Support for this PennPathway was provided by the Penn Medicine Center for Evidence-based Practice

CENTER for EVIDENCE-BASED PRACTICE

Contact Nikhil Mull, MD or Emilia Flores, PhD, RN for more information on our PennPathways program.

This PennPathway was developed using a multidisciplinary approach and presents the best model of care based on the best available scientific evidence the time of publication. Recommendations are not intended to replace professional judgement.

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Review MOUD pathway for methadone vs buprenorphine use by clicking here

Methadone for use as a Medication for Opioid Use Disorder (MOUD)
Penn Medicine Formulary:
Methadone for use as a Medication for Opioid Use Disorder in the Hospital

Neither psychiatry consultation nor X-waiver required to order and administer buprenorphine in any hospital setting

Obtain pregnancy testing

- Pregnancy status is helpful in planning treatment and disposition
- Either buprenorphine, buprenorphine-naloxone, or methadone are appropriate
- The choice should reflect shared decision making and a follow-up plan

Initial discharge planning

- [HUP/PPMC/PAH/CCH] Contact Certified Recovery Specialist - who can help in all aspects of patient engagement in possible treatment - CORE 267-809-5080
- Identify X-waivered provider to provide bridge script until outpatient follow-up (see final step)
- For follow-up, contact substance use navigator at the Penn Medicine On Demand (PMOD) CareConnect Warmline at 484-278-1679
- Provide intranasal naloxone (Narcan) in case of self-directed discharge

Confirm time since last opioid use unless buprenorphine microdosing (Belbuca) planned

**Buprenorphine microdosing (Belbuca) may be started anytime without having any period of abstinence.*

Confirm time since last opioid use

- IV fentanyl/heroin: >18 hours
- Short-acting oral opioids (morphine IR, oxycodone IR): >12 hours
- Extended release opioids (Morphine ER, Oxycodone ER): >24 hours
- Methadone: >72 hr

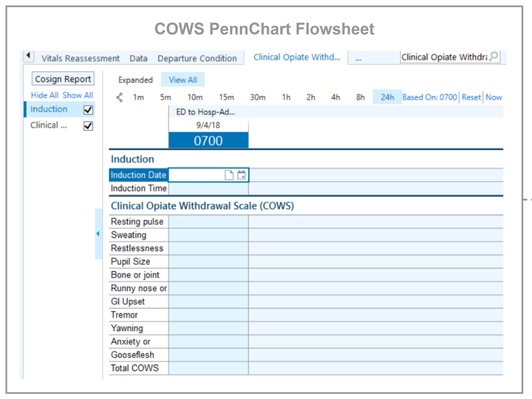
IR=immediate release
ER=extended release

Order adjunctive medications for symptomatic opioid withdrawal

Adjunctive medications for symptomatic opioid withdrawal

Symptom	Medication
Nausea/vomiting	Ondansetron 4-8 mg IV or PO q6-8h PRN
Autonomic (hypertension, tachycardia, diaphoresis, cramps, etc)	Clonidine 0.1-0.2 mg PO q6-8h
GI distress	Loperamide 2 mg PO q2h PRN diarrhea (max 16 mg/day) Dicyclomine 10 mg PO q6h PRN abdominal cramps
Anxiety/insomnia	Diphenhydramine 25-50 mg PO q6h PRN Hydroxyzine 25-50 mg PO q6h PRN Trazodone 50 mg PO qhs PRN (insomnia)
Pain	Acetaminophen 1000 mg q6-8h Ibuprofen 600 mg PO q6h PRN OR Ketorolac 15 mg IV q6h PRN, if no contraindications to NSAIDS Opioids - full opioid agonist may be indicated to provide relief and stabilize withdrawal (refer to full agonist dosing pathway for patients with OUD)
Agitation (mod/severe)	Lorazepam 2 mg IV or IM OR Haloperidol 5 mg IV or IM OR Droperidol 2.5 mg IV OR Olanzapine 5-10 mg PO or IM

COWS PennChart Flowsheet



Assess for withdrawal using COWS score

COWS Score for Opiate Withdrawal
(available under PennChart flowsheets)

**Dilated pupils, diaphoresis, and piloerection are objective signs of opioid withdrawaland more reliable than anxiety, restlessness, nausea, myalgias*

COWS<13

Buprenorphine (Belbuca) 450 mcg buccal film x1

Lower initial dose used to mitigate precipitated withdrawal risk (e.g., recent fentanyl or methadone use)

Discharged from ED?

Low-dose buprenorphine outpatient up-titration home instructions (handout with patient directions is provided as paper clip attachment)

- ***Continue low-dose induction with up-titration at home:***
  - Day 1: Cut buprenorphine/naloxone 2/0.5 mg SL films into 4 pieces and take one piece every 6 hours x 4 doses
  - Day 2: Cut buprenorphine/naloxone 2/0.5 mg SL films into 2 pieces and take one piece every 6 hours x 4 doses
  - Day 3: Take 1 buprenorphine/naloxone 2/0.5 mg SL mg SL film q6h x 4 doses
  - Day 4: Take 4 buprenorphine/naloxone 2/0.5 mg SL mg SL films BID
  - Dispense #41 (7 day supply)
  - Self-guided low dose home induction protocol - patient handout can be found here as well as a paper clip attachment.

Admitted to inpatient or observation

Buprenorphine microdosing protocol (see paper clip attachment for full protocol)

Buprenorphine microdosing protocol on Penn Medicine Formulary

- Patients opting for microinduction should receive concomitant full opioid agonist until on a dose of 12-16 mg of buprenorphine/suboxone in 24 hours
  - This can be in the form of oxycodone, hydromorphone, or methadone.
  - Once stable on this dose of buprenorphine/naloxone, full agonists can be discontinued.

Buprenorphine Microdosing Regimen for Patients Who Will Not Require Full Agonist for Analgesia

MOUD	Buprenorphine	Methadone
Day 1	Buprenorphine (Belbuca®) 450 mcg buccal q6h	Methadone 30 mg PO x 1 PRN COWS >8
Day 2	Buprenorphine /naloxone 2 mg SL q6h	Methadone 30 mg x 1 PO PRN COWS >8 can give extra 10 mg methadone PRN (up to 40 mg total) if needed
Day 3	Buprenorphine /naloxone 4 mg SL q6h (alternatively may give 16 mg once daily if preferred)	Discontinue methadone

COWS≥13

Buprenorphine/naloxone 2/0.5 mg sublingual (SL) film Q1h as needed up to 4 doses

- When at least two doses of 2 mg have been well tolerated, next dose can continue at 2 mg or can advance to 8 mg if significant symptoms persist
- Decrease dose frequency (i.e., Q1h -> Q2h) if withdrawal worsening
- Maximum dose 16-24 mg in 24 hours

Patients with objective signs of opioid withdrawal (dilated pupils, diaphoresis, piloerection) compared to subjective symptoms (anxiety, restlessness, nausea, myalgias) are more likely to respond to buprenorphine treatment

Patient information for administration of buprenorphine/naloxone film

- Allow buprenorphine sublingual film to completely dissolve (5-10min)
- Not to swallow any saliva during for 5-10 min following during administration
- No eating or drinking 15 min before or after administering the film

Reassess prior to each dose

- Use patient's reported subjective symptoms, **repeat COWS assessment not required**
- Re-dosing may occur earlier if patient reports symptoms outside of set time intervals described in pathway
- Use nonopioid withdrawal management as needed

Precipitated withdrawal suspected -OR- COWS increased by ≥6

Management of precipitated withdrawal (PW)

- 16 mg buprenorphine SL (two 8 mg films [without naloxone where readily available] simultaneously)
- Adjunctive medications for opioid withdrawal symptoms
- For complicated cases:
  - Dr. Jeanmarie Perrone (Director, Penn Medicine Center for Addiction Medicine and Policy) 610-247-8998
  - Opioid Assistance Resource Line 267-426-5900

Symptoms resolved

Initial scheduled AM dose on day 2 = Total cumulative dose administered day 1

- This dose should **NOT** be based on ongoing withdrawal symptoms on day 2
- Dose should be ordered in multiples of 4/1 mg films for ease of dispensing (e.g. day 1 cumulative dose 18 mg → 16 mg on day 2 for maintenance)

Discharge planning

- [HUP/PPMC/PAH/CCH] Contact Certified Recovery Specialist - who can help in all aspects of patient engagement in possible treatment - CORE 267-809-5080
- Identify X-waivered provider to provide bridge script until outpatient follow-up (see final step)
- For follow-up - contact substance use navigator at the PMOD-CareConnect Warmline at 484-278-1679

Do you have a DEA number -AND- an X-waiver?

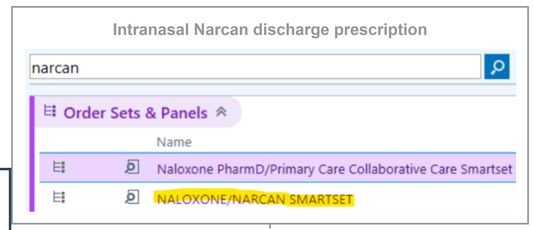
NO, Do not have DEA license -OR- Do not have an X-waiver

Bridge to outpatient treatment

- Consult X-waivered physician (ideally inpatient service attending) to e-prescribe bridging prescription - see attachments tab for list
- Remind patient that if a gap in transition of care occurs, they can return to ED for withdrawal management
- For follow-up, contact substance use navigator at the PMOD-CareConnect Warmline at 484-278-1679

YES, Possess BOTH DEA license -AND- Possess an X-waiver

Bridge to outpatient treatment

- E-prescribe prescription for buprenorphine/naloxone SL films. Provide quantity sufficient until follow-up at local clinic - double click link for instructions
- Co-prescribe intranasal naloxone (Narcan) at discharge
- Instruct patient to return to ED if withdrawal recurs before patient follows-up

Intranasal Narcan discharge prescription