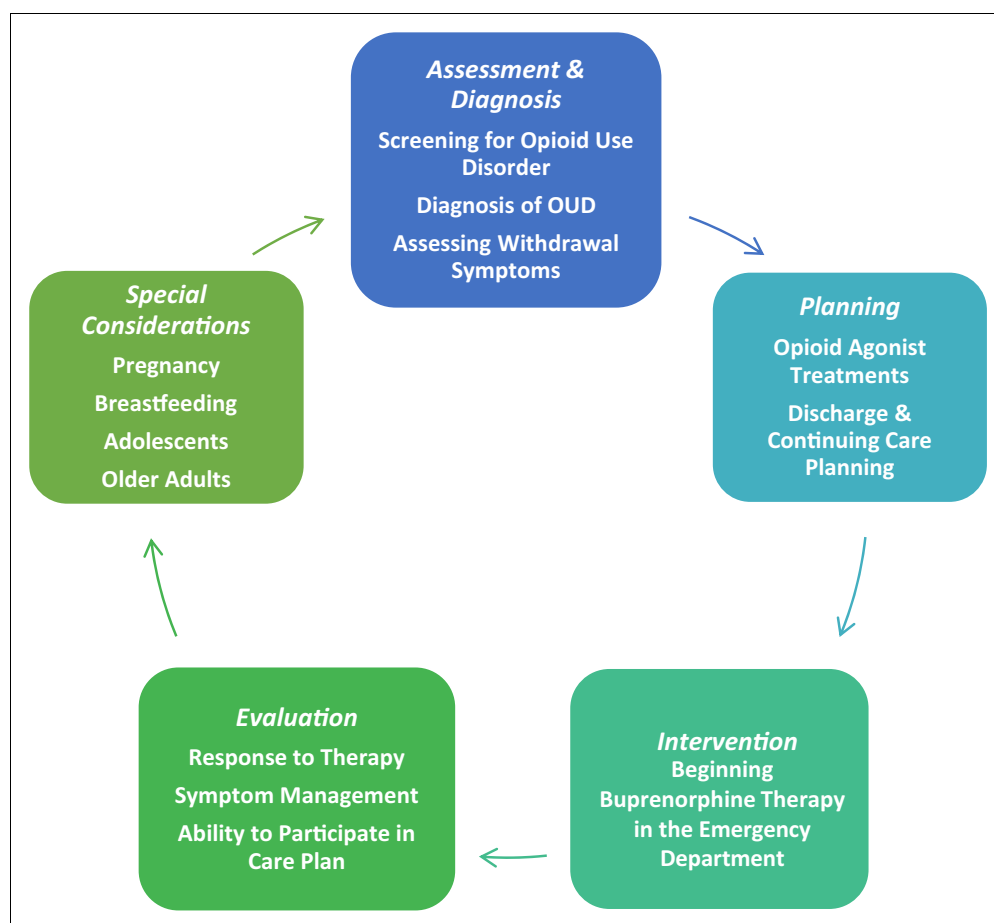


# UNDERSTANDING ED BUPRENORPHINE INITIATION FOR OPIOID USE DISORDER: A GUIDE FOR EMERGENCY NURSES



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**CE** Earn Up to 10.5 Hours. See page 206.

## Contribution to Emergency Nursing Practice

- Dependence on opioids is a critical public health problem in the United States and worldwide, and the emergency department is an important setting for delivering high-quality care, including medication-assisted therapy, for patients with opioid use disorder.
- This article reviews opioid use disorder and opioid withdrawal syndrome, medications used to treat opiate use disorder, considerations for beginning buprenorphine/naloxone in the emergency setting, clinical assessment of withdrawal symptoms, discharging patients with medication-assisted therapy, and specific considerations for special populations.
- Key implications for emergency nurses and their practice are summarized, including roles in education, advocacy, interventions, assessment, and referral to ongoing treatment.

der and opioid withdrawal syndrome, medication treatments for opioid use disorder, best clinical practices for ED-initiated buprenorphine therapy, assessment of withdrawal symptoms, discharge considerations, and concerns for special populations. With expanded understanding of opioid use disorder, withdrawal, and available treatments, emergency nurses will be better prepared to deliver and support life-saving treatments for patients and families suffering from this disease. In addition, emergency nurses are well positioned to play an important role in public health advocacy around opioid use disorder, providing critical support for destigmatization and expanded access to safe and efficacious treatments.

**Key words:** Emergency department; Emergency nursing; Opioid-related disorders; Opiate substitution treatment; Buprenorphine

## Abstract

Opioid use disorder is a critical public health problem that continues to broaden in scope, adversely affecting millions of people worldwide. Significant efforts have been made to expand access to medication therapy for opioid use disorder, in particular buprenorphine. As the emergency department is a critical point of access for many patients with opioid use disorder, the initiation of buprenorphine therapy in the emergency department is increasing, and emergency nurses should be familiar with the care of these vulnerable patients. The purpose of this article is to provide a clinical review of opioid use disorder

## Introduction

Opioid dependence and opioid use disorder (OUD) are critical public health problems that continue to increase both in the United States and beyond.<sup>1-4</sup> The emergency department is a critical source of care for those with OUD. Emergency department leaders have been called on by many, including the surgeon general and Centers for Disease Control and Prevention, to assist in addressing the opioid epidemic by expanding patients' access to opioid agonist treatment (OAT) with buprenorphine.<sup>5</sup>

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Patients with OUD are at an increased risk for poor health outcomes but are often marginalized or are unable to access primary health care services.<sup>6,7</sup> Therefore, many patients with OUD seek care in emergency departments for a variety of issues. ED visits are often a particularly critical moment for patients, bringing into focus the connection between opioid use and health consequences. Emergency clinicians are poised to leverage this moment, assisting patients to initiate effective OAT, in conjunction with a brief intervention and referral to continuing treatment. ED-based initiation of buprenorphine as treatment for OUD is rapidly expanding, and we are unaware of other peer-reviewed, English language articles published in the *Journal of Emergency Nursing* or other emergency-oriented journals specifically focused on educating emergency nurses about this topic. Therefore, the purpose of this article is to provide emergency nurses with an overview of buprenorphine's use in treating OUD, the specifics of its use in the emergency setting, and to review the implications of ED-initiated buprenorphine for emergency nursing practice.

### Assessment and Diagnosis of Opioid Use Disorder and Opioid Withdrawal

The *Diagnostic and Statistical Manual of Mental Disorders* (5th edition, text revision) (DSM-V) defines OUD as “a problematic pattern of opioid use leading to clinically significant impairment or distress.”<sup>8</sup> Assessment for the presence of OUD is made using a set of 11 diagnostic criteria, which also allow clinicians to determine the severity of disease (mild, moderate, or severe).<sup>8</sup> Whereas advanced practice emergency nurses are able to diagnose OUD using DSM-V criteria, bedside emergency nurses play an important role in screening and identifying patients who may have OUD and other substance use disorders. Assessing patients' patterns of opioid use, the degree to which they experience opioid cravings, past efforts to curtail use, and ways that opioid use may be interfering with patients' role obligations can assist in the early identification of patients who may be experiencing OUD. Patients with OUD are at a high risk for a wide range of adverse health outcomes including mortality, and recent estimates suggest that more than 16 million people worldwide and more than 2.1 million people in the US are affected.<sup>9,10</sup> The time required for opioid dependence to develop after exposure varies but is generally days to weeks.<sup>11</sup> After sustained exposure to opioids,  $\mu$ -opioid receptors in the body adapt to the presence of opioid agonists by downregulating their “activation” and suppressing their neurons' excitability. When these same receptors are unbound in the absence of

opioid, neuronal disinhibition and hyperexcitability result in the syndrome of opioid withdrawal.<sup>12</sup>

Opioid withdrawal is a constellation of predictable signs and symptoms that follows a discontinuation or reduction in opioid use.<sup>8</sup> Physiologic manifestations of opioid withdrawal include nausea, vomiting, diarrhea, piloerection (goose bumps/flesh), diaphoresis, yawning, mydriasis or photophobia, restlessness, lacrimation or rhinorrhea, and autonomic hyperactivity. Additional findings include pain, anxiety, irritability, stress intolerance, and drug craving.<sup>8</sup> These symptoms are very uncomfortable and distressing for patients. Avoiding feeling sick with withdrawal symptoms and the craving produced by the altered neurons is a primary reason for continued opioid use rather than a desire to obtain a euphoric high.<sup>13</sup> Opioid withdrawal is considered a high-risk period that is associated with an increased risk of return to opioid use, overdose, and death.<sup>14-17</sup> The use of opioid agonist medications such as methadone and buprenorphine is known to be an effective treatment for addressing opioid withdrawal.<sup>18</sup> An assessment for the presence and severity of opioid withdrawal should be made using a standardized, validated tool to allow for meaningful assessment and communication between providers. One widely used withdrawal assessment tool is described in the section on Evaluating Treatment Response. A clear use of terminology is also important when discussing OUD; therefore, definitions of common terms are provided in [Table 1](#).

### Planning: Opioid Agonist Treatment for Opioid Use Disorder

Growing evidence supports the use of opioid agonists in the treatment of OUD.<sup>11,18</sup> Evidence from multiple systematic reviews supports the efficacy of therapy with methadone or buprenorphine across a wide range of outcomes including decreasing the use of illicit drugs, improving physical and mental health, reducing risk of HIV and hepatitis C infections, and reducing all-cause mortality.<sup>19-27</sup> These medications are widely used both to treat patients with active symptoms of opioid withdrawal and as a bridge to long-term treatment.

#### METHADONE

Methadone is a synthetic opioid, working as a full agonist at the  $\mu$ -opioid receptor and producing a long half-life with significant interindividual variability.<sup>28,29</sup>

TABLE 1

**Common terminology and definitions**

Term	Definition
At-risk substance use	A pattern of substance use that deviates from the accustomed social or medical use is based on the quantity, frequency, and duration of substance use; the reasons for substance use; and the increased risk for substance-related harms to an individual's well-being. <sup>96</sup>
Diversion	The channeling of regulated pharmaceuticals from someone for whom they are legally prescribed to another person for whom they are not prescribed.
Induction	Refers to the initial phase of transitioning a patient from use of an opioid to a prescribed dose of opioid agonist treatment designed to provide relief from withdrawal symptoms and lessen opioid cravings. The induction process can be medically monitored or completed at home by patients.
Medication-assisted therapy	The use of medications, in combination with counseling and behavioral therapies, to provide a "whole-patient" approach to the treatment of substance use disorders. <sup>97</sup>
Opiate	Refers to natural opioids such as heroin, morphine, or codeine.
Opioid	Refers to all natural, semisynthetic, and synthetic opioids.
Opioid agonist treatment	Medication-based treatment for OUD using an opioid agonist treatment such as buprenorphine or methadone.
Opioid use disorder	A problematic pattern of opioid use leading to clinically significant impairment or distress. The DSM-V includes 12 diagnostic criteria in which the total number of criteria endorsed indicates the severity (mild, moderate, severe) of OUD. <sup>8</sup>
Opioid dependence	Occurs when the body adjusts its normal functioning around regular opioid use; people experience unpleasant symptoms (withdrawal) when opioid use is stopped.
Opioid withdrawal syndrome	An unpleasant set of symptoms that occur when a person with opioid dependence reduces or stops using opioid, or receives an opioid antagonist after a period of heavy opioid use. The DSM-V requires the presence of 3 or more symptoms (dysphoric mood, nausea or vomiting, muscle aches, lacrimation or rhinorrhea, pupillary dilation, piloerection or sweating, diarrhea, yawning, fever, or insomnia) to confirm a diagnosis of opioid withdrawal syndrome. <sup>8</sup>
Opioid tolerance	Occurs when a person using opioids begins to experience a diminished response to the opioid, requiring more opioid to experience the same effect.
Nonmedical use	Taking prescribed or diverted medications in a manner that is not consistent with the way, reasons, amount, or time-frame in which they were prescribed.

DSM-V, Diagnostic and Statistical Manual of Mental Disorders (5th edition); OUD, opioid use disorder.

Methadone is commonly used in opioid treatment programs for maintenance treatment, with daily oral doses ranging from 10 mg to greater than 250 mg, although most patients are maintained at less than 200 mg/d.<sup>11</sup> Although very effective in the treatment of OUD, methadone cannot be prescribed for the OUD indication; it is only administered and dispensed in licensed, specialized clinics, requiring patients to travel to a clinic daily to receive their dose. Most clinics use the oral liquid form of methadone as most of diverted methadone associated with dangerous overdoses is in the tablet formulation prescribed for pain. Methadone can prolong the QTc interval

and increase the risk for torsades de pointes, especially when combined with other medications that also cause QTc prolongation.<sup>30</sup> In addition, methadone interacts with many other medications, including ciprofloxacin, carbamazepine, tricyclic antidepressants, lithium, monoamine oxidase inhibitors, and selective serotonin reuptake inhibitors.<sup>31</sup> As methadone is a full  $\mu$ -agonist, there are elevated risks of respiratory depression and overdose, particularly if used with other sedating medications; dosing must be carefully titrated for the individual patient to avoid these risks.<sup>29</sup> Methadone maintenance dosing is not reported to state prescription monitoring programs

as filled prescriptions are, making it difficult for emergency clinicians to readily verify a patient's regular dosage. Verification requires direct contact with the patient's clinic. Because of these complexities and regulatory restrictions, the initiation of methadone therapy for OUD is not recommended or feasible in the ED setting. In addition, replacement of missed methadone maintenance doses in the emergency department is typically not recommended, unless dosing can be verified with the patient's regular clinic.

## BUPRENORPHINE

Buprenorphine is a semisynthetic thebaine derivative and is a partial  $\mu$ -opioid receptor agonist. In the US, it is currently approved for use in the treatment of OUD as well as in the treatment of moderate-to-severe chronic pain, in which efficacy and safety are well established.<sup>25,32</sup> Although patients using buprenorphine for the management of opioid withdrawal symptoms will experience agonistic effects in the form of diminished cravings, miosis, mild sedation, and mild respiratory depression, a unique property of this medication is a "ceiling effect" on respiratory depression and feelings of euphoria.<sup>11,33,34</sup> For the patient with OUD, these qualities result in the management of opioid craving and suppression of withdrawal symptoms with less respiratory and central nervous system depression and abuse potential than is present for full opioid agonists.<sup>35</sup>

In the ED setting, buprenorphine is typically administered as a sublingual tablet or film strip, although it is also available in transbuccal, transdermal, subdermal implant, subcutaneous, and parenteral formulations.<sup>11,33</sup> Sublingual and oral buprenorphine are often administered in combination with naloxone (a full opioid antagonist) to decrease abuse potential. When administered orally, naloxone does not cross the mucosa well and has very poor bioavailability, therefore, it is essentially inactive by this route. If a patient uses oral or sublingual formulations containing naloxone by injection or inhalation, the naloxone easily gets into the bloodstream, and the antagonistic effects are fully activated.<sup>11,33</sup> Currently, standard ED dosing of buprenorphine for patients with withdrawal symptoms is not available, and dosing practices are variable.<sup>36-38</sup> Recent evidence suggests that patients in the emergency department will likely require at least 8 mg of sublingual buprenorphine to experience a significant relief of withdrawal symptoms, with most patients achieving comfort from a total of 16 mg.<sup>11,37</sup> At present, the maximum recommended dose of buprenorphine for ED induction is 32 mg administered sublingually.<sup>11</sup>

As with methadone, there is a risk of QTc interval prolongation with buprenorphine, and caution should be used especially with the coadministration of other medications known to cause QT prolongation such as antipsychotics, tricyclic antidepressants, and selective serotonin reuptake inhibitors.<sup>33</sup> Research evidence indicates that the risk of QTc prolongation is less with buprenorphine than it is with methadone, making it a better choice for patients with co-occurring cardiac conditions.<sup>39-41</sup> The coadministration of buprenorphine with sedative medications or central nervous system depressants such as alcohol or benzodiazepines can compound its depressant effects, worsening respiratory depression.<sup>42</sup> In addition, the administration of buprenorphine in the presence of other opioids can cause severe precipitated withdrawal symptoms owing to the higher affinity for receptors of buprenorphine compared with other opioids. There is a potential for patients who are intoxicated with other opioids, such as methadone, to experience its rapid displacement from receptors with the introduction of buprenorphine, causing the onset of severe withdrawal symptoms including vomiting, hallucinations, delirium, seizures, and hemodynamic instability.<sup>43,44</sup> It is important to avoid precipitating withdrawal symptoms, not only because of the extreme discomfort and dangerous symptoms it can produce, but also because patients with this profoundly unpleasant experience may be understandably hesitant to participate in OAT for OUD in the future.<sup>30</sup>

## Intervention: Buprenorphine/Naloxone Initiation in the Emergency Department

There is currently not a single approach to initiating buprenorphine therapy in the ED setting, and strategies may vary on the basis of local resources. A widely used strategy is presented in Figure 1. Patients presenting to the emergency department with suspected OUD or opioid withdrawal are assessed for the presence and severity of OUD using the aforementioned DSM-V criteria. In addition, their use history is evaluated, with attention to the type of opioids(s) used and the time of last use. It is important to recognize that the administration of buprenorphine in patients taking methadone may cause serious precipitated withdrawal for up to 72 hours after the patient's last use.<sup>33,45</sup> Patients experiencing withdrawal symptoms while on methadone are typically evaluated for methadone dosing adjustment rather than transition to buprenorphine.<sup>11</sup>

When OUD is confirmed, the severity of withdrawal symptoms should be assessed using a standardized tool such as the clinical opiate withdrawal scale (COWS), described in detail in later text (Table 2).<sup>46</sup> Patients with

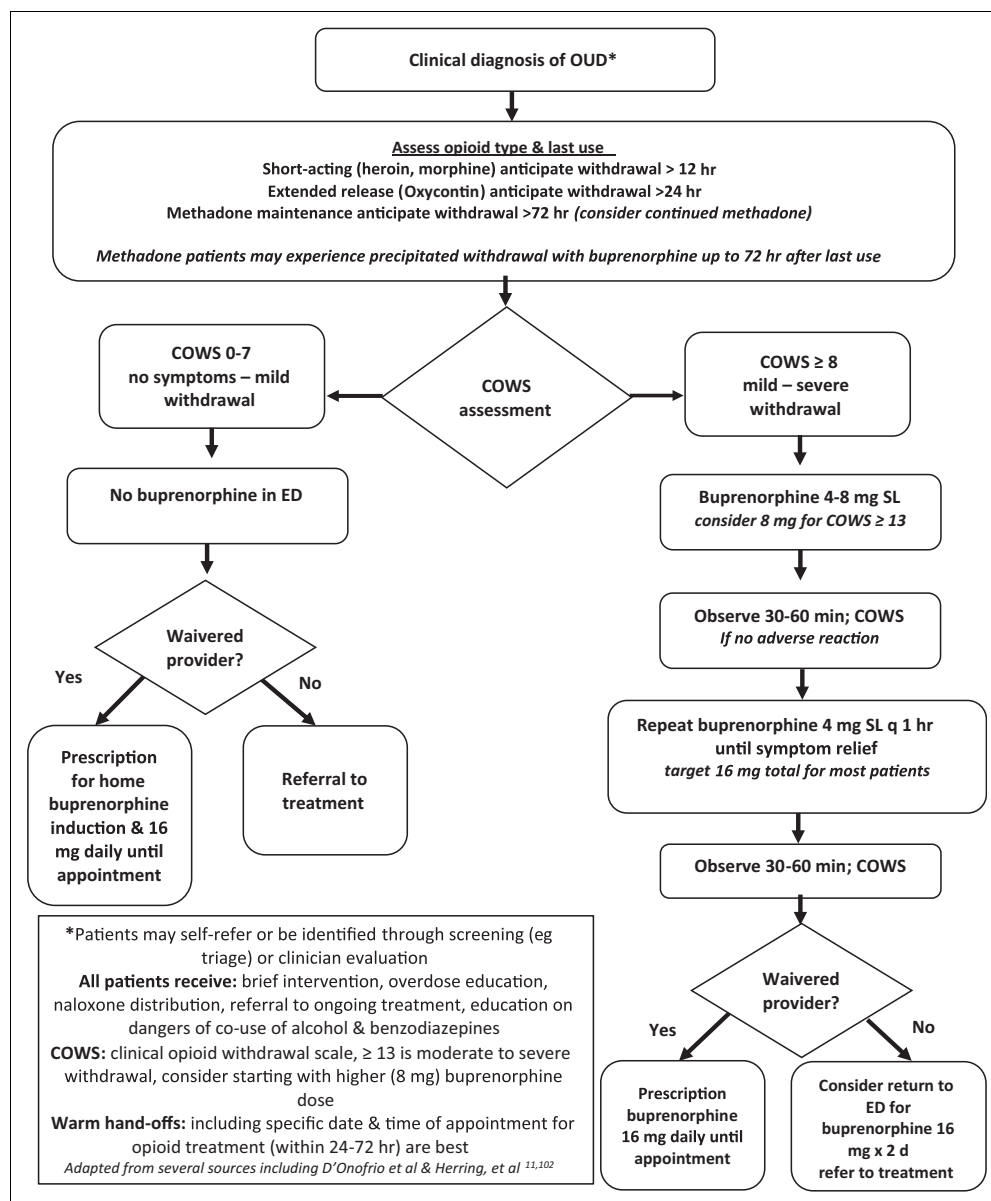


FIGURE 1

Beginning buprenorphine for uncomplicated opioid use disorder in the emergency department. OUD, opioid use disorder; COWS, clinical opiate withdrawal scale; SL, sublingual; ED, emergency department.

mild withdrawal symptoms (total COWS score 0-7) may not require buprenorphine in the emergency department; some institutions are able to provide buprenorphine, instructions on when and how to begin taking the medication, and referral to ongoing treatment for patients to be able to begin induction at home.<sup>47</sup> For those experiencing a greater burden of withdrawal symptoms (COWS ≥ 8), buprenorphine dosing typically begins with 4 to 8 mg of buprenorphine or buprenorphine/naloxone administered

sublingually. The higher, 8-mg dose is widely used as a starting dose especially for patients with COWS scores of at least 13. In patients with higher COWS scores, the 8-mg dosing may be less likely to cause precipitated withdrawal.<sup>48</sup> Patients should be observed in the emergency department for 45 to 60 minutes and reassessed for withdrawal symptoms after the initial buprenorphine administration. If substantial relief of symptoms is not achieved, an additional 4 mg of sublingual buprenorphine may be



given, followed by an additional period of observation. It should be anticipated that patients may require as much as 24 to 32 mg of buprenorphine to achieve symptomatic relief.<sup>30,32</sup> In addition to buprenorphine, patients may require other medications to relieve symptoms. These include acetaminophen, ibuprofen, or ketorolac for myalgias; dicyclomine or loperamide for abdominal cramping or diarrhea; ondansetron, prochlorperazine, or promethazine for nausea; and clonidine for elevated blood pressure or tachycardia.<sup>49</sup>

When buprenorphine is administered to patients in moderate-to-severe opioid withdrawal, they should experience rapid relief of suffering and uncomfortable symptoms, typically within 30 to 60 minutes.<sup>33</sup> Relief of withdrawal symptoms and opioid cravings is important as this allows patients to focus on additional strategies that are helpful to achieving remission and improved quality of life, such as counseling or behavioral therapy.<sup>50</sup>

## Evaluating Treatment Response: Assessing Opioid Withdrawal Symptoms

### CLINICAL OPIATE WITHDRAWAL SCALE

Assessment of withdrawal symptoms is most commonly accomplished using the COWS.<sup>46</sup> The COWS grades the severity of withdrawal symptoms on a scale of 0 to 36, with higher scores indicating more severe symptoms. Both subjective reports of symptoms (eg, anxiousness, irritability, gastrointestinal upset) and clinical observations of withdrawal signs (eg, piloerection of skin, pupil size, resting heart rate) are used in computing the COWS. It is important to wait until patients are experiencing objective signs of opioid withdrawal before administering buprenorphine to avoid precipitated withdrawal; therefore, frequent assessment using a standardized assessment tool such as the COWS is critical to ensuring optimal outcomes. Generally, a COWS score of at least 8 is recommended before the administration of buprenorphine, with some guidelines suggesting waiting until the patient scores 13.<sup>11,30,37</sup> Regardless, emergency nurses must be well acquainted with the use and documentation of the COWS as frequent reassessment is required to guide dosing and prevention of precipitated withdrawal. Table 2 displays the COWS tool.<sup>46</sup>

### Discharge and Follow-up

Discharge planning for patients in the emergency department after the initiation of treatment with buprenorphine is contingent on several factors. First, whether there is a

medical provider who has obtained a Drug Addiction Treatment Act of 2000 X-waiver is an important consideration. An X-waiver is required to prescribe buprenorphine for the treatment of OUD; any provider who holds a Drug Enforcement Administration registration may apply for an X-waiver after the completion of an approved training program.<sup>51</sup> If an X-waivered provider is available, a discharge prescription for a buprenorphine/naloxone combination product, or buprenorphine alone for pregnant patients, should be provided, with the typical buprenorphine dosage ranging between 8 mg and 16 mg daily for the sublingual formulation. The discharge prescriptions should provide enough medication for the patient to be able to attend a follow-up appointment with an OAT or recovery provider. If an X-waivered provider is not available, patients are permitted to return to the emergency department daily for up to 72 hours to receive daily doses of buprenorphine/naloxone under the “3-day rule.”<sup>52</sup> As with patients discharged with a buprenorphine/naloxone prescription, the medication is intended to “bridge” the patient until they can reach an appointment with a follow-up provider.

Follow-up with an opioid treatment provider or program is an essential component of an ED-initiated OAT program. Establishing relationships and referral programs with community partners is helpful to ensuring that patients will be able to receive follow-up in a timely manner. Whenever possible, patients should be able to see a follow-up provider within 24 to 72 hours of their ED discharge. This may be the patient’s primary care provider, if the primary care provider is an X-waivered practitioner. Otherwise, it will be necessary to refer the patient for follow-up treatment at another provider who is waived and prescribes buprenorphine. It will likely be necessary to engage supportive resources such as social workers or care managers when arranging for outpatient follow-up, and it is ideal to use a “warm handoff” approach to smooth transitions between the emergency department and the continuing treatment.<sup>53</sup> It is important that clinicians provide education reinforcing the importance of engaging fully in a multimodal treatment program to maximize disease remission, and this begins with providing the patient with a date, a time, and a follow-up location whenever possible. However, a patient’s preference for medication alone should not be a barrier as medication monotherapy has also been demonstrated to be effective treatment for OUD.<sup>54,55</sup> Recognizing that resources are often scarce and systems can be fragmented, it is important to let patients know that they can return to the emergency department if they are in need of continuing care and cannot access it in the outpatient setting.<sup>56</sup> With the aforementioned 3-day

rule, emergency providers can continue to prescribe buprenorphine for 72 hours to prevent relapse and ensure that the patient reaches treatment safely.

Before discharge, it is also important to ensure that patients are supported with harm-reducing strategies and knowledge, including the provision of naloxone, and to ensure that the patient and their family or support people understand the signs of an overdose, how to administer naloxone, and how to call for emergency medical assistance. Patients should be educated on the dangers associated with concomitant use of buprenorphine with benzodiazepines or alcohol, as buprenorphine can exaggerate the sedating effects of these substances.<sup>57,58</sup> Additional harm-reduction strategies such as overdose prevention education, hepatitis C and HIV screening, and counseling on reproductive health should also be considered and offered as appropriate.<sup>11</sup>

### Special Populations

Pregnancy and breastfeeding are not contraindications to receiving OAT with buprenorphine.<sup>59</sup> Therapy with buprenorphine for patients who are pregnant or breastfeeding with OUD is supported by the American College of Obstetricians and Gynecologists.<sup>60</sup> Maternal opioid use and acute withdrawal can both cause harm for the childbearing person and the baby, with increased risks of spontaneous abortion, stillbirth, prematurity, low-birth weight neonate, adverse neural effects, and birth defects.<sup>61</sup> Withdrawal from opioids can lead to preterm labor, fetal distress, and fetal withdrawal symptoms.<sup>61</sup> Buprenorphine has been demonstrated to be safe and effective in pregnancy, with a meta-analysis indicating that the rate of congenital anomalies in patients treated with buprenorphine was similar to that of the general population.<sup>62,63</sup>

Research demonstrates that the amount of buprenorphine detectable in human breastmilk is very small.<sup>11,60,64</sup> For people with OUD who are breastfeeding, buprenorphine has been associated with a lower severity of neonatal abstinence syndrome symptoms, less need for pharmacologic treatment of neonatal abstinence syndrome, and shortened hospital stay, in addition to traditional benefits such as the transfer of passive immunity, supporting parent-infant bonding, and facilitating skin-to-skin contact.<sup>65</sup> The American Academy of Pediatrics, American Academy of Breastfeeding Medicine, Association of Women's Health, Obstetric, and Neonatal Nurses, and American College of Obstetricians and Gynecologists all support the use of buprenorphine for OUD in people who are breastfeeding.<sup>60,64,66-68</sup>

Whereas clinical practice has often been to prescribe buprenorphine monotherapy, rather than the buprenorphine-naloxone combination formulation for

pregnant women, some recent research found the use of the combination product to be safe in pregnant people.<sup>69-71</sup> Because the naloxone-free formulation is more likely to be used nonmedically or diverted, this is an important area for continued research, and potential risks of prenatal naloxone exposure should be weighed with the risk of nonmedical buprenorphine use in individual patients.

OUD is a serious health problem for adolescents, as well as for adults, with recent estimates suggesting that nonmedical use of opioids and the development of OUD is on the rise in this adolescent age group.<sup>72</sup> Buprenorphine is currently approved for use in treating OUD in patients aged at least 16 years.<sup>73</sup> Three randomized controlled trials have investigated the use of buprenorphine in the treatment of OUD in adolescent patients.<sup>74-76</sup> Each study found buprenorphine to be relatively safe and well tolerated, with no serious adverse effects reported. Opioid abstinence outcomes, retention in treatment, and reductions in high-risk behaviors such as injection drug use were all similar to outcomes for adult patients.<sup>73,77,78</sup> Because most adolescents with OUD do not receive treatment<sup>79,80</sup> and most who are in treatment receive therapies with high rates of dropout and relapse such as abstinence-based treatment or outpatient therapy,<sup>77,81,82</sup> the role of the emergency department in connecting adolescents to effective, evidence-based treatment strategies including buprenorphine may increase in the future.

As with adolescents, OUD is an important and increasing health problem for older adults.<sup>83</sup> Rates of OUD in older adults are expected to continue to rise as the "baby boomer" generation ages because this population has demonstrated high rates of substance use.<sup>84</sup> Research evidence on the use of OAT is limited in older adults; however, the properties of buprenorphine (eg, less risk of overdose and QTc prolongation) make it a good option for patients who are older and may have comorbid conditions, and it is first-line therapy for the treatment of OUD in older adults according to Canadian guidelines.<sup>85,86</sup> The half-life of buprenorphine is relatively stable in patients older than 65 years, and there is less polypharmacy risk than for other opioids as buprenorphine possesses less cytochrome P450 activity.<sup>87</sup>

### Implications for Emergency Nurses

Emergency nurses across the spectrum of professional roles all play a critical part in helping patients safely begin OAT, optimizing their chances of remission and improvement in quality of life. Although there is likely overlap between professional roles and activities, engagement from emergency



nurses in executive, managerial, scientist, advanced practice, and clinical roles is necessary to address this critical health problem. In addition to administering induction and supportive medications, assessing for effect and signs of opioid withdrawal, and providing patients and families with medication-specific education, bedside emergency nurses can be central in helping to decrease the shame and the stigma that are present around OUD. Helping patients, families, colleagues, and the public to reframe thinking about OUD is critical to reducing stigma and making it more likely that those in need will seek treatment and receive the support that is necessary to achieve OUD remission.<sup>88</sup> Encouraging people to think about OUD as a chronic disease that needs a consistent and multifaceted management strategy to achieve optimal results—much the way we approach other chronic diseases such as diabetes or hypertension—can be helpful. Moving from a model that conceptualizes OUD as a moral weakness or choice to one that understands OUD as a chronic medical illness provides space for OUD treatment to take its place alongside the rest of health care. Emergency nurses are well positioned to model this in discussing OUD and OAT with patients and families. People with OUD often feel a strong sense of shame, guilt, or isolation that can make engaging with treatment very difficult, and helping them to feel supported while in the emergency department, when transitioning to follow-up care, and at home can help empower them throughout the process.<sup>89</sup>

The use of destigmatizing language around OUD, drug use, and OAT is also of critical importance. Our language mirrors our thoughts about OUD, and the use of stigmatizing language reinforces myths and stereotypes, presents barriers to treatment seeking, sways public attitudes, and even can reduce the willingness of policymakers to allocate resources toward OUD.<sup>88,90</sup> The National Institute on Drug Abuse recommends the use of “person-first” or patient-centered language that supports the integrity of the person rather than equating the individual to their condition.<sup>91</sup> For example, rather than saying “drug abuser,” an emergency nurse using a person-centered approach would say, “a person with OUD.” Additional examples are provided in [Table 3](#).

To best support patients with OUD, it is important for emergency nurses to have a strong understanding of helpful resources available within and outside of their hospital settings. Although resources will not be standard, many hospitals and emergency departments have clinical social workers, care managers, substance use disorder treatment specialists, and mental health professionals who can all play important roles in caring for patients with OUD. Understanding local resources will help the emergency

nurse be prepared to coordinate the multidisciplinary team and care planning for patients. In addition, having a strong awareness of and familiarity with community resources such as treatment centers, peer support programs, needle exchanges, harm-reduction centers, virology testing centers, and shelters accepting patients receiving medication-assisted therapy OAT will ensure that the emergency nurse is able to recommend support resources appropriate for individual patients.

Emergency nurses can help ensure the delivery of high-quality care by having a strong understanding of local care standards and protocols. For example, best practice includes providing pregnancy testing for persons of childbearing age to ensure that pregnancies are identified and that patients are connected to prenatal care, in addition to guiding treatment decisions. Patients receiving medication for OUD are at high risks of relapse and overdose; therefore, ensuring access to a naloxone kit and education for patients and their supports is an important marker of high-quality care.<sup>92</sup> All patients receiving opioid medications must be educated on the proper storage and disposal of their medications, and buprenorphine is no exception as there has been an alarming increase in pediatric accidental exposures with the advance of OAT.<sup>33,93</sup> Emergency nurses are optimally positioned to ensure that each of these best practices and local standards has been provided to patients with OUD before discharge from the emergency department.

Those emergency nurses in advanced practice roles (nurse practitioner, certified nurse midwife, certified registered nurse anesthetist, certified nurse specialist) are eligible to apply for an X-waiver. To do so, they must be licensed under state law to prescribe schedule III, IV, or V medications for pain; complete at least 24 hours of education through a qualified provider; demonstrate the ability to treat and manage OUD through other training or experience; and, if required by state law, be supervised or work in collaboration with a qualifying physician. The American Association of Nurse Practitioners has created an interactive map that provides information regarding the practice environment for advanced practice nurses (APRNs) on a state-by-state basis as some states may have legislation prohibiting APRNs from prescribing these medications despite federal regulations. The map is available at <https://www.aanp.org/advocacy/state/state-practice-environment>. Free, 24-hour X-waiver trainings are available for APRNs through the Providers Clinical Support System, who has partnered with multiple professional organizations including the American College of Emergency Physicians, the Society for Academic Emergency Medicine, the American Psychiatric Nurses Association, and American Academy of Addiction Psychiatry to expand access to this

TABLE 2

**The Clinical Opiate Withdrawal Scale.**<sup>46</sup>**Resting Pulse Rate:**\_\_\_\_\_ beats/  
minute*Measured after patient is  
sitting or lying for one  
minute*

0 pulse rate 80 or below

1 pulse rate 81-100

2 pulse rate 101-120

4 pulse rate greater than  
120**Sweating:** *over past ½ hour  
not accounted for by room  
temperature or patient  
activity*0 no report of chills or  
flushing1 subjective report of  
chills or flushing2 flushed or observable  
moistness on face3 beads of sweat on brow  
or face

4 sweat streaming off face

**Restlessness:** *observation  
during assessment*

0 able to sit still

1 reports difficulty sitting  
still, but is able to do so3 frequent shifting or  
extraneous movements  
of legs/arms5 unable to sit still for  
more than a few seconds**Pupil size**0 pupils pinned or normal  
size for room light1 pupils possibly larger  
than normal for room  
light2 pupils moderately  
dilated5 pupils so dilated that  
only the rim of the iris  
is visible**GI Upset:** *over last ½ hour*

0 no GI symptoms

1 stomach cramps

2 nausea or loose stool

3 vomiting or diarrhea

5 multiple episodes of  
diarrhea or vomiting**Tremor:** *observation of  
outstretched hands*

0 no tremor

1 tremor can be felt, but  
not observed

2 slight tremor observable

4 gross tremor or muscle  
twitching**Yawning:** *observation  
during assessment*

0 no yawning

1 yawning once or twice  
during assessment2 yawning three or more  
times during assessment4 yawning several times/  
minute**Anxiety or Irritability**

0 none

1 patient reports  
increasing irritability or  
anxiousness2 patient obviously  
irritable or anxious4 patient so irritable or  
anxious that  
participation in the  
assessment is difficult**Bone or Joint aches:** *if  
patient was having pain  
previously, only the  
additional component  
attributed to opiate  
withdrawal is scored*

0 not present

1 mild diffuse discomfort

2 patient reports severe  
diffuse aching of joints/  
muscles4 patient is rubbing joints  
or muscles and is unable  
to sit still because of  
discomfort**Runny nose or tearing:**  
*Not accounted for by cold  
symptoms or allergies*

0 not present

1 nasal stuffiness or  
unusually moist eyes

2 nose running or tearing

4 nose constantly running  
or tears streaming down  
cheeks**Gooseflesh skin**

0 skin is smooth

3 piloerection of skin can  
be felt or hairs standing  
upon arms

5 prominent piloerection

Total Score \_\_\_\_\_

The total score is the sum  
of all 11 itemsInitials of person  
completing  
assessment \_\_\_\_\_

Score 5-12 = mild; 13-24 = moderate; 25-36 = moderately severe; more than 36 = severe withdrawal

training (<https://pcssnow.org/medications-for-addiction-treatment/>). Expanding the number of emergency APRNs prepared to provide buprenorphine for OUD is critical as many patients may lack other access to health care providers, using the emergency department as a result. Because there is a cap on the number of patients that X-waivered providers can actively treat at any given time, increasing the overall number of eligible providers is essential to expanding access to this important, evidence-based treatment.<sup>54</sup>

In addition, emergency APRNs are often clinical leaders, participating in the development and implementation of new programs and educational efforts for other clinicians. Those with expertise in caring for patients with OUD in the ED setting can play an important role in providing continuing education in this area for colleagues within and outside of the emergency department, expanding the number of clinicians who are prepared to provide compassionate, evidence-based care for these vulnerable patients and their families. With extensive clinical knowledge

TABLE 3

**Patient-centered language**

<b>Stigmatizing language</b>	<b>Patient-centered language</b>	<b>Rationale</b>
<ul style="list-style-type: none"> <li>• Opioid substitution therapy</li> <li>• Opioid substitution treatment</li> <li>• Replacement therapy</li> </ul>	<ul style="list-style-type: none"> <li>• Treatment</li> <li>• Opioid agonist therapy</li> <li>• Medication for treatment of OUD</li> <li>• Pharmacotherapy</li> <li>• Medication-assisted treatment</li> <li>• Medication-assisted therapy</li> </ul>	<ul style="list-style-type: none"> <li>• The terms “substitution” or “replacement” reinforce the misconception that medication-assisted therapy is replacing 1 addiction with another.<sup>98</sup></li> <li>• Some authors proposed that the terms “medication-assisted treatment” or “therapy” wrongly imply that medication is only an adjunct to other forms of treatment, whereas research demonstrates that medication alone is an effective treatment for OUD.<sup>54,55</sup></li> </ul>
<ul style="list-style-type: none"> <li>• Abuse</li> <li>• Substance misuse</li> <li>• Misuse</li> </ul>	<p>When describing illicit drugs:</p> <ul style="list-style-type: none"> <li>• Use</li> <li>• At-risk substance use</li> </ul> <p>When describing prescription medications:</p> <ul style="list-style-type: none"> <li>• Used other than prescribed</li> <li>• At-risk substance use</li> </ul>	<ul style="list-style-type: none"> <li>• Research indicates that the word “abuse” has a strong association with negative judgments and punishment.<sup>99</sup></li> <li>• Although “substance misuse” has been commonly used, recent authors describe it as technically imprecise and likely to contribute to stigma.<sup>96</sup></li> </ul>
<ul style="list-style-type: none"> <li>• Clean</li> </ul>	<p>When referencing toxicology testing:</p> <ul style="list-style-type: none"> <li>• Testing negative</li> </ul> <p>Nontoxiology references:</p> <ul style="list-style-type: none"> <li>• Being in remission or recovery</li> <li>• Abstinent from drugs</li> <li>• Not taking drugs</li> <li>• Not currently/actively using drugs</li> </ul>	<ul style="list-style-type: none"> <li>• Use of “clean” or “dirty” can evoke or reinforce negative or punitive cognitions.<sup>89</sup></li> <li>• Use of clinically accurate, nonstigmatizing terminology is consistent with language used for other medical conditions.</li> </ul>
<ul style="list-style-type: none"> <li>• Dirty</li> </ul>	<p>When referencing toxicology testing:</p> <ul style="list-style-type: none"> <li>• Testing positive</li> </ul> <p>Nontoxiology references:</p> <ul style="list-style-type: none"> <li>• Person who uses drugs</li> </ul>	<ul style="list-style-type: none"> <li>• May decrease patients’ sense of hope and self-efficacy for change.<sup>89</sup></li> <li>• Use of clinically accurate, nonstigmatizing terminology is consistent with language used for other medical conditions.</li> </ul>
<ul style="list-style-type: none"> <li>• Habit</li> </ul>	<ul style="list-style-type: none"> <li>• Substance use disorder</li> <li>• Drug addiction</li> </ul>	<ul style="list-style-type: none"> <li>• The word “habit” implies inaccurately that a person is choosing to use substances or can choose to stop.<sup>98</sup></li> <li>• Habit may undermine the seriousness of the disease.</li> </ul>
<ul style="list-style-type: none"> <li>• Addict</li> <li>• User</li> <li>• Substance or drug abuser</li> <li>• Junkie</li> <li>• Former or reformed addict</li> <li>• Addicted baby</li> </ul>	<ul style="list-style-type: none"> <li>• Person with OUD</li> <li>• Person with opioid addiction</li> <li>• Patient</li> <li>• Person in recovery or long-term recovery</li> <li>• Baby with signs of withdrawal from prenatal drug exposure</li> <li>• Baby with neonatal opioid withdrawal</li> <li>• Baby with neonatal abstinence syndrome</li> </ul>	<ul style="list-style-type: none"> <li>• Use first-person language.</li> <li>• Reinforces notion that a person has a problem rather than is the problem.<sup>9</sup></li> <li>• Avoids terms that elicit negative association, punitive attitudes, individual blame.<sup>89</sup></li> <li>• Babies can be born with manifestations of withdrawal syndrome owing to physical dependence but not OUD.<sup>100</sup></li> </ul>

Adapted from the National Institute on Drug Abuse, 2017<sup>89</sup> and other sources.  
 OUD, opioid use disorder.

and evidence-based practice skills, emergency APRNs can also be instrumental in the implementation and evaluation of ED-based buprenorphine programs, forging the collaborative relationships necessary to develop successful treatment protocols and community referral partnerships.

Similarly, emergency nurse executives and managers are positioned to be able to advocate for and develop ED-based programs focused on identifying and providing treatment for patients with OUD. As formalized leaders, they are empowered to set priorities for special areas of focus, to bring education and training programs to their staff members, and to develop policy around the care of patients with OUD. These leaders can support the development of ED-based OUD screening programs, ED-initiated buprenorphine protocols, harm-reduction strategies such as the distribution of naloxone kits and opioid take-back sites. Our emergency nurse leaders are prepared to navigate often-complex hospital administrative systems, sponsoring and supporting ED-based programming across committees such as pharmacy and therapeutics, finance, and nursing practice. Nurse executives often set the tone and serve as examples for many other staff members. Their approach to OUD should be compassionate and nonjudgmental, drawing on current evidence, best practices, and principles of nursing theory to optimize success and positive outcomes.

Finally, scientific knowledge in this area is rapidly evolving, yet many gaps in knowledge remain. Emergency nurse scientists can and must play a central role in continuing to expand scientific evidence to support clinical practice, especially through nursing's unique lens. OUD is a complex problem with profound impacts on all facets of the human experience; therefore, research programs that embrace multiparadigmatic approaches are necessary to develop a more full and nuanced understanding of our patients' experiences with OUD. In particular, research addressing gaps in our understanding of the treatment of adolescents, older adults, patients with co-occurring psychiatric disorders, patients with chronic pain, and those living with OUD within jails and prisons is sorely needed, as is knowledge supporting the clinical care of pregnant women with OUD.<sup>95</sup> Emergency nursing scientists work at the intersections between nursing, medicine, public health, education, psychology, and many other disciplines and have unique opportunities to bring together traditionally "siloe" practices with the goal of ultimately improving care for patients and families affected by OUD.

OUD is a complex and widespread public health problem, and the emergency department is an important point of entry into the health care system for many patients with OUD. By expanding access to OAT through

provision of buprenorphine in the emergency department, it is anticipated that our nation's emergency departments can play an important role in saving lives and improving the health and quality of life for many patients with OUD. As experts in communication, advocacy, navigating complex systems, and providing expert clinical care, emergency nurses are poised to help address this continuing health crisis.

## Author Disclosures

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