Cleveland Clinic Women's Health

Care of Moms with Opioid Use Disorder

Screening, Treatment, Delivery, Recovery

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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

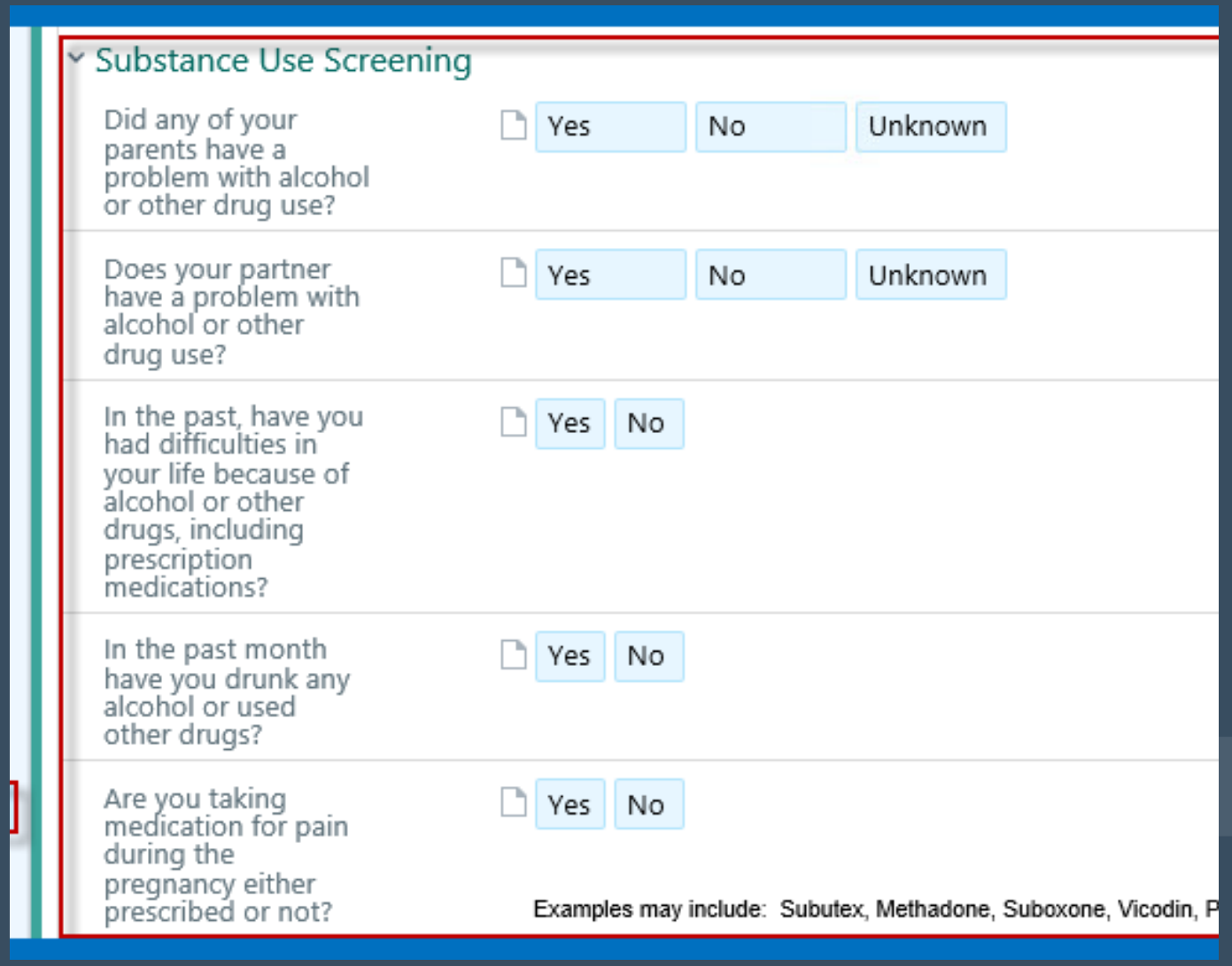
- ASAM 8-Hour waiver qualifying course that covers all medications and treatments for opioid use disorder, and provides the required education needed to obtain the waiver to prescribe buprenorphine.

- 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

Prenatal Screening Launch



SBIRT: Screen, Brief Intervention, Referral, Treatment

Cleveland Clinic

Some risks of drinking and drug use during pregnancy

Withdrawal
(opiates, cocaine, marijuana, amphetamines, alcohol, benzos)

Fetal alcohol spectrum disorders
(alcohol)

Birth defects
(alcohol, marijuana, cocaine, opiates)

Low birth weight
(alcohol, marijuana, cocaine, opiates, meth, tobacco)

Miscarriage
(alcohol, cocaine, tobacco)

Premature birth
(alcohol, marijuana, cocaine, opiates, meth, tobacco)

Sudden Infant Death Syndrome
(tobacco)

Development and behavior problems
(alcohol, marijuana, opiates, meth)

Readiness ruler

Not at all 0 1 2 3 4 5 6 7 8 9 10 Very

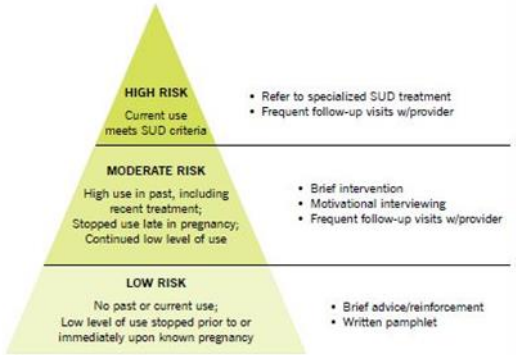
SBIRT Oregon. Oregon Health and Science University, Department of Family Medicine. Available at: http://www.sbirtoregon.org/clinic-tools/. Accessed April 8, 2017.
March of Dimes. Available at: https://www.marchofdimes.org/pregnancy/street-drugs-and-pregnancy.aspx. Accessed on February 21, 2018.

Steps of the brief intervention

Raise the subject	• "Thank you for completing this questionnaire -is it ok with you if we review your results?" • "Can you tell me more about your past/current drinking or drug use? What does a typical week look like?"
Provide feedback	• "Sometimes patients who give similar answers on this questionnaire are continuing to use drugs or alcohol during their pregnancy." • "I recommend to all my pregnant patients not to use any amount of alcohol or drugs, because of the risks shown on the front of this page."
Enhance motivation	• "What do you like and what are you concerned about when it comes to your substance use?" • "On a scale of 0-10, how ready are you to avoid drinking/using altogether? Why did you pick that number rather than a ____ (lower number)?"
Negotiate plan	• Summarize conversation. Then: "What steps do you think you can take to reach your goal of having a healthy pregnancy and baby?" • "I hope we can check in about this next time -can we schedule a date?"

SAMHSA National Helpline
24/7 hotline that quickly identifies treatment resources for patients experiencing a substance use disorder:
1-800-662-HELP (4357)

Risk pyramid for assessment of substance use during pregnancy



Billing codes

Screening only

Commercial & Medicaid	CPT 96160

Screening plus brief intervention

Commercial	≥15 min: CPT 99408
	≥30 min: CPT 99409
Medicaid	≥15 min: G0396
	≥30 min: G0396

SUD, substance use disorder.
Wright. SBIRT in pregnancy. Am J Obstet Gynecol 2016.
SBIRT Oregon. Oregon Health and Science University, Department of Family Medicine. Available at: http://www.sbirtoregon.org/clinic-tools/. Accessed April 8, 2017.

Provider Education

Cleveland Clinic

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 for labor, 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 –

At delivery, ALL prescribed or unprescribed opiate, subutex or methodone exposed neonates may be monitored in the hospital for 5 days as per Cleveland Clinic best practice due to the risks associated with withdrawal.

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 subutex or methodone 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.

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

Discuss substance use/abuse with your patient as 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 subutex or suboxone. These medications are widely available without a prescription and if used can 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.

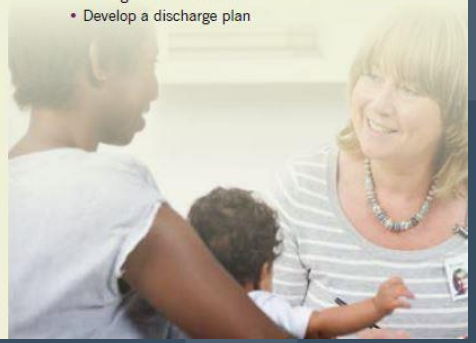
What can Care Management Social Workers do for you?

We are currently limited in what we can do in the outpatient setting but we will give you resources for your patients. The health and safety of patients and their children is our priority. If you are aware that a patient is abusing drugs or unprescribed substances while caring for other children you are mandated to refer to the **Department of Children Services** at **216.696.KIDS**. You can also notify Care Management Social Workers through EPIC of the patients upcoming delivery.

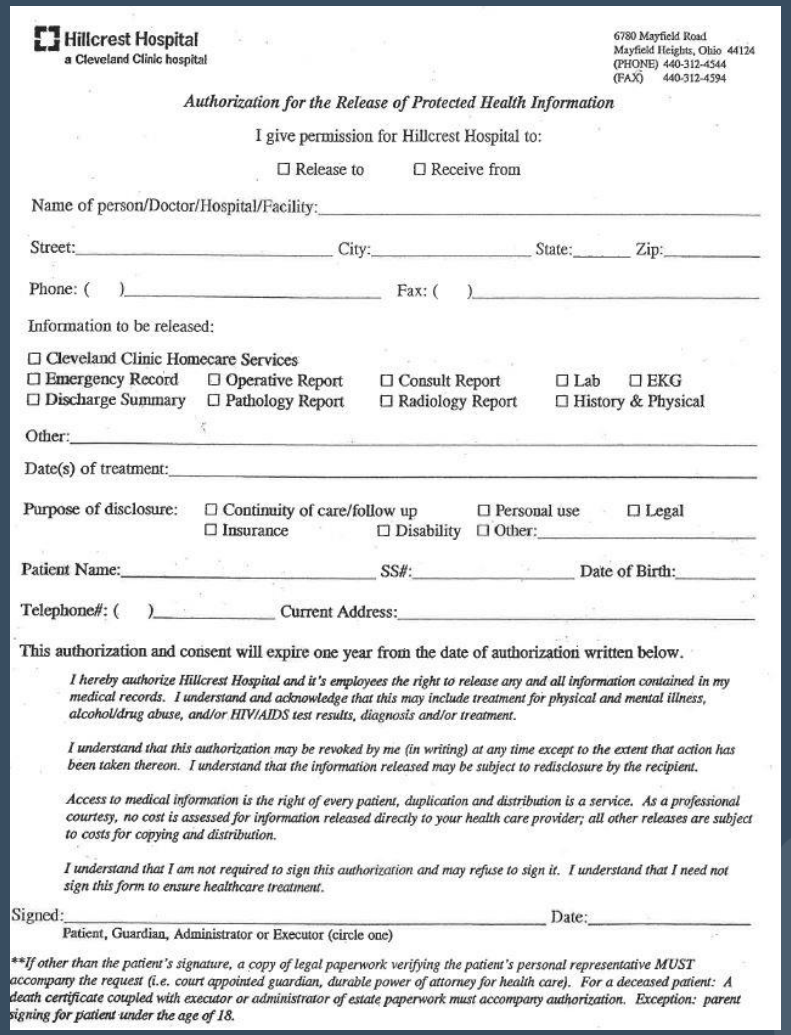
In the inpatient setting or at delivery Social Workers will meet with the patient and assess for:

- Substances used during pregnancy
- History of prior use
- Any substance abuse treatment
- Any episodes of relapse
- Onset age of substance use
- Patterns and consequences of use
- Provide support
- Connection with treatment program
- Assess if Behavioral Health or Pain Management is needed
- Develop a discharge plan

Social Workers will provide the patient with resources and make referrals based on this assessment.



Authorization to Disclose Health Information



Hillcrest Hospital
a Cleveland Clinic hospital

6780 Mayfield Road
Mayfield Heights, Ohio 44124
(PHONE) 440-312-4564
(FAX) 440-312-4594

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 Record ☐ Operative Report ☐ Consult Report ☐ Lab ☐ EKG
☐ 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:_____ SS#:_____ 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 HIV/AIDS test results, diagnosis and/or treatment.

I understand that this authorization may be revoked by me (in writing) at any time except to the extent that action has been taken thereon. 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 assessed for information released directly to your health care provider; all other releases are subject to costs 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 ensure healthcare treatment.

Signed:_____ Date:_____
Patient, Guardian, Administrator or Executor (circle one)

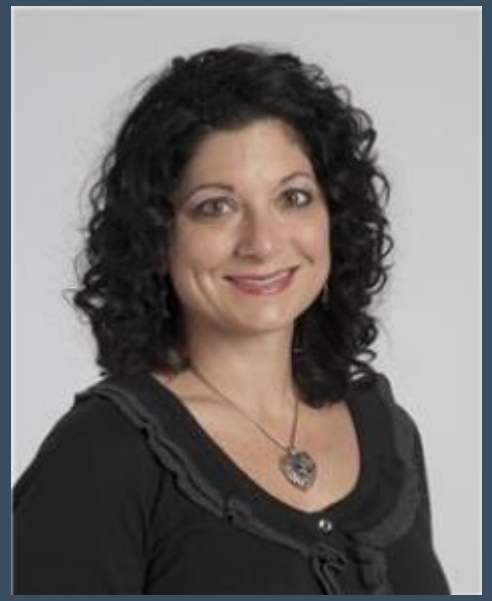
***If other than the patient's signature, a copy of legal paperwork verifying the patient's personal representative MUST accompany the request (i.e. court appointed guardian, durable power of attorney for health care). For a deceased patient: A death certificate coupled with executor or administrator of estate paperwork must accompany authorization. Exception: parent signing for patient under the age of 18.*

Care Coordinator,

Jen Ayala, R.N.

Monitor the care of patients who are flagged by screening process through the development of a database and shared list in EPIC.

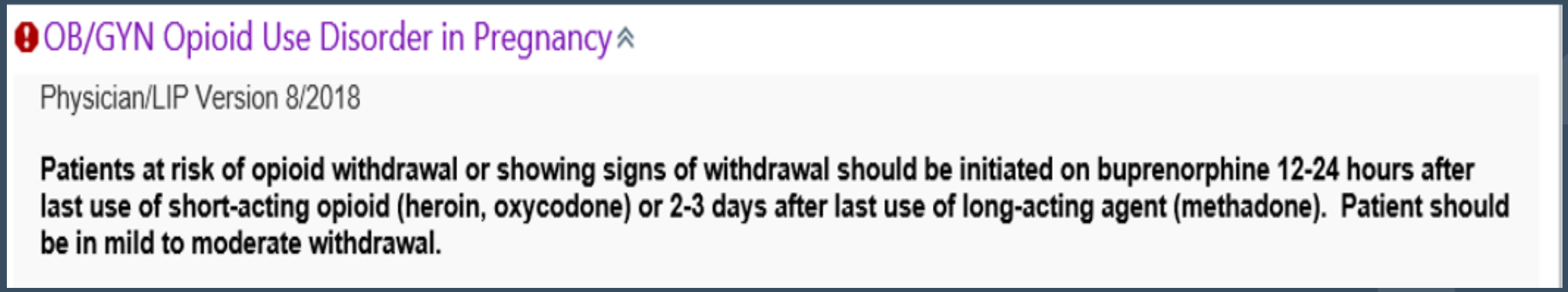
- Patient list can be used to coordinate care
  - OB
  - NICU
  - MFM
  - Social Work
  - nursing



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

Inpatient Care

- 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.



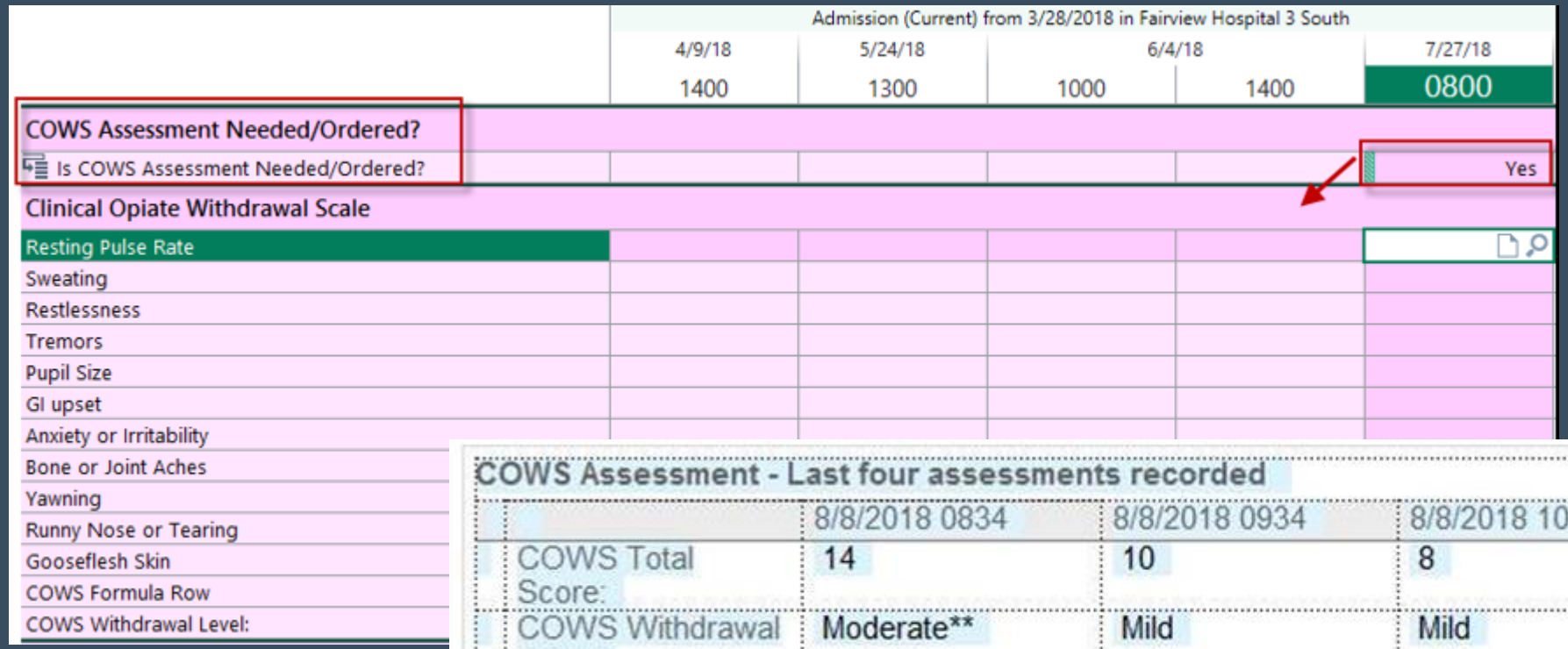
Order Set Overview

- 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)

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	**Gooseflesh skin** 0 skin is smooth 3 piloerrection of skin can be felt or hairs standing up on arms 5 prominent piloerrection

COWS Documentation and Smartphrase



	Admission (Current) from 3/28/2018 in Fairview Hospital 3 South				
	4/9/18	5/24/18	6/4/18		7/27/18
	1400	1300	1000	1400	0800
COWS Assessment Needed/Ordered?					
Is COWS Assessment Needed/Ordered?					Yes
Clinical Opiate Withdrawal Scale					
Resting Pulse Rate					
Sweating					
Restlessness					
Tremors					
Pupil Size					
GI upset					
Anxiety or Irritability					
Bone or Joint Aches					
Yawning					
Runny Nose or Tearing					
Gooseflesh Skin					
COWS Formula Row					
COWS Withdrawal Level:					

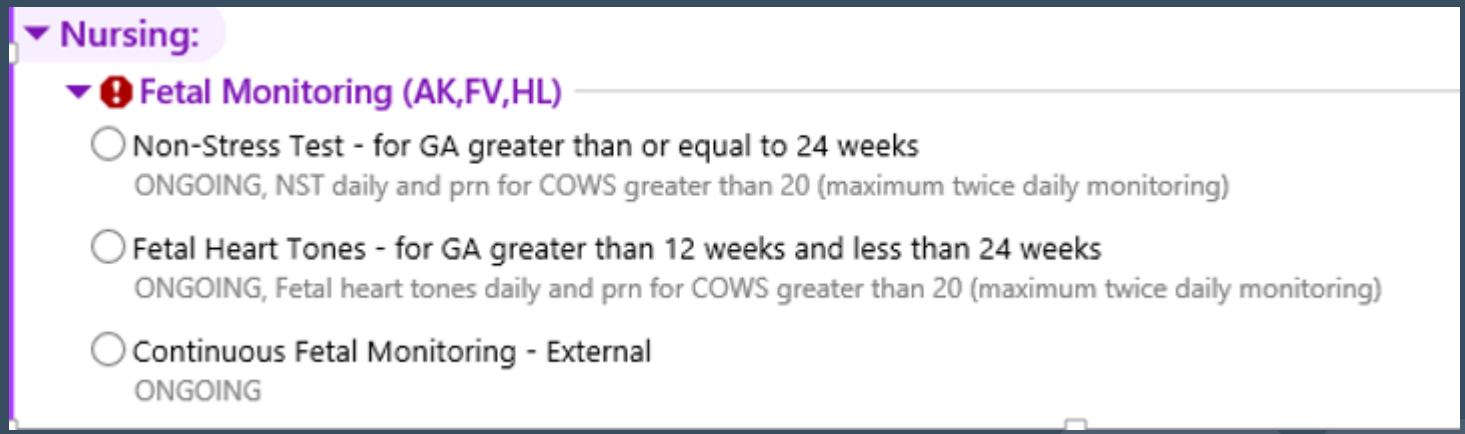
COWS Assessment - Last four assessments recorded

	8/8/2018 0834	8/8/2018 0934	8/8/2018 1033	8/8/2018 1200
COWS Total Score:	14	10	8	7
COWS Withdrawal Level:	Moderate**	Mild	Mild	Mild

Abbrev	Expansion
COWSASSESSMENTLAST4	Displays last 4 COWS Assessment Nursing Documentation Entries

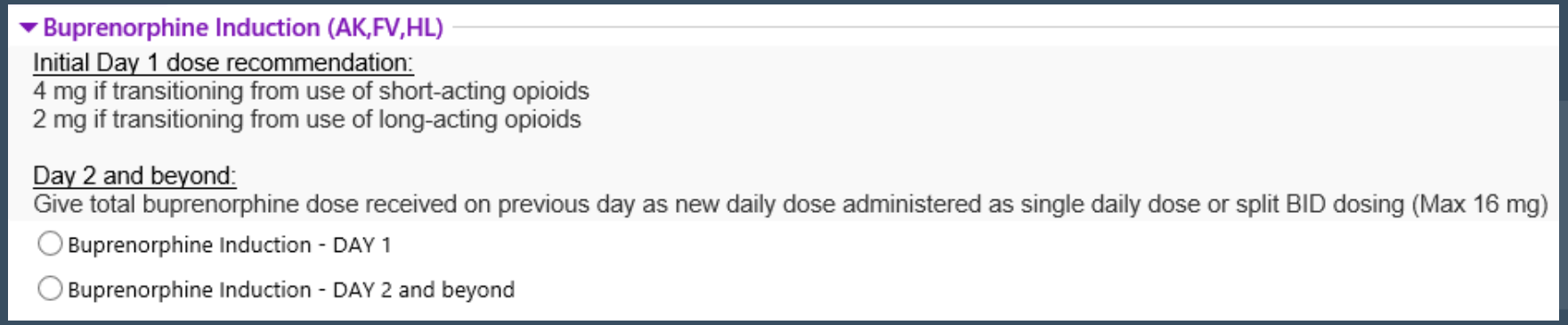
Fetal Monitoring

- Fetal monitoring selection based upon gestational age or situation.



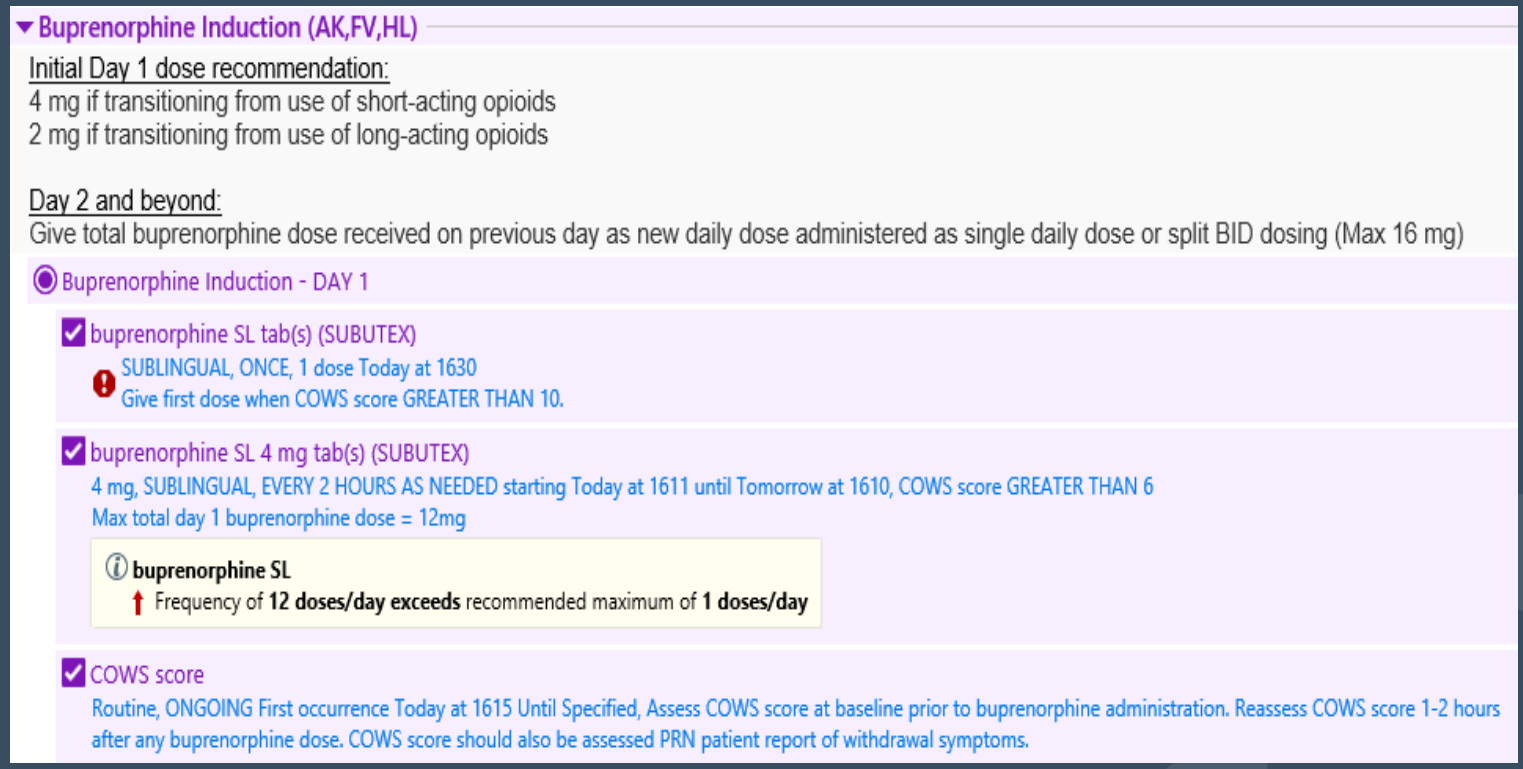
Buprenorphine Induction Panels

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



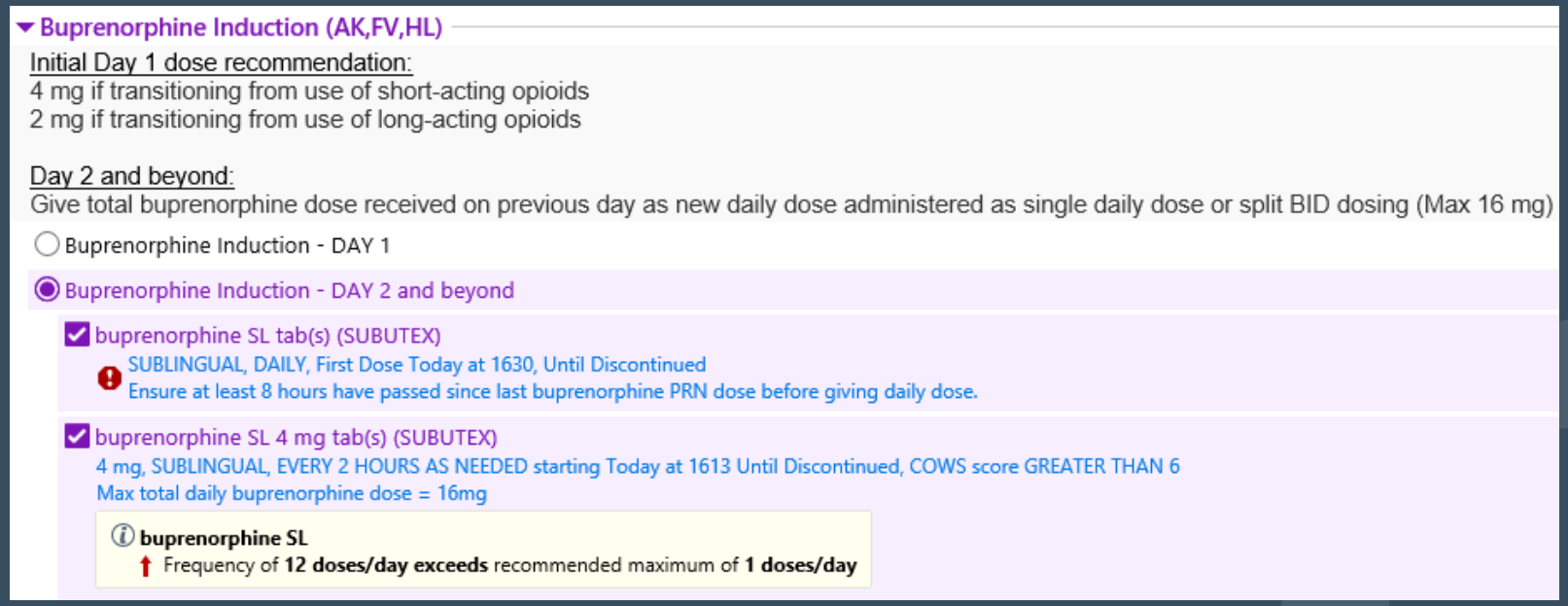
Buprenorphine Day 1

- COWS monitoring linked and automatically ordered



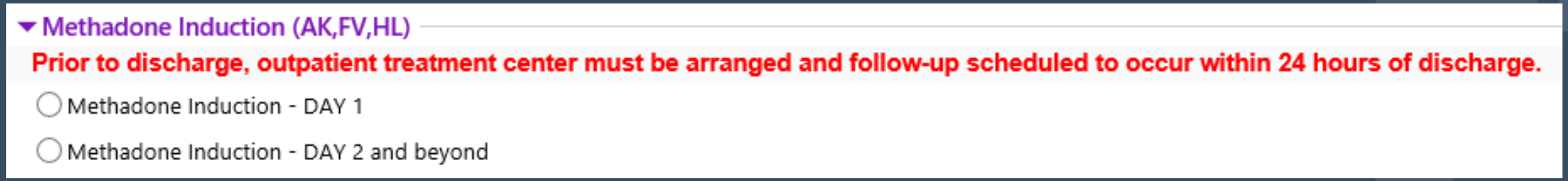
Buprenorphine Day 2 and Beyond

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



Methadone Induction Panels

- Methadone group collapsed by default, when expanded:
- Two panel options (may select only one at a time)
  - Initial day
  - Subsequent days

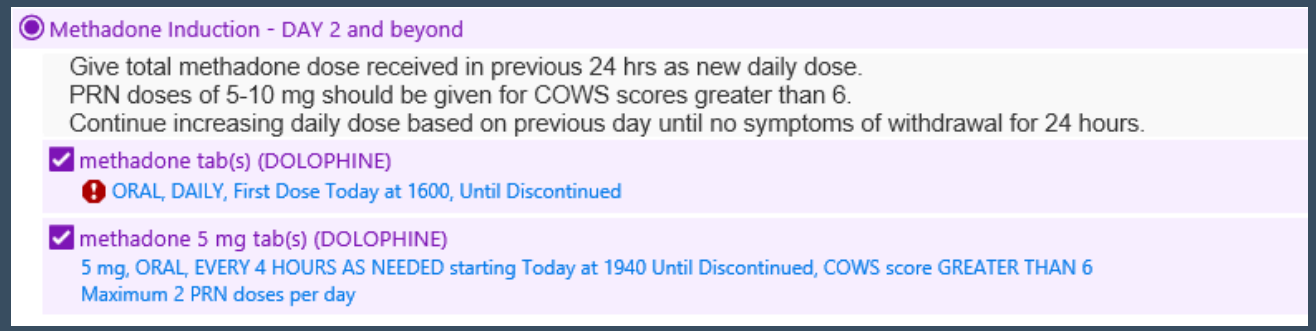


Methadone

Includes appropriate default dose, EKG and COWS assessment orders

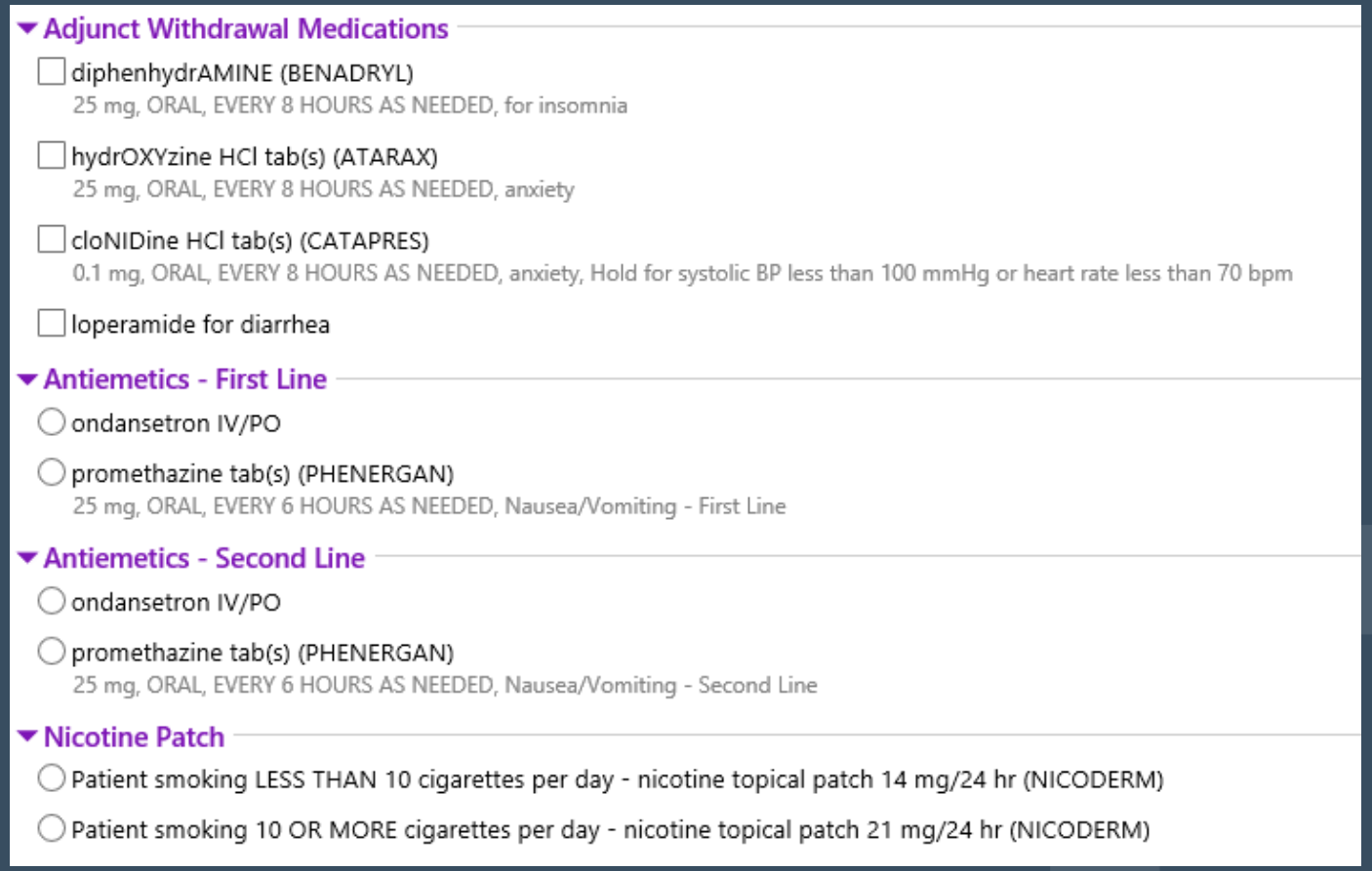
Methadone Day 2 and Beyond

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



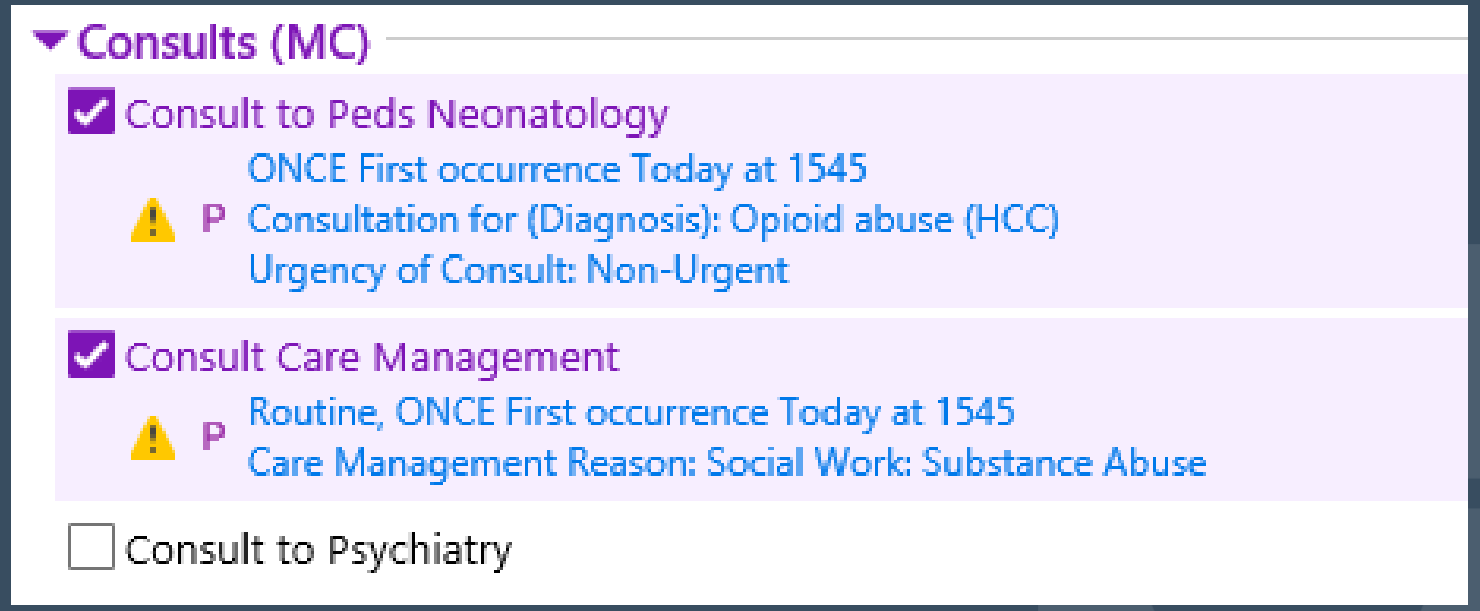
Adjunct Symptom Management

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



Consults

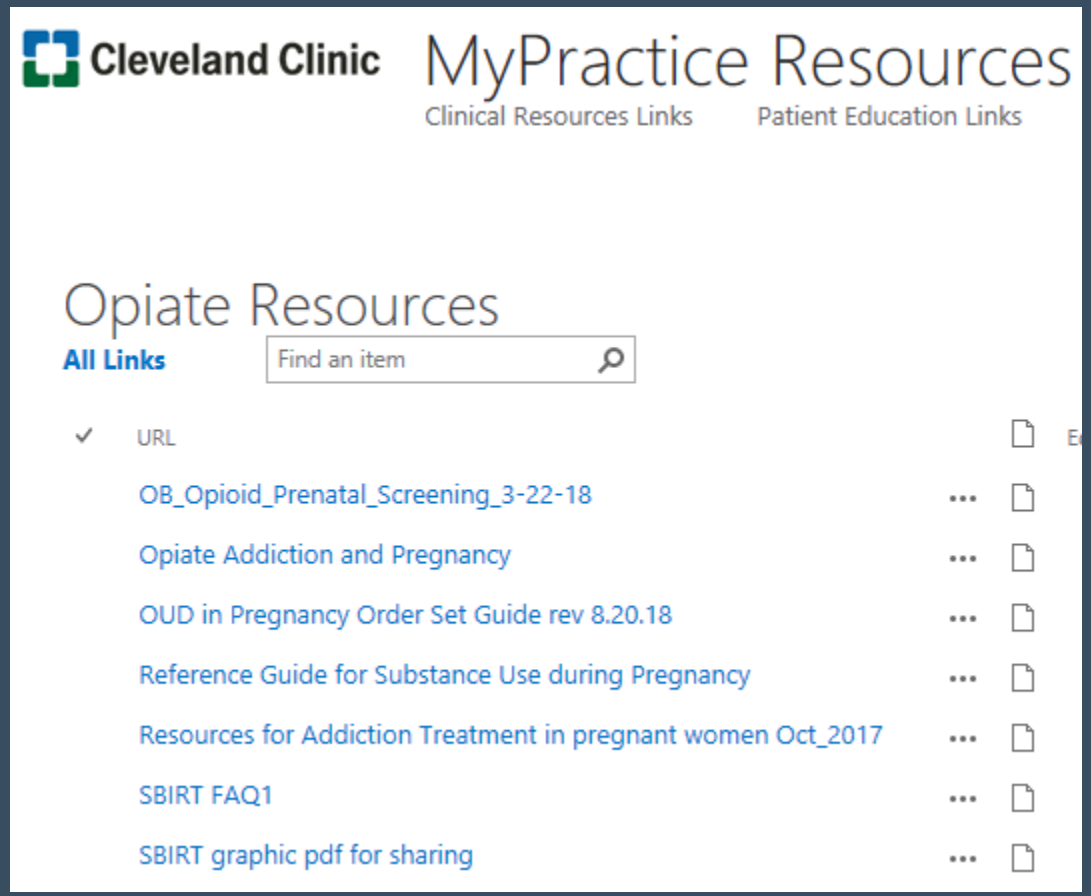
- Neonatology and Care Management consults defaulted
- Optional for consult to Psychiatry or Addiction Medicine (based on service availability at that site)

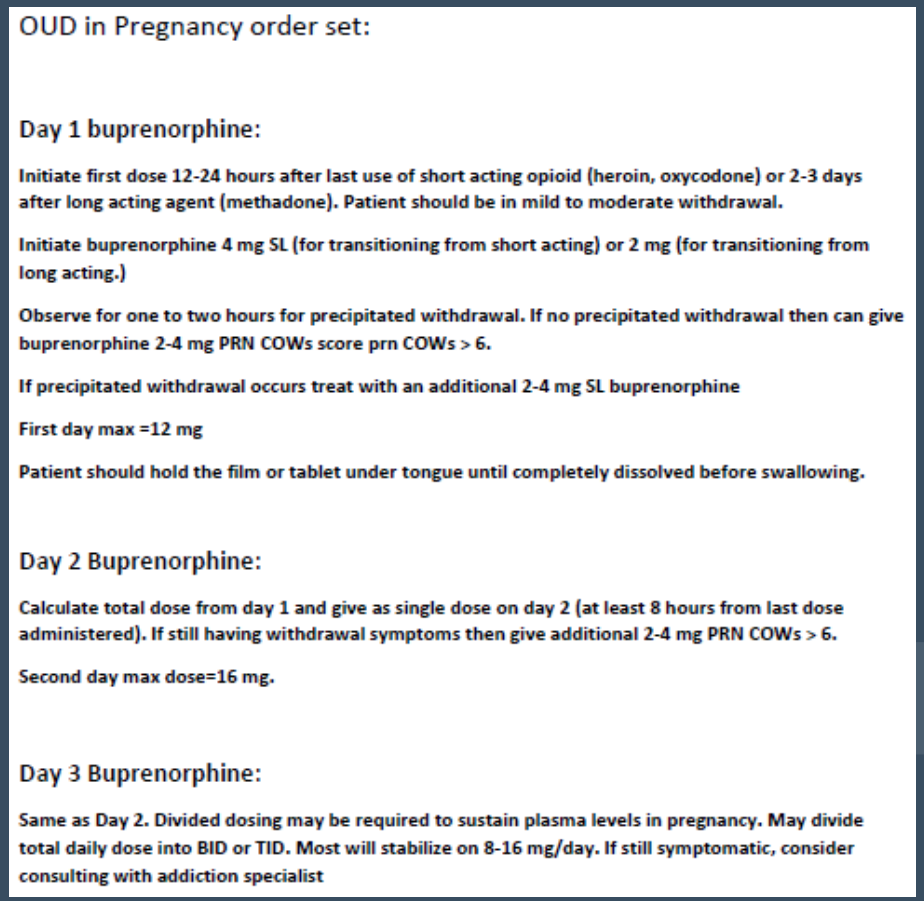


Reference Guide for Order Set

- 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





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

Inpatient MAT Administration Rules

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.

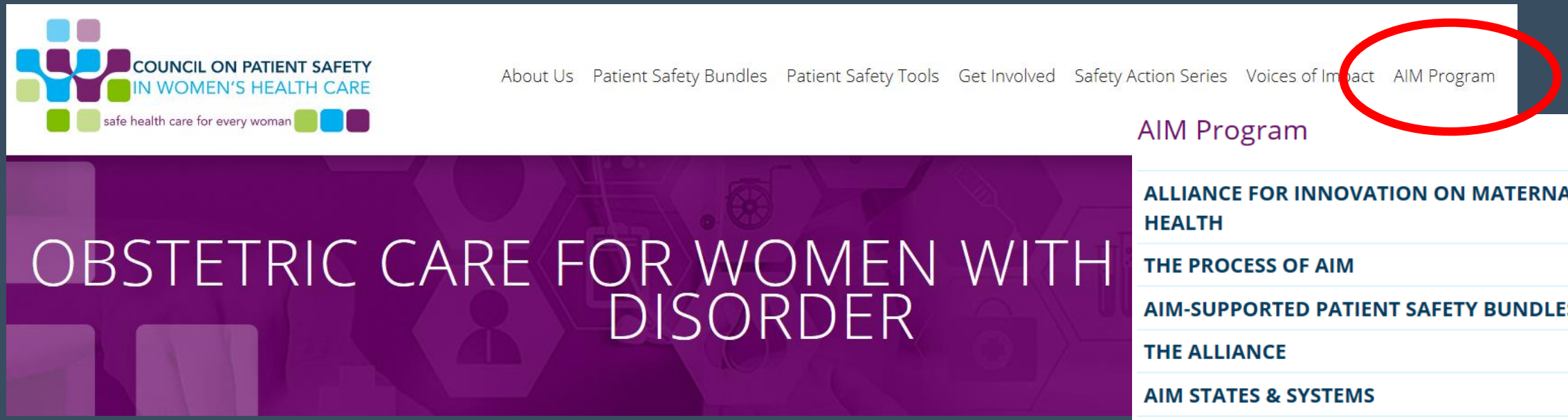
(2) The practitioner is in compliance with DEA regulations regarding treatment qualifications, security, records, and unsupervised use

(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.

(d) A practi
Food and Drug Administration specifically for use in maintenance or detoxification treatment to a narcotic dependent person if the practitioner complies with the requirements of §1301.28 of this chapter.

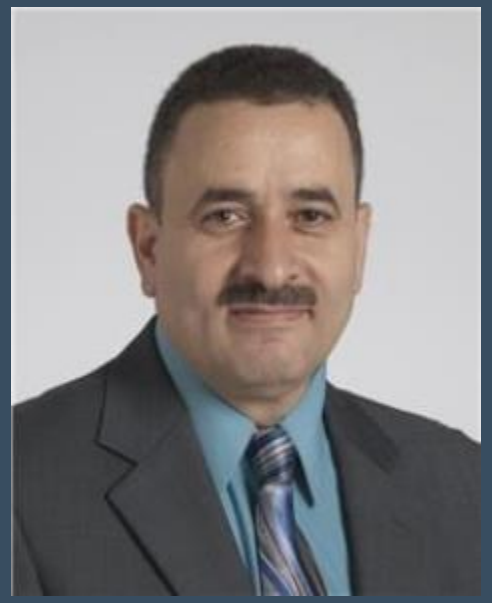
AIM OUD in Pregnancy Safety Bundle Training



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



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

Dramatic Increase in NAS Infants

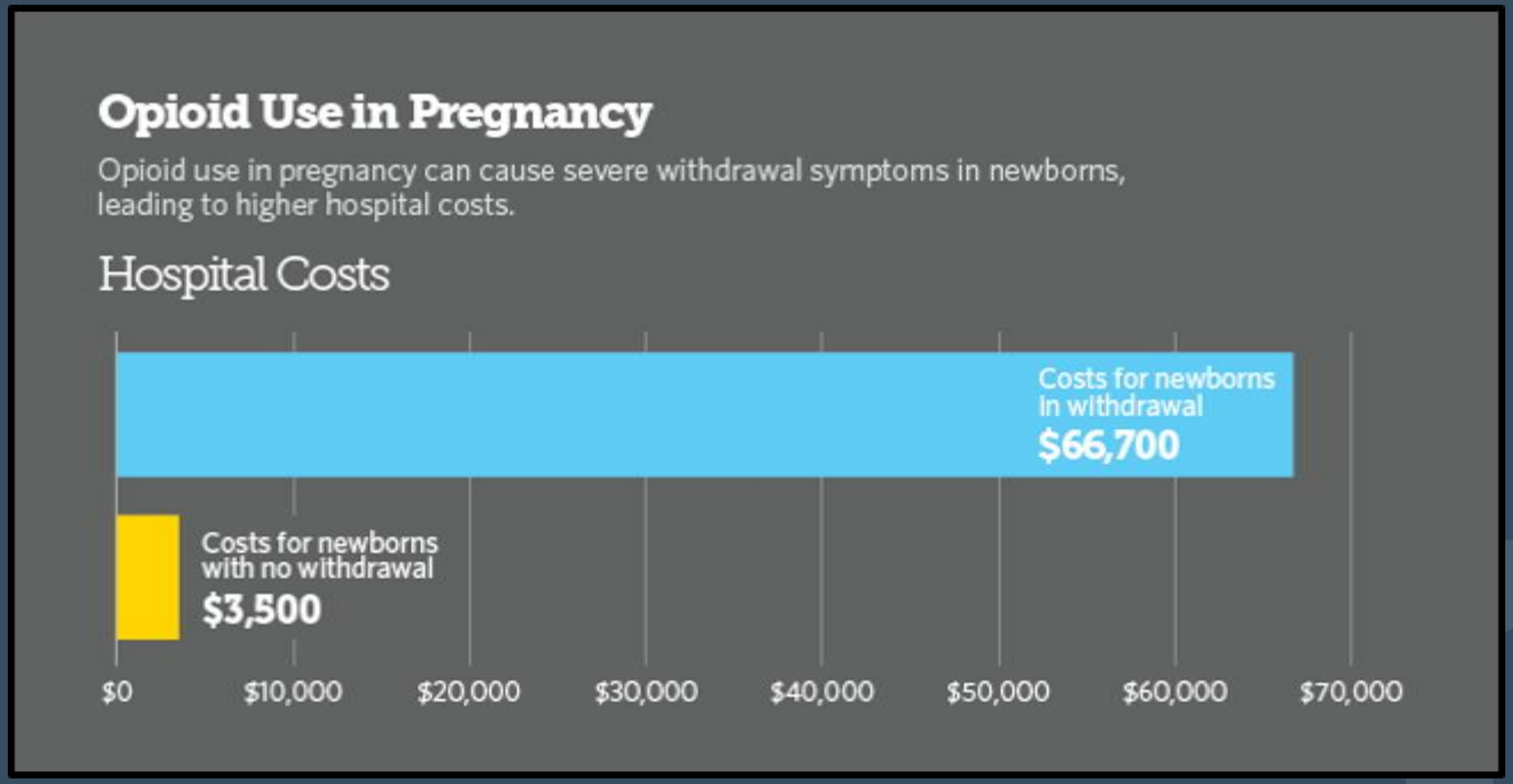
- In the United States an estimated 21,732 babies were born with Neonatal Abstinence Syndrome in 2012. This is a 5 fold increase since the year 2000.
- Every 25 minutes an infant is born suffering from opioid withdrawal.

NAS in Ohio

- 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.

NAS Hospital Costs



Neonatal Subcommittee

- Comprehensive approach to managing NAS infants
  - Prenatal consult, intrapartum, post partum follow up care
- Careplan to identify long-term facility or outpatient management

Neonatal Outcomes

- 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

Updated NAS Protocol

Phase	NAS protocol
Initiation	3 consecutive scores of 9-11 OR 2 consecutive scores of 12 or greater
Initial morphine dose	Starting dose is 0.05 mg/kg/dose q3h No loading dose is given
IV morphine	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
Escalation	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
Adjunct therapy	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
Adjunct escalation	Increase clonidine by 0.5 mcg/kg/dose (max dose 2 mcg/kg/dose) every 24 hours until all scores are less than 9
Weaning	Wean by 10% of the original stabilization dose every 24 hours for scores less than 9
Backslide	If infant has 2 consecutive scores of 9 or greater after a wean, return to previous dose. Wait 48 hours to resume wean.
Morphine DC	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
Clonidine DC	Start wean 24 hours after morphine DC. Wean by 25% of original dose every 24 hours for scores less than 9
Time off prior to DC	48 hours after last morphine dose
Feeds	Breast milk or low lactose 22 kcal formula Change formula back to 20 kcal at DC

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

Effect of Maternal Labor Analgesia

- 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.

Drugs/Metabolites Screened

No.	Name
1	Buprenorphine
2	Norbuprenorphine
3	Buprenorphine-G
4	Codeine
5	Dihydrocodeine

No.	Name
6	Fentanyl
7	Hydrocodone
8	Norhydrocodone
9	Hydromorphone
10	Meperidine

No.	Name
11	Methadone
12	Methadone metabolite
13	6-Acetylmorphine
14	Morphine
15	Naloxone

No.	Name
16	Oxycodone
17	Noroxycodone
18	Oxymorphone
19	Noroxymorphone
20	Propoxyphene

No.	Name
21	Tapentadol
22	Tramadol
23	N-desmethyltramadol
24	O-desmethyltramadol
25	Amphetamine

No.	Name
26	Benzoylecgonine
27	m-OH-Benzoylecgonine
28	Cocaethylene
29	Cocaine
30	MDMA-Ecstasy

No.	Name
31	Methamphetamine
32	Phentermine
33	Alprazolam
34	Alpha-OH-Alprazolam
35	Butalbital

No.	Name
36	Clonazepam
37	7-Aminoclonazepam
38	Diazepam
39	Lorazepam
40	Midazolam

No.	Name
41	Alpha-OH-Midazolam
42	Nordiazepam
43	Oxazepam
44	Phenobarbital
45	Temazepam

No.	Name
46	Zolpidem
47	Phencyclidine - PCP
48	Marijuana Metabolite

Urine/ Meconium Testing

- Urine/meconium testing will be available for ordering as separate tests and will no longer be part of the admission orderset.

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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 addition 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

Methadone Patient

- 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
  - Reynaud et al. Am J Psychiatry. 1998;155:448-449
- 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

The Buprenorphine Dilemma

- 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

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

Clonidine for the Buprenorphine Patient

- 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?

CCF Experience Labor Management

- 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 epineprine 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

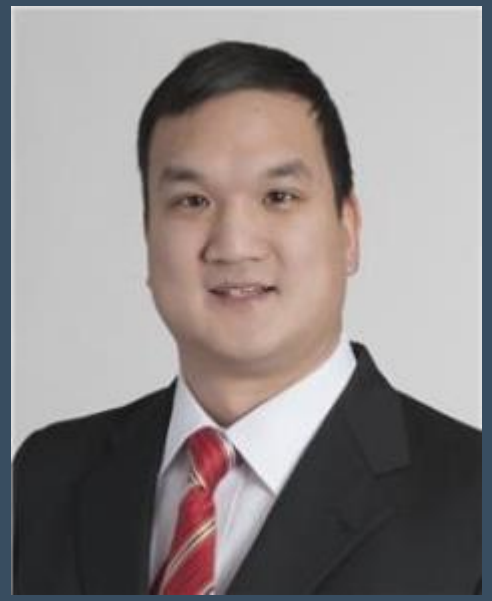
- Cesarean Delivery (Other options)
  - TAP blocks are a possibility
    - Quadratus lumborum (QL) blocks
  - Fentanyl has higher mu receptor affinity than morphine so consider for IV-PCA route
    - Doses will be markedly larger
    - May need an ICU setting or Pain Service assistance
  - Avoid low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

Summary

- 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



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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, MD[1,2]; Jennifer F. Waljee, MD, MPH, MS[2,3]; Jenna Goesling, PhD[1]; et al

» Author Affiliations

JAMA Surg. 2017;152(6):e170504. doi:10.1001/jamasurg.2017.0504

Key Points

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

Findings In this population-based study of 36 177 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

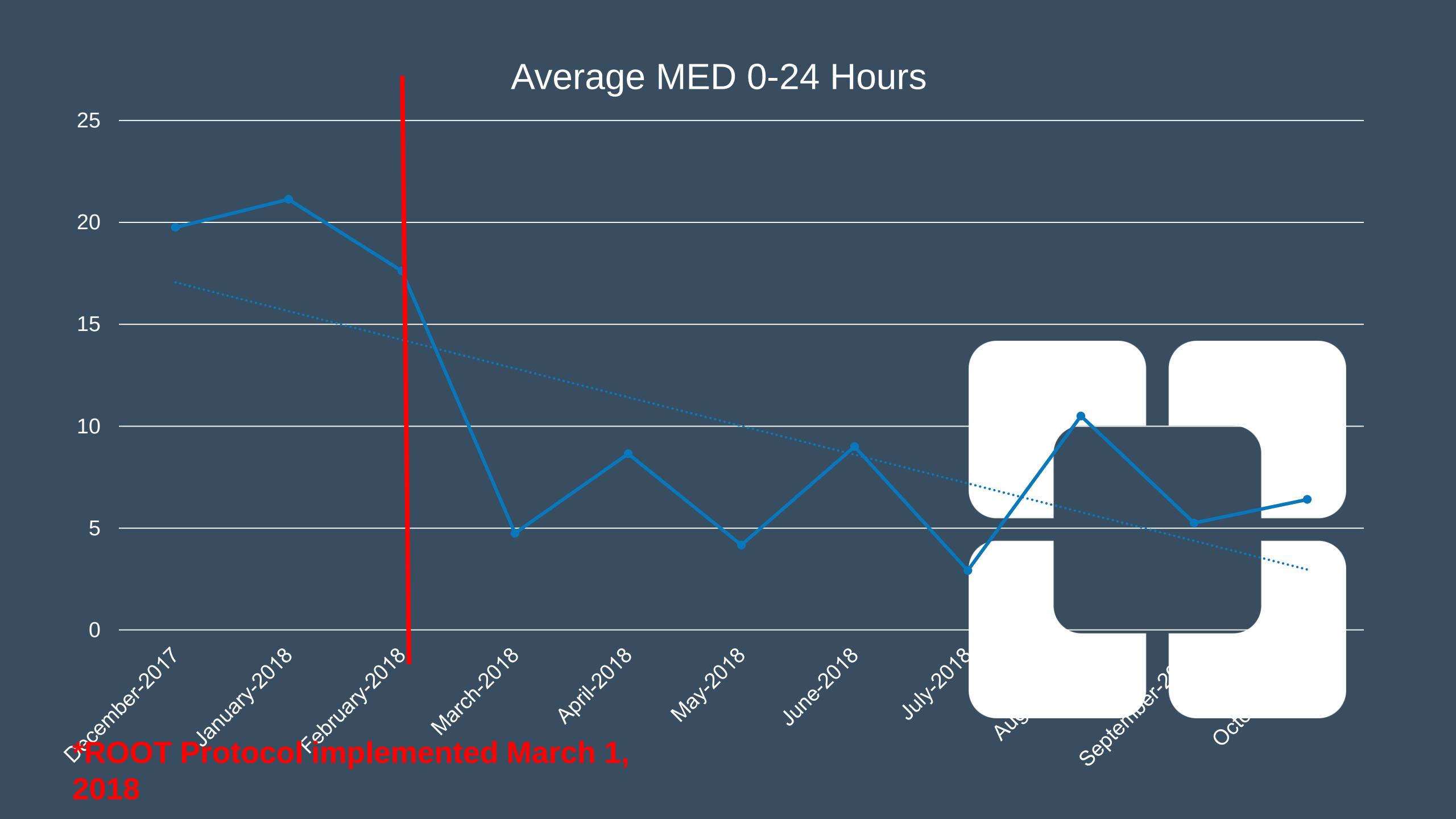
- Percocet 5/325mg q4h prn
- Toradol 30mg IV q6h prn

Scheduled

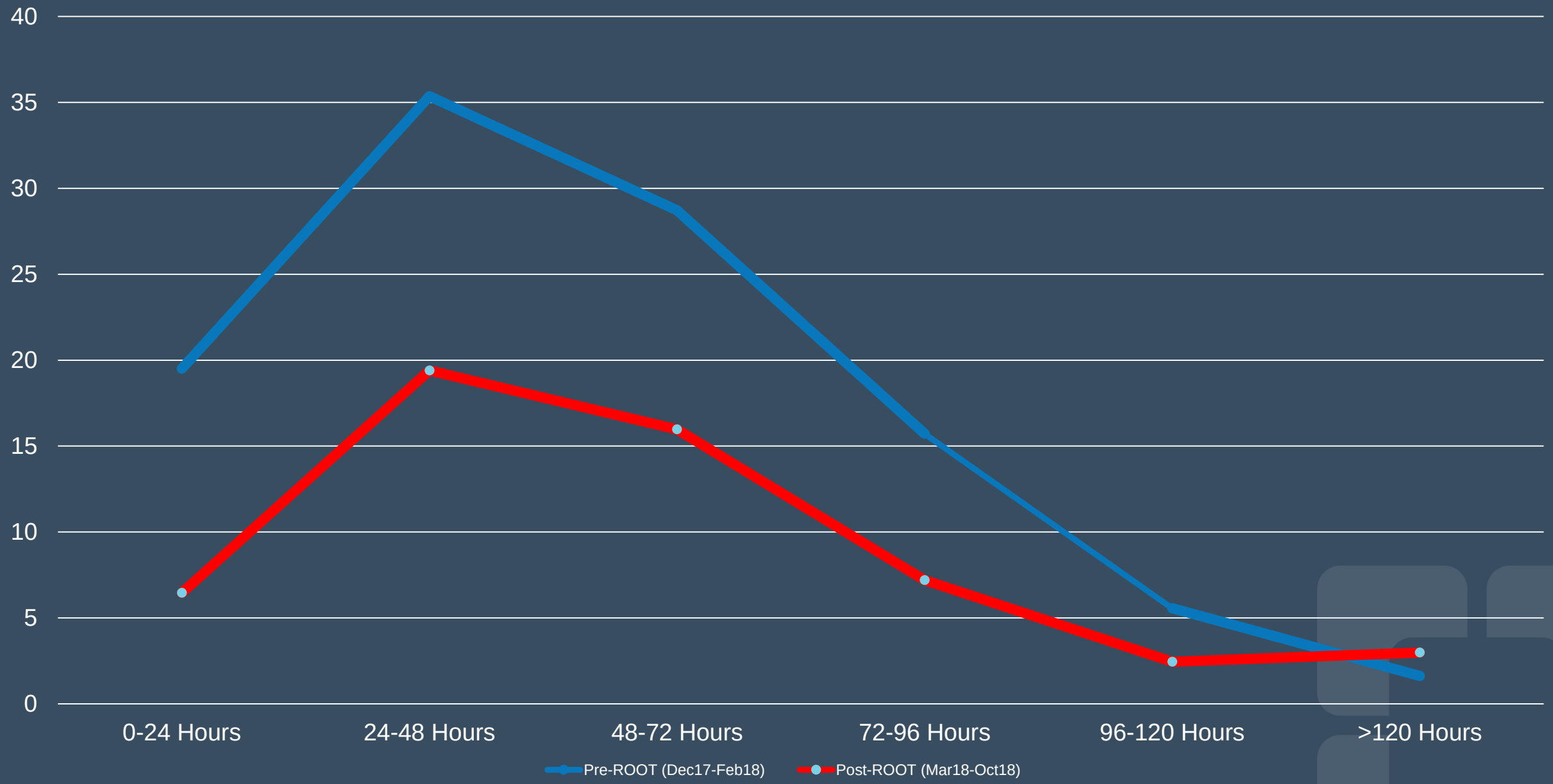
- Acetaminophen 1000mg PO q6h
- Toradol 15mg IV q6h
- Three Hour Stagger

Breakthrough

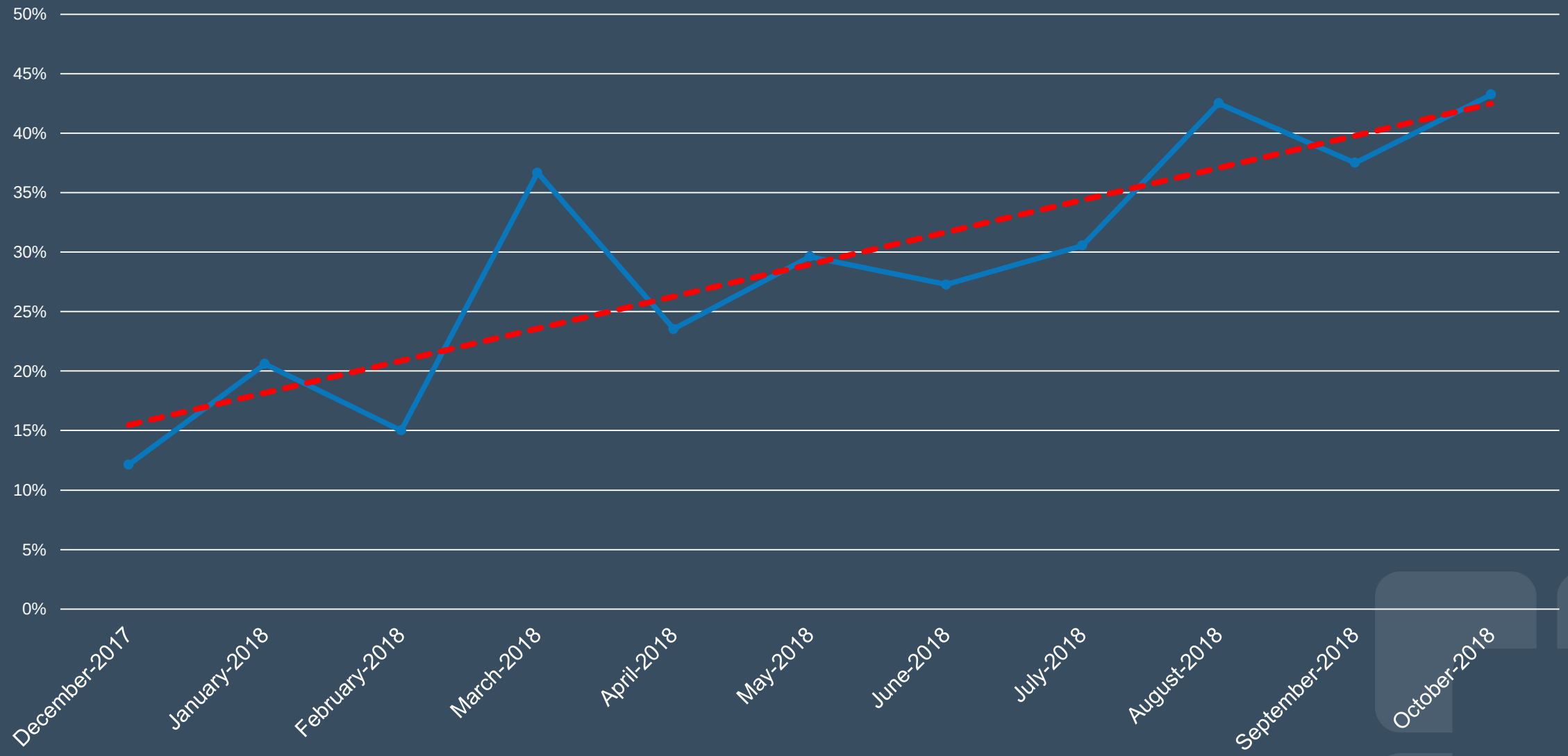
- Toradol 15mg IV q6h prn moderate pain
- Oxycodone 5mg PO q4h prn severe pain


Average MED 0-24 Hours
25
20
15
10
5
0
December-2017
January-2018
February-2018
March-2018
April-2018
May-2018
June-2018
July-2018
September-2
*ROOT Protocol implemented March 1, 2018

Average MED / Patient Over Time



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

Protect Our Community

- Patients are using less than one pill a day POD 3 and 4
- Decrease discharge medications to 10 pills (50 percent reduction).