**CMC Main – ED Adult Buprenorphine Protocol for Patients with Opioid Use Disorder**

[Buprenorphine](https://www.uptodate.com/contents/buprenorphine-drug-information?source=see_link) is a partial opioid agonist used to treated opioid use disorder. In the acute setting, there is also a clear role for [buprenorphine](https://www.uptodate.com/contents/buprenorphine-drug-information?source=see_link) treatment in those individuals presenting in opioid withdrawal.1

The goal of this protocol is to help provide high risk opioid users the opportunity to transition to safer chronic maintenance therapy.

1. Identify Patients In Opioid Withdrawal

**Inclusion Criteria:**

Adults in opioid withdrawal with a COWS score > 8 and one objective sign of withdrawal

Objective signs of withdrawal: tachycardia, sweating, piloerection, tremor, yawning, dilated pupils, vomiting, or tearing

Desire to receive buprenorphine

Last opioid use > 12 hours prior to arrival for short-acting opioids and >48 hours for long-acting opioids (methadone)

**Exclusion Criteria:**

Altered mental status or clinical signs of intoxication

Chronic pain patient taking prescribed opioids

Taking long acting opioid like methadone in last 48 hours

2. Screening labs

1. Urine pregnancy test -
	* Please coordinate care of pregnant patient with high risk OB
2. Breathalyzer
	* This will assist our outpatient follow up clinics in developing the best treatment plan for the patient
	* A positive breathalyzer test does not exclude the patient from receiving buprenorphine in the ED unless the patient is clinically intoxicated
3. Offer the patient the following screening labs
* Hepatitis Panel (HBsAg, HBsAb, HBcAb, HCV Ab)
* HIV 1 and 2
* RPR
1. Calculating a COWS Score
	1. Provider will evaluate patient with Clinical Opioid Withdrawal Scale (COWS) and calculate a “COWS Score”.
	2. Also document last opioid use and which kind of opioid
2. Initial Dosing
3. COWS score of ≥ 8 to <12 **AND** symptoms consistent with expected time since last use: give buprenorphine/naloxone 2 mg/0.5 mg SL film or SL tab
4. COWS score ≥ 12: give buprenorphine 4 mg / 1 mg SL film or SL tab
5. The more severe the withdrawal (COWS 12 and above) the less risk of precipitating withdrawal following the administration of buprenorphine.
6. **Tips for success:** Before taking moisten mouth slightly (sip of water) and then hold SL film or buccal tab 20 min to dissolve and keep saliva in mouth, not swallowing ideally and not talking.  Then no eating or drinking for another 10-15 minutes.
7. Symptomatic Adjunctive Therapies

For patients not wanting buprenorphine, if symptoms still present after max dose of buprenorphine given, or if giving buprenorphine in the ED results in precipitated withdrawal (see Precipitated Withdrawal section below)

1. Nausea:
* Zofran 4 mg ODT every 8 hours prn **OR** phenergan 25 mg IM once
1. General withdrawal:
* Clonidine 0.1 to 0.2 mg PO Q4-6 hr (SBP >90 mmHg)
1. Body aches:
* Acetaminophen 650 mg PO every 4 hours prn
* Ibuprofen 600 mg PO every 6 hours prn **OR** ketorolac 15 mg IM once
1. Anxiety/Irritability/Itching:
* Hydroxyzine 50-100 mg PO every 6 hours prn
1. Abdominal cramping:
* Dicyclomine 10 mg PO every 6 hours prn

Reassessment- Any worsening in COWS score suggests that initiation has precipitated withdrawal (see section below on Precipitated Withdrawal).

* Significant and unambiguous improvement in COWS score suggests patient is a responder and an additional dose can be safely administered.
1. Repeat dosing
	* + - 1. If COWS score is > 8:
* Administer a second dose of buprenorphine/naloxone 4/1 mg or 8/2 mg SL film or tab
* Continue monitoring for 1 additional hour after second dose has been administered and reassess
	+ - * 1. If COWS score is < 8:
* Provide patient with instructions regarding outpatient follow up (see Outpatient Follow-up section below)

8. Managing Potential Complications

* 1. Precipitated Withdrawal

- Precipitated withdrawal is the worsening of opioid withdrawal symptoms after administration of buprenorphine.

* Abused opioids are FULL agonists and buprenorphine is a partial agonist (with a very high receptor affinity).
* The development of precipitated withdrawal means that buprenorphine was given too soon after the last opioid use. It displaced full agonist opioids and led to the person feeling a net deficit of opioid activity.

 - Management of precipitated withdrawal

* Give 2 mg of buprenorphine every 1-2 hours until precipitated withdrawal is resolved. Max total dose of buprenorphine is 16 mg/day on Day 1
	+ Provide aggressive adjunctive therapy as outlined above and in flow chart

- It is important to treat precipitated withdrawal aggressively since it is very uncomfortable for the patient and can lead to refusal of buprenorphine treatment in the future.

* 1. Apnea, Hypoxia, or Hypercarbia
* This is very unlikely to occur. Patients do not need to receive cardiac or pulse ox monitoring when initiating buprenorphine in the ED.
* Symptoms of apnea, hypoxia, or hypercarbia would typically indicate patient has a low opioid tolerance or another sedative had previously been co-administered. Hospital buprenorphine administration may result in a slowing of respirations but not arrest.
* If the patient develops respiratory depression, place patient on end-tidal CO2, pulse ox, and cardiac monitoring.
* Try supportive measures first: supplemental O2, noxious stimuli, upright positioning.
* If needed, can use naloxone.

Naloxone dosing:

* IV bolus dose of 1-2 mg, repeat or escalate if needed
* Start continuous infusion if patient responds but resedates after 3rd dose. Continuous infusions are started 2/3 of the dose it takes to wake patient per hour.
* Goal is to improve respiratory depression, not completely reverse the opioid effects
* Call the Carolinas Poison Center for assistance in dosing 704-355-4000
* If benzodiazepine co-ingestion is suspected as cause of hypoxia or apnea, flumazenil reversal is an option after careful consideration of contraindications (Ex: chronic benzodiazepine use, seizure disorder). Please consult poison control if considering using flumazenil.
	1. Call Carolinas Poison Center with any questions about the protocol or complicated withdrawal (704-355-4000). ***Ask to speak to the toxicologist on call for any questions regarding this protocol.***

9. Outpatient follow-up

1. Refer to outpatient buprenorphine clinic:

**Atrium Health Addiction Medicine**

7825 Ballantyne Commons

704-446-0391 phone

Accepts only insured patients (Private, Medicare, Medicaid) Open Monday through Thursday 8:30 AM to 5 PM. Please call to coordinate appointment and inform scheduler that patient will need maintenance therapy until patient is able to obtain appointment. Mercy Horizons providers can call in script Mon to Thursday to bridge suboxone until appt.

**McLeod Center**

521 Clanton Road, Charlotte, NC 28217
704.332.9001 phone 704.295-4937 Fax

Accepts all insurance and uninsured

Fill out referral form and fax to 704-295-4937 Attn Tommy Jeffcoat

Intake Monday, Wednesday through Friday from 7 AM to 10 AM for buprenorphine and 7 AM to 11 AM for methadone.

**Anuvia Recovery**

100 Billingsley Road

Accepts all insurance and uninsured.

Fill out referral form and fax to 980-927-8899 Attn Nikki Turner.

Intake for MAT clinic is Monday, Wed, and Friday mornings. Will need general intake appointment before being dosed the same day.

1. If patient cannot get to clinic in next 24 hours (weekend, holiday)
* Try to consult a DATA-waivered ED physician to write a prescription.
* Patients do well with BID dosing so if received 16 mg on Day 1, write for 8 mg BID.
	+ Sample prescription:

Buprenorphine/naloxone 8 mg/2 mg SL tablet or film

Take 1 tablet/film twice daily

Dispense #6 (Six)

No refills

* If there are no DATA-waivered physicians to write a prescription and the patient cannot follow up at the clinic within 24 hours of administering buprenorphine, the patient can return to the ED to receive no more than a single additional daily dose for up to 3 doses within 72 hours, including the initial ED encounter.
* Dose on Day 2 and Day 3:
* (Total dose received during previous encounter) + 4 mg Q1H if COWS > 8
* Max daily bridge dose 16 mg/day
1. Offer naloxone rescue kit

**Protocol for Adult Patients With**:

* Last opioid use: > 12 hours short-acting (heroin, morphine IR), > 48 hours for long acting opioids (methadone)
* Desire to receive buprenorphine
* Does not meet exclusion criteria (see below)

**Optional labs**:

* HIV 1 and 2
* Hepatitis panel
* RPR

**Required Labs:**

* UPT (if indicated)
* Breathalyzer (for follow-up)

**Complete Clinical Opiate Withdrawal Scale (COWS) Score**

**No buprenorphine indicated**

Re-assess COWS score in 1-2 hrs

**COWS < 8**

**COWS > 8**

\*\* If there are no DATA-waivered physicians to write a prescription and the patient cannot follow up at the clinic within 24 hours of administering buprenorphine, the patient can return to the ED to receive no more than a single additional daily dose for up to 3 doses within 72 hours, including the initial ED encounter.

Dose on Day 2 and Day 3 = (Total dose received during previous encounter) + 4 mg Q1H if COWS > 8. Max daily bridge dose 16 mg/day

**Adjunctive Therapies**:

For patients not wanting buprenorphine or if symptoms still present after max dose of buprenorphine given

Nausea:

Zofran 4 mg ODT every 8 hrs prn, **OR**

Phenergan 25 mg IM once

General withdrawal:

Clonidine 0.1 to 0.2 mg PO Q4-6 hr (SBP >90 mmHg)

Body aches:

Acetaminophen 650 mg PO Q4 hr

 Ibuprofen 600 mg PO **OR** ketorolac 15 mg IM once

Anxiety/Irritability/Itching:

 Hydroxyzine 50-100 mg PO Q6 hr prn

Abdominal cramping:

Dicyclomine 10 mg PO Q6 prn

**Outpatient follow-up**:

* Refer to outpatient buprenorphine clinic
* If patient cannot get to clinic in next 24 hours (weekend, holiday)
	+ Try to consult a DATA-waivered physician to write a prescription
	+ Have patient return to the ED in 24 hours for repeat/bridge dosing or if withdrawal occurs before they can get to the clinic\*\*
* Offer naloxone rescue kit

**Re-assess after 1 hour**

Are withdrawal symptoms present?

**Give buprenorphine**:

* COWS >8 to <12: give 2 mg/0.5 mg
	+ Can give this dose if COWS > 12 but concerned about over sedation (elderly, time of last opioid use unclear)
* COWS >12 and up: 4 mg/1 mg

**No**

**Repeat or double buprenorphine dose**

* Max single dose = 8 mg
* Max total dose = 16 mg (most won’t need more than 10-12 mg on Day 1)

\* If you are concerned about precipitated withdrawal, as opposed to continued symptoms:

 - Give 2 mg/0.5 mg every 1-2 hours to gain control of withdrawal symptoms

**Exclusion Criteria**:

* Altered mental status/clinical intoxication
* Chronic pain and on prescribed opioids
* Taking long acting opioid in last 48 hrs

>8

<8

**Yes**