



US Opioid Epidemic: Mitigation and Treatment Opportunities

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Disclosures

Thomas Blocher, MD, MBA has no relevant financial relationships to disclose.

Dianna Candelaria, PharmD, BCACP has no relevant financial relationships to disclose.

Roy Schneiderman, MD has no relevant financial relationships to disclose.

Agenda

- Background
- CDC Guideline
- Mitigation Strategies
- Clinical Presentation
- Risk Factors/Chronic Pain Syndromes
- Treatment/Recovery Support
- Patient Case Study (Interspersed)
- **Case Management Opportunities**

Learning Objectives

At the end of this activity, participants should be able to:

- Report the current state of the United States opioid epidemic and identify populations at risk of excessive usage including overdose.
- Identify key components of the CDC (Centers for Disease Control and Prevention) Guideline for Prescribing Opioids for Chronic Pain and recognize potential risk of opioid misuse based on frequency and quantity prescribed.
- Describe mitigation strategies to reduce the risk of dependence and misuse of opioids.
- State ways in which members of the interdisciplinary team can effectively evaluate and support patients at risk of developing dependence and those with opioid-use disorder.

A National Health Crisis – HHS Data View

Every 12 minutes¹
there is a death from
opioid overdose
(2016)

\$504 Billion²
in economic costs
(2017)

14,000+¹
substance abuse
facilities in the U.S.
(2016)

Nearly 80%¹
of heroin users reported
misusing prescription opioids
prior to heroin
(2016)

HHS is the U.S. Department of Health and Human Services which is a U.S. government's principal agency for protecting the health of all Americans and providing essential human services, especially for those who are least able to help themselves.

¹ CDC/HHS: The opioid epidemic in numbers, www.hhs.gov/opa/oids

² CDC/HHS: The opioid epidemic in numbers, www.hhs.gov/opa/oids/sites/default/files/2018-01/oids-infographic.pdf

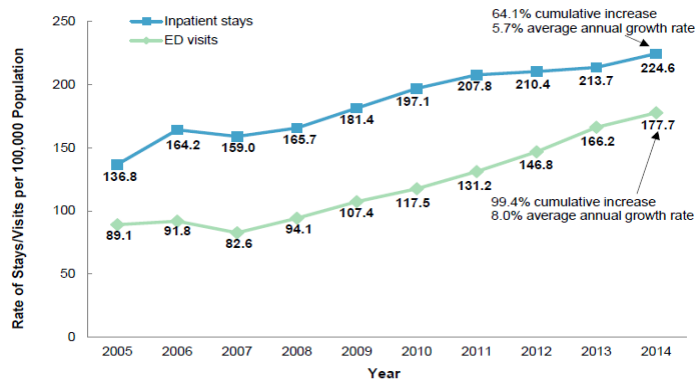
US Drug Overdose Death Rate* in Perspective

National Vital Statistics Report	1999	2015
All Causes	857.0	844.0
Firearms	10.3	11.3
Alcohol	7.0	10.3
Drugs	6.9	17.2

*per 100,000 population

Murphy, Sherry and Jiaquan, Xu et al, National Vital Statistics Reports: www.cdc.gov/nchs/data/nvsr/nvsr66/nvsr66_06.pdf, vol. 66, no. 6, pp 27-34, November 27, 2017

US Hospital Care Trending – AHRQ Data View



Agency for Healthcare Research (AHRQ) is an agency within the U.S. HHS, that invests in research and evidence to make health care safer and to improve quality.

Weiss, Audrey, Elixhauser, Anne, et al. Agency for Healthcare Research and Quality (AHRQ): [/hcup-us.ahrq.gov/reports/statbriefs/sb219-Opioid-Hospital-Stays-ED-Visits-by-State.pdf](http://hcup-us.ahrq.gov/reports/statbriefs/sb219-Opioid-Hospital-Stays-ED-Visits-by-State.pdf), Page 3, Source: Center for Delivery, Organization, and Markets, Healthcare Cost and Utilization Project (HCUP), HCUP Fast Stats, Opioid-Related Hospital Use (www.hcup-us.ahrq.gov/faststats/landing.jsp) based on the HCUP National (Nationwide) Inpatient Sample (NIS) and the HCUP Nationwide Emergency Department Sample (NEDS) Healthcare cost and utilization project, Statistical Brief #219 Dec 2016 (Revised Jan 2017)

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Timeline: How Did We Get Here?

- **1911-1990:** Opioid (narcotic) pain medications used primarily for acute pain and cancer pain¹
- **1987:** MS Contin® (morphine sulfate extended-release) 30mg FDA approved¹
- **1990:** Duragesic® (fentanyl transdermal system) approved; first formulation of an opioid pain medicine in a patch¹
- **1995:** OxyContin® (oxycodone hydrochloride extended-release) FDA approved¹
- **1996:** Pharmaceutical Company launches an extensive campaign to market and promote²
- **1998:** Actiq® (fentanyl citrate lozenge) transmucosal medication that looked like a lollipop, FDA approved to treat cancer breakthrough pain¹
- **2000's:**
 - Opioid drug volume and death toll skyrocket
 - Government inter-agency collaboration occurred to develop public education regarding prescription drug abuse¹
- **2007:** Pharmaceutical company pays \$634 million in fines for false promotion, three executives pleaded guilty to criminal charges³
- **2010:** FDA approval of a new formulations of OxyContin® (oxycodone hydrochloride extended-release) to help discourage misuse and abuse¹
- **2006-2016:** Range from 216-255 million opiate prescriptions were issued annually in the U.S.⁴

¹ FDA: Timeline for selected FDA activities, significant events addressing opioid misuse and abuse, www.fda.gov/downloads/Drugs/DrugSafety/InformationbyDrugClass/UCM566985.pdf

² GAO: U.S. General accounting office report to congressional requesters, www.gao.gov/new.items/d04110.pdf, pp 16

³ Meier, Barry, New York Time: In guilty plea, oxycontin makers to pay \$600 million, www.nytimes.com/2007/05/10/business/11drug-web.html

⁴ CDC: U.S. Prescribing rate map, www.cdc.gov/drugoverdose/maps/rxrate-maps.html, table 1

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Case Study

Jane is a 38 yo female with past medical history (PMH) including hypothyroid (diagnosed 2 years ago, well-managed, asymptomatic), Gastroesophageal Reflux Disease (GERD) (chronically for > 10 years, well-managed, asymptomatic), seasonal allergies (well-managed); Denies recent history of depression or anxiety but was treated for post-partum depression after the birth of her youngest child.

Social History: Married, 2 children (16 yo daughter and 12 yo son), works full-time as customer service agent with local cable company. She and husband drink alcohol socially and her daughter utilizes recreational drugs including marijuana and has experimented with MDMA (ecstasy/molly) and cocaine (coke). Member used marijuana as teenager but none since college.

Chronic Medications: Synthroid® (levothyroxine) 100mcg QAM + Nexium® (esomeprazole) 20mg QAM + Xyzal® (levocetirizine) 5mg QHS

Transition Case Management (TCM): 3-day admission s/p MVA with right-wrist fracture (ORIF), collar-bone fracture, 3 fractured ribs and mild head trauma/concussion (5 minute LOC post-MVA) with facial lacerations and generalized bruising; Pain managed with Fentanyl® (morphine) PCA and transitioned to oral Percocet® (oxycodone) pre-discharge.

Discharge Medications: Percocet® (oxycodone-acetaminophen) 5-325mg #100 1-2 tab Q4-6h PRN, Advil® (ibuprofen) 600mg Q6h PRN, Senna®(sennoside) 8.6mg 1-2 BID (start with 1 QHS) and continue chronic medications.

Polling Questions
1 and 2

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CDC Guidelines for Prescribing Opioids for Chronic Pain

- Guideline published March 2016
- Recommendations for prescribing opioids for chronic pain (outside of active cancer, palliative, and end-of-life care)
- Three (3) areas for consideration:
 - Determining when to **initiate or continue** opioids for chronic pain
 - Opioid **selection, dosage, duration, follow-up, and discontinuation**
 - Assessing risk and **addressing harms** of opioid use

Centers for Disease Control and Prevention
MMWR
Morbidity and Mortality Weekly Report
Recommendations and Reports / Vol. 65 / No. 1
March 18, 2016

CDC Guideline for Prescribing Opioids for
Chronic Pain — United States, 2016



Continuing Education Examination available at <http://www.cdc.gov/mmwr/ce/continuing-education>



Dowell D, Haegerich TM, Chou R., et al. CDC: Guideline for prescribing opioids for chronic pain – United States, 2016. MMWR, www.cdc.gov/mmwr/volumes/65/mr6501e1.htm, vol 65, No 1. March 18, 2016, introduction

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Determining When to Initiate or Continue Opioids for Chronic Pain

CDC Guideline for Prescribing Opioids for Chronic Pain Recommendations



Image Source: Photo Library Image GET_487685815

1. “Nonpharmacological therapy and non-opioid pharmacological therapy are preferred for chronic pain.”
2. “Before starting opioid therapy for chronic pain, clinicians should **establish treatment goals** with patients, including realistic goals for **pain and function**, and should consider how therapy will be **discontinued** if benefits do not outweigh risks.”
3. “Before starting and periodically during opioid therapy, clinicians should **discuss** with patients known **risks and realistic benefits of opioid therapy**...”

CDC: Guidelines at a glance, www.cdc.gov/drugoverdose/pdf/Guidelines_At-A-Glance-508.pdf, CDC recommendation, pp 3-4

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Opioid Selection, Dosage, Duration, Follow-up, and Discontinuation

CDC Guideline for Prescribing Opioids for Chronic Pain Recommendations

4. “When starting opioid therapy for chronic pain, clinicians should prescribe immediate-release opioids instead of extended-release/long-acting (ER/LA) opioids.”
5. “When opioids are started, clinicians should prescribe the lowest effective dosage.”
 - Carefully assess benefits and risks when increasing dosage ≥ 50 MME (morphine milligram equivalents) per day
 - “Avoid increasing dosage to ≥ 90 MME per day or carefully justify decision to titrate ≥ 90 MME per day”



Image Source: Photo Library Image Lifestyle_MedCabinet_0001

CDC: Guidelines at a glance, https://www.cdc.gov/drugoverdose/pdf/Guidelines_At-A-Glance-508.pdf, CDC recommendation, pp 3-4

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Opioid Selection, Dosage, Duration, Follow-up, and Discontinuation

CDC Guideline for Prescribing Opioids for Chronic Pain Recommendations

6. “Long-term opioid use often begins with treatment of acute pain. When opioids are used for acute pain, clinicians should prescribe lowest effective dose of immediate-release opioids and prescribe no greater quantity than needed for the expected duration of pain severe enough to require opioids.

- Three (3) days or less will often be sufficient
- More than seven (7) days will rarely be needed”



Image Source: Photo Library Image
Hospital_Pharmacy_0106

7. “Clinicians should evaluate benefits and harms with patients within one (1) to four (4) weeks of starting opioid therapy for chronic pain or of dose escalation.

- Clinicians should evaluate benefits and harms of continued therapy with patient every three (3) months or more frequently
- If benefits do not outweigh harms of continued opioid therapy; clinicians should optimize other therapies and work with patients to taper opioids to lower dosages or taper to discontinue opioids”



Image Source: Photo Library
Image GettyImages-518285260

CDC: Guidelines at a glance, https://www.cdc.gov/drugoverdose/pdf/Guidelines_At-A-Glance-508.pdf, CDC recommendation, pp 3-4

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Assessing Risk and Addressing Harms to Opioid Use

CDC Guideline for Prescribing Opioids for Chronic Pain Recommendations

8. “Before starting and periodically during continuation of opioid therapy, clinicians should evaluate risk factors for opioid-related harms;...should incorporate strategies to mitigate risk.”

- e.g. Offering naloxone when there is an increased risk for opioid overdose, such as: a history of overdose, history of substance use disorder, higher opioid dosages (≥ 50 MME/day) or concurrent benzodiazepine use

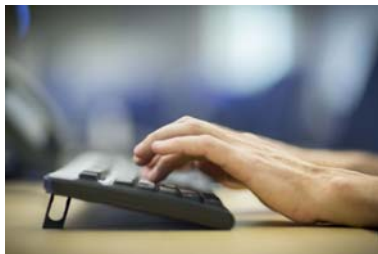


Image Source: Photo Library Image Euro_Command_Center_0268

9. “Clinicians should review patient's history of controlled substance prescriptions using state prescription drug monitoring program (PDMP) data to determine if the patient is receiving opioid dosages or dangerous combinations that put the patient at high risk for overdose.

- PDMP data should be reviewed when starting opioid therapy for chronic pain and periodically during opioid therapy for chronic pain, ranging from every prescription to every three (3) months”

CDC: Guidelines at a glance, https://www.cdc.gov/drugoverdose/pdf/Guidelines_At-A-Glance-508.pdf, CDC recommendation, pp 3-4

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Assessing Risk and Addressing Harms to Opioid Use

CDC Guideline for Prescribing Opioids for Chronic Pain Recommendations

10. "When prescribing opioids, clinicians should use **urine drug testing before** starting opioid therapy and consider urine drug testing **at least annually.**"
11. "Clinicians should avoid prescribing opioid pain medication and benzodiazepines (tranquilizers) concurrently whenever possible."
12. "Clinicians should offer or arrange evidence-based treatment (usually medication-assisted treatment {MAT}) for patients with opioid use disorder."



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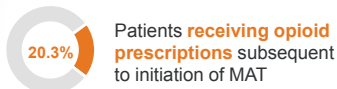
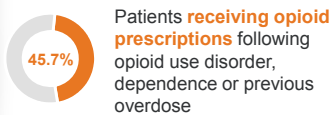
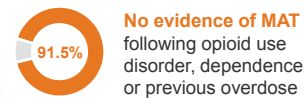
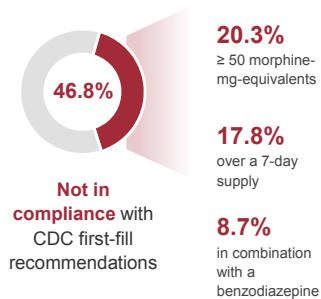
CDC: Guidelines at a glance, www.cdc.gov/drugoverdose/pdf/Guidelines_At-A-Glance-508.pdf, CDC recommendation, pp 3-4

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2016 Large Pharmacy Benefit Manager Company

Providing a View of Their Compliance with CDC Guidelines



Pharmacy benefit manager CY'16 commercial managed care medical and pharmacy claims data

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Calculating Morphine Milligram Equivalents (MME)



Calculating morphine milligram equivalents (MME)

OPIOID (doses in mg/day except where noted)	CONVERSION FACTOR
Codeine	0.15
Fentanyl transdermal (in mcg/hr)	2.4
Hydrocodone	1
Hydromorphone	4
Methadone	
1-20 mg/day	4
21-40 mg/day	8
41-60 mg/day	10
> 61-80 mg/day	12
Morphine	1
Oxycodone	1.5
Oxymorphone	3

These dose conversions are estimated and cannot account for all individual differences in genetics and pharmacokinetics.

CDC/HHS: Calculating total daily dose of opioids for safer dosage, www.cdc.gov/drugoverdose/pdf/calculating_total_daily_dose-a.pdf

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Case Study

Case manager (CM) follow-up call one (1) week post-discharge

Jane 38 yo female; PMH hypothyroid, GERD, seasonal allergies; TCM: discharged 10-days ago, post MVA, right-wrist/ORIF, collar-bone and 3 rib fractures, discharged with Percocet® (oxycodone-acetaminophen) 5/325mg #100 and Advil® (ibuprofen) 600mg.

Jane reports her pain is well-managed and only requiring 3-4 Percocet® (oxycodone-acetaminophen) per day but is surprised her discharge prescription bottle is almost empty. She had a follow-up appointment with her PCP yesterday and was given a new prescription for Percocet® (oxycodone-acetaminophen) 5-325mg #200 and Xanax® (Alprazolam) 0.5mg #30 1 tab TID PRN anxiety which she has been experiencing since the accident.

Polling Questions
3 and 4

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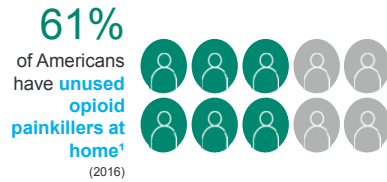
Opioid Risk Mitigation Strategies

Pharmacy Benefit Plan Managers (PBM)



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Problem: Inadequate Awareness and Training



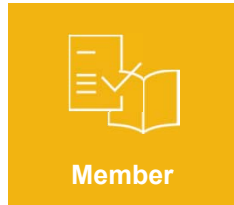
11 Hours Mean amount of training provided to students at US medical schools relative to **pain management**³ (2009-2010)

Overall some of the U.S. medical schools devote five hours or less of training relative to pain management³ (2009-2010)

¹ Kennedy-Hendrick A, and Gielen A, McDonald E, JAMA: Medication sharing, storage, and disposal practices for opioid medications among US adults. JAMA Intern Med. 2016; 176(7): 1027-1029. [amanetwork.com/journals/jamainternalmedicine/fullarticle/2527368](http://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2527368). results
² U.S. Department of Health and Human Services (HHS): Results from the 2010 national survey on drug use and health: www.samhsa.gov/data/sites/default/files/NSDUHNationalFindingsResults2010-web/2k10ResultsRevNSDUHresultsRev2010.pdf, summary of national findings, pp 25
³ Mezei, L, Murinson, Beth, Pain, et al, J Pain: education in north American medical school, www.ncbi.nlm.nih.gov/pubmed/21945594, results and discussion, 2011;12(12)

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Solution: Examples of Prevention and Education



Member

Prevention and Proper Usage

- First-fill patient mailings
- Partnerships with national advocacy groups
- Educational resources via member portals and mailings



Pharmacy and
Prescriber

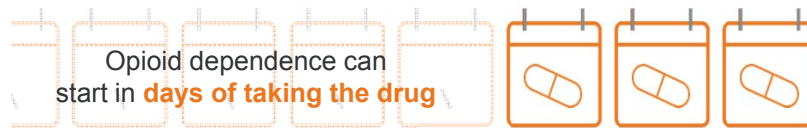
Appropriate Prescribing and Patient Management

- Prescriber Education
 - CDC guideline reinforcement
 - Opioid abuse patient and pain management resources
- Pharmacy fax blasts

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Problem: Rapid Onset of Dependence



“After taking opioids for just five (5) days in a row, a person is more likely to take them long-term”

CDC: Get the facts, www.cdc.gov/drugoverdose/pdf/patients/Get-the-Facts-a.pdf

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Solution: Examples to Minimize Early Exposure

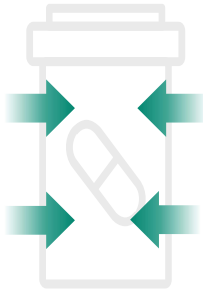


Pharmacy Benefit Plan Design

- **Align with CDC guideline recommendations**
- **First-fill prescription limits MME dose and day supply limitations**

Examples:

Maximum MME per day and day supply limitations on **new short-acting opioid** prescription claims



Narrow refill window on all opioid prescriptions to limit early refills and stockpiling

Limit the **number of refills** within specific timeframe

Prior authorization and treatment plan requirement beyond the limits

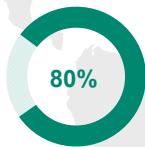
CDC: Guidelines at a glance, www.cdc.gov/drugoverdose/pdf/Guidelines_At-A-Glance-508.pdf, CDC recommendation, pp 3-4

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Problem: Excessive US Opioid Supply



Although the U.S. represents only **5% of the 7.1 billion global population¹ (2014)**



All Rx Opioids

The **majority** of the world's supply of opioids is consumed in the U.S.² (2014)

¹ Census: www.census.gov/popclock/

² Straehley, Steve, AllGov: www.allgov.com/news/controversies/us-5-percent-of-world-population-80-percent-of-opioid-consumption-141215?news=855100, title

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Problem: Excessive US Opioid Supply



214 Million
opiate prescriptions
issued in the
U.S.¹ (2016)



3X
health care providers
ordered opioid Rx in
the highest-
prescribing states vs.
the lowest prescribing
states² (2012)



92 Units
average # of
tablets* per
prescription³
(2016)

*Oxycodone-Acetaminophen and Hydrocodone-Acetaminophen

¹ CDC: www.cdc.gov/drugoverdose/maps/rxrate-maps.html, table 1

² CDC: [Vital Signs. Variation Among States in Prescribing of Opioid Pain Relievers and Benzodiazepines—United States, 2012](#), MMWR 2014; 63(26):563-568, results

³ Pharmacy benefit manager CY16 commercial managed care medical and pharmacy claims data

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Solution: Examples to Reduce Inappropriate Supply



Initial Supply:

- **Lowest effective dose/quantity of short-acting opioid**
- **Assess risk: benefit if opioid dosage \geq 50 MME**
- **Avoid dosages \geq 90 MME without justification¹**

- Pharmacy network auditing¹
- Prescriber surveillance, scoring, and intervention¹
- Advanced concurrent drug utilization review:
 - Opioid + benzodiazepine (such as: Xanax[®], Klonopin[®], Librium[®], Ativan[®])
 - Acetaminophen (Tylenol[®]) daily dosage limitations with combination products²

¹ CDC: Guidelines at a glance, www.cdc.gov/drugoverdose/pdf/Guidelines_At-A-Glance-508.pdf, CDC recommendation, pp 3-4

² Lexicomp: Morphine, online.lexi.com/co/action/doc/retrieve/docid/patch_f/1799128#/interactions, interactions

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Case Study

CM follow-up call six (6) weeks post-discharge

Jane reports her pain is not well-managed at this time (8 out of 10) and was needing 8-10 Percocet® (oxycodone-acetaminophen) per day.

Her PCP was concerned about prolonged use of Acetaminophen (in the Percocet® (oxycodone-acetaminophen) and changes her prescription to Opana® (oxymorphone ER) #60 10mg BID + Oxycodone IR #100 5mg 1-2 tab every 6 hours PRN for breakthrough pain and refills Xanax® (alprazolam) #90 0.5mg TID PRN with 5 refills.

Jane seems more anxious and concerned about the cost of Opana® (oxymorphone ER).

Polling Question
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Risk Factors for Individual Prescription Dependence Disorder

*Preventing Prescription Drug Misuse:
Understanding Who Is at Risk, CAPT Decision-Support Tool (2016)*

- **Prior substance abuse**
- **Family history of substance abuse**
- Demographics (age, education, income, and health)
- Prescription access
- Having health insurance
- Negative life events
- Employment
- **Prior/current engagement with legal system**
- **Tobacco use**
- Mental health disorders
- Workplace
- Spiritual beliefs
- Youth ages 12 to 17, that have moved three or more times in the past year
- Cognitive: Impulsivity, lack of judgment, attention deficit hyperactivity disorder (ADHD) by history
- **Psychosocial: “slippery people, places, and things”**

SAMHSA: CAPT Decision-Support Tools, www.samhsa.gov/capt/sites/default/files/resources/preventing-prescription-drug-misuse-understanding.pdf, pp12-35

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Opioid Use Disorder - Clinical Presentation

- Toxicity
 - Sedation, decreased respiration, blood pressure and heart rate may be decreased or unchanged, possible seizures, and myosis (constriction of pupils)¹
- Withdrawal
 - Nausea/vomiting, sweating, dysphoria (a state of unease), abdominal cramping, diarrhea, mydriasis (dilation of pupils)
 - Severe distress: Elevated heart rate, blood pressure, respiration rate²
- Normal effects
 - Developed tolerance²
 - Often present seeking treatment for their addiction³
 - Can lead to withdrawal²
- Drug seeking behavior
 - Demanding and desperate quality³

¹ UpToDate: Physical examination findings of opioid toxicity.

www.uptodate.com/contents/image?imageKey=EM%2F77213&topicKey=EM%2F300&source=see_link

² Stolbach, Andrew and Hoffman, Robert, UpToDate: Opioid withdrawal in the emergency setting, physical examination, and pharmacology and cellular toxicology https://www.uptodate.com/contents/opioid-withdrawal-in-the-emergency-setting?search=Opioid%20withdrawal%20in%20the%20emergency%20setting&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1

³ US Department of Justice, DEA: Don't be scammed by a drug abuser, www.deadiversion.usdoj.gov/pubs/brochures/drugabuser.htm, Common characteristics of the drug abuser

Opioid Overdose - Clinical Presentation

- Signs and symptoms of an opioid overdose that can lead to death
 - During an overdose, breathing can be dangerously slowed or stopped, causing brain damage or death. It's important to recognize the signs and act fast. Signs include:
 - Small, constricted "pinpoint pupils"
 - Falling asleep or loss of consciousness
 - Choking or gurgling sounds
 - Limp body
 - Pale, blue or cold skin
- What to do if you think someone is overdosing
 - Call 911 immediately
 - Administer naloxone, if available
 - Try to keep the person awake and breathing
 - Lay the person on their side to prevent choking
 - Stay with him or her until emergency workers arrive

Opioid Use and Pregnancy

Opioid use during pregnancy has increased dramatically in recent years¹

Opioid use during pregnancy has been associated with:

- Miscarriage
- Preeclampsia
- Placental abruption
- Placental insufficiency
- Premature rupture of membranes (preterm labor - before 37 weeks)
- Postpartum hemorrhage
- Fetal growth restriction
- Premature birth
- Neonatal opioid withdrawal¹

Opioid use during pregnancy has been associated with an increased risk of birth defects, such as:

- Neural tube defects
- Heart defects
- Gastroschisis
- Fetal death²

¹ HealthEd: OUD, healthed.optum.com/content/replatform/healtheducation/topics/opioid-use-disorder-oud.html#pregnancy, pregnancy specific
² CDC/HHS: Pregnancy and Opioid, www.cdc.gov/drugoverdose/pdf/pregnancy_opioid_pain_factsheet-a.pdf, pp1

Opioid Risk Assessment Tools

National Institute of Drug Abuse (NIDA)

- **Screener and Opioid Assessment for Patients in Pain (SOAPP-R)**
 - Predicts possible adult opioid abuse in chronic pain patients, sample questions:
 - ✓ How often do you have mood swings? 0 1 2 3 4
 - ✓ How often do you smoke a cigarette within an hour after you wake up? 0 1 2 3 4
 - ✓ How often have you taken medication other than the way that it was prescribed? 0 1 2 3 4
 - ✓ How often have you used illegal drugs (marijuana, cocaine, etc.) in the past five years? 0 1 2 3 4
 - ✓ How often, in your lifetime, have you had legal problems or been arrested?
- **Drug Abuse Screening Test (DAST)** (DAST 10, 20 {adolescent} and 28)
 - Assesses problems and consequences related to drug
- **Opioid Risk Tool (ORT)**
 - Administered at initial visit prior to beginning opioid therapy for pain management.
 - ✓ Score of three or lower indicates low risk for future opioid abuse, a score of four to seven indicates moderate risk for opioid abuse, and a score of eight or higher indicates a high risk for opioid abuse.

NIH: Chart of Evidence-Based Screening Tools for Adults and Adolescents, www.drugabuse.gov/nidamed-medical-health-professionals/tool-resources-your-practice/screening-assessment-drug-testing-resources/chart-evidence-based-screening-tools-adults

What About Chronic Pain Syndromes?

- Centralized from peripheral nerve injury
- Direct brain injury
 - Total brain injury (TBI)
 - Post-stroke
 - Post-infection
 - Multiple sclerosis
 - Phantom limb pain
- Originates inside brain from auto-immunity, genetics or unknown
 - Fibromyalgia
 - Interstitial cystitis

Rosenquist, Ellen. UpToDate: www.uptodate.com/contents/evaluation-of-chronic-pain-in-adults?search=Shift%20from%20Acute%20Pain%20to%20Chronic%20Pain&source=search_result&selectedTitle=4~150&usage_type=default&display_rank=4, common causes of chronic pain

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Chronic/Central Pain Definition

- Constant pain driven by focus inside brain and characterized by stimulation of sympathetic nervous and endocrine systems
- Chronic pain is largely a brain disease
- Areas of brain atrophy in people with chronic pain which may be corrected or normalized by successful treatment of pain
- Process of glial cell activation, neuro-inflammation and imbedding of pain memory

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Treatment of Chronic Pain

- Central pain
 - Pain in the brain is real and not imaginary
 - Not “neurogenic pain” (based on peripheral nerve)
 - Includes phantom limb pain and fibromyalgia
 - Type of pain has different quality¹
- Chronic pain and opioid addiction are similar in effects on autonomic nervous and endocrine system
 - Systems are initially alert and stimulated by acute pain and early use
 - Blood pressure and pulse rate increase, adrenaline released
 - As acute pain wears down into chronic pain, same system become worn out, e.g. adrenal insufficiency, loss of appetite, inability to “love” (oxytocin failure)

ACPA: www.theacpa.org/wp-content/uploads/2018/03/ACPA_Resource_Guide_2018-Final-v2.pdf, pp 9, central pain syndrome.

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Treatment of Chronic Pain

- Shift from acute to chronic pain is defined as pain that is greater than three months¹
- Acute pain and chronic pain can co-exist²
- Brain cannot always tell difference between opioid withdrawal and recurrence of pain²
- **Opioids are not treatment of choice for chronic pain³**
- Paradoxical responses to opioids do occur in chronic pain... “the first dose gives me a headache, so I have to take at least three more to get rid of the headache.”²

¹ Rosenquist, Ellen, UpToDate: Evaluation of chronic pain in adults, www.uptodate.com/contents/evaluation-of-chronic-pain-in-adults?search=Shift%20from%20Acute%20Pain%20to%20Chronic%20Pain&source=search_result&selectedTitle=4~150&usage_type=default&display_rank=4, common causes of chronic pain

² Arnold Rober, Childer, Julie, UpToDate: Management of acute pain in the patient chronically using opioids, www.uptodate.com/contents/management-of-acute-pain-in-the-patient-chronically-using-opioids?search=Management%20of%20acute%20pain%20in%20the%20patient%20chronically%20using%20opioids&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1, introduction and challenges

³ Gupta Anita, and Rosenquist, Richard, UpToDate: Use of opioids in the management of chronic non-cancer pain, www.uptodate.com/contents/use-of-opioids-in-the-management-of-chronic-non-cancer-pain?search=Chronic%20Pain%20Treatment&source=search_result&selectedTitle=2~150&usage_type=default&display_rank=2, introduction

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Case Study

Six (6) months post-discharge

Jane calls asking to speak with the RN case manager she spoke to 6 months ago.

Her dosage of Opana® (oxymorphone ER) has been increased gradually by her PCP to 20mg BID and is having trouble managing the constipation.

Jane has continued to use the Xanax® (Alprazolam) 0.5mg TID PRN and was given a written warning from her job for excessive absences.

She admits that she takes the Opana® (oxymorphone ER) now to help her relax and is asking questions if she is now an addict.

Polling Questions
6 and 7

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Problem: Dependency Challenges



 **\$10-20K**
excess annual
medical costs

opioid abusers vs non-abusers¹
(Jan 2012- March 2015)



1 in 4

receiving prescription opioids long term in a primary care setting struggles with addiction²



80%
heroin users

report starting on Rx opioids prior to transitioning to heroin³

¹ Kirson, Noam and Scarpali, Lauren, et. al: The economic burden of opioid abuse: updated finding, www.jmcp.org/dol/abs/10.18553/jmcp.2017.16265, Journal of Managed Care and Specialty Pharmacy Vol. 23, No. 4, April 2017, Abstract

² CDC: www.cdc.gov/drugoverdose/pdf/AHA-Patient-Opioid-Factsheet-a.pdf, pp1

³ HHS: www.hhs.gov/opioids/

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Problem: Dependency Challenges



Collateral Damage: Our Nation's Children

35% increase in U.S. hospitalization related to opioids¹ (2004-2015)

20% of children <6 years of age hospitalized with methadone ingestion¹ (2004-2015)



Over 500% increase in rate of neonatal abstinence syndrome in U.S.² (2000-2012)

Every 25 minutes a baby is born suffering from opioid withdrawal² (2012)

Neonatal abstinence syndrome is a postnatal drug withdrawal syndrome that occurs primarily among opioid-exposed infants shortly after birth, often manifested by central nervous system irritability, autonomic over reactivity, and gastrointestinal tract dysfunction³

¹ Kane, Jason, Colvin Jeffrey, et al, American Academy of Pediatrics (AAP): Opioid-Related Critical Care Resource Use in US Children's Hospitals, <http://pediatrics.aappublications.org/content/early/2018/03/01/peds.2017-3335>, What this study adds, data source

² NIH: Dramatic Increases in Maternal Opioid Use and Neonatal Abstinence Syndrome, <https://www.drugabuse.gov/related-topics/trends-statistics/infographics/dramatic-increases-in-maternal-opioid-use-neonatal-abstinence-syndrome>

³ Ko Jean, Stephen, Patrick, et al, CDC/MMWR: Incidence of Neonatal Abstinence Syndrome, www.cdc.gov/mmwr/volumes/65/wr/mm6531a2.htm, 28 States, 1999–2013, Weekly / August 12, 2016 / 65(31):799–802

Solution: Treating At-Risk and High-Risk Populations



Preventing progression to dependence/abuse

Pharmacy benefit manager (PBM) interventions may include prescriber outreach to address:

- Notification when patient receiving multiple Rx from multiple pharmacies and/or multiple prescribers
- Use of concurrent opioids and benzodiazepines over prolonged periods of time
- Excessive early refills
- Overuse of opioids and other potential drugs of abuse

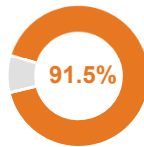
Clinical Pharmacist engagement in case management

- Comprehensive medication review
- Prescriber-focused outreach and consultation
- Continuous patient monitoring

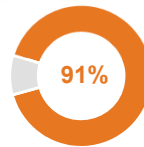
Problem: Complex Ongoing Management



40-60% Average relapse rate amongst drug abusers in the U.S.¹



No evidence of MAT following opioid use disorder, dependence or previous overdose²



Patients who overdose receive an opiate Rx within 10 months³

¹ NIH: A Research-Based [Guide](https://d14rmqtrwz5a.cloudfront.net/sites/default/files/soa_2014.pdf)https://d14rmqtrwz5a.cloudfront.net/sites/default/files/soa_2014.pdf, Comparison of relapse rate between drug addiction and other chronic illnesses, pp 26

² Pharmacy benefit manager CY'16 commercial managed care medical and pharmacy claims data

³ Larochelle et al., ACP: Opioid Prescribing After Nonfatal Overdose and Association With Repeated Overdose: A Cohort Study, www.annals.org/aim/article-abstract/2479117/opioid-prescribing-after-nonfatal-overdose-association-repeated-overdose-cohort-study *Ann Intern Med*, Results, 2016; 164:1-9.

Solution: Support Chronic Populations and Recovery



- 1** Expanded access to emergency/rescue medications to treat overdose
Remove impediments for emergency rescue therapy (e.g. naloxone)
- 2** Unrestricted access to all MAT (medication-assisted therapy) options
(e.g. buprenorphine, naltrexone, methadone)
- 3** Drug level lock-in to prescriber and/or pharmacy
Intensive case management review and restriction of high-risk opioid users
- 4** Post-treatment relapse prevention
Advanced concurrent drug utilization monitoring on opioid use in patients actively engaged in MAT therapy

Opioid Use Disorder (OUD)

Substance Use Disorders (SUDs) Are Difficult to Treat

Only one in 10 individuals receives treatment

			
Stigma stops people from exploring treatment options	Treatment facilities have been biased against using any medications	Inconsistency in provider expertise	SUD/OUD is a chronic disease and must be treated like one

¹ HHS: The Surgeon General's Report on Alcohol, Drugs, and Health, facing addiction in America, Washington, DC: HHS, November 2016, <https://addiction.surgeongeneral.gov/sites/default/files/chapter-4-treatment.pdf>, Key Findings, section 4, pp 2

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Standard Treatment Protocols Fall Short

Medication-Assisted Treatment (MAT)

Traditional therapies like detox-to-abstinence treatment does not address cravings – a major cause of relapse:

- Greater risk for overdose due to lower tolerances
- SUD treatment requires multiple streams of care
- Success is dependent on personalized care

MAT Program

Takes a chronic condition approach by understanding there are multiple streams of care needed to address multiple conditions.

MAT Plays Critical Role for Those with Opioid Use Disorder (OUD)

It is the most effective intervention to treat OUD and is more effective than either behavioral intervention or medication alone.

What exactly is MAT Program

Pairs therapies, such as counseling or cognitive behavioral therapy, with an FDA-approved medication to treat substance use disorders and prevent opioid overdose.



Strain, Eric, M.D., UpToDate: Pharmacotherapy for opioid use disorders, www.uptodate.com/contents/pharmacotherapy-for-opioid-use-disorder?search=Opioid%20MAT&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1

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Medication-Assisted Treatment Programs

Need for MAT Significantly Exceeds Capacity

Physicians are not prescribing...



- Only 3.5% of 900,000 U.S. physicians can write prescriptions for opioid analgesics have obtained DATA 2000 waiver to prescribe buprenorphine – and only fraction of those licensed actually prescribe it.¹



- Only 23% of public and < 50% of private-sector treatment program offer any FDA-approved medications to treat SUD/OD (2017).²

Meeting MAT Network Demand

1,744 MAT Providers and 3,747 locations nationally and expanding

- Utilizing large PBM data source, and working closely with providers to identify in what neighborhoods and communities treatment facilities are needed.
- Proprietary quality requirements to become a MAT provider.³



¹ Pew Trusts: <http://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2016/01/15/few-doctors-are-willing-able-to-prescribe-powerful-anti-addiction-drugs>, introduction, Jan 15, 2016

² Pew Trusts: <http://www.pewtrusts.org/en/research-and-analysis/fact-sheets/2017/02/the-case-for-medication-assisted-treatment>, treatment gap, Jan 15, 2016

³ Source: Pharmacy Benefit Manager Commercial Managed Care Medical and Pharmacy Claims Data, 2016

Accountability



Helpful Links

1. **CDC: Helpful Materials for Patients**
www.cdc.gov/drugoverdose/patients/materials.html
2. **CDC: Information for Providers**
www.cdc.gov/drugoverdose/providers/index.html
3. **CAPT Decision-Support Tools, Preventing Prescription drug Misuse, Understanding Who Is at Risk**
www.samhsa.gov/capt/sites/default/files/resources/preventing-prescription-drug-misuse-understanding.pdf
4. **U.S. General Accounting Office Report to Congressional Requesters**
www.gao.gov/new_items/d04110.pdf
5. **NIH Chart of Evidence-Based Screening Tools for Adults and Adolescents**
www.drugabuse.gov/nidamed-medical-health-professionals/tool-resources-your-practice/screening-assessment-drug-testing-resources/chart-evidence-based-screening-tools-adults

Thank You.

Questions? Contact OptumHealth Education at
moreinfo@optumhealtheducation.com

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- Center for Application of Prevention Technologies Decision-Support Tools (CAPT): www.samhsa.gov/capt/sites/default/files/resources/preventing-prescription-drug-misuse-understanding.pdf, Updated May 2016, Accessed 4/23/2018.
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