University HOSPITAL
Newark, NJ

ED Buprenorphine Dosing Guideline for Acute Opioid Withdrawal

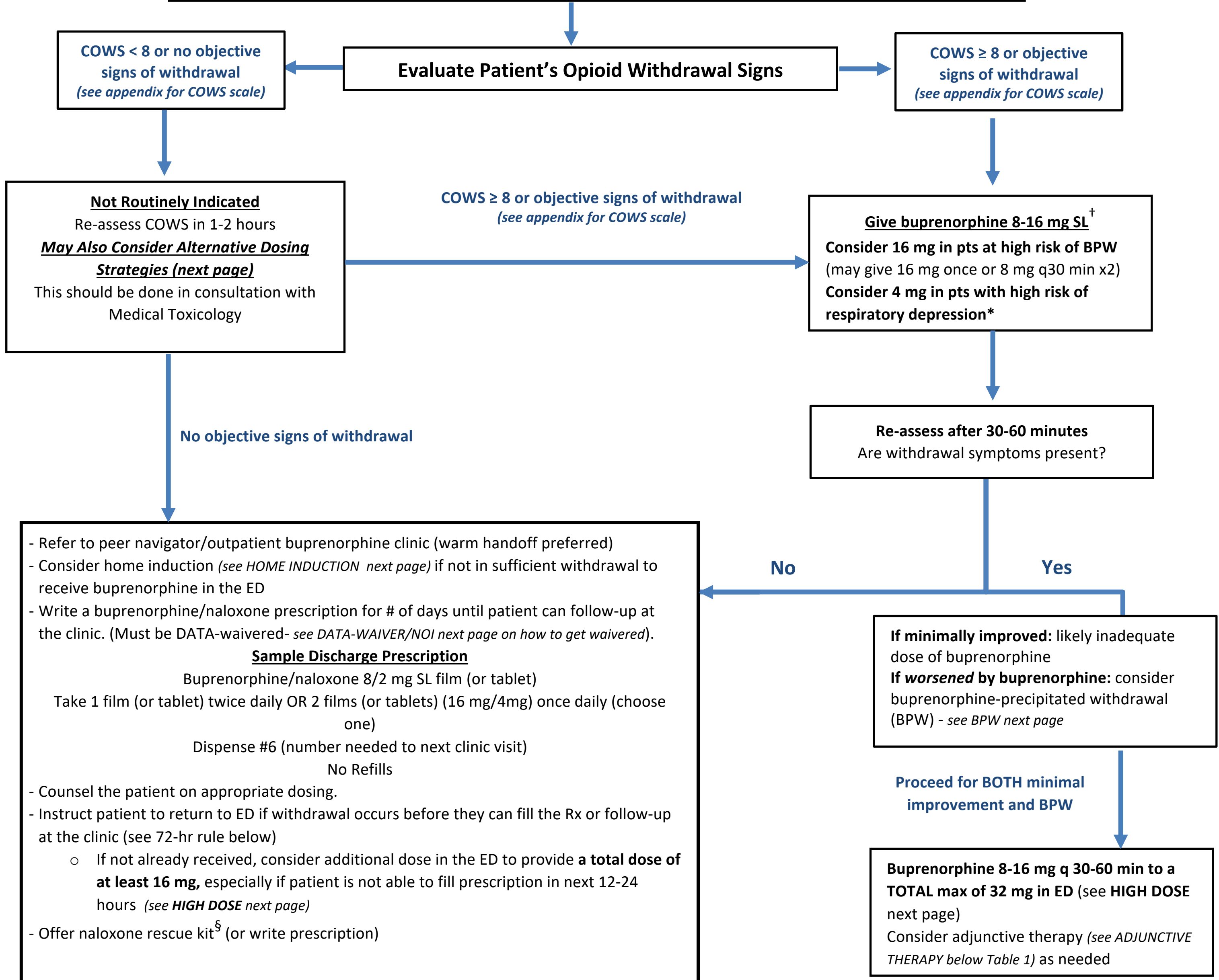

TABLE 1. ADJUNCTIVE THERAPY - *Consider if symptoms persist after maximum dose of buprenorphine given*	
General withdrawal symptoms	Clonidine 0.1 mg PO Q4H PRN (hold for SBP < 90 mmHg) (Max total dose=0.3 mg)
Nausea and vomiting	Ondansetron 4 mg ODT/IV Q4H PRN
Diarrhea	Loperamide 4 mg PO, then 2 mg PO Q2H PRN (max total dose = 8 mg)
Myalgias and arthralgias	Ibuprofen 600 mg PO Q6H PRN

† Inform patient that buprenorphine takes 5-10 minutes to dissolve and should remain under the tongue until it is completely dissolved
* *High risk for respiratory depression: heavy user of alcohol/benzodiazepines, very intoxicated/altered, medically complex, older age*
§ Please refer to the "Naloxone Rescue Kit Protocol" available on Clinical Links

Guidelines are intended to be flexible. They serve as reference points or recommendations, not rigid criteria. Guidelines should be followed in most cases, but there is an understanding that, depending on the patient, setting, circumstances or factors, guidelines can and should be tailored to fit individual needs.

Updated July 29, 2022

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BUPRENORPHINE PRECIPITATED WITHDRAWAL (BPW)

- BPW is the worsening of opioid withdrawal after administration of buprenorphine.
  - Since essentially all opioids are full agonists and buprenorphine is a partial agonist (with a very high receptor affinity), the development of BPW withdrawal means that buprenorphine was given too soon or in too low of a dose. It displaced full agonist opioids and led to the person feeling a net deficit of opioid activity.
- It is crucial to treat BPW aggressively since it is very uncomfortable for the patient and can lead to refusal of buprenorphine treatment in the future. Provide adjunctive therapy *(see Table 1 on first page)*

DATA 2000-WAIVER/NOTICE OF INTENT (NOI)

- Required for qualified practitioners (physicians, nurse practitioners, physician assistants, clinical nurse specialists, certified registered nurse anesthetists, and certified nurse-midwives) to administer, dispense, or prescribe buprenorphine
- **2021 UPDATE- Alternative Notice of Intent (NOI) application to SAMHSA** allows practitioners to treat up to 30 patients with OUD using buprenorphine while being exempt from certification requirements related to training, counseling, and other ancillary services
  - For further details and to register: https://www.samhsa.gov/medication-assisted-treatment/become-buprenorphine-waivered-practitioner
- 72-HOUR RULE**:** If there are no waivered prescribers available to write a buprenorphine/naloxone 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 three doses, within 72 hours, including the initial ED encounter.
- Buprenorphine dose on Day 2 and Day 3 = Same dose received during the previous encounter

DOSING STRATEGIES

HIGH-DOSE INITIATION (MACRODOSING) –*Although the current evidence behind this is limited, many clinicians find this option safe and effective*

- Higher initial total doses of 16-32 mg may rapidly overcome the net deficit of opioid activity and reduce the risk of BPW. *Limited data suggests this is also effective for patients with mild or no withdrawal. This should be done in consultation with Medical Toxicology.*
- It may also increase the magnitude and duration of withdrawal relief.
- Good option for patients with barriers to follow up care, such as lack of insurance or housing
- Discharge prescription can still be written (buprenorphine/naloxone 8 mg/2 mg SL BID)
- The risk of over-sedation and respiratory depression is small, but increased if combined with alcohol, benzodiazepines or other sedatives.

MICRODOSING *Current evidence limited. Requires extensive patient education and close follow up. Most practical for admitted patients while consulting addiction medicine or medical toxicology*

- Does not require patients to be in opioid withdrawal or have a period of opioid abstinence prior to initiation, and decreases risk of precipitated opioid withdrawal.
- Microdosing involves administering buprenorphine/naloxone (or buprenorphine) in small initial dose (e.g., 0.5 mg/0.125 mg) with incremental increases to both dose and frequency over time (e.g., Bernese method)
- Coinciding with this, patients can continue to use other opioids until a therapeutic dose of buprenorphine has been achieved (>8 mg daily), when full opioid agonists are discontinued
  - Usually takes place over 7-10 days
- Can also be done as a cross-taper, in which the full agonist dose is reduced as the buprenorphine dose is escalated
- See link for example microdosing protocols

HOME INDUCTION OF BUPRENORPHINE/NALOXONE – *Note: Prescriptions can only be written by DATA-waivered providers*

- Home induction can be performed in willing patients with adequate support who are not in adequate withdrawal to initiate buprenorphine in the ED. This is widely practiced in the community and its safety is documented in the literature.
- Counsel patients to wait until they are in "moderate" withdrawal (i.e., several hours after they start feeling sick)
  - Patient tools and resources:
    - Example patient education sheet
    - Subjective Opiate Withdrawal Scale (SOWS): Give the patient a copy and instruct them to take the first dose of buprenorphine/naloxone when SOWS > 11.
- Home induction dosing
  - *Day 1:* Dose = 4 mg/1 mg q2H PRN until withdrawal is tolerated. Maximum total dose = 16 mg
  - *Subsequent days:* 8 mg/2 mg BID

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APPENDIX

Clinical Opiate Withdrawal Scale (COWS)

For each item, circle the number that best describes the patient' s signs or symptom. Rate on just the apparent relationship to opiate withdrawal. For example, if heart rate is increased because the patient was jogging just prior to assessment, the increase pulse rate would not add to the score.

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	**GI Upset:** *over last 1/2 hour* 0 no GI symptoms 1 stomach cramps 2 nausea or loose stool 3 vomiting or diarrhea 5 multiple episodes of diarrhea or vomiting
Sweating: *over past 1/2 hour not accounted for by room temperature or patient activity.* 0 no report of chills or flushing 1 subjective report of chills or flushing 2 flushed or observable moistness on face 3 beads of sweat on brow or face 4 sweat streaming off face	**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
Restlessness *Observation during assessment* 0 able to sit still 1 reports difficulty sitting still, but is able to do so 3 frequent shifting or extraneous movements of legs/arms 5 unable to sit still for more than a few seconds	**Yawning** *Observation during assessment* 0 no yawning 1 yawning once or twice during assessment 2 yawning three or more times during assessment 4 yawning several times/minute
Pupil size 0 pupils pinned or normal size for room light 1 pupils possibly larger than normal for room light 2 pupils moderately dilated 5 pupils so dilated that only the rim of the iris is visible	**Anxiety or Irritability** 0 none 1 patient reports increasing irritability or anxiousness 2 patient obviously irritable or anxious 4 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 opiates withdrawal is scored* 0 not present 1 mild diffuse discomfort 2 patient reports severe diffuse aching of joints/muscles 4 patient is rubbing joints or muscles and is unable to sit still because of discomfort	**Gooseflesh skin** 0 skin is smooth 3 piloerrection of skin can be felt or hairs standing up on arms 5 prominent piloerrection
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	Total Score ________ The total score is the sum of all 11 items Initials of person completing assessment: ____________

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

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