Initiation of Buprenorphine for Opioid Use Disorder & Opioid Withdrawal in the Emergency Department

A presentation for HealthTrust Members
May 17, 2023

Deanna Fox, PharmD
PGY-1 Pharmacy Resident
Atlantic Health System

Preceptor: Deborah Booth, PharmD, MS, BCPS
Clinical Emergency Medicine Pharmacist

Disclosures

The presenter and her preceptor have no relevant financial relationship with ineligible companies to disclose.

Note: This program may contain the mention of suppliers, brands, products, services, or drugs presented in a case study or comparative format using evidence-based research. Such examples are intended for educational and informational purposes only and should not be perceived as an endorsement of any supplier, brand, product, service, or drug.

Objectives

Learning Objectives for Pharmacists & Nurses

1. Identify the clinical signs and symptoms of opioid withdrawal in a patient presenting to the emergency department (ED) using the Clinical Opiate Withdrawal Scale (COWS)
2. Recall key drug information and counseling points for buprenorphine
3. Recognize an algorithm for initiation of buprenorphine in patients with opioid use disorder and withdrawal in the ED

Objectives

Learning Objectives for Pharmacy Technicians

1. Recall key drug information for buprenorphine including indication, use, and storage
2. Identify the clinical signs and symptoms of opioid withdrawal
3. Recognize the laws and regulations regarding buprenorphine initiation in the ED

Opioid Use Disorder

- Opioid use disorder (OUD) is a substance use disorder distinguished by a loss of opioid use control, impaired social function, increased opioid tolerance, and withdrawal
- OUD is a chronic disease and is treatable
- OUD can be caused by either prescription or illicit opioids
- According to the Centers for Disease Control and Prevention (CDC), about 2.7 million people in the United States suffered from OUD in 2020

Sources: SAMHSA. Treatment Improvement Protocol (TIP) Series 63 Publication Substance Abuse and Mental Health Services Administration, 2021.
Opioid use disorder. Centers for Disease Control and Prevention. Updated August 30, 2022.

Opioid Epidemic

- According to the CDC, opioid overdoses account for about 75% of overall drug overdoses in the United States

- Opioid overdose deaths have continued to rise in the United States since 1999
  - Between 2019 and 2020, there was a 38% increase in opioid overdose deaths
  - The National Institute of Health reported approximately 69,000 and 80,000 opioid overdose deaths in 2020 and 2021, respectively

Sources: Understanding the Opioid Overdose Epidemic. Centers for Disease Control and Prevention. Updated June 1, 2022.
Drug Overdose Death Rates. National Institute on Drug Abuse. Updated February 9, 2023.

Effects of OUD on Healthcare

- Opioid overdoses have led to an increase in ED visits over the past decade
  - Between 2016 and 2017, a 30% increase in ED visits for opioid overdoses was seen
- Patients who present with an opioid overdose are often discharged from the ED and referred to an outpatient treatment program for OUD
  - Weiner et al, demonstrated that 1 in 20 patients that presented to the ED with a non-fatal opioid overdose died within 1 year in which 67.4% of deaths were caused by an opioid overdose
- With the accessibility of the ED and increased number of visits for opioid overdoses, ED providers have a unique opportunity to identify high-risk patients who may benefit from pharmacological treatment for OUD

Sources: Opioid Overdoses Treated in Emergency Departments. Centers for Disease Control and Prevention. Updated March 16, 2018.
NIDA. Many People Treated for Opioid Overdose in Emergency Departments Die Within 1 Year. National Institute on Drug Abuse. April 2, 2020.
Weiner SG, et al. *Ann Emerg Med*. 2020;75(1):13-17.
Substance Abuse and Mental Health Services Administration: Use of Medication-Assisted Treatment in Emergency Departments. 2021.

Identifying at Risk Patients

- Assessment tools are available to screen patients at risk of OUD and opioid withdrawal to determine appropriate treatment strategies
- Available assessment tools

Assessment Tools	
OUD	Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-V) Criteria
Opioid Withdrawal	Clinical Opiate Withdrawal Scale (COWS)

- Laboratory values can aid in appropriate treatment strategies
  - Urine drug testing
  - Pregnancy testing in female patients
  - Liver function tests

Sources: Yale Department of Emergency Medicine. Assessment & Tools. ED-Initiated Buprenorphine. 2023.
Clinical opiate withdrawal scale. National Institute on Drug Abuse. 2023.

DSM-V Criteria

OUD diagnosis includes use of opioids *plus* 2 of 11 symptoms in the past 12 months

DSM-V Questions for Identification of OUD
Have you often found that when you started using opioids, you ended up taking more than you intended to?
Have you wanted to stop or cut down using or control your use of opioids?
Have you spent a lot of time getting opioids or using opioids?
Have you had a strong desire or urge to use opioids?
Have you missed work or school or often arrived late because you were intoxicated, high, or recovering from the night before?
Has your use of opioids caused problems with other people such as family members, friends, or people at work?
Have you had to give up or spend less time working, enjoying hobbies, or being with others because of drug use?
Have you ever gotten high before doing something that requires coordination or concentration like driving, boating, climbing a ladder, or operative heavy machinery?
Have you continued to use even though you knew that the drug caused you problems like making you depressed, anxious, agitated, or irritable?
Have you found you needed to use much more drug to get the same effect that you did when you first started taking it?
When you reduced or stopped using, did you have withdrawal symptoms or felt sick when you cut down or stopped using?

Mild OUD: 2-3 symptoms
Moderate OUD: 4-5 symptoms
Severe OUD: ≥ 6 symptoms

Source: Yale Department of Emergency Medicine. Assessment & Tools. ED-Initiated Buprenorphine. 2023.

Clinical Opiate Withdrawal Scale (COWS)

- Score ranging from 0-48 that evaluates signs and symptoms of opioid withdrawal
- Classifies severity and stage of opioid withdrawal
- Helps determine appropriate timeframe to initiate buprenorphine for OUD to prevent precipitated withdrawal

Sources: SAMHSA. Treatment Improvement Protocol (TIP) Series 63 Publication Substance Abuse and Mental Health Services Administration. 2021.
Clinical opiate withdrawal scale. National Institute on Drug Abuse. 2023.

COWS Criteria

Resting Pulse Rate *(after sitting or lying down for 1 minute)*	Bone or Joint Aches	Yawning *(during assessment)*
0: Pulse rate ≤ 80 1: Pulse rate 81-100 2: Pulse rate 101-120 3: Pulse rate > 120	0: Not present 1: Mild discomfort 2: Severe diffuse aching of joints/muscles 4: Rubbing joints or muscles and unable to sit still due to discomfort	0: No yawning 1: Yawning once or twice during assessment 2: Yawning ≥ 3 times during assessment 4: Yawning severe times/minute
Sweating *(over past ½ hour not accounted for by room temperature or patient activity)*	**Runny Nose or Tearing** *(not caused by cold symptoms or allergies)*	**Anxiety or Irritability**
0: No chills or flushing 1: Subjective report of chills or flushing 2: Flushed or observed moistness on face 3: Beads of sweat on brow or face 4: Streaming sweat off face	0: Not present 1: Nasal stuffiness or unusual moist eyes 2: Nose running or tearing 4: Nose constantly running or tears streaming down cheeks	0: None 1: Increasing irritability or anxiousness 2: Obviously irritable anxious 4: So irritable or anxious that participation in assessment is difficult
Restlessness *(during assessment)*	**Gastrointestinal Upset** *(over last ½ hour)*	**Gooseflesh Skin**
0: Able to sit still 1: Difficulty sitting still, but still able to do so 3: Frequent shifting or extraneous movements of legs/arms 5: Unable to sit still for more than a few seconds	0: No symptoms 1: Stomach cramps 2: Nausea or loose stool 3: Vomiting or diarrhea 5: Multiple episodes or diarrhea or vomiting	0: Smooth skin 3: Piloerection of skin felt or hairs standing straight up on arms 5: Prominent piloerection
Pupil Size	**Tremor** *(observed with outstretched hands)*	
0: Pinned pupils or normal size for room light 1: Pupils possible larger than normal for room light 2: Moderately dilated pupils 5: Pupils dilated that only rim of iris is visible	0: No tremor 1: Tremor can be felt, but not observed 2: Slight tremor observed 4: Gross tremor or muscle twitching	

Score	Severity of Opioid Withdrawal
5-12	Mild
13-24	Moderate
25-36	Moderately Severe
> 36	Severe

Source: Clinical opiate withdrawal scale. National Institute on Drug Abuse. 2023.

Medication-Assisted Treatment

- Medication-Assisted Treatment (MAT) is the treatment of substance use disorders using evidence-based medications in addition to behavioral therapies
  - Medications for Opioid Use Disorder (MOUD) is a type of MAT specific for OUD
  - Helps prevent symptoms of withdrawal and cravings associated with OUD
- Psychosocial treatment should be implemented in conjunction with MAT
  - Includes psychosocial needs assessment, supportive counseling, links to existing family support, and referrals to community services
  - Collaboration with qualified behavioral health care providers to determine optimal type and intensity of psychosocial treatment is needed
- Three medications are currently approved as MAT for management of moderate to severe OUD
  - Buprenorphine
  - Methadone
  - Naltrexone

Sources: Substance Abuse and Mental Health Services Administration: Use of Medication-Assisted Treatment in Emergency Departments. 2021.
ASAM National Practice Guideline for the Treatment of Opioid Use Disorder: 2020. *J Addict Med*. 2020.
Commonly used terms. Opioids. Centers for Disease Control and Prevention. Updated January 26, 2021.

Benefits of MAT

Benefits of MAT

- Increases OUD treatment retention
- Reduces/eliminates use of illicit opioids
- Reduces mortality associated with OUD
- Reduces opioid overdoses
- Reduces high-risk behaviors and complications
- Improves maternal and infant health with OUD
- Decreases utilization of ED and hospitalization care

Benefits of Buprenorphine

- Convenient and accessible initiation in outpatient setting
- Safe to initiate in the ED
- No required admission to a qualified outpatient opioid treatment program, unlike methadone
- Does not require opioid detoxication for 7-10 days, unlike naltrexone

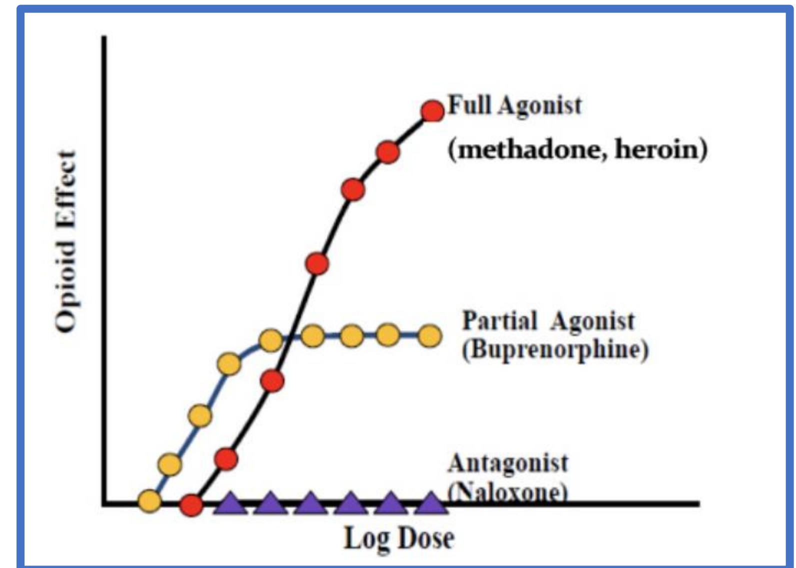
Source: Substance Abuse and Mental Health Services Administration: Use of Medication-Assisted Treatment in Emergency Departments. 2021.

Buprenorphine Overview

Buprenorphine

- Buprenorphine is a schedule III-controlled substance FDA approved for the management of OUD

Pharmacological Characteristics	
Mechanism of Action	• Partial agonist at the mu receptor • Weak antagonist at the kappa receptor
Pharmacokinetics	**Half-life** • Sublingual tablet: 37 hours **Time to Peak Plasma** • Sublingual tablet: 30 minutes - 1 hour **Metabolism** • Hepatic



Sources: Buprenorphine (monograph). Lexicomp Online [online database]. Hudson, OH. Lexi-Comp. Accessed March 15, 2023.
Yale Department of Emergency Medicine. Academic Detailing Brochure: ED Initiated Buprenorphine & Referral to Treatment. ED-Initiated Buprenorphine. March 15, 2023.
Substance Abuse and Mental Health Services Administration: Use of Medication-Assisted Treatment in Emergency Departments. 2021.

Oral Formulations

Naloxone versus non-naloxone containing available oral products

Drug	Formulation	Brand Name/Generic	Strengths
Buprenorphine	Sublingual tablet	Generic	2 mg 8 mg
		Subutex®	
Buprenorphine/naloxone	Sublingual tablet	Generic	2 mg/0.5 mg 8 mg/2 mg
		Zubsolv®	0.7 mg/0.18 mg 1.4 mg/0.36 mg 2.9 mg/0.71 mg 5.7 mg/ 1.4 mg 8.6 mg/ 2.1 mg 11.4 mg/ 2.9 mg
	Sublingual film	Generic	2 mg/ 0.5 mg 4 mg/1 mg 8 mg/2 mg 12 mg/3 mg
		Suboxone®	

Buprenorphine is also available as parenteral formulation for OUD

Sources: Buprenorphine (monograph). Lexicomp Online [online database]. Hudson, OH. Lexi-Comp. Accessed March 15, 2023.
Buprenorphine/naloxone (monograph). Lexicomp Online [online database]. Hudson, OH. Lexi-Comp. Accessed March 15, 2023.
Buprenorphine. SAMHSA. Published January 25, 2023

Buprenorphine Dosing

Drug/Formulation	Initial Dosing *(Day 1)*	Incremental Dose Increases *(Day 1)*	Maintenance *(Day 2 and on)*
Buprenorphine tablets	2-4 mg SL	2-4 mg SL until clinically effective dose reached in 1-2 hours	Continue with Day 1 TDD *limited evidence for doses > 24 mg*
Buprenorphine/naloxone sublingual film	Buprenorphine 2 mg/naloxone 0.5 mg SL or Buprenorphine 4 mg/naloxone 1 mg SL	Increase by available doses every 2 hours up to TDD of buprenorphine 8 mg/naloxone 2 mg	Up to buprenorphine 16 mg/naloxone 4 mg SL as single dose
Buprenorphine/naloxone sublingual tablet	Buprenorphine 1.4 mg/naloxone 0.36 mg SL	1 to 2 buprenorphine 1.4 mg/naloxone 0.36 mg tablets SL every 1.5 to 2 hours up to TDD dose of buprenorphine 5.7 mg/naloxone 1.4 mg	Up to buprenorphine 11.4 mg/naloxone 2.9 mg SL as single dose

TDD: Total daily dose; SL: Sublingually

Duration tailored to meet patient needs and can be indefinite

Sources: Buprenorphine (monograph). Lexicomp Online [online database]. Hudson, OH. Lexi-Comp. Accessed March 15, 2023.
Buprenorphine/naloxone (monograph). Lexicomp Online [online database]. Hudson, OH. Lexi-Comp. Accessed March 15, 2023.

Safety Considerations

Safety Considerations	
Contraindications	• Hypersensitivity (anaphylaxis) to buprenorphine
Warnings/Precautions	**Boxed Warnings:** 1. Addiction, abuse, and misuse 2. Neonatal opioid withdrawal syndrome 3. Life-threatening respiratory depression 4. Risk of respiratory depression with concomitant use of benzodiazepines or other CNS depressants including alcohol 5. Accidental exposure (films) can lead to fatal overdose

CNS: Central nervous system

Sources: Buprenorphine (monograph). Lexicomp Online [online database]. Hudson, OH. Lexi-Comp. Accessed March 15, 2023.
Buprenorphine/naloxone (monograph). Lexicomp Online [online database]. Hudson, OH. Lexi-Comp. Accessed March 15, 2023.

Risk Evaluation & Mitigation Strategy

- Risk Evaluation and Mitigation Strategy (REMS) for buprenorphine-containing transmucosal products for opioid dependence established in 2010
  - Buprenorphine/naloxone sublingual films and tablets
  - Buprenorphine sublingual tablets
- Purpose
  - Mitigate the risks of accidental overdose, misuse, and abuse
  - Inform and educate prescribers, pharmacists, and patients of associated risks
- Components
  - Medication guide each time medication is dispensed
  - Documentation of conditions for safe use and monitoring using "Appropriate Use Checklist"
  - DATA-Waiver for implementation previously required

Sources: Suboxone/Subutex REMS. Food and Drug Administration. Updated September 2017.
BTOD REMS. Buprenorphine-containing Transmucosal products for Opioid Dependence (BTOD). Published December 2022. Accessed April 28, 2023.

Risk Evaluation & Mitigation Strategy

Induction Appropriate Use Checklist

- Appropriate diagnostic criteria
- Prescription drug monitoring
- Review opioids/CNS depressants
- Review risks and side effects
- Conditions of safe storage
- Co-prescription with naloxone
- Review naloxone for opioid overdoses
- Provide induction doses
- Prescribe limited amount of medication
- Participation in professional counseling
- Schedule follow-up visit

Maintenance Appropriate Use Checklist

- Co-prescription with naloxone
- Review naloxone for opioid overdoses
- Medication count/dose reconciliation
- Assess appropriateness of dosage
- Urine drug screen
- Prescription drug monitoring
- Participation in professional counseling
- Benefits vs. risks of treatment
- Progress toward treatment goal
- Schedule follow-up visit

Sources: Suboxone/Subutex REMS. Food and Drug Administration. Updated September 2017.
Appropriate use checklist. BTOD REMS. Published May 2022. Accessed April 28, 2023.

Adverse Effects

Common Adverse Effects	Serious Adverse Effects
• Headache (29 to 37%) • Pain (18-22%) • Insomnia (14 to 21%) • Nausea (15%) • Sweating (12 to 14%) • Constipation (8 to 12%) • Abdominal pain (11%)	• Withdrawal syndrome (18 to 25%) • Respiratory depression • Dependence • Overdose

Sources: Suboxone [package insert]. North Chesterfield, VA: Indivior Inc. Published March 2023. Accessed April 28, 2023.
Zubsolv [package insert]. Morristown, NJ: Orexo US, Inc. Published June 2022. Accessed April 28, 2023.
Buprenorphine. SAMHSA. Published January 25, 2023

Use in Pregnancy

- The American College of Obstetricians and Gynecologists recommends opioid agonist therapy with either buprenorphine or methadone in pregnant patients with OUD
  - No difference in congenital malformations between methadone and buprenorphine
  - Increased outpatient convenience, less drug interactions, and less dose adjustments with buprenorphine
  - Buprenorphine without naloxone is recommended to decrease fetal exposure
    - Minimal safety data with naloxone in pregnancy

- Management with an opioid agonist in pregnancy helps prevent opioid withdrawal, improves prenatal care adherence, and reduces pregnancy complications

Sources: Opioid use and opioid use disorder in pregnancy. American College of Obstetricians and Gynecologists. *Obstet Gynecol* 2017;130:e81–94.
Buprenorphine Quick Start Guide. SAMHSA. Accessed March 16, 2023.

Administration & Storage

Administration

- Place tablet or film under the tongue until dissolved (may take up to 10 minutes)
  - Films may also be administered buccally
  - Do not chew or swallow
  - Avoid eating, drinking, and talking when drug is dissolving
- Water should be used to swish mouth and swallow once tablet/film has been dissolved
- Wait at least 1 hour to brush teeth after administration of buprenorphine

Storage

- Store at room temperature in a safe place away from children and pets

Sources: Buprenorphine (monograph). Lexicomp Online [online database]. Hudson, OH. Lexi-Comp. Accessed March 15, 2023.
Buprenorphine/naloxone (monograph). Lexicomp Online [online database]. Hudson, OH. Lexi-Comp. Accessed March 15, 2023.
Buprenorphine. SAMHSA. Published January 25, 2023
Buprenorphine Quick Start Guide. SAMHSA. Accessed March 16, 2023.

Counseling Points

- Discontinuation of buprenorphine and resuming illicit opioid use significantly increases the risk of overdose and death
- Use of alcohol or benzodiazepines with buprenorphine significantly increases the risk of overdose and death
- Contact provider if you become pregnant while taking buprenorphine
- Contact provider about any upcoming procedures that may require opioid medications

Source: Buprenorphine Quick Start Guide. SAMHSA. Accessed March 16, 2023.

Buprenorphine Initiation in the ED

Emergency Department–Initiated Buprenorphine/Naloxone Treatment for Opioid Dependence

324 patients

- Randomized, control trial
- Patients ≥ 18 with non-medical use of prescription opioids or heroin in past 30 days

Interventions	Primary Outcome: Enrollment and receipt of addiction treatment 30 days after randomization	Secondary Outcomes: Self-reported days of illicit opioid use in past 7 days	Secondary Outcomes: Use of inpatient addiction treatment services	Secondary Outcomes: Urine testing for illicit opioids
Referral	37% [95% CI, 28%-47%]	5.4 days → 2.3 days	37% (95% CI, 27%-48%)	53.8% (95% CI, 42%-65%)
Brief Intervention	45% [95% CI, 36%-54%]	5.6 days → 2.4 days	35% 95% CI, 25%-37%)	42.9% (95% CI, 31%-55%)
Brief Intervention + Buprenorphine/Naloxone	78% [95% CI, 70%-85%]	5.4 days → 0.9 days	11% (95% CI, 6%-19%)	57.6% (95% CI, 47%-68%)
	p<0.001	p<0.001	p<0.001	p=0.17

Source: D'Onofrio et al. *JAMA*. 2015.

High-Dose Buprenorphine Induction in the Emergency Department for Treatment of OUD

391 patients

- Retrospective case series
- Objective to evaluate safety and tolerability of high-dose (>12 mg) buprenorphine induction in patients ≥ 18 with OUD presenting to ED with COWS ≥ 8
- Clinically trained ED physicians and advanced care practitioners on high-dose protocol

Buprenorphine 4 mg or 8 mg

Standard dose Buprenorphine (8-12 mg)

High-dose Buprenorphine (< 32 mg)

Observe 30-60 minutes

Discharge with buprenorphine 16 mg daily until follow-up

Outcomes

Outcome	
Occurrence of precipitated withdrawal	0.8%
Occurrence of respiratory depression	0%

Source: Herring et al. *JAMA.* 2021

Algorithms for Buprenorphine Initiation in the ED

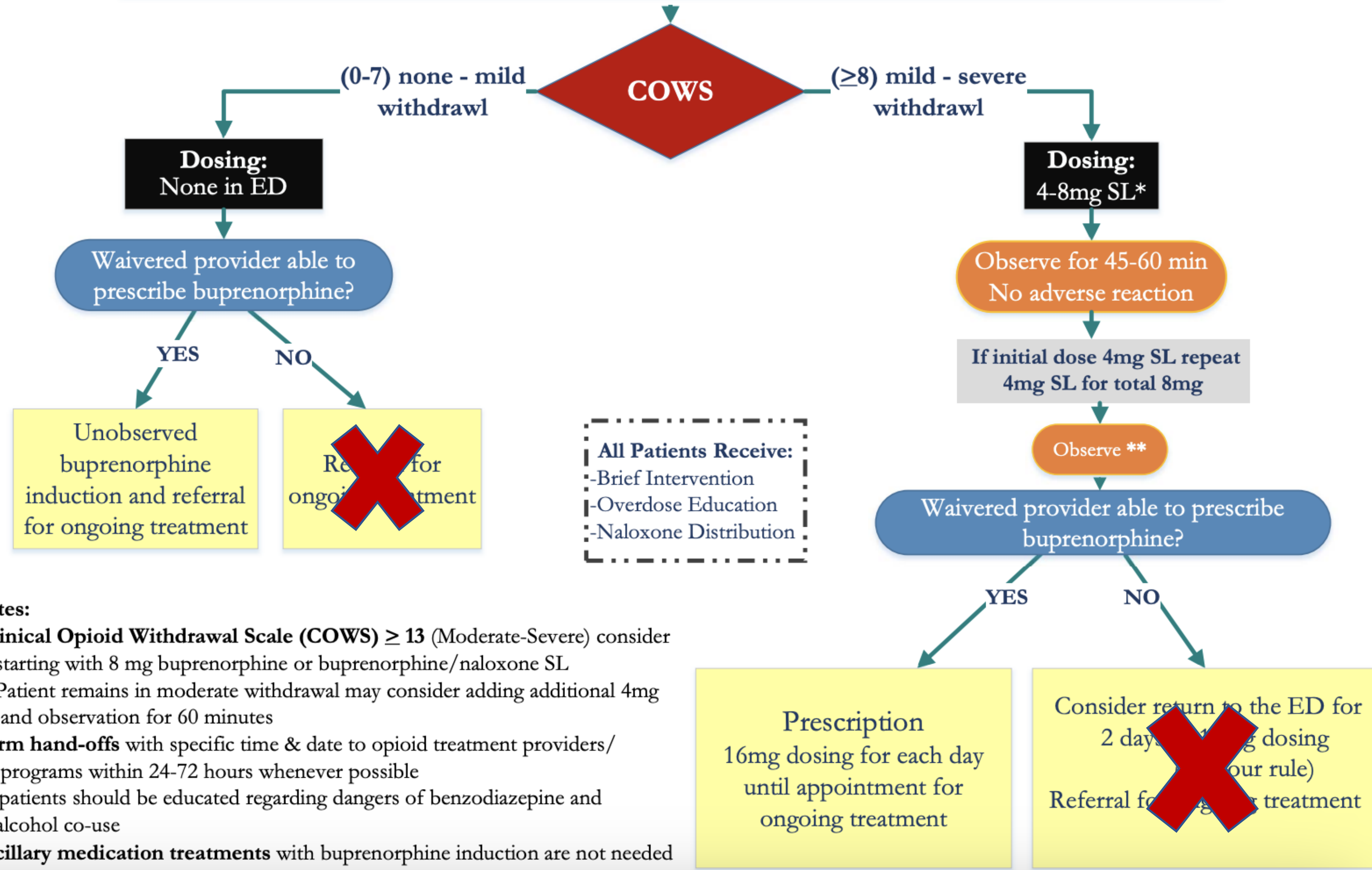
Buprenorphine Initiation Algorithms

- Algorithms available for initiation of buprenorphine in the ED
  - Yale School of Medicine
  - American Academy of Emergency Medicine

- COWS score and timing of last opioid dose should be considered when initiating buprenorphine for opioid withdrawal management
  - Short-acting agonist (eg: heroin, oxycodone): Initiate buprenorphine 12-18 hours after last dose
  - Long-acting agonist (eg: methadone): Initiate buprenorphine 24-48 hours after last dose

Sources: ASAM National Practice Guideline for the Treatment of Opioid Use Disorder: 2020. *J Addict Med*. 2020.
Yale Department of Emergency Medicine. Treatment: Buprenorphine Algorithm & BNI. ED-Initiated Buprenorphine. Accessed March 15, 2023.
Strayer et al. *J Emerg Med*. 2020.

Yale School of Medicine



Note: DATA-Waiver is no longer required for prescribing

Source: Yale Department of Emergency Medicine. Treatment: Buprenorphine Algorithm & BNI. ED-Initiated Buprenorphine. Accessed March 15, 2023.

Brief Negotiation Interview

Address the Subject

- Ask permission to address OUD
- Openly listen and provide empathy
- Assess patient's comfortability with conversation

Provide Feedback

- Discuss patients OUD and patterns
- Have patient reflect on pros and cons of their OUD
- Make connection between OUD and possible negative consequences

Enhance Motivation

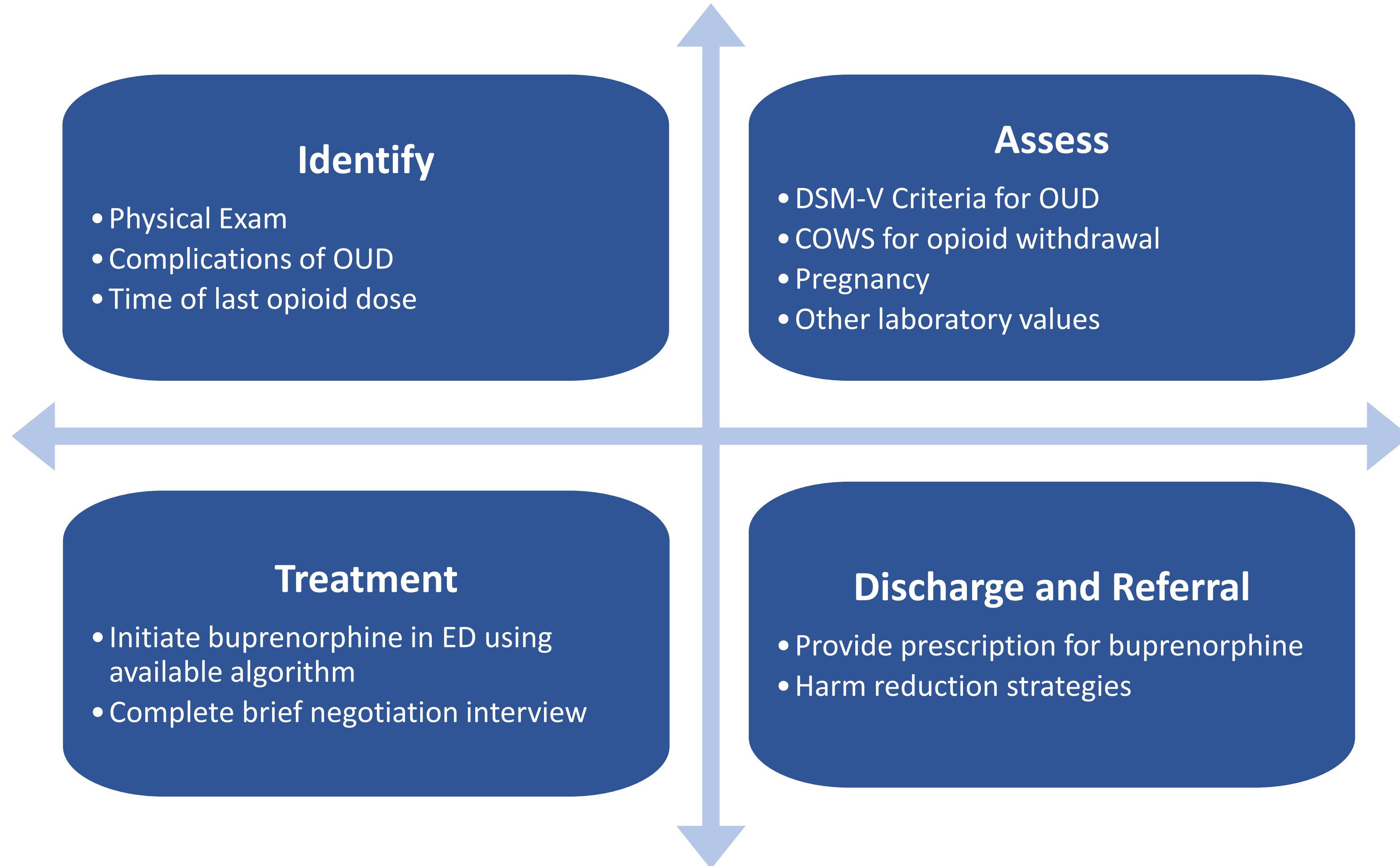
- Assess patient's willingness to make a change (1-10 scale)
- Discuss medication therapies available and respective benefit

Negotiate & Advise

- Help patient identify a goal for management of their OUD
- Reinforce motivation to achieve goal
- Provide advice on how patient can achieve goal
- Initiate of buprenorphine and referral to outpatient services

Sources: Yale Department of Emergency Medicine. Treatment: Buprenorphine Algorithm & BNI. ED-Initiated Buprenorphine. Motivational Interviewing to Help Your Patients Seek Treatment. Centers for Disease Control and Prevention. Updated July 7, 2022.

Summary of Buprenorphine Initiation



Sources: Yale Department of Emergency Medicine. Treatment: Buprenorphine Algorithm & BNI. ED-Initiated Buprenorphine.
Guo et al. *J Am Coll Emerg Physicians Open*. 2021.

Potential Barriers to Buprenorphine Initiation

Laws & Regulations

- Drug Addiction Treatment Act of 2000 known as the DATA-Waiver or X-Waiver
  - Authorized prescribing of buprenorphine for OUD in the outpatient setting
  - Separate registration for prescribers required to provide maintenance and detoxification treatment
  - Specific identification number issued for registered practitioners
    - License number starting with an X
- Requirements to obtain a DATA-Waiver
  - Physicians: 8 hours of training hours
  - Advanced Practitioners: 24 hours of training hours
- Limited prescribing to 30 patients at a single time
- Initiation in the ED
  - Permitted to dispense a total supply of 72 hours to alleviate acute opioid withdrawal in the ED
    - Each dose must be administered in the ED
  - If ED provider has DATA-Waiver, they can prescribe for outpatient management

Sources: H.R.2634 - Drug Addiction Treatment Act of 2000. Congress. Accessed March 16, 2023.
All about the X waiver. CAMP. 2023.

Laws & Regulations

- DATA-Waiver removed on December 29, 2022 under the Omnibus bill
  - Removes federal requirement to have waiver to prescribe buprenorphine
  - Eliminates maximum number of patients that can be treated at one time by a provider
- Any provider with a Drug Enforcement Administration (DEA) registration that has the authority to prescribe schedule III-controlled substance can prescribe buprenorphine if applicable by state law
  - Consolidated Appropriations Act will set new training requirements for all prescribers that do not go into effect until June 21, 2023
    - One-time 8-hour training required before prescribers who prescribe controlled substances can obtain or renew their DEA registrations
- DATA-Waiver removal will increase accessibility to buprenorphine in patients with OUD

Source: Hurt A. Data-waiver for Buprenorphine eliminated. Practical Pain Management. Published January 17, 2023. Accessed March 16, 2023.

Additional Barriers

Diversion

- Use of naloxone-containing products helps decrease diversion
- Encourage locked devices to store buprenorphine
- Reserve buprenorphine monotherapy for pregnant patients or those who cannot afford buprenorphine/naloxone
- Limit day supply of buprenorphine prescriptions
- Verify opioids are not being filled from other providers using Prescription Drug Monitoring Program
- Implement practice treatment agreements with patients

Stigma

- Educate that OUD is a chronic condition
- Educate on supporting evidence of MAT and that it is not replacing one drug for another
- Encourage person-first language
  - Identify patients as individuals with an addiction or OUD, instead of using the term “addict”
- Implement compassionate, patient-centered approach to build relationships with patients

Access

- Pharmacy stock of buprenorphine
- Training to ensure providers are comfortable to prescribed buprenorphine
- Removal of DATA-Waiver should increase access to buprenorphine

Sources: Buprenorphine Quick Start Guide. SAMHSA. Accessed March 16, 2023.
Substance Abuse and Mental Health Services Administration: Use of Medication-Assisted Treatment in Emergency Departments. 2021.

Adjunctive Therapies to MAT

Harm Reduction Strategies

- Harm reduction strategies promote patient safety, provide treatment, and recovery
  - Decreases overdoses and infectious diseases
  - Improves wellbeing of patients
- Examples of harm reduction strategies include:
  - Overdose education
  - Distribution of naloxone to reverse opioid overdoses
  - Syringe exchange programs
  - Education on prevention of infectious diseases
  - Referral for vaccinations
  - Referral for human immunodeficiency virus and viral hepatitis prevention, testing, and treatment

Sources: Motivational interviewing to help your patients seek treatment. Centers for Disease Control and Prevention. Published July 7, 2022.
Harm reduction. SAMHSA. Accessed March 15, 2023.

Naloxone

- Naloxone is an opioid receptor antagonist that is life-saving in opioid overdoses
  - Available as an intranasal spray and injection (intramuscular or subcutaneous) for outpatient use
- Naloxone should be provided to patients with an OUD before ED discharge
  - Regardless if they are willing to pursue treatment with buprenorphine
- As of March 29, 2023, the FDA has approved naloxone 4 mg nasal spray for over-the-counter use
  - Approved with efforts to address opioid crisis and improve access
- Naloxone may also be available through free distribution programs and pharmacy standing order agreements depending on state laws and regulations
- Provide proper education on administration and use

Sources: Substance Abuse and Mental Health Services Administration: Use of Medication-Assisted Treatment in Emergency Departments. 2021.
Naloxone. SAMHSA. Accessed March 15, 2023.
"FDA Approves First Over-the-Counter Naloxone Nasal Spray". Food and Drug Administration. 2023.
Evaluation Profile for Naloxone Distribution Programs. Centers for Disease Control and Prevention. Accessed April 12, 2023.

Naloxone Counseling Points

- Steps for use of naloxone:
  - Call 911 or emergency response system
  - Administer naloxone (intranasal or injection)
  - Try to keep person awake
  - Lay person on their side to prevent choking
  - Stay until medical assistance arrives
- All patients that receive naloxone after an opioid overdose should seek immediate medical attention
- Naloxone can last up to 30-90 minutes
  - Some patients may need more than one naloxone administration

Sources: Lifesaving naloxone. Centers for Disease Control and Prevention. Published January 25, 2023.
Naloxone. SAMHSA. Accessed March 15, 2023.

Key Take Aways

- OUD has led to a consistent increase in opioid-related deaths
- MAT with buprenorphine can help improve OUD outpatient treatment retention and reduce opioid overdoses and deaths
- Initiation of buprenorphine in the ED is has shown to be safe and effective in increasing enrollment in addiction treatment after ED discharge
- Algorithms are available to help aid in buprenorphine initiation in the ED
- Elimination of the DATA-Waiver will increase the access of buprenorphine by allowing more prescribers to initiate treatment for OUD

Assessment Question #1
Pharmacy Technicians

Which of the following is true regarding buprenorphine?

a. Buprenorphine is available as a sublingual film
b. Buprenorphine is available as a parenteral formulation
c. Buprenorphine is a schedule III-controlled substance
d. All of the above

Assessment Question #1: Correct Response

Which of the following is true regarding buprenorphine?

a. Buprenorphine is available as a sublingual film
b. Buprenorphine is available as a parenteral formulation
c. Buprenorphine is a schedule III-controlled substance
d. All of the above

Assessment Question #2: Pharmacy Technicians

Which of the following are possible signs and symptoms of opioid withdrawal that describe the clinical presentation of a patient who presents to the ED with abrupt cessation of heroin use in the past 3 days?

a. Heart rate of 55, constricted pupils, new onset of tremor/twitching, and chills

b. Heart rate of 120, dilated pupils, hypoxia, and lethargy

c. Heart rate of 70, constricted pupils, new onset of diarrhea and vomiting

d. Heart rate of 130, dilated pupils, diaphoresis, and multiple episodes of vomiting

Assessment Question #2: Correct Response

Which of the following are signs and symptoms of opioid withdrawal that most likely describe the clinical presentation of a patient who presents to the ED with abrupt cessation of heroin use in the past 3 days?

a. Heart rate of 55, constricted pupils, new onset of tremor/twitching, and chills

b. Heart rate of 120, dilated pupils, hypoxia, and lethargy

c. Heart rate of 70, constricted pupils, new onset of diarrhea and vomiting

d. Heart rate of 130, dilated pupils, diaphoresis, and multiple episodes of vomiting

Assessment Question #3: Pharmacy Technicians

Which of the following are provider requirements for prescribing buprenorphine since the removal of the federal DATA-Waiver?

a. DEA registration with authority to prescribe schedule III-controlled substances
b. Specific license number starting with the letter X
c. Limit prescribing of buprenorphine to less than 30 patients at a time
d. Limit buprenorphine dispensing of 72 hours total supply for acute opioid withdrawal in the ED

Assessment Question #3: Correct Response

Which of the following are provider requirements for prescribing buprenorphine since the removal of the federal DATA-Waiver?

a. **DEA registration with authority to prescribe schedule III-controlled substances**
b. Specific license number starting with the letter X
c. Limit prescribing of buprenorphine to less than 30 patients at a time
d. Limit buprenorphine dispensing of 72 hours total supply for acute opioid withdrawal in the ED

Assessment Question #4: Pharmacists & Nurses

Which of the following is **NOT** a counseling point to educate a patient on who has been initiated on buprenorphine in the ED and will be discharged with a buprenorphine prescription?

a. Co-use of alcohol and benzodiazepines with buprenorphine can increase the risk of difficulty breathing, confusion, and lethargy which can lead to death

b. Buprenorphine is available as both sublingual films and tablets which should be placed under the tongue until they are fully dissolved

c. Buprenorphine helps to overcome OUD by working similar in the body as opioids and provides just enough stimulation to prevent withdrawal and cravings

d. Following-up with an outpatient treatment program for OUD is not recommended once you have been started on buprenorphine

Assessment Question #4: Correct Response

Which of the following is **NOT** a counseling point to educate a patient on who has been initiated on buprenorphine in the ED and will be discharged with a buprenorphine prescription?

a. Co-use of alcohol and benzodiazepines with buprenorphine can increase the risk of difficulty breathing, confusion, and lethargy which can lead to death

b. Buprenorphine is available as both sublingual films and tablets which should be placed under the tongue until they are fully dissolved

c. Buprenorphine helps to overcome OUD by working similar in the body as opioids and provides just enough stimulation to prevent withdrawal and cravings

d. Following-up with an outpatient treatment program for OUD is not recommended once you have been started on buprenorphine

Assessment Question #5: Pharmacists & Nurses

LR is a 36-year-old female who presents to the ED with nausea and vomiting. She has been using her oxycodone-acetaminophen more often than prescribed and is diagnosed with OUD. Her COWS score is 6. Which of the following would be the best option to manage her OUD?

a. LR is taking an opioid that is prescribed by her doctor, therefore she does not require any management for OUD

b. LR should be initiated on 4 mg of sublingual buprenorphine for OUD in the ED

c. LR does not meet criteria for buprenorphine initiation in the ED based on her COWS score

d. LR should be initiated on 16 mg of sublingual buprenorphine for OUD in the ED

Assessment Question #5: Correct Response

LR is a 36-year-old female who presents to the ED with nausea and vomiting. She has been using her oxycodone-acetaminophen more often than prescribed and is diagnosed with OUD. Her COWS score is 6. Which of the following would be the best option to manage her OUD?

a. LR is taking an opioid that is prescribed by her doctor, therefore she does not require any management for OUD

b. LR should be initiated on 4 mg of sublingual buprenorphine for OUD in the ED

c. LR does not meet criteria for buprenorphine initiation in the ED based on her COWS score

d. LR should be initiated on 16 mg of sublingual buprenorphine for OUD in the ED

Assessment Question #6: Pharmacists & Nurses

JC is a 24-year-old male who presents to the ED with worsening anxiety. He endorses that he uses heroin with his last use being 2 days ago. His initial COWS score is 20. He received an initial dose of 4 mg of sublingual buprenorphine and was observed for 45 minutes. His repeat COWS score was 13. How would you manage his opioid withdrawal in the ED?

a. JC is experiencing moderate withdrawal symptoms and should be given another 4 mg of sublingual buprenorphine and prescribed 16 mg of sublingual buprenorphine daily until an appointment with an outpatient treatment program

b. JC is no longer experiencing withdrawal symptoms based on his COWS score and is not indicated for another dose of buprenorphine

c. JC is experiencing moderate-severe withdrawal symptoms and should be given 8 mg of sublingual buprenorphine and prescribed 16 mg of sublingual buprenorphine daily until an appointment with an outpatient treatment program

d. JC is experiencing moderate-severe withdrawal symptoms and should be given another 4 mg of sublingual buprenorphine but should not be initiated on sublingual buprenorphine upon ED discharge

Assessment Question #6: Correct Response

JC is a 24-year-old male who presents to the ED with worsening anxiety. He endorses that he uses heroin with his last use being 2 days ago. His initial COWS score is 20. He received an initial dose of 4 mg of sublingual buprenorphine and was observed for 45 minutes. His repeat COWS score was 13. How would you manage his opioid withdrawal in the ED?

a. **JC is experiencing moderate withdrawal symptoms and should be given another 4 mg of sublingual buprenorphine and prescribed 16 mg of sublingual buprenorphine daily until an appointment with an outpatient treatment program**

b. JC is no longer experiencing withdrawal symptoms based on his COWS score and is not indicated for another dose of buprenorphine

c. JC is experiencing moderate-severe withdrawal symptoms and should be given 8 mg of sublingual buprenorphine and prescribed 16 mg of sublingual buprenorphine daily until an appointment with an outpatient treatment program

d. JC is experiencing moderate-severe withdrawal symptoms and should be given another 4 mg of sublingual buprenorphine but should not be initiated on sublingual buprenorphine upon ED discharge

References

1. Substance Abuse and Mental Health Services Administration. Medications for Opioid Use Disorder. Treatment Improvement Protocol (TIP) Series 63 Publication No. PEP21-02-01-002. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2021.
2. Opioid use disorder. Centers for Disease Control and Prevention. https://www.cdc.gov/dotw/opioid-use-disorder/index.html Updated August 30, 2022. Accessed March 15, 2023.
3. Understanding the Opioid Overdose Epidemic. Centers for Disease Control and Prevention. https://www.cdc.gov/opioids/basics/epidemic.html Updated June 1, 2022. Accessed March 15, 2023.
4. Drug Overdose Death Rates. National Institute on Drug Abuse. https://nida.nih.gov/research-topics/trends-statistics/overdose-death-rates#:~:text=Opioid%2Dinvolved%20overdose%20deaths%20rose,with%2080%2C411%20reported%20overdose%20deaths Updated February 9, 2023. Accessed March 15, 2023.
5. Opioid Overdoses Treated in Emergency Departments. Centers for Disease Control and Prevention. https://www.cdc.gov/vitalsigns/opioid-overdoses/ Updated March 16, 2018. Accessed March 15, 2023.
6. NIDA. Many People Treated for Opioid Overdose in Emergency Departments Die Within 1 Year. National Institute on Drug Abuse website. https://nida.nih.gov/news-events/nida-notes/2020/04/many-people-treated-opioid-overdose-in-emergency-departments-die-within-1-year April 2, 2020 Accessed March 15, 2023.
7. Weiner SG, Baker O, Bernson D, Schuur JD. One-Year Mortality of Patients After Emergency Department Treatment for Nonfatal Opioid Overdose. *Ann Emerg Med*. 2020;75(1):13-17. doi:10.1016/j.annemergmed.2019.04.020
8. Substance Abuse and Mental Health Services Administration: Use of Medication-Assisted Treatment in Emergency Departments. HHS Publication No. PEP21-PL-Guide-5 Rockville, MD: National Mental Health and Substance Use Policy Laboratory. Substance Abuse and Mental Health Services Administration, 2021.
9. Yale Department of Emergency Medicine. Assessment & Tools. ED-Initiated Buprenorphine. https://medicine.yale.edu/edbup/assessment/ Accessed March 15, 2023.
10. Clinical opiate withdrawal scale. National Institute on Drug Abuse. Clinical Opiate Withdrawal Scale. https://nida.nih.gov/sites/default/files/ClinicalOpiateWithdrawalScale.pdf Accessed March 16, 2023.
11. Commonly used terms. Opioids. Centers for Disease Control and Prevention. https://www.cdc.gov/opioids/basics/terms.html Updated January 26, 2021. . Accessed March 15, 2023.
12. The ASAM National Practice Guideline for the Treatment of Opioid Use Disorder: 2020 Focused Update [published correction appears in J Addict Med. 2020 May/Jun;14(3):267]. *J Addict Med*. 2020;14(2S Suppl 1):1-91. doi:10.1097/ADM.0000000000000633
13. Yale Department of Emergency Medicine. Academic Detailing Brochure: ED Initiated Buprenorphine & Referral to Treatment, a brief guide for ED Practitioners. ED-Initiated Buprenorphine. https://medicine.yale.edu/edbup/ March 15, 2023.
14. Buprenorphine (monograph). Lexicomp Online [online database]. Hudson, OH. Lexi-Comp. Accessed March 15,2023.
15. Buprenorphine/naloxone (monograph). Lexicomp Online [online database]. Hudson, OH. Lexi-Comp. Accessed March 15,2023.
16. Suboxone [package insert]. North Chesterfield, VA: Indivior Inc. https://www.suboxone.com/pdfs/prescribing-information.pdf. Published March 2023. Accessed April 28, 2023.
17. Zubsolv [package insert]. Morristown, NJ: Orexo US, Inc. https://www.zubsolv.com/pdf/prescribinginformation.pdf. Published June 2022. Accessed April 28, 2023.

References

18. Buprenorphine. SAMHSA. https://www.samhsa.gov/medications-substance-use-disorders/medications-counseling-related-conditions/buprenorphine Published January 25, 2023. Accessed March 15, 2023.
19. Suboxone/Subutex REMS. Food and Drug Administration. https://www.accessdata.fda.gov/drugsatfda_docs/rems/Suboxone_Subutex_2017-09-19_Full.pdf. Updated September 2017. Accessed April 13, 2023.
20. BTOD REMS. Buprenorphine-containing Transmucosal products for Opioid Dependence (BTOD). https://btodrems.com/. Published December 2022. Accessed April 28, 2023.
21. Appropriate use checklist. BTOD REMS. https://btodrems.com/files/Appropriate_Use_Checklist_May2022.pdf. Published May 2022. Accessed April 28, 2023.
22. Opioid use and opioid use disorder in pregnancy. Committee Opinion No. 711. American College of Obstetricians and Gynecologists. Obstet Gynecol 2017;130:e81–94.
23. Buprenorphine Quick Start Guide. SAMHSA. https://www.samhsa.gov/sites/default/files/quick-start-guide.pdf Accessed March 16, 2023.
24. D'Onofrio, G., O'Connor, P.G., Pantalon, M.V., Chawarski, M.C., Busch, S.H., Owens, P.H., Bernstein, S.L. and Fiellin, D.A., 2015. Emergency department–initiated buprenorphine/naloxone treatment for opioid dependence: a randomized clinical trial. *JAMA*, *313*(16), pp.1636-1644.
25. Herring AA, Vosooghi AA, Luftig J, et al. High-Dose Buprenorphine Induction in the Emergency Department for Treatment of Opioid Use Disorder. *JAMA Netw Open.* 2021;4(7):e2117128. doi:10.1001/jamanetworkopen.2021.17128
26. Strayer RJ, Hawk K, Hayes BD, et al. Management of Opioid Use Disorder in the Emergency Department: A White Paper Prepared for the American Academy of Emergency Medicine. *J Emerg Med*. 2020;58(3):522-546. doi:10.1016/j.jemermed.2019.12.034
27. Yale Department of Emergency Medicine. Treatment: Buprenorphine Algorithm & BNI. ED-Initiated Buprenorphine. https://medicine.yale.edu/edbup/treatment/ Accessed March 15, 2023.
28. Motivational Interviewing to Help Your Patients Seek Treatment. Centers for Disease Control and Prevention. https://www.cdc.gov/opioids/addiction-medicine/conversation-starters/motivational-interviewing.html Updated July 7, 2022. Accessed March 15, 2023.
29. Guo CZ, D'Onofrio G, Fiellin DA, et al. Emergency department-initiated buprenorphine protocols: A national evaluation. *J Am Coll Emerg Physicians Open*. 2021;2(6):e12606. Published 2021 Nov 29. doi:10.1002/emp2.12606
30. H.R.2634 - Drug Addiction Treatment Act of 2000 - congress. Congress.gov. https://www.congress.gov/bill/106th-congress/house-bill/2634 Accessed March 16, 2023.
31. All about the X waiver. CAMP. https://penncamp.org/education/what-is-an-x-waiver-and-who-needs-one/ Accessed March 15, 2023.
32. Hurt A. Data-waiver for Buprenorphine eliminated. Practical Pain Management. https://www.practicalpainmanagement.com/news/data-waiver-for-buprenorphine-eliminated Published January 17, 2023. Accessed March 16, 2023.
33. Informational documents. https://www.deadiversion.usdoj.gov/pubs/docs/index.html Accessed March 15, 2023.
34. Motivational interviewing to help your patients seek treatment. Centers for Disease Control and Prevention. https://www.cdc.gov/opioids/addiction-medicine/conversation-starters/motivational-interviewing.html Published July 7, 2022. Accessed March 15, 2023.
35. Harm reduction. SAMHSA. https://www.samhsa.gov/find-help/harm-reduction Accessed March 15, 2023.
36. Naloxone. SAMHSA. https://www.samhsa.gov/medications-substance-use-disorders/medications-counseling-related-conditions/naloxone Accessed March 15, 2023.
37. Lifesaving naloxone. Centers for Disease Control and Prevention. https://www.cdc.gov/stopoverdose/naloxone/index.html Published January 25, 2023. Accessed March 15, 2023.
38. "FDA Approves First Over-the-Counter Naloxone Nasal Spray" (2023) *https://www.fda.gov/news-events/press-announcements/fda-approves-first-over-counter-naloxone-nasal-spray* [Preprint]. Food and Drug Administration.
39. Evaluation Profile for Naloxone Distribution Programs. Centers for Disease Control and Prevention. Accessed April 12, 2023. https://www.cdc.gov/drugoverdose/od2a/pdf/OD2A_EvalProfile_NaloxoneDistributionPrograms_508.pdf

Thank You!

Deanna Fox, PharmD

PGY-1 Pharmacy Resident | Atlantic Health System

Deanna.Fox@atlantichealth.org