Cleveland Clinic Women’s Health
Care of Moms with Opioid Use Disorder
Screening, Treatment, Delivery, Recovery
Rebecca Starck, MD, FACOG
President, Avon Hospital | OB/GYN and Women’s Health Institute | Clinical Assistant Professor of Surgery, Cleveland Clinic Lerner College of Medicine, Case Western Reserve University
Opioid Task Force Goals

• Create comprehensive and cost effective guidelines for pregnant patients with opioid use disorders.

- Universal Screening of all Prenatal Patients
- Support and Resources for OB Providers and Patients
- Care Coordination upon Diagnosis through Postpartum
- Inpatient Management and Referral to Treatment from Triage/ER
- Intrapartum and Postpartum Management
- Post-Delivery Transition
- Management of Neonatal withdrawal
- Safe Prescribing Education for Providers
DATA 5000
X Waiver Training

- ASAM 8-Hour waiver qualifying course that covers all medications and treatments for opioid use disorder, and provides the required education needed to obtain the waiver to prescribe buprenorphine.
- 52 WHI completed training
- 20 received x-waivers
Opioid Task Force Implementation Plan

- Prenatal screening launch – Q1
  - >90% screen rate
  - Outpatient communication/education plans
  - Care coordination with addiction treatment provider

- Inpatient withdrawal ordersets – Q2
  - Nursing education of COWS scoring tool

- Inpatient labor, delivery, post partum ordersets – Q2
  - Anesthesia, OB, nursing education/communication
### Substance Use Screening

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did any of your parents have a problem with alcohol or other drug use?</td>
<td></td>
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</tr>
<tr>
<td>Does your partner have a problem with alcohol or other drug use?</td>
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<tr>
<td>In the past, have you had difficulties in your life because of alcohol or other drugs, including prescription medications?</td>
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</tr>
<tr>
<td>In the past month have you drunk any alcohol or used other drugs?</td>
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<tr>
<td>Are you taking medication for pain during the pregnancy either prescribed or not?</td>
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</tbody>
</table>

Examples may include: Subutex, Methadone, Suboxone, Vicodin, Percocet...
SBIRT: Screen, Brief Intervention, Referral, Treatment
**Provider Education**

**Opiate Addiction and Pregnancy**

**What you need to know…**
Meet the patient where she is at & remember that substance abuse is an illness & a lifelong struggle.

**What are our collaborative goals?**
- Prepare the mother to tutor delivery, newborn needs, sober parenting and provide community resources
- Support patients without judgement
- Talk about addiction so that they know that they are not alone
- Remember that the patient maintains the right to accept or decline treatment; she has to be ready to begin recovery

**Prepare your OB Patient –**
All deliveries, all prescribed or unprescribed opiates, suboxone or methadone exposed neonates may be managed in the hospital for 5 days as per Cleveland Clinic best practice due to the risks associated with withdrawal.

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**What if your pregnant patient informs you they are in a treatment program?**

If this situation presents, please ask your patient the name and number of the treatment program, and ask if she would sign a release of information for the treatment program. Verifying the patient’s treatment during pregnancy is critical for effective management of the pregnancy and supporting the mother and baby postpartum.

If the patient questions why this release is needed, please reassure her that it will allow her to continue to receive her subsites or methadone when she delivers.

Also, reassure the patient that if she is actively in a treatment program – this will allow us to work with that program at delivery and possibly decrease the likelihood that Children Services will need to be involved at delivery.

If a patient misses several appointments or has late start of care, consider a pain panel during the pregnancy and a urine tox at delivery. Pain panels take several days to have a result which is why a urine tox is needed at delivery.

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**What if you are concerned your patient has addiction issues but is not ready to disclose this to you?**

Discuss substance use/drug use with your patient at this information may support her in considering or obtaining treatment.

Consider obtaining a pain panel on the patient to assist you in caring for the patient and the baby. A pain panel is appropriate because it is far more accurate than a urine tox and will distinguish what type of opiate is being abused. Also, a pain panel is the only screen that will detect for subsites or subsites. These medications are usually available without a prescription and it could impact your OB management and the baby at delivery.

If you do order a urine tox screen and it comes back positive, but the patient denies it – do NOT order another tox screen as most substances have a very short half life so a patient can be positive one day and negative the next. Instead contact the lab and ask them to mail out the positive tox screen for further analysis. The lab holds positive tox screens for 30 days.

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**What can Care Management Social Workers do for you?**

We are currently limited in what we can do in the outpatient setting but will continue to provide resources and make referrals based on the assessment.

Social Workers will provide the patient with resources and make referrals based on the assessment.
Authorization to Disclose Health Information

Authorization for the Release of Protected Health Information

I give permission for Hillcrest Hospital to:
[ ] Release to [ ] Receive from

Name of person/doctor/hospital/facility:

Street: ________________ City: ________________ State: ________________ Zip: ________________

Phone: ( ) __________ Fax: ( ) __________

Information to be released:
[ ] Cleveland Clinic Homecare Services
[ ] Emergency Room
[ ] Operative Report
[ ] Discharge Summary
[ ] Pathology Report
[ ] Radiology Report
[ ] History & Physical
[ ] Other: ____________________________

Date(s) of treatment: ____________________________

Purpose of disclosure:
[ ] Continuity of care/follow up
[ ] Personal use
[ ] Legal
[ ] Insurance
[ ] Disability
[ ] Other: ____________________________

Patient Name: ____________________________ SSN: ____________________________ Date of Birth: ____________________________

Telephone: ( ) __________ Current Address: ____________________________

This authorization and consent will expire one year from the date of authorization written below.

I hereby authorize Hillcrest Hospital and it’s employees the right to release any and all information contained in my medical records. I understand and acknowledge that this may include treatment for physical and mental illness, alcohol/drug abuse, and/or detention and/or treatment.

I understand that the authorization may be revoked by me (in writing) at any time except for the extent that action has been taken thereunder. I understand that the information released may be subject to redisclosure by the recipient.

Access to medical information is the right of every patient, duplication and distribution is a service. As a professional courtesy, no cost is assumed for information released directly to your health care provider; all other releases are subject to cost for copying and distribution.

I understand that I am not required to sign this authorization and may refuse to sign it. I understand that I need not sign this form to receive healthcare treatment.

Signature: ____________________________ Date: ____________________________

[ ] Patient, Guardian, Administrator or Entitled (make one)

*If other than the patient’s signature, a copy of legal paperwork verifying the patient’s personal representative MUST accompany the request. A duly appointed guardian, durable power of attorney for health care, or a deceased patient’s death certificate completed with survivor designation of valid paperwork must accompany authorization. Exceptions: parent signing for patient under the age of 18.
Monitor the care of patients who are flagged by screening process through the development of a database and shared list in EPIC.

- Patient list can be used to coordinate care
  - OB
  - NICU
  - MFM
  - Social Work
  - nursing
Trina Pagano MD, FACOG
Medical Director of the Obstetric Emergency Department, Cleveland Clinic Akron General I OB Hospitalist, Women’s Health Institute I Clinical Assistant Professor of Surgery, Cleveland Clinic Lerner College of Medicine, Case Western Reserve University
Epic order set to prompt and assist a provider treating a pregnant woman presenting with opioid use disorder

Order sets adapted from several sources

Text guidance at top for timing of induction and choice of agent.

Patients at risk of opioid withdrawal or showing signs of withdrawal should be initiated on buprenorphine 12-24 hours after last use of short-acting opioid (heroin, oxycodone) or 2-3 days after last use of long-acting agent (methadone). Patient should be in mild to moderate withdrawal.
Order Set Overview

Order choices include:

- Fetal monitoring based upon gestational age
- Buprenorphine/methadone induction with Clinical Opiate Withdrawal Scale (COWS) scoring parameters
- Adjuvant medications for symptomatic treatment
- Labs /Consults
**Clinical Opiate Withdrawal Scale (COWS)**

<table>
<thead>
<tr>
<th></th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Resting Pulse Rate</strong></td>
<td>_____beats/minute</td>
</tr>
<tr>
<td>Measured after patient is sitting or lying for one minute</td>
<td></td>
</tr>
<tr>
<td>0 pulse rate 80 or below</td>
<td></td>
</tr>
<tr>
<td>1 pulse rate 81-100</td>
<td></td>
</tr>
<tr>
<td>2 pulse rate 101-120</td>
<td></td>
</tr>
<tr>
<td>4 pulse rate greater than 120</td>
<td></td>
</tr>
<tr>
<td><strong>GI Upset: over last 1/2 hour</strong></td>
<td></td>
</tr>
<tr>
<td>0 no GI symptoms</td>
<td></td>
</tr>
<tr>
<td>1 stomach cramps</td>
<td></td>
</tr>
<tr>
<td>2 nausea or loose stool</td>
<td></td>
</tr>
<tr>
<td>3 vomiting or diarrhea</td>
<td></td>
</tr>
<tr>
<td>4 multiple episodes of diarrhea or vomiting</td>
<td></td>
</tr>
<tr>
<td><strong>Sweating: over past 1/2 hour not accounted for by room temperature or patient activity.</strong></td>
<td></td>
</tr>
<tr>
<td>0 no report of chills or flushing</td>
<td></td>
</tr>
<tr>
<td>1 subjective report of chills or flushing</td>
<td></td>
</tr>
<tr>
<td>2 flushed or observable moishness on face</td>
<td></td>
</tr>
<tr>
<td>3 beads of sweat on brow or face</td>
<td></td>
</tr>
<tr>
<td>4 sweat streaming off face</td>
<td></td>
</tr>
<tr>
<td><strong>Tremor: observation of outstretched hands</strong></td>
<td></td>
</tr>
<tr>
<td>0 no tremor</td>
<td></td>
</tr>
<tr>
<td>1 tremor can be felt, but not observed</td>
<td></td>
</tr>
<tr>
<td>2 slight tremor observable</td>
<td></td>
</tr>
<tr>
<td>4 gross tremor or muscle twitching</td>
<td></td>
</tr>
<tr>
<td><strong>Restlessness: Observation during assessment</strong></td>
<td></td>
</tr>
<tr>
<td>0 able to sit still</td>
<td></td>
</tr>
<tr>
<td>1 reports difficulty sitting still, but is able to do so</td>
<td></td>
</tr>
<tr>
<td>3 frequent shifting or extraneous movements of legs/arms</td>
<td></td>
</tr>
<tr>
<td>5 unable to sit still for more than a few seconds</td>
<td></td>
</tr>
<tr>
<td><strong>Yawning: Observation during assessment</strong></td>
<td></td>
</tr>
<tr>
<td>0 no yawning</td>
<td></td>
</tr>
<tr>
<td>1 yawning once or twice during assessment</td>
<td></td>
</tr>
<tr>
<td>2 yawning three or more times during assessment</td>
<td></td>
</tr>
<tr>
<td>4 yawning several times/minute</td>
<td></td>
</tr>
<tr>
<td><strong>Pupil size</strong></td>
<td></td>
</tr>
<tr>
<td>0 pupils pinned or normal size for room light</td>
<td></td>
</tr>
<tr>
<td>1 pupils possibly larger than normal for room light</td>
<td></td>
</tr>
<tr>
<td>2 pupils moderately dilated</td>
<td></td>
</tr>
<tr>
<td>3 pupils so dilated that only the rim of the iris is visible</td>
<td></td>
</tr>
<tr>
<td><strong>Anxiety or Irritability</strong></td>
<td></td>
</tr>
<tr>
<td>0 none</td>
<td></td>
</tr>
<tr>
<td>1 patient reports increasing irritability or anxiety</td>
<td></td>
</tr>
<tr>
<td>2 patient obviously irritable or anxious</td>
<td></td>
</tr>
<tr>
<td>4 patient so irritable or anxious that participation in the assessment is difficult</td>
<td></td>
</tr>
<tr>
<td><strong>Bone or Joint aches: If patient was having pain previously, only the additional component attributed to opiates withdrawal is scored</strong></td>
<td></td>
</tr>
<tr>
<td>0 not present</td>
<td></td>
</tr>
<tr>
<td>1 mild diffuse discomfort</td>
<td></td>
</tr>
<tr>
<td>2 patient reports severe diffuse acheing of joints/muscles</td>
<td></td>
</tr>
<tr>
<td><strong>Gooseflesh skin</strong></td>
<td></td>
</tr>
<tr>
<td>0 skin is smooth</td>
<td></td>
</tr>
<tr>
<td>3 piloerection of skin can be felt or hairs standing up on arms</td>
<td></td>
</tr>
<tr>
<td>5 prominent piloerection</td>
<td></td>
</tr>
</tbody>
</table>
COWS Documentation and Smartphrase

COWS Assessment Needed/Ordered?

<table>
<thead>
<tr>
<th>Clinical Opiate Withdrawal Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resting Pulse Rate</td>
</tr>
<tr>
<td>Sweating</td>
</tr>
<tr>
<td>Restlessness</td>
</tr>
<tr>
<td>Tremors</td>
</tr>
<tr>
<td>Pupil Size</td>
</tr>
<tr>
<td>GI upset</td>
</tr>
<tr>
<td>Anxiety or Irritability</td>
</tr>
<tr>
<td>Bone or Joint Aches</td>
</tr>
<tr>
<td>Yawning</td>
</tr>
<tr>
<td>Runny Nose or Tearing</td>
</tr>
<tr>
<td>Gooseflesh Skin</td>
</tr>
<tr>
<td>COWS Formula Row</td>
</tr>
<tr>
<td>COWS Withdrawal Level</td>
</tr>
</tbody>
</table>

COWS Assessment - Last four assessments recorded

<table>
<thead>
<tr>
<th>COWS Total Score</th>
<th>COWS Withdrawal Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/8/2018 0834</td>
<td>Moderate**</td>
</tr>
<tr>
<td>8/8/2018 0934</td>
<td>Mild</td>
</tr>
<tr>
<td>8/8/2018 1033</td>
<td>Mild</td>
</tr>
<tr>
<td>8/8/2018 1200</td>
<td>Mild</td>
</tr>
</tbody>
</table>

Abbreviation: COWSASSESSMENTLAST4
Expansion: Displays last 4 COWS Assessment Nursing Documentation Entries
Fetal Monitoring

- Fetal monitoring selection based upon gestational age or situation.

- Non-Stress Test - for GA greater than or equal to 24 weeks
  ONGOING, NST daily and prn for COWS greater than 20 (maximum twice daily monitoring)

- Fetal Heart Tones - for GA greater than 12 weeks and less than 24 weeks
  ONGOING, Fetal heart tones daily and prn for COWS greater than 20 (maximum twice daily monitoring)

- Continuous Fetal Monitoring - External
  ONGOING
Buprenorphine Induction Panels

- Buprenorphine group expanded by default
- Text guidance at top
- Two panel choices for Day 1 or subsequent days

**Buprenorphine Induction (AK,FV,HL)**

**Initial Day 1 dose recommendation:**
- 4 mg if transitioning from use of short-acting opioids
- 2 mg if transitioning from use of long-acting opioids

**Day 2 and beyond:**
Give total buprenorphine dose received on previous day as new daily dose administered as single daily dose or split BID dosing (Max 16 mg)

- Buprenorphine Induction - DAY 1
- Buprenorphine Induction - DAY 2 and beyond
Buprenorphine

Day 1

- COWS monitoring linked and automatically ordered

<table>
<thead>
<tr>
<th>Buprenorphine Induction (AK,FV,HL)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Initial Day 1 dose recommendation:</strong></td>
</tr>
<tr>
<td>4 mg if transitioning from use of short-acting opioids</td>
</tr>
<tr>
<td>2 mg if transitioning from use of long-acting opioids</td>
</tr>
<tr>
<td><strong>Day 2 and beyond:</strong></td>
</tr>
<tr>
<td>Give total buprenorphine dose received on previous day as new daily dose administered as single daily dose or split BID dosing (Max 16 mg)</td>
</tr>
</tbody>
</table>

- **Buprenorphine Induction - DAY 1**
  - **buprenorphine SL tab(s) (SUBUTEX)**
    - SUBLINGUAL, ONCE, 1 dose Today at 1630
    - Give first dose when COWS score GREATER THAN 10.
  - **buprenorphine SL 4 mg tab(s) (SUBUTEX)**
    - 4 mg, SUBLINGUAL, EVERY 2 HOURS AS NEEDED starting Today at 1611 until Tomorrow at 1610, COWS score GREATER THAN 6
    - Max total day 1 buprenorphine dose = 12 mg

- Frequency of 12 doses/day exceeds recommended maximum of 1 doses/day

- **COWS score**
  - Routine, ONGOING First occurrence Today at 1615 Until Specified. Assess COWS score at baseline prior to buprenorphine administration. Reassess COWS score 1-2 hours after any buprenorphine dose. COWS score should also be assessed PRN patient report of withdrawal symptoms.
Buprenorphine Day 2 and Beyond

- Subsequent days – provider chooses daily dose with text guidance
- COWS monitoring order remains active from Day 1

**Buprenorphine Induction (AK,FV,HL)**

- **Initial Day 1 dose recommendation:**
  4 mg if transitioning from use of short-acting opioids
  2 mg if transitioning from use of long-acting opioids

- **Day 2 and beyond:**
  Give total buprenorphine dose received on previous day as new daily dose administered as single daily dose or split BID dosing (Max 16 mg)

- **Buprenorphine Induction - DAY 1**
  - Buprenorphine 0.3 mg tab(s) (SUBUTEX)
  - Buprenorphine 0.6 mg tab(s) (SUBUTEX)
  - Buprenorphine 0.9 mg tab(s) (SUBUTEX)

- **Buprenorphine Induction - DAY 2 and beyond**
  - Buprenorphine 0.3 mg tab(s) (SUBUTEX)
  - Buprenorphine 0.6 mg tab(s) (SUBUTEX)
  - Buprenorphine 0.9 mg tab(s) (SUBUTEX)

- **Frequency of 12 doses/day exceeds recommended maximum of 1 doses/day**
Methadone Induction Panels

- Methadone group collapsed by default, when expanded:

- Two panel options (may select only one at a time)
  - Initial day
  - Subsequent days

Prior to discharge, outpatient treatment center must be arranged and follow-up scheduled to occur within 24 hours of discharge.

- Methadone Induction - DAY 1
- Methadone Induction - DAY 2 and beyond
Methadone

Includes appropriate default dose, EKG and COWS assessment orders

<table>
<thead>
<tr>
<th>Methadone Induction - DAY 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Methadone 20 mg tab(s) (DOLOPHINE)</td>
</tr>
<tr>
<td>20 mg, ORAL, ONCE, 1 dose Today at 1800</td>
</tr>
<tr>
<td>EKG must be interpreted prior to dose. Hold if QTc greater than 450 msec</td>
</tr>
<tr>
<td>✓ EKG</td>
</tr>
<tr>
<td>Routine, ONCE First occurrence Today at 1545</td>
</tr>
<tr>
<td>P: Reason for EKG: Other - Specify</td>
</tr>
<tr>
<td>Pre first dose of methadone</td>
</tr>
<tr>
<td>✓ EKG</td>
</tr>
<tr>
<td>Routine, CONDITIONAL X 1 starting Today at 1539 for 1 occurrence</td>
</tr>
<tr>
<td>P: Reason for EKG: Other - Specify</td>
</tr>
<tr>
<td>Condition for Release of Order: OTHER (ENTER COMMENT)</td>
</tr>
<tr>
<td>Post first dose of methadone</td>
</tr>
<tr>
<td>✓ COWS score</td>
</tr>
<tr>
<td>Routine, ONGOING First occurrence Today at 1545 Until Specified, Assess COWS score at baseline prior to methadone administration; Reassess COWS score 4 hours after any methadone dose. COWS score should also be assessed PRN patient report of withdrawal symptoms.</td>
</tr>
<tr>
<td>✓ Methadone 5 mg tab(s) (DOLOPHINE)</td>
</tr>
<tr>
<td>5 mg, ORAL, EVERY 4 HOURS AS NEEDED starting Today at 1539 until Tomorrow at 1538, COWS score GREATER THAN 6</td>
</tr>
<tr>
<td>Total day 1 methadone dose not to exceed 40 mg</td>
</tr>
</tbody>
</table>
Methadone
Day 2 and Beyond

• Subsequent days, provider enters daily dose with guidance text

• COWS monitoring order remains active from Day 1

<table>
<thead>
<tr>
<th>Methadone Induction - DAY 2 and beyond</th>
</tr>
</thead>
<tbody>
<tr>
<td>Give total methadone dose received in previous 24 hrs as new daily dose. PRN doses of 5-10 mg should be given for COWS scores greater than 6. Continue increasing daily dose based on previous day until no symptoms of withdrawal for 24 hours.</td>
</tr>
</tbody>
</table>

- methadone tab(s) (DOLOPHINE)
  - ORAL DAILY, First Dose Today at 1600, Until Discontinued

- methadone 5 mg tab(s) (DOLOPHINE)
  - 5 mg, ORAL, EVERY 4 HOURS AS NEEDED starting Today at 1940 Until Discontinued, COWS score GREATER THAN 6 Maximum 2 PRN doses per day
Adjunct Symptom Management

- Adjunct meds available (no defaults)
- Withdrawal symptoms
- Antiemetics
- Standard nicotine patch panels

<table>
<thead>
<tr>
<th>Adjunct Withdrawal Medications</th>
</tr>
</thead>
<tbody>
<tr>
<td>- diphenhydramine (BENADRYL)</td>
</tr>
<tr>
<td>- hydroxyzine HCl tab(s) (ATARAX)</td>
</tr>
<tr>
<td>- clonidine HCl tab(s) (CATAPRES)</td>
</tr>
<tr>
<td>- loperamide for diarrhea</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Antiemetics - First Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>- ondansetron IV/PO</td>
</tr>
<tr>
<td>- promethazine tab(s) (PHENERGAN)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Antiemetics - Second Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>- ondansetron IV/PO</td>
</tr>
<tr>
<td>- promethazine tab(s) (PHENERGAN)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nicotine Patch</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Patient smoking LESS THAN 10 cigarettes per day - nicotine topical patch 14 mg/24 hr (NICODERM)</td>
</tr>
<tr>
<td>- Patient smoking 10 OR MORE cigarettes per day - nicotine topical patch 21 mg/24 hr (NICODERM)</td>
</tr>
</tbody>
</table>
Consults

- Neonatology and Care Management consults defaulted
- Optional for consult to Psychiatry or Addiction Medicine (based on service availability at that site)
Reference Guide for Order Set

- Document is available to all providers on Clinical Resource Sharing in Epic

- Offers guidance for management with utilization of the order set.
Resources Linked Through Epic

Opiate Resources

All Links

URL

- OB_Opioid_Prenatal_Screening_3-22-18
- Opiate Addiction and Pregnancy
- OUD in Pregnancy Order Set Guide rev 8.20.18
- Reference Guide for Substance Use during Pregnancy
- Resources for Addiction Treatment in pregnant women Oct_2017
- SBIRT FAQ1
- SBIRT graphic pdf for sharing

OUD in Pregnancy order set:

Day 1 buprenorphine:
- Initiate first dose 12-24 hours after last use of short acting opioid (heroin, oxycodone) or 2-3 days after long acting agent (methadone). Patient should be in mild to moderate withdrawal.
- Initiate buprenorphine 4 mg SL (for transitioning from short acting) or 2 mg (for transitioning from long acting.)
- Observe for one to two hours for precipitated withdrawal. If no precipitated withdrawal then can give buprenorphine 2-4 mg PRN COWs score prn COWs > 6.
- If precipitated withdrawal occurs treat with an additional 2-4 mg SL buprenorphine
- First day max =12 mg
- Patient should hold the film or tablet under tongue until completely dissolved before swallowing.

Day 2 Buprenorphine:
- Calculate total dose from day 1 and give as single dose on day 2 (at least 8 hours from last dose administered). If still having withdrawal symptoms then give additional 2-4 mg PRN COWs > 6.
- Second day max dose=16 mg.

Day 3 Buprenorphine:
- Same as Day 2. Divided dosing may be required to sustain plasma levels in pregnancy. May divide total daily dose into 8/6 or 10/1. Most will stabilize on 8-16 mg/day. If still symptomatic, consider consulting with addiction specialist
Transitioning to Treatment Provider or Center

- Collaboration with treatment providers who give priority appointments to pregnant women
- Over 40 treatment providers/centers
- Over 20 OBs with DATA 5000 x-waiver to bridge
Title 21 Code of Federal Regulations

PART 1306 — PRESCRIPTIONS

GENERAL INFORMATION

§1306.07 Administering or dispensing of narcotic drugs.

(a) A practitioner may administer or dispense directly (but not prescribe) a narcotic drug listed in any schedule to a narcotic dependant person for the purpose of maintenance or detoxification treatment if the practitioner meets both of the following conditions:

1. The practitioner is separately registered with DEA as a narcotic treatment program.
2. The practitioner complies with DEA regulations regarding treatment qualifications, security, records, and unsupervised use.

(b) Nothing in this section shall prohibit a physician who is not specifically registered to conduct a narcotic treatment program from administering (but not prescribing) narcotic drugs to a person for the purpose of relieving acute withdrawal symptoms when necessary while arrangements are being made for referral for treatment. Not more than one day's medication may be administered to the person or for the person's use at one time. Such emergency treatment may be carried out for not more than three days and may not be renewed or extended.

(c) This section is not intended to impose any limitations on a physician or authorized hospital staff to administer or dispense narcotic drugs in a hospital to maintain or detoxify a person as an incidental adjunct to medical or surgical treatment of conditions other than addiction, or to administer or dispense narcotic drugs to persons with intractable pain in which no relief or cure is possible or none has been found after reasonable efforts.
AIM OUD in Pregnancy Safety Bundle Training
Checklist: Caring for Pregnant Women with Opioid Use Disorder from Diagnosis beyond Postpartum

RESOURCES

- AIM Neonatal Abstinence Syndrome Slides
- AIM Opioid Implementation Guide
- AIM Opioid Metrics
- AIM Opioid Screening Tool Chart
- AIM Opioid Use Disorder Chart Checklist
- AIM Screening Slides
- AIM “Questions for States to Consider”
- Question Regarding Inpatient MAT Administration & 3-Day Limit
- Stigma and Opioid Use
- Additional Resources

Opioid Use Disorder Clinical Pathway
Jalal M Abu-Shaweesh, MD, MBA
Chairman of Pediatrics, Fairview Hospital
Children’s Liaison, International Operations
Cleveland Clinic Children’s
Associate Professor of Pediatrics | CCLCM
In the United States an estimated 21,732 babies were born with Neonatal Abstinence Syndrome in 2012. This is a 5 fold increase since the year 2000.

Every 25 minutes an infant is born suffering from opioid withdrawal.
• The hospitalization rate of NAS has increased rapidly in Ohio between 2006 and 2015. In 2015 alone, there were 2,174 admissions to inpatient settings, which equates to nearly six admissions per day.

• In Ohio, the rate of NAS grew nearly 8 times between 2006 to 2015.
Opioid Use in Pregnancy

Opioid use in pregnancy can cause severe withdrawal symptoms in newborns, leading to higher hospital costs.

Hospital Costs

- Costs for newborns with no withdrawal: $3,500
- Costs for newborns in withdrawal: $66,700
• Comprehensive approach to managing NAS infants
  - Prenatal consult, intrapartum, post partum follow up care

• Careplan to identify long-term facility or outpatient management
• Updated NAS Protocol
• Dual Scoring in Newborn Nursery
• Cohorting
• Identify Children’s Hospital for Rehab for management of newborn requiring long-term withdrawal treatment
• Developmental Clinic follow up appointments
• Change to umbilical cord newborn drug testing
### Phase NAS protocol

<table>
<thead>
<tr>
<th>Phase</th>
<th>NAS protocol</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Initiation</strong></td>
<td>3 consecutive scores of 9-11 OR 2 consecutive scores of 12 or greater</td>
</tr>
<tr>
<td><strong>Initial morphine dose</strong></td>
<td>Starting dose is 0.05 mg/kg/dose q3h No loading dose is given</td>
</tr>
<tr>
<td><strong>IV morphine</strong></td>
<td>IV morphine only indicated if infant cannot take enteral morphine. Dose is 0.02 mg/kg/dose q3h (no infusion). Increase by 0.01 mg/kg/dose q3h until symptoms are controlled</td>
</tr>
<tr>
<td><strong>Escalation</strong></td>
<td>For 2 consecutive scores of 9-12: increase by 0.02 mg/kg/dose  For 2 consecutive scores of 13 or higher: increase by 0.04 mg/kg/dose</td>
</tr>
<tr>
<td><strong>Adjunct therapy</strong></td>
<td>Start clonidine at 1 mcg/kg/dose q3h when morphine is 0.1 mg/kg/dose OR if unable to wean infant for 2 consecutive weaning attempts</td>
</tr>
<tr>
<td><strong>Adjunct escalation</strong></td>
<td>Increase clonidine by 0.5 mcg/kg/dose (max dose 2 mcg/kg/dose) every 24 hours until all scores are less than 9</td>
</tr>
<tr>
<td><strong>Weaning</strong></td>
<td>Wean by 10% of the original stabilization dose every 24 hours for scores less than 9</td>
</tr>
<tr>
<td><strong>Backslide</strong></td>
<td>If infant has 2 consecutive scores of 9 or greater after a wean, return to previous dose. Wait 48 hours to resume wean.</td>
</tr>
<tr>
<td><strong>Morphine DC</strong></td>
<td>DC morphine when scores are less than 9 for at least 24 hours on a total dose of less than 0.02 mg/kg/dose</td>
</tr>
<tr>
<td><strong>Clonidine DC</strong></td>
<td>Start wean 24 hours after morphine DC. Wean by 25% of original dose every 24 hours for scores less than 9</td>
</tr>
<tr>
<td><strong>Time off prior to DC</strong></td>
<td>48 hours after last morphine dose</td>
</tr>
<tr>
<td><strong>Feeds</strong></td>
<td>Breast milk or low lactose 22 kcal formula Change formula back to 20 kcal at DC</td>
</tr>
</tbody>
</table>

**Updated NAS Protocol**
Updated Umbilical Cord Testing

• Ease of sample collection
  - Cord can be sent for testing immediately or up to 3 weeks later if properly prepared and refrigerated.

• Faster turn-around times for results
  - Negative results are available 24 hours after specimen receipt
  - Positive results available 1-3 days after receipt.
Advantages

- Umbilical cord testing reviews 48 drugs/metabolites
  - Current urine/meconium reviews 5-9 drugs
- Umbilical cord testing has a similar look-back period to meconium
  - Approximately 12 weeks
Fetal cord levels should be subclinical and not result in a false positive; it is theoretically possible (but unlikely).

• Toxicologists at the testing company (ARUP) are available to assist with interpretation if needed.
<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
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<tr>
<td>1</td>
<td>Buprenorphine</td>
<td>6</td>
<td>Fentanyl</td>
<td>11</td>
<td>Methadone</td>
<td>16</td>
<td>Oxycodone</td>
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<td>Tapentadol</td>
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<td>Norbuprenorphine</td>
<td>7</td>
<td>Hydrocodone</td>
<td>12</td>
<td>Methadone metabolite</td>
<td>17</td>
<td>Noroxycodone</td>
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<td>Buprenorphine-G</td>
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<td>Norhydrocodone</td>
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<td>6-Acetylmorphine</td>
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<td>Oxymorphone</td>
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<td>9</td>
<td>Hydromorphone</td>
<td>14</td>
<td>Morphine</td>
<td>19</td>
<td>Noroxymorphone</td>
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<td>Dihydrocodeine</td>
<td>10</td>
<td>Meperidine</td>
<td>15</td>
<td>Naloxone</td>
<td>20</td>
<td>Propoxyphene</td>
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<td>31</td>
<td>Methamphetamine</td>
<td>36</td>
<td>Clonazepam</td>
<td>41</td>
<td>Alpha-OH-Midazolam</td>
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<td>Zolpidem</td>
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<td>Phentermine</td>
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<td>7-Aminoclazepam</td>
<td>42</td>
<td>Nordiazepam</td>
<td>47</td>
<td>Phencyclidine - PCP</td>
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<tr>
<td>33</td>
<td>Alprazolam</td>
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<td>Diazepam</td>
<td>43</td>
<td>Oxazepam</td>
<td>48</td>
<td>Marijuana Metabolite</td>
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<tr>
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<td>Alpha-OH-Alprazolam</td>
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<td>Lorazepam</td>
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<td>Phenobarbital</td>
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<td>Butalbital</td>
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<td>Midazolam</td>
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<td>Temazepam</td>
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<td>Benzoylecgonine</td>
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<td>m-OH-Benzoylecgonine</td>
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<td>MDMA-Ecstasy</td>
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</tbody>
</table>
Urine/mecconium testing will be available for ordering as separate tests and will no longer be part of the admission orderset.
McCallum R. Hoyt, MD, MBA
Director of Obstetric Anesthesia, AI | Clinical Professor of Anesthesiology, CCLCM | Chair ASA Committee on Obstetric Anesthesia | ASA Liaison to ACOG Committee on Obstetric Practice | Past President SOAP
Intrapartum Pain Management of the SUD Parturient:

With special emphasis on the patient taking buprenorphine for addiction maintenance therapy
Basic Anesthesia Consideration: Patients currently actively using

- Patients who are currently using will respond to opioids but may have greater requirements
- The response to neuraxial opioids is generally preserved
- The response to IV/PO opioids may be altered
  - Generally greater amounts are required
  - Monitoring for respiratory depression should be enhanced
Basic Anesthesia Considerations: Patients on Addiction Maintenance Therapy

**Methadone**
- Advise to continue usual doses
- Neuraxial analgesia is fine
- Avoid nalbuphine
  - May initiate withdrawal

**Buprenorphine**
- Advise to continue usual maintenance doses
  - Summate total daily dose and give q 6hr ATC
- Neuraxial analgesia is fine but opioids ineffective
• Opioid does not need to be removed from the epidural solution
• IV opioid doses may be used but dose may need to be lowered
• Avoid benzodiazepine use with methadone
  - Excessive sedation and fatalities reported
• Consider maintaining epidural infusion postpartum or post-cesarean for analgesia
  - Consider a field block (i.e. TAP of QL) if neuraxial morphine is avoided for post-cesarean coverage
• Buprenorphine blocks the effects of narcotics at the receptor level, making pain management more challenging in these patients

• It requires very large amounts opioids to provide affective pain relief. Must be cautious to monitor for respiratory depression

• Some dispute whether affective analgesia is even possible

The Buprenorphine Dilemma
Management Dilemma:
Is it harmful to expose a patient on opioid addiction therapy to even a small amount of opioid?

Short answer: We don’t know
Opioids will be ineffective
- Replace opioids with clonidine
  - Alpha 2 agonist
- Resistance to clonidine d/t FDA Black Box warning:
  - Hypotension
  - Sedation
  - Maternal Bradycardia
  - Fetal Bradycardia
- What’s the appropriate clonidine dose?

Clonidine for the Buprenorphine Patient
• Epidural syringe solution
  - 0.125% Bupivacaine w/ 5mcg fentanyl per ml + 1.25mcg epinephrine per ml

• Epidural infusion solution
  - 0.0625% Bupivacaine w/ 1.2mcg clonidine per ml + 1.25 mcg epinephrine per ml

• Hypotension in 3 of 12 with response to pressors and no fetal compromise

• No other side effects

Hoyt et al. IJOA. 2018;34:67-72
Buprenorphine Patient

- During labor:
  - Add clonidine to epidural mixture
  - Run solution as would normally
  - Give 25% of total buprenorphine dose on q6hr regimen as a pain management modality

- Postpartum:
  - Non-opioid medications on a schedule, not prn
    - 1000mg po acetaminophen q6 and 30mg iv ketorolac q6
  - May increase total buprenorphine dose for mild analgesia during postpartum hospitalization
    - Up to 36 mg/day
Buprenorphine Patient

- Cesarean Delivery
  - CSE Technique
    - Standard spinal dosing but omit opioid
    - Start bupivacaine/clonidine mix at 8-10ml/hr.
    - Maintain 20-24 hrs.
    - As infusion terminates, give non-opioids on a schedule for 24 hrs.
      - 1000mg po acetaminophen q6 and 30mg iv ketorolac q6

Hoyt et al. IJOA. 2018;34:67-72
Buprenorphine Patient

- Cesarean Delivery (Other options)
  - TAP blocks are a possibility
    - Quadratus lumborum (QL) blocks
  - Fentanyl has higher mu receptor affinity than morphine so consider for IV-PCA route
    - Doses will be markedly larger
    - May need an ICU setting or Pain Service assistance
  - Avoid low affinity oral opioids such as codeine or hydrocodone
These are challenging patients, especially those on buprenorphine.

Going forward, buprenorphine will likely be more prevalent than methadone for maintenance therapy:
- Better NAS scores and ease of use.

Do not stop current dosing regimens:
- Divide total daily dose of buprenorphine by 4 and give q6.

Clonidine substituted for opioids is very effective:
- Consult with your Pharmacy Dept. for use.
Summary

• Set expectations and use non-opioid agents aggressively post-delivery

• If opioids are necessary, use only high affinity
  - Fentanyl
  - Consider the need for ICU admission
  - Consider Pain Service involvement
Eric Chiang, MD
Director, Western Region | Anesthesiology Institute | Clinical Assistant Professor of Anesthesiology, Cleveland Clinic Lerner College of Medicine, Case Western Reserve University
Prevention

• What is the risk for addiction after a single elective procedure?
New Persistent Opioid Use After Minor and Major Surgical Procedures in US Adults

Chad M. Brummett, MD¹,²; Jennifer F. Waljee, MD, MPH, MS²,³; Jenna Goesling, PhD¹; et al

Author Affiliations


Key Points

Question  What is the incidence of new persistent opioid use after surgery?

Findings  In this population-based study of 36177 surgical patients, the incidence of new persistent opioid use after surgical procedures was 5.9% to 6.5% and did not differ between major and minor surgical procedures.
Study Design

- Opiate-naive patients 18-64 years old (>11 months w/o prescription)
  - Three groups
    - Minor surgery
    - Major surgery
    - Nonsurgical comparison
New Chronic Users

- Definition: Still filling opioid prescription filled between 90 and 180 days
- Duration of acute postsurgical pain: < 6 weeks
- CDC recommendations:
  - < 3 days (most)
  - < 7 days (some)
  - > days (rare/complex)
Results

- Minor Procedures:
  - 5.9%

- Major Procedures:
  - 6.5%

- Control:
  - 0.4%
Risk Factors

- Tobacco use
- ETOH abuse
- Other substance abuse
- Anxiety, depression
- Pre-operative pain disorders
Take Home

- New persistent opioid use is more common than previously reported
- **Most common complication** after elective surgery?
- Is associated with behavioral disorders
- Suggests persistent opioid use is not due to surgical pain, but **addressable patient-level predictors**
A Case Study
Fairview Postpartum
Cultural Change

- Identified Need for Cultural Change
- Breast Feeding Compliance
- Postpartum Depression Association
- Patient Satisfaction
The Power of Education

A single one hour educational session
• Information on the current opioid epidemic.
• Importance of non-pharmacologic therapy
• Role of non-narcotic pain medications.
Systemic Change

• Postop Anesthesia Protocol Change
  • Shift from “PRN” to “Scheduled”
  • Clear definition of ”Breakthrough”
Protocol Change

PRN
- Percocet 5/325mg q4h prn
- Toradol 30mg IV q6h prn

Scheduled
- Acetaminophen 1000mg PO q6h
- Toradol 15mg IV q6h
- Three Hour Stagger

Breakthrough
- Toradol 15mg IV q6h prn moderate pain
- Oxycodone 5mg PO q4h prn severe pain
Average MED 0-24 Hours

*ROOT Protocol implemented March 1, 2018*
Average MED / Patient Over Time

- Pre-ROOT (Dec17-Feb18)
- Post-ROOT (Mar18-Oct18)
Percentage of Opioid Free C-section Cases
Discharge Prescribing

• Opioid prescriptions Dec17-Sept18
  - 331 prescriptions
  - Average of 20.5 tablets
  - 102.5 mg oxycodone = 154 MED / prescription
- Patients are using less than one pill a day POD 3 and 4
- Decrease discharge medications to 10 pills (50 percent reduction).