SECTION: **WOMEN'S AND NEWBORN SERVICES**
TITLE: **GUIDELINE FOR OPIOID USE DISORDER IN HOSPITALIZED OBSTETRIC PATIENTS**
FACILITY:

POPULATION: ☒ **Adult** ☒ **Pediatric** ☐ **Neonate**
(Adult > 18 years of age; Pediatric 0-18 and adult patients under care of a pediatric specialty physician; Neonate 0-28 days and continued hospitalization in the NICU)

PURPOSE:

1. To facilitate the acute medical care of the hospitalized obstetric patient with opioid use disorder (OUD).
2. To promote intervention for OUD in the hospitalized obstetric patient on a family birth center requiring initiation of medication to treat OUD to manage or prevent acute withdrawal symptoms.

RESPONSIBLE STAFF:

Obstetric RNs and licensed independent practitioners (LIP)

A. **REGULATORY STANDARDS AND BEST PRACTICE**

1. **REGULATORY STANDARDS**
   a. Any licensed provider can order methadone or buprenorphine products to treat an OUD patient while in the hospital as per Title 21 of the Code of Federal Regulations, Section 1306.07 (B).
   b. The Drug Addiction Treatment Act (DATA) of 2000 permits qualified physicians to treat OUD with opioids approved by the Food and Drug Administration (FDA) for that indication.
      (i) With regard to buprenorphine, DATA regulations state that only a DATA-waivered provider may prescribe a partial agonist (buprenorphine products) on hospital discharge on in the outpatient setting. However, as of 4/28/21, practitioners wishing to prescribe buprenorphine without completing training may apply for a DEA waiver to be able to prescribe buprenorphine but are limited to treating no more than 30 patients at any one time.
      (ii) DATA regulations state that methadone may only be prescribed at hospital discharge for the indication of control of pain, not OUD. If methadone is to be continued after discharge, the patient needs to be referred to a designated methadone clinic.

Key Point: *Providers do not need any specific training or licensure to use approved opioid replacement medications (i.e., methadone and buprenorphine preparations) for treating OUD for patients admitted to the hospital*

Key Point: *Providers can obtain the DATA Waiver to prescribe buprenorphine on hospital discharge or in the outpatient setting without the 8 hours of CME training.*

2. **BEST PRACTICE:**

a. Medication treatment for opioid use disorder (OUD) with methadone or buprenorphine has become a cornerstone of treatment for OUD in pregnancy in the outpatient setting.
b. During pregnancy, chronic untreated addiction to heroin is associated with lack of prenatal care, increased risk of fetal growth restriction, abruptio placentae, fetal death, preterm labor, and intrauterine passage of meconium.
c. For pregnant women with OUD, buprenorphine or methadone is part of recommended therapy and is preferable to medically supervised withdrawal. Withdrawal is associated with high relapse rates, which lead to worse outcomes. More research is needed to assess the safety (particularly regarding relapse for the obstetric person), efficacy, and long-term outcomes of medically supervised withdrawal.
d. The American College of Obstetrics & Gynecology (ACOG) continues to recommend use of buprenorphine or methadone as part of the **standard of care during pregnancy and postpartum** for people with OUD. Medication for OUD:
    i. Decreases the peaks and troughs associated with short acting opiate use, therefore decreasing intoxication and withdrawal for the pregnant person and fetus,
    ii. Decreases relapses,
    iii. Decreases high risk behavior, such as injection use, which exposes the obstetric person and fetus/baby to potential viral hepatitis and HIV,
    iv. Decreases fetal exposure to illicit drugs and contaminants,
    v. Is associated with improved adherence to prenatal care.
e. Methadone and buprenorphine are considered safe in pregnancy and lactation. A recent meta-analysis that compared methadone and buprenorphine to treat OUD found no difference between the groups with respect to congenital malformations. In addition, the incidence of anomalies reported was similar to what would be expected in the general population. Overall, concern about a potential small increased risk of birth defects associated with opioid agonist pharmacotherapy during pregnancy should be weighed against the clear risks associated with the ongoing misuse of opioids by a pregnant or postpartum person.
f. Managing distressful withdrawal symptoms can facilitate effective treatment of acute medical illness and management of the pregnancy. See Appendix B for a timeline and list of withdrawal symptoms.
g. Neonatal Opiate Withdrawal Syndrome (NOWS, formerly known as Neonatal Abstinence Syndrome [NAS]) is both expected and treatable in neonates exposed to opiates *in utero*.

KEY POINT: It is important to recognize that buprenorphine or methadone is the medical standard of care for medications to treat OUD in pregnancy. Management of withdrawal symptoms supports the continued treatment of the patient's pregnancy and can prevent the patient from leaving against medical advice (AMA).

B. ELIGIBILITY for initiating buprenorphine or methadone treatment for Opioid Use Disorder (OUD) During Hospitalization:

1. Before initiating buprenorphine or methadone, the OUD diagnosis must be established and documented. See Appendix A for DSM-5 criteria for opioid use disorder.
2. The patient should be assessed to determine if they are an appropriate candidate for initiating buprenorphine or methadone in the hospital.
3. Inclusion criteria:
    a. Obstetric patients diagnosed with OUD who desire buprenorphine or methadone to manage their OUD during their hospital stay.
4. Exclusion criteria:
    a. Patients currently enrolled in outpatient treatment programs
        (i) Patients should be continued on their outpatient methadone or buprenorphine regimen in hospital whenever possible (after confirmation that the medication is still being taken immediately prior to admission)
        (ii) See Methadone Maintenance/Detoxification of Inpatient 900.4358
    b. Patients who are currently receiving outpatient medication treatment for OUD from OUD provider(s).
    c. Patients with concurrent untreated active alcohol withdrawal.

(i) Alcohol withdrawal must be managed first (usually with benzodiazepines) as it can be life-threatening, though OUD can be addressed as soon as patient has been stabilized from the perspective of alcohol withdrawal

d. Patients with severe hepatic dysfunction (Child-Pugh score C) and/or end-stage liver disease (relative contraindication; opioid replacement therapy may be possible in some patients with end stage liver disease with close monitoring).

D. **MANAGEMENT**

1. Patient engagement
   a. When the patient meets inclusion criteria, they should be offered buprenorphine or methadone and encouraged to consider outpatient treatment upon discharge.
      i. The decision to start methadone or buprenorphine should be shared decision-making with the patient. While either medication is acceptable, in most cases, **buprenorphine is preferred in pregnancy** due to decreased risk of neonatal opioid withdrawal syndrome. The on-call maternal fetal medicine specialist should be consulted if questions remain regarding which medication to start.
      ii. It is imperative that the LIP discuss the following issues with the patient and give the patient adequate opportunity to have questions answered
         (1) That preventing and treating opioid withdrawal is an integral of their medical treatment in the hospital and will allow the patient to focus on other health issues without concern that the discomfort and distress of opioid withdrawal will be ignored.
         (2) That patients may receive buprenorphine or methadone while hospitalized regardless of whether they agree to outpatient treatment,
         (3) That if the patient starts buprenorphine while in the hospital, it may not be possible for the medication to be prescribed upon discharge, and even if it is prescribed, the patient will need to pursue outpatient follow-up with a provider able to continue buprenorphine treatment
         (4) That if the patient starts methadone while in the hospital, methadone cannot be prescribed upon discharge for opioid replacement, and if the patient desires to continue taking methadone as opioid replacement therapy, they must establish care with a licensed methadone clinic.
         (5) That if the patient agrees to outpatient therapy, every effort will be made to assure direct transfer to avoid a gap in therapy post discharge.

Key Point: *Reassurance that a patient's OUD will be addressed during the admission can be crucial to ensuring the patient receives the best care possible.*

2. Coordinating outpatient treatment
   a. Care Management (i.e., social Worker and/or RN Care Manager) should be consulted to coordinate the behavioral health components necessary for transitioning the patient to an outpatient treatment program.
3. Patients taking buprenorphine or methadone who also have an acutely painful process:
   a. Buprenorphine or methadone will typically not completely alleviate acute pain, and d patients with acute pain will often require additional pain management.
   b. Regional anesthesia (epidural or spinal anesthesia) will work normally and should be utilized. Consider epidural therapy earlier than you may typically recommend to avoid polypharmacy.
   c. Avoid all agonist/antagonist medications (e.g. Nubain, Stadol) as these could precipitate severe withdrawal syndromes in opioid-dependent patients.
   d. Use NSAIDS and acetaminophen first-line for moderate postpartum pain.
   e. If the patient is started on buprenorphine and requires additional opioid medication for severe pain, due to high opioid tolerance and partial blockade of opioid receptors, they will likely require 70% more opioid analgesia compared to non-opioid dependent patients (e.g., if normal PRN dosing of oxycodone is 5-10 mg, consider 10-20 mg).

f. If a patient is started on methadone and still endorses pain, they can be treated with additional opioids but be vigilant for opioid sedation, as the full sedative effects of methadone can accumulate for several days after initiating treatment,
g. If the patient enters the operating room for a cesarean section without neuraxial analgesia, consider requesting that anesthesia place a combined spinal epidural (CSE) and then leave the epidural running for 24 hours. If the patient enters the operating room with an epidural in place, consider dosing the epidural for surgical block and then leave it running for 24 hours. Alternately, consider a PCA (patient-controlled analgesia) with a high potency opioid such as hydromorphone for the first 24 hours postoperatively.
h. Monitor for both pain relief and excessive sedation to guide opioid medication dosing (e.g., if the patient is still in pain but has no sedation, the dose is not too high).
i. Buprenorphine-only treatment considerations:
    i. Fentanyl has a high affinity for the mu receptor and may be more effective for providing pain relief for patients on buprenorphine therapy than other short-acting opioid agonists.
    ii. Buprenorphine has antagonist as well as agonist action, therefore control of severe pain with opioid agonists can be complicated as opioid agonist pain medications may not be able to adequately reach the target receptors. Rarely, pain control may not be achieved using the guidelines above. In this case, consider consulting a pain management specialist or anesthesia provider regarding reduction or cessation of buprenorphine and treatment with scheduled opioid agonist analgesics (e.g. sustained-release and immediate-release morphine or other opioid analgesics) to desired effect.

4. Inpatient Guidelines for medication treatment for OUD
    a. **BUPRENORPHINE AND METHADONE:**
        i. Baseline assessments must be completed prior to initiation of buprenorphine or methadone and ideally should include the following:
            (1) Urine drug screen (UDS)
                (a) Note: a positive drug screen is not a contraindication to initiating opioid replacement therapy,
            (2) Rapid plasma reagin (RPR), hepatitis C, and human immunodeficiency virus (HIV) testing,
            (3) Baseline electrocardiogram (ECG)
                (a) Baseline ECG is an absolute requirement when starting methadone. Methadone may prolong QTc interval.
            (4) CMP in patients with known or suspected liver failure or acute hepatitis; do not use if AST or ALT is greater than 5x upper limit of normal.
        ii. Assessment of withdrawal symptoms using the Clinical Opioid Withdrawal Scale (COWS), is performed by RNs. See Appendix C.
        iii. Opioid withdrawal symptoms mimic common discomforts of pregnancy, which should be taken in to account before increasing the daily maintenance buprenorphine or methadone doses.
        iv. Mild symptoms of withdrawal (COWS less than 6) can sometimes be managed adequately with counseling, supportive care, and/or clonidine 0.1 mg orally every 4 to 6 hours rather than with incremental doses of buprenorphine or methadone.
    b. **BUPRENORPHINE:**
        i. Premature administration of buprenorphine (i.e., before opioid withdrawal has set in) can precipitate acute withdrawal and create both significant discomfort and distrust of buprenorphine. The first dose should only be administered after the following criteria are met.
            (1) It has been greater than or equal to 6 hours since the last dose of heroin or short-acting opioid.
            (2) It has been 12-24 hours since the last dose of long-acting opioid, depending on the formulation.
        ii. Day 1 (0 to 24 hours):
            (1) The first dose of buprenorphine is determined by the LIP. The starting dose is typically 4 mg, depending on signs of withdrawal and prior drug history.
            (2) The first dose should be administered once the patient is showing signs of withdrawal with a COWS score 10 or greater or patient-reported cravings.

(3) Withdrawal symptoms should be assessed every 4 hours as needed and additional as needed doses administered based on COWS score or patient-reported cravings.
(a) If the COWS score is less than 6, vital signs are stable, no adverse effects are present, and the patient reports no cravings, then the patient is experiencing sufficient relief from their current dose. No additional buprenorphine should be administered.
(b) If the COWS score is 6 or more, or patient reports cravings, a repeat dose of 2 mg as needed every 2 hours of buprenorphine may be given to a maximum Day 1 total dose of 16 mg.
(4) The RN must notify the LIP if the COWS score remains 6 or more or the patient reports cravings after a total dose of 16 mg buprenorphine on Day 1 is given.

iii. Day 2 (24 to 48 hours):
(1) The scheduled dose for Day 2, to be administered 24 hours after the first dose on Day 1, is determined by the total dose administered on Day 1 and any breakthrough symptoms that may still be present.
(a) If the COWS score is less than 6 and the patient reports no cravings at the start of Day 2, give Day 1's total dose of buprenorphine.
(b) If the COWS score is 6 or more or the patient reports cravings at the start of Day 2, then give Day 1's total dose plus an additional 4 mg.
(2) Withdrawal symptoms should be assessed every 2 hours as needed and additional as needed doses administered based on COWS score greater than 6 or patient-reported cravings.
(a) If the COWS score is less than 6, vital signs are stable, no adverse effects are present, and the patient reports no cravings, then the patient is experiencing sufficient relief from their current dose. No additional buprenorphine should be administered.
(b) If the COWS score is 6 or more, or the patient reports cravings, a repeat dose of 4 mg buprenorphine may be given every 4 hours up to a maximum Day 2 total dose of 20 mg.
(3) The RN must notify the LIP if the COWS score remains 6 or more or the patient reports cravings after a total dose of 20 mg buprenorphine on Day 2 is given.

iv. Day 3 (48 to 72 hours):
(1) The scheduled dose for Day 3, to be administered 48 hours after the first dose of buprenorphine on Day 1, is determined by the total dose administered on Day 2 and any breakthrough symptoms that may still be present.
(a) If the COWS score is less than 6 and the patient reports no cravings at the start of Day 3, give Day 2's total dose of buprenorphine.
(b) If the COWS score is 6 or more, or the patient reports cravings, at the start of Day 3, give Day 2's total dose plus an additional 4 mg buprenorphine.
(2) Withdrawal symptoms should be assessed every 2 hours as needed and additional as needed doses administered based on COWS score greater than 6 or patient-reported cravings.
(a) If the COWS score is less than 6, vital signs are stable, no adverse effects are present, and the patient reports no cravings, then the patient is experiencing sufficient relief from their current dose. No additional buprenorphine should be administered.
(b) If the COWS score is 6 or more or the patient reports cravings, a repeat dose of 4 mg buprenorphine may be given every 4 hours up to a maximum Day 3 total dose of 24 mg.
(3) The RN must notify the LIP if the COWS score remains 6 or more or the patient reports cravings after a total dose of 24 mg buprenorphine on Day 3 is given.

v. Days 4 to 7 (72 hours to one week) - Maintenance:
(1) The scheduled total daily dose should be maintained at 24 mg or less before increasing the dose further, regardless of the COWS score.

vi. Day 8 and subsequent the dose may be increased up to a maximum of 32 mg daily for full symptom control.

c. **METHADONE:**

i. Day 1 (0 to 24 hours):
(1) The first dose of methadone is determined by the LIP. The starting dose is typically 20 mg, depending on signs of withdrawal and prior drug history. For women with only mild

symptoms of withdrawal (COWS score 6 or less), the LIP may choose an alternative approach and begin with a lower initial dose of methadone.
(2) The first dose of methadone should be administered per provider order.
(3) Withdrawal symptoms should be assessed every 4 hours and additional as needed doses administered based on COWS score.
(a) If the COWS score is less than 6, vital signs are stable, no adverse effects are present, and the patient reports no cravings, then the patient is experiencing sufficient relief from their current dose. No additional methadone should be administered.
(b) If the COWS score is 6 or more or the patient reports cravings, a repeat dose of 10 mg methadone may be given 4 or more hours after the most recent dose, up to a maximum Day 1 total dose of 30 mg.
(4) The RN must notify the LIP if the COWS score remains 6 or more after a total dose of 30 mg methadone on Day 1 is given.

ii. Day 2 (24 to 48 hours):
(1) The scheduled dose for Day 2, to be administered 24 hours after the first dose on Day 1, is determined by the total dose administered on Day 1 and any breakthrough symptoms that may still be present.
(a) If the COWS score is less than 6 at the start of Day 2 and the patient reports no cravings, give Day 1's total dose of methadone.
(b) If the COWS score is 6 or more or the patient reports no cravings at the start of Day 2, then give Day 1's total dose of methadone plus an additional 10 mg.
(2) Withdrawal symptoms should be assessed every 4 hours and additional as needed doses administered based on COWS score.
(a) If the COWS score is less than 6, vital signs are stable, no adverse effects are present, and the patient reports no cravings, then the patient is experiencing sufficient relief from their current dose. No additional methadone should be administered.
(b) If the COWS score is 6 or more or the patient reports cravings, a repeat dose of 10 mg methadone may be given 4 or more hours after the most recent dose, up to a maximum Day 2 total dose of 40 mg.
(3) The RN must notify the LIP if the COWS score remains 6 or more after a total dose of 40 mg methadone on Day 2 is given.

iii. Day 3 (48 to 72 hours):
(1) The scheduled dose for Day 3, to be administered 48 hours after the first dose on Day 1, is determined by the total dose administered on Day 2 and any breakthrough symptoms that may still be present.
(2) Withdrawal symptoms should be assessed every 4 hours and additional as needed doses administered based on COWS score.
(a) If the COWS score is less than 6, vital signs are stable, no adverse effects are present, and the patient reports no cravings, then the patient is experiencing sufficient relief from their current dose. No additional methadone should be administered.
(b) If the COWS score is 6 or more or the patient reports cravings, a repeat dose of 10 mg methadone may be given 4 or more hours after the most recent dose, up to a maximum Day 3 total dose of 60 mg.
(3) The RN must notify the LIP if the COWS score remains 6 or more after a total dose of 60 mg methadone on Day 3 is given.

iv. Days 4 to 7 (72 hours to one week) - Maintenance:
(1) The scheduled total daily dose should be maintained at 60 mg or less before increasing the dose further, regardless of the COWS score.

v. Days 8 and subsequent the dose may be increased in 5 to 10 mg increments per week, if indicated, to maintain the lowest dose that controls withdrawal symptoms and minimizes the desire to use additional opioids.

vi. The LIP may choose to order methadone as twice daily dosing after stabilization.
(1) The half-life of methadone is about 8 hours during pregnancy, compared with an average half-life of 22 to 24 hours in chronically dosed non-pregnant individuals.

(2) For this reason, twice daily dosing is sometimes used in pregnant women and results in more sustained plasma levels, fewer withdrawal symptoms, and less illicit drug use.
(3) Twice daily dosing also does not suppress fetal neurobehavior (e.g., fetal movement, fetal breathing) as much as single daily dosing.
(4) Twice daily dosing is optimally delivered at 12-hour intervals.

d. **DISCHARGE PLANNING:**
   i. Many experts, including ACOG and SAMHSA, suggest prescribing naloxone upon discharge to patients at risk of opioid overdose.
   ii. Hospital LIPs are not allowed to discharge a patient with a prescription for methadone. Only LIPs with a waiver to prescribe buprenorphine can prescribe buprenorphine when discharged from the hospital. (See regulatory standards.)

E. **Roles and Responsibilities:**
1. The LIP is responsible for the following:
   a. Diagnosing that the patient has OUD
   b. Ensuring that there are no contraindications to whichever medication is to be offered.
   c. Initiating the discussion with the patient regarding the OUD diagnosis and potential management options. See Management, Patient engagement.
      i. It is vitally important that the patient understand that the continuation of buprenorphine outside the hospital will require a transition to an outpatient treatment program (methadone) or DATA waivered provider (buprenorphine). There should be an empathetic but frank discussion with the patient about how their withdrawal will be managed in the hospital. Every effort should be made to deliver a consistent message by all team members.
   d. Offering treatment for OUD
   e. Ordering treatment plan (including medication, assessment frequency, administration parameters, notification parameters, etc.).
   f. Prescribing buprenorphine products, if the prescriber has a DATA waiver.
2. Nursing will assure the following:
   a. COWS score assessments and documentation per this OUD practice guideline and LIP order.
   b. Patient monitoring, including side effects, per this OUD practice guideline and LIP order.
3. Care Management/Social Work will provide, when available and patient is agreeable:
   a. Education about and verification of the patient's understanding of the requirements for acceptance to outpatient treatment.
   b. Coordination of acceptance/transition to an outpatient treatment program.
   c. Determination of which outpatient treatment program to refer the patient to; based on insurance coverage, location, transportation, and any other limiting factors.
   d. Coordination for intake screening with the outpatient treatment program.
   e. Documentation for optimal transition to a treatment program, as applicable.

F. Documentation:
1. COWS scores will be documented in the COWS flowsheet.
2. All other RN assessment documentation will occur in the appropriate flowsheets.
3. Medication administration documentation will occur in the MAR.

Key Words: opioid, opioid substitute therapy, pregnancy, pregnant, obstetric, ob, buprenorphine, methadone, medication assisted therapy, mat, postpartum, intrapartum, antepartum

References: Administering or Dispensing of Narcotic Drugs, 21 C.F.R., § 1306.07, 1998.
American College of Obstetricians and Gynecologists. (2017). ACOG committee opinion no. 711: opioid use and opioid use disorder in pregnancy. *Obstet Gynecol, 130*; e81-94.
The American Society of Addiction Medicine (ASAM). (2015). The ASAM national practice guideline for the use of medications in treatment of addiction involving opioid use. Retrieved from https://www.asam.org/docs/default-source/practice-support/guidelines-and-consensus-docs/asam-national-practice-guideline-supplement.pdf
Klaman, S. L., Isaacs, K., Leopold, A., Perpich, J., Hayashi, S., . . . Jones, H. E. (2017). Treating women who are pregnant and parenting for opioid use disorder and the concurrent

care of their infants and children: literature review to support national guidance. *J Addict Med*, *11*(3); 178-190. doi: 10.1097/ADM.0000000000000308.

Jones, H. E., Martin, P. R., Heil S. H., Kaltenbach, K., Selby, P., … Gischer, G. (2008). Treatment of opioid dependent pregnant women: clinical and research issues. *J Subst Abuse Treat, 35*(3); 245–259. doi: 10.1016/j.jsat.2007.10.007.

Substance Abuse and Mental Health Services Administration. (2016). SAMHSA opioid overdose prevention toolkit. Accessed from https://store.samhsa.gov/shin/content//SMA18-4742/SMA18-4742.pdf.

Approval:

Originator:
Owner:

Appendix A: Diagnostic Criteria for Opioid Use Disorder (OUD)

The Diagnostic and Statistical Manual of Mental Disorders 5th edition (DSM-V) includes opioid abuse and opioid dependence under the diagnosis of opioid use disorder.

Symptoms of opioid use disorder include any two of the following in the past 12 months:

- Taking more opioids than prescribed
- Inability to control opioid usage
- Prolonged recovery from opioid drug effects
- Craving opioids
- Failure to continue activities of daily living, work or school due to opioid usage
- Continued opioid use despite drug associated relationship and social problems
- Continued opioid use despite knowledge of physical or psychological problems associated with opioid drugs
- Opioid tolerance as defined by either “a markedly increased amount of opioids to achieve intoxication or desired effect or a markedly diminished effect with continued use of the same amount of an opioid”
- Presence of withdrawal symptoms when in the absence of opioid drugs

Risk factors for opiate dependence and subsequent withdrawal include:

- Age (< 65 yo)
- Depression
- Psychotropic medication use
- Pain impairment
- Opioid abuse history
- Chronic pain management with opioid drug therapy
- Concomitant substance abuse (i.e. alcohol, psychedelics, cannabis, and/or tobacco)

APPENDIX B: Timeline of Opioid Withdrawal Symptoms

Onset (hours)	Clinical Findings
4 – 12 hours	Diaphoresis, agitation, craving, anxiety
8 – 24 hours	Insomnia, restlessness, lacrimation, rhinorrhea, mydriasis, diaphoresis, yawning
24 – 72 hours	Muscle spasms, tremor, tachycardia, vomiting, diarrhea, chills and piloerection

- Opioid withdrawal typically appears 6 to 12 hours after the last dose of short acting opioids. Opioid withdrawal typically appears 36 hours after last use of methadone.
- Patients experiencing opioid withdrawal may complain of the following (see COWS table):
    - Dysphoria and restlessness
    - Rhinorrhea and lacrimation
    - Myalgias and arthralgias
    - Nausea, vomiting, abdominal cramping, and diarrhea

APPENDIX C: CLINICAL OPIOID WITHDRAWL SCALE (COWS)

Clinical Opioid Withdrawal Scale (COWS)

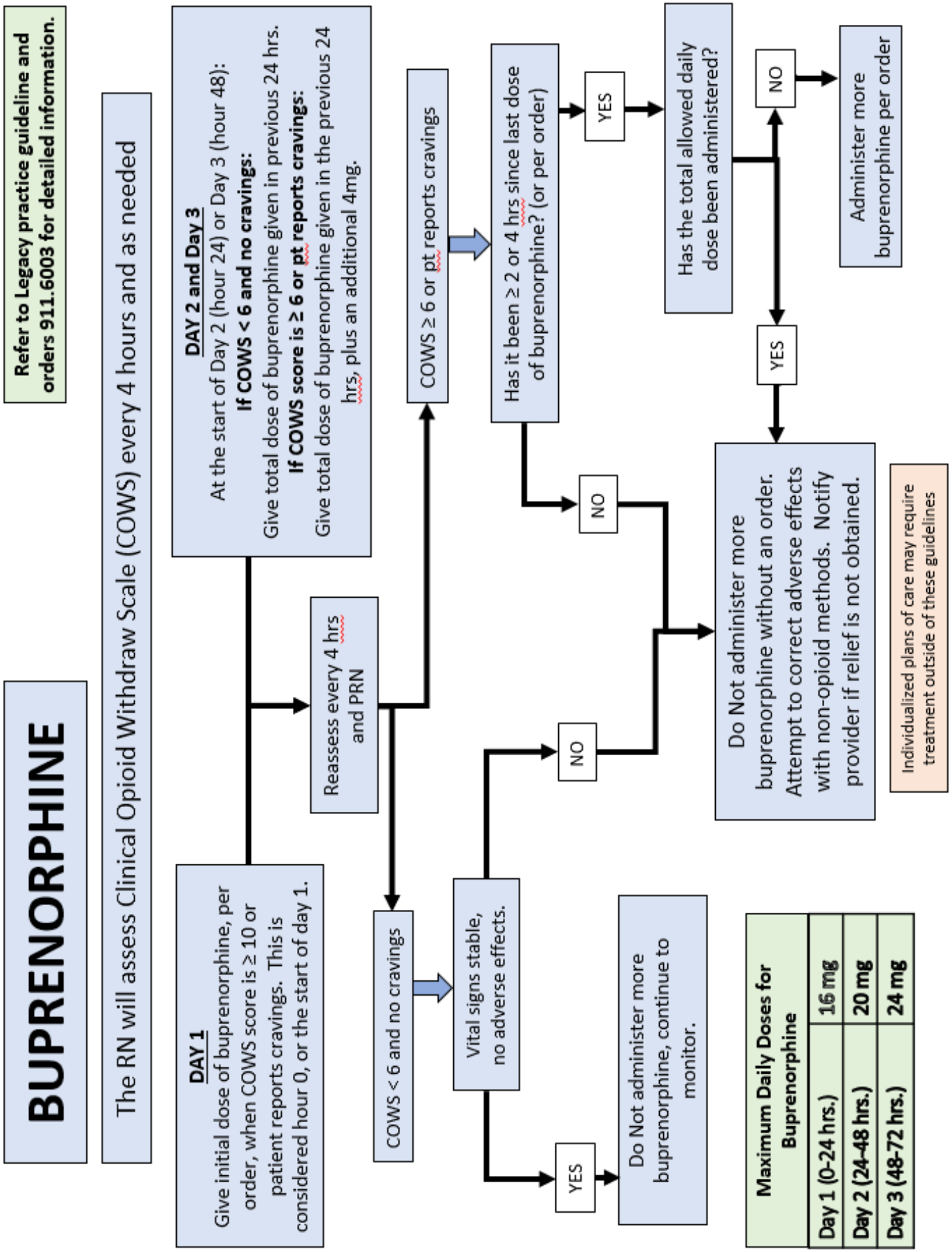
Patient's name:_____	**Date and time:**___/___/___:_____
Reason for this assessment:_____	
Resting pulse rate:_____beats/minute Measured after patient is sitting or lying for one minute	**GI upset:** Over last half-hour
0 pulse rate 80 or below 1 pulse rate 81 to 100 2 pulse rate 101 to 120 4 pulse rate greater than 120	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 half-hour not accounted for by room temperature or patient activity	**Tremor:** Observation of outstretched hands
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	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	**Yawning:** 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 stil l for more than a few seconds	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	**Anxiety or irritability**
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	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	**Gooseflesh skin**
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	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	**Total score:**_____ The total score is the sum of all 11 items
0 not present 1 nasal stuffiness or unusually moist eyes 2 nose running or tearing 4 nose constantly running or tears streaming down cheeks	Initials of person completing assessment:_____

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

GI: gastrointestinal.

Reproduced from: Wesson DR, Ling W. The Clinical Opiate Withdrawal Scale (COWS). J Psychoactive Drugs 2003; 35:253.

APPENDIX D: Buprenorphine Algorithm



APPENDIX E: Methadone Algorithm