Tackling the Opioid Crisis: An OB Perspective

Beth Davis, M.D.
Baylor College of Medicine
Assistant Professor
Department of Obstetrics & Gynecology
Objectives

- Recognize the severity of the opioid epidemic
- Describe the management of opioid use disorder during pregnancy
- Apply the information to opioid prescribing habits in clinical practice
1804: Morphine isolated
1817: Marketed as analgesic
1827: Commercial production
1843: Hypodermic needle developed
1874: Heroin synthesized
1898: Commercial production
1875: First reported case of neonatal withdrawal
1903: Morphine treatment for neonates reported
1892: Series of 12 infants, 9 died. Paregoric was tried
1971: Methadone withdrawal in 5 neonates
1967: Buprenorphine developed
1996: Buprenorphine use in France
2002: FDA approval for opioid dependence
2002: First reported case of NAS due to oxycodone
2012: Epidemic of NAS
1974: Methadone developed
1964: Methadone maintenance treatment
1997: First reported case of buprenorphine withdrawal
2001: Series of buprenorphine withdrawal in 13 infants
2007: Opioid analgesic medications:
- Vicodin (1984)
- Oxycontin (1989)
- Percocet (1999)
THE OPIOID EPIDEMIC BY THE NUMBERS
2016 and 2017 Data

130+
People died every day from opioid-related drug overdoses\(^3\) (estimated)

11.4 m
People misused prescription opioids\(^1\)

42,249
People died from overdosing on opioids\(^2\)

2 million
People misused prescription opioids for the first time\(^1\)

2.1 million
People had an opioid use disorder\(^3\)

17,087
Deaths attributed to overdosing on commonly prescribed opioids\(^2\)

886,000
People used heroin\(^1\)

19,413
Deaths attributed to overdosing on synthetic opioids other than methadone\(^2\)

81,000
People used heroin for the first time\(^1\)

15,469
Deaths attributed to overdosing on heroin\(^2\)

SOURCES
2. NCHS Data Brief No. 293, December 2017

Updated September 2018. For more information, visit: http://www.hhs.gov/opioids/
FENTANYL AND OTHER SYNTHETIC OPIOIDS

DRUG OVERDOSE DEATHS

SYNTHETIC OPIOIDS LINKED TO OVERDOSE DEATHS WITH OTHER SUBSTANCES

<table>
<thead>
<tr>
<th>Substance</th>
<th>2016 Total Drug Overdose Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any Opioid</td>
<td>45.9% 42,249</td>
</tr>
<tr>
<td>Prescription Opioids</td>
<td>23.7% 17,087</td>
</tr>
<tr>
<td>Heroin</td>
<td>37.4% 15,469</td>
</tr>
<tr>
<td>Cocaine</td>
<td>40.3% 10,375</td>
</tr>
<tr>
<td>Psychostimulants</td>
<td>13.8% 7,542</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>31.0% 10,684</td>
</tr>
<tr>
<td>Antidepressants</td>
<td>20.8% 4,812</td>
</tr>
<tr>
<td>Antipsychotics and Neuroleps</td>
<td>20.5% 1,677</td>
</tr>
<tr>
<td>Barbiturates</td>
<td>21.5% 409</td>
</tr>
<tr>
<td>Other Ilicit Drugs</td>
<td>26.5% 543</td>
</tr>
</tbody>
</table>

Percent of Deaths Involving Synthetic Opioids

Deaths are not mutually exclusive. Deaths involving more than one drug or drug class are counted multiple times.

FENTANYL AND OTHER SYNTHETIC OPIOIDS

DRUG OVERDOSE DEATHS

TYPE OF OPIOID INVOLVED IN OPIOID-RELATED OVERDOSE DEATHS

Among the 42,249 opioid-related overdose deaths in 2016, 19,413 involved synthetic opioids, 17,087 involved prescription opioids, and 15,469 involved heroin.

<table>
<thead>
<tr>
<th>Type of Opioid</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synthetic Opioids</td>
<td>19,413</td>
</tr>
<tr>
<td>Prescription Opioids</td>
<td>17,087</td>
</tr>
<tr>
<td>Heroin</td>
<td>15,469</td>
</tr>
</tbody>
</table>

Deaths are not mutually exclusive. Deaths involving more than one drug or drug class are counted multiple times.


For more information about finding treatment for yourself or a loved one, visit drugabuse.gov/related-topics/treatment.
Synthetic opiate deaths continue to surge
Annual overdose deaths involving selected drugs

Note: 2017 figures are provisional. Many overdose deaths involve multiple drugs.
Source: Centers for Disease Control and Prevention
WAPO.ST/WONKBLOG
Opioid Overdose Deaths – Texas

Number of Opioid Related Overdose Deaths in Texas

Source: CDC WONDER
Pain – the Fifth Vital Sign

Wong-Baker FACES® Pain Rating Scale

0  No Hurt
2  Hurts Little Bit
4  Hurts Little More
6  Hurts Even More
8  Hurts Whole Lot
10 Hurts Worst
Figure 1 - Opioid Prescriptions Dispensed by US Retail Pharmacies
Opioid Prescriptions

- Prescriptions filled, ages 15–44 years (2008-2012):
  - 39% Medicaid-enrolled women (age 40-44 more likely)
  - 28% privately insured women (age 30-34 more likely)
  - Most common: hydrocodone, codeine, oxycodone

- Every 3 minutes a women seeks ER care for opioid misuse
  - Doesn’t include illicit drug use – heroin
  - 2015: 600,000 Americans report heroin use
Maternal Mortality

Prepared by: Office of Program Decision Support, Division for Family and Community Health, Texas Department of State Health Services.
Data Sources: Centers for Disease Control and Prevention, National Center for Health Statistics.
Underlying Cause of Death and Natality public use data 2005-2015 on CDC WONDER Online Database.
Top Causes of Confirmed Maternal Death: Within 1 Year Following End of Pregnancy
# Maternal Mortality

<table>
<thead>
<tr>
<th>Total Drug Overdose Maternal Deaths</th>
<th>64 (17%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Maternal Drug Overdose Deaths Involving Opioids</td>
<td>37 (58%)</td>
</tr>
</tbody>
</table>
Opiate versus Opioids

- **Opiates**
  - Heroin
  - Morphine
  - Codeine

- **Opioids**
  - Hydrocodone
  - Oxycodone
  - Fentanyl
  - Methadone
Opioid High

- Analgesia
- Depression
- Euphoria
- Physical dependence
- Respiratory depression
- Sedation
Opioid High
Opioid Terminology

- Tolerance
  - Diminished response to a drug due to repeated use

- Dependence
  - Physical condition in which body has adapted to presence of drug → discontinuation leads to withdrawal

- Addiction
  - Compulsive drug seeking and use despite adverse consequences
Opioid Use Disorder (OUD)

- Definition: pattern of opioid use characterized by tolerance, craving, inability to control use and continued use despite negative consequences

- Diagnosis DSM-5 – 11 main symptoms
  - Mild 2-3 symptoms
  - Moderate 4-5 symptoms
  - Severe 6+ symptoms
<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>Opioid Use Disorder Diagnostic Criteria*</th>
</tr>
</thead>
</table>

A problematic pattern of opioid use leading to clinically significant impairment or distress, as manifested by at least 2 of the following, occurring within a 12-month period:

1. Opioids are often taken in larger amounts or over a longer period than was intended
2. There is a persistent desire or unsuccessful efforts to cut down or control opioid use
3. A great deal of time is spent in activities necessary to obtain the opioid, use the opioid, or recover from its effects
4. Craving, or a strong desire or urge to use opioids
5. Recurrent opioid use resulting in a failure to fulfill major role obligations at work, school, or home
6. Continued opioid use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of opioids
7. Important social, occupational, or recreational activities are given up or reduced because of opioid use
8. Recurrent opioid use in situations in which it is physically hazardous
9. Continued opioid use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance
10. Tolerance, as defined by either of the following:
   a. A need for markedly increased amounts of opioids to achieve intoxication or desired effect
   b. A markedly diminished effect with continued use of the same amount of an opioid
   *Note: This criterion is not considered to be met for those taking opioids solely under appropriate medical supervision
11. Withdrawal, as manifested by either of the following:
   a. The characteristic opioid withdrawal syndrome (refer to Criteria A and B of the criteria set for opioid withdrawal)
   b. Opioids (or a closely related substance) are taken to relieve or avoid withdrawal symptoms

*adapted from the American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders (DSM-5). American Psychiatric Publishing; 2013"
Opioid Withdrawal

- Generalized pain
- Muscle pain
- Nausea
- Diarrhea
- Sweating
- Rhinorrhea

- Tearing
- Dilated pupils
- Tremor
- Gooseflesh
- Restlessness
- Anxiety
Opioid Withdrawal

Opiate Withdrawal Timeline

**Start**
Take your last dose

**72 Hours**
Physical symptoms at peak
Chills, fever, body aches, diarrhea, insomnia, muscle pain, nausea, dilated pupils

**1 Week**
Physical symptoms start to lessen
Tiredness, sweating, body aches, anxiety, irritability, nausea

**2 Week**
Psychological and emotional symptoms
Depression, anxiety, irritability, restlessness, trouble sleeping

**1 Month**
Cravings and depression
Symptoms can linger for weeks or months

Source: National Institute on Drug Abuse

© Workit Health

Texas Children’s Hospital
Pavilion for Women
<table>
<thead>
<tr>
<th><strong>Objective Opioid Withdrawal Scale (OOWS)</strong></th>
<th><strong>Subjective Opioid Withdrawal Scale (SOWS)</strong></th>
<th><strong>Clinical Opioid Withdrawal Scale (COWS)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yawning</td>
<td>I feel anxious</td>
<td>Pulse</td>
</tr>
<tr>
<td>Rhinorrhea</td>
<td>I feel like yawning</td>
<td>Sweating</td>
</tr>
<tr>
<td>Piloerection</td>
<td>I’m perspiring</td>
<td>Restlessness</td>
</tr>
<tr>
<td>Perspiration</td>
<td>My eyes are tearing</td>
<td>Pupil size</td>
</tr>
<tr>
<td>Lacrimation</td>
<td>My nose is running</td>
<td>Bone or joint aches</td>
</tr>
<tr>
<td>Tremor</td>
<td>I have goose flesh</td>
<td>Rhinorrhea</td>
</tr>
<tr>
<td>Mydriasis</td>
<td>I am shaking</td>
<td>Tearing</td>
</tr>
<tr>
<td>Hot &amp; cold flashes</td>
<td>I have hot/cold flashes</td>
<td>GI upset</td>
</tr>
<tr>
<td>Restlessness</td>
<td>My bones and muscles ache</td>
<td>Tremor of outstretched hands</td>
</tr>
<tr>
<td>Vomiting</td>
<td>I feel restless</td>
<td>Yawning</td>
</tr>
<tr>
<td>Muscle twitches</td>
<td>I feel nauseous or need to vomit</td>
<td>Anxiety/irritability</td>
</tr>
<tr>
<td>Abdominal cramps</td>
<td>My muscles twitch</td>
<td>Gooseflesh skin</td>
</tr>
<tr>
<td>Anxiety</td>
<td>I have stomach cramps</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I feel like shooting up</td>
<td></td>
</tr>
</tbody>
</table>
Opioid Overdose

- Loss of consciousness
- Unresponsive to outside stimuli
- Awake but unable to talk
- Breathing slow & shallow, erratic or has ceased
- Skin tone changes
- Choking sounds or vomiting
- Limp body
- Pulse is slow, erratic or not present
Emergency Response for Opioid Overdose

Try to wake the person up
- Shake them and shout.
- If no response, grind your knuckles into their breast bone for 5 to 10 seconds.

Call 911
If you report an overdose, New York State law protects you and the overdosed person from being charged with drug possession, even if drugs were shared.

Administer nasal naloxone
- Assemble nasal naloxone.
- Spray half up each nostril.
- Repeat after 2 to 5 minutes if still not conscious.

Check for breathing
Give CPR if you have been trained, or do rescue breathing:
- Tilt the head back, open the mouth, and pinch the nose.
- Start with 2 breaths into the mouth. Then 1 breath every 5 seconds.
- Continue until help arrives.

Stay with the person
- Naloxone wears off in 30 to 90 minutes.
- When the person wakes up, explain what happened.
- If you need to leave, turn the person on his or her side to prevent choking.
I can't imagine living with addiction.

Uh... me, either.
Opioid use in pregnancy

- Eunice Kennedy Shriver National Institute of Child Health

1. Optimal screening for opioid use disorder
2. Complications of pregnancy secondary to opioid use
3. Treatment for pregnant women with opioid use disorders
4. Best approach for management and treatments of newborns with NAS
5. Long-term effects of prenatal opioid exposure on children
## Screening for Opioid Use Disorder

**Screening should be:**
- Universal
- Nondiscriminating
- Continue throughout prenatal care

**Validated Questionnaires**
- 5-P’s Prenatal Substance Abuse Screen
  - Parents
  - Partner
  - Peers
  - Past
  - Present
Prenatal care

- Screening for comorbid conditions
  - Include medication review and polysubstance abuse screening
  - Screening for infectious diseases including Hepatitis, HIV, syphilis, gonorrhea & chlamydia, tuberculosis

- Psychosocial care
  - Mental health treatment and licensed social work
  - Addiction medicine
  - Pain management
  - Nutrition
  - Social work
Prenatal Care

- Prenatal counseling regarding risks:
  - Birth defects (gastroschisis, congenital heart defects, neural tube defects)
  - Fetal growth restriction
  - Preterm birth

- Ultrasound screening – anatomy ultrasound and serial growth scans
  - Antenatal testing if clinical indications arise (not for opioid use alone)
Prenatal Care

- Multidisciplinary
  - Maternal Fetal Medicine
  - Addiction Medicine
  - Anesthesia
  - Neonatology
  - Psychiatry
  - Social Work
Medically Supervised Withdrawal

- Requires intensive inpatient and outpatient monitoring
- Lower rates of complete detoxification
- Higher rate of relapse compared to MAT (60-90%)
- Few case reports report increased risk of fetal stress and fetal demise
- Limited data regarding effects of detoxification on maternal & neonatal outcomes
## Medication-Assisted Therapy

<table>
<thead>
<tr>
<th>Methadone</th>
<th>Buprenorphine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered treatment center – observed therapy</td>
<td>Outpatient prescription</td>
</tr>
<tr>
<td>Initial dose: 20 mg oral then titrate up</td>
<td>Initial dose: 2-4 mg sublingual then titrate up</td>
</tr>
<tr>
<td>50% of women require low daily dose &lt; 60 mg</td>
<td>Average dose 10 mg</td>
</tr>
<tr>
<td>Anticipate dose increases during 2\textsuperscript{nd} &amp; 3\textsuperscript{rd} trimesters</td>
<td>Ceiling effect at 32 mg</td>
</tr>
<tr>
<td>Preferred in polysubstance abuse</td>
<td>Preferred for prescription opioid users or heroin users</td>
</tr>
<tr>
<td>Higher risk of overdose morality</td>
<td>Lower risk of overdose mortality</td>
</tr>
</tbody>
</table>

- Higher risk of overdose mortality
- Preferred for prescription opioid users or heroin users
- Lower risk of overdose mortality
Medication-Assisted Therapy

- Buprenorphine appears superior to methadone for neonatal outcomes
  - Required 90% less morphine to treat neonatal abstinence syndrome
  - Spent 43% less time in hospital
  - Lower NAS scores
  - Higher birth weights
Neonatal Abstinence Syndrome (NAS)
Postpartum Follow-up

- Allied health professionals for consistent follow-up
  - Chemical dependency treatment programs
- Monitoring, storage and disposal of leftover opioids
- Social services consultation
- Access to psychology/psychiatry services
- Contraception counseling (LARC)
- Lactation counseling
- MAT therapy:
  - Methadone continued for 6 weeks
  - Buprenorphine: continue through peripartum, discontinue on admission and substitute long-active opioids
Pain Management

- **Intrapartum**
  - Adequate pain relief usually achieved with regional anesthesia
  - If needed, add short-acting opioids
  - **AVOID** mixed antagonists & agonists
    - Nalbuphine (Nubain) & butorphanol (Stadol)
  - Consider doula – mindfulness, breathing, relaxation
Pain Management

- Postpartum
  - Patient-controlled analgesia may be required
  - Avoid meds that can cause sedation
    - Benzodiazepines, Zolpidem
  - Avoid opioids with high addictive potential (oxycodone)
Postpartum Pain Control:
ACOG Recommendations

- We need to use a multimodal approach for postpartum pain control that is individualized to the patient’s needs
- Opioids come in to play when pain is not controlled with other analgesics
- Patients should be counseled regarding the effects of opioid use may have on infants of breastfeeding mothers
- Duration of opioid use should be limited to the shortest duration needed for effective pain control
Postpartum Pain: ACOG Recommendations

Non-opioid
- Acetaminophen
- NSAIDs
- Local anesthetics

Oral Opioids
- Codeine
- Hydrocodone
- Oxycodone
- Tramadol

IV Opioids
- Morphine
- Hydromorphone
- Fentanyl
"Mothers are basically part of a scientific experiment to prove that sleep is not a crucial part of human life."
Postpartum Pain

<table>
<thead>
<tr>
<th>Vaginal Birth</th>
<th>Cesarean Birth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heating pads/ice packs</td>
<td>Neuraxial opioids</td>
</tr>
<tr>
<td>NSAIDS + acetaminophen</td>
<td>Oral opioids</td>
</tr>
<tr>
<td>Opioid only if pain control inadequate</td>
<td>Parenteral opioids</td>
</tr>
<tr>
<td>Lowest dose for shortest duration</td>
<td>Local anesthesia</td>
</tr>
</tbody>
</table>
Postpartum Pain

- Combined spinal-epidural anesthesia with intrathecal morphine
- Supplemental IV analgesics based on patient-reported pain intensity
  - NRS score 1–5
    - 3 doses IV acetaminophen 10 mg/mL† every 6 hours, alternated with 3 doses IV ketorolac 30 mg every 6 hours for 24 hours
  - NRS score 6–10
    - IV nalbuphine 2 mg every 2 hours as needed for breakthrough pain for 24 hours
Transversus Abdominus Plane (TAP) Block

- Liposomal bupivacaine (LB; EXPAREL® [bupivacaine liposome injectable suspension], Pacira Pharmaceuticals, Inc., Parsippany, NJ) is a prolonged-release formulation of bupivacaine
  - Protocol augmented with ultrasound-guided TAP block
    - Bilateral single-shot injections of 10 mL LB (133 mg) admixed with 15 mL 0.25% bupivacaine HCl expanded with 15 mL normal saline (total 40 mL injection/side)
Transversus Abdominus Plane Block
TAP Block Study Results

- Reduction in opioid use by 47%
  - 12% of patients did not consume ANY opioids

- Reduction in length of stay and readiness for discharge
  - Shorter time to ambulation, eating, bowel movements

- Reduction in adverse effects associated with opioids
  - Nausea, vomiting, abdominal pain, itching
Opioids after vaginal delivery

- 31% of patients required opioids while inpatient with median stop time of 1 day
  - Less than 10% required outpatient prescriptions
- After vaginal delivery, 12% of patients filled an opioid prescription within 5 days of delivery
  - 14% of these patients refilled a second prescription
  - Of these patients, only 28% had pain-inducing condition
- There are currently no national guidelines for pain management after vaginal delivery but this needs to change
  - Commonwealth of Pennsylvania first state-issued guidelines
Opioids after cesarean delivery

- After cesarean delivery, median of 40 tabs of narcotics were prescribed
- Only ~50% are consumed
- 95% of patients with remaining tabs did not properly dispose of them and kept them at home in unlocked locations
- Estimated that 1/300 opioid-naïve women may become addicted after cesarean delivery
Post-discharge Opioid Use

- 83% of patients used opioids for 8 days after discharge
- 75% of patients had unused tablets
  - 63% left in unlocked location
  - Median 10 unused tablets per patient → total of 19,000 unused morphine milligram equivalents (MME)
- Correlation noted between inpatient and post-discharge opioid use
Opioids and Breastfeeding

- Opioids are low molecular weight and lipophilic → easily transferred to breast milk

- Codeine and tramadol are converted to active analgesics via cytochrome P450 2D6 (CYP2D6)
  - Ultra-rapid metabolizers may develop high serum metabolite levels leading to sedation and respiratory depression in infants

- ACOG recommends counseling patients regarding risks and limiting duration to shortest course to achieve adequate pain control
National Prescription Drug Take-Back Day

Turn in your unused or expired medication for safe disposal

Visit www.dea.gov or call 800-882-9539 for a collection site near you.

Sponsored by the U.S. Drug Enforcement Administration.
National Initiatives

National Institutes of Health

- HEAL (Help to End Addiction Long-term) Initiative
  - Improve treatments for opioid misuse and addiction
  - Enhance pain management practices

- $500 million
  - National Institute on Drug Abuse (NIDA)
  - National Institute of Neurological Disorders and Stroke (NINDS)

Department of Health and Human Services

- Five-Point Strategy
  - Improve access to prevention, treatment, and recovery support services
  - Target the availability and distribution of overdose-reversing drugs
  - Strengthen public health data reporting and collection
  - Support cutting-edge research on addiction and pain
  - Advance the practice of pain management
What is Texas Children’s doing?
Perspective

- In the United States, there are ~4 million babies born each year
  - ~32% are estimated to be cesarean deliveries
- In Texas, there are 402,275 babies born in 2015
  - 273,547 vaginal deliveries
- At Texas Children’s Hospital PFW there are ~5700 babies born each year
  - 3700 are vaginal deliveries
AQI Project

- Decrease inpatient use of opioids after uncomplicated vaginal delivery by 3%
Survey postpartum and OB/Gyn providers about opioid use and explain the AQI project and goal.

Update existing postpartum pain management order.

Create awareness & educate Physician leaders about our AQI project and goal so that they can educate their teams (WSH, POGC, BCM).

Presented at OB/Gyn Department Meeting informing providers that provider level data on opioid prescribing will begin shortly.
Updated Order Set

Pain Management

Postpartum Pain meds

- Pain meds for uncomplicated vaginal delivery
  - ibuprofen (MOTRIN) PO TAB 600 mg
    600 mg (8.29 mg/kg), Oral, EVERY 6 HOURS PRN starting Today at 1209 Until Discontinued, pain
    Do NOT exceed 4 doses per day! (For Pain Scale 1-3 (mild): maximum 2400 mg/24 hours). Do NOT give if patient is also taking Ketorolac. Give with food or milk.
  - hydrocodone/acetaminophen (NORCO 5) Oral Tablet 5 mg-325 mg
    5 mg (0.0691 mg/kg), Oral, EVERY 4 HOURS PRN starting Today at 1209 Until Discontinued, pain, pain not controlled by ibuprofen
    * Complete Shingle Sheet * May give with food or milk to decrease GI distress. Maximum dose of acetaminophen: 3 grams/day from all dosage forms for adults and 2.6 grams/day

- Pain meds for vaginal delivery with complicated lacerations
  - ibuprofen (MOTRIN) PO TAB 600 mg
    600 mg (8.29 mg/kg), Oral, EVERY 6 HOURS, First Dose Today at 1230, Until Discontinued
    Do NOT exceed 4 doses per day! (For Pain Scale 1-3 (mild): maximum 2400 mg/24 hours). Do NOT give if patient is also taking Ketorolac. Give with food or milk.
  - hydrocodone/acetaminophen (NORCO 5) Oral Tablet 5 mg-325 mg
    5 mg (0.0691 mg/kg), Oral, EVERY 4 HOURS PRN starting Today at 1209 Until Discontinued, pain, mild to moderate pain
    Pain score: 1-5. May give with food or milk to decrease GI distress. Maximum dose of acetaminophen: 3 grams/DAY from all dosage forms for adults.

  - hydrocodone/acetaminophen (NORCO 10) Oral Tablet 10 mg-325 mg
    10 mg (0.138 mg/kg), Oral, EVERY 6 HOURS PRN starting Today at 1209 Until Discontinued, pain
    Pain score: 6-10. May give with food or milk to decrease GI distress. Maximum dose of acetaminophen: 3 grams/DAY from all dosage forms for adults.
Opioid Reduction Initiative – Inpatient Component

Inpatient Narcotic Administrations following Uncomplicated Vaginal Delivery

Jan 2017-May 2017
Baseline - Pre-Intervention
Average: 8.5 Narcotic Doses per Patient

Jun 2017 - May 2018
Intervention Phase 1: Inpatient Opioid Reduction Interventions, Data Presentation at Departmental Meetings
Average: 6.1 Narcotic Doses per Patient

Jun 2018 - September 2018
Intervention Phase 2: Providers Prescribing Higher than Avg # of Narcotics at Discharge notified individually, Departmental Meeting Updates Continue
Average: 3.2 Narcotic Doses per Patient

Overall Decrease: 62%
Opioid Reduction Initiative – Outpatient Component

Narcotic Doses Prescribed at Discharge following Uncomplicated Vaginal Delivery

Jan 2015 - May 2017
Baseline - Pre-Intervention
Average: 14.9 Narcotic Doses per Patient

Jun 2017 - May 2018
Intervention Phase 1: Inpatient Opioid Reduction Interventions, Data Presentation at Departmental Meetings
Average: 8.8 Narcotic Doses per Patient

Jun 2018 - September 2018
Intervention Phase 2: Providers Prescribing Higher than Avg # of Narcotics at Discharge notified individually, Departmental Meeting Updates Continue
Average: 3.2 Narcotic Doses per Patient

Overall Decrease: 79%
Summary

- The opioid epidemic is a true public health crisis
- Universal screening of all patients seeking medical care is necessary
- Pregnancy should be managed with a multidisciplinary team using medication-assisted therapy to improve maternal and neonatal outcomes
- Small changes in prescribing practices can have a big impact
Questions?