Opioids in Chronic Pain Management: Guidelines and Principles – Part 1

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Principles of Pain Management

- **Pain types**: somatic, visceral, neuropathic or mixed
- **Stepwise approach**:
  - nonopioid +/- adjuvant +/- adding opioid when indicated.

  Acetaminophen, NSAIDs/COX-2
  \[ \downarrow \]
  Tramadol
  \[ \downarrow \]
  Opioids - last resort but

Patients with life-limiting illness where pain impacts remaining QOL and functional capacity.
Principles of Pain Management

• **Consider adjunctive and non-pharmacologic modalities:**
  
  • Topicals: Capsaicin, Menthol, diclofenac, lidocaine cream/patch
  
  • Adjuncts for neuropathic pain: TCAs, SNRIs, Gabapentin
  
  • Local injections: joint, trigger point, epidural/caudal or nerve blocks
  
  • Physical therapy, exercise
  
  • Massage, acupressure/acupuncture, yoga, meditation
  
  • Cognitive behavioral therapy (CBT)
Opioids

- Efficacy depends on intra-patient variability – no superior drug per se
- Incomplete cross-tolerance and equi-analgesia is inexact, do not strictly adhere to conversion tables – dose reduce by 25-30%
- Always require prevention of constipation with a daily bowel regimen (prokinetic +/- osmotic agent).
- Withdrawal if not tapered – decrease by ~ 10-25%/week or month
- Convert opioids to PO OMEs before conversion to other opioids
  - Be cognizant of Parenteral to Oral conversion
  - e.g. Dilaudid IV:PO morphine 1:20
- Initial dosage and frequency must be individualized contingent on many factors i.e. age>70, BMI, protein binding (albumin level), organ dysfunction (liver or renal, precaution RE: morphine in CKD), prior opioid use or exposure (including adverse reactions)
# OPIOID Equivalency Table

<table>
<thead>
<tr>
<th>Drug</th>
<th>Oral/Rectal Route</th>
<th>Parenteral Route</th>
<th>Conversion Ratio to Oral Morphine</th>
<th>Equianalgesic Dose of Oral Morphine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphine sulfate</td>
<td>30mg Oral morphine</td>
<td>10mg of parenteral morphine</td>
<td><strong>3 times to 1</strong></td>
<td>30mg Oral morphine</td>
</tr>
<tr>
<td>Oxycodone</td>
<td>20mg of oral oxycodone</td>
<td>NA</td>
<td><strong>1.5 times to 1</strong></td>
<td>30mg Oral morphine</td>
</tr>
<tr>
<td>Hydrocodone</td>
<td>20mg of oral hydrocodone</td>
<td>NA</td>
<td>roughly <strong>1.5 times to 1</strong></td>
<td>30mg Oral morphine</td>
</tr>
<tr>
<td>Hydromorphone</td>
<td>7mg of oral hydromorphone</td>
<td>1.5mg of parenteral hydromorphone</td>
<td><strong>Oral 4 times to 1</strong> Parenteral 20 times to 1 Parenteral hydromorphone is 5 times to 1 oral hydromorphone</td>
<td>30mg Oral morphine</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>NA</td>
<td>15 micrograms/hr</td>
<td><strong>fentanyl is 80-100 times to 1</strong> (This is based on studies converting from Morphine to fentanyl. Currently, there are no empirical studies converting fentanyl to morphine).</td>
<td>30mg Oral morphine</td>
</tr>
<tr>
<td>Meperidine</td>
<td>300mg of oral meperidine</td>
<td>75mg of parenteral meperidine</td>
<td><strong>Oral 1 to 10 times</strong> Parenteral 1 to 2 times</td>
<td>30mg Oral morphine</td>
</tr>
</tbody>
</table>

Meperidine is not a recommended opioid given seizure-inducing metabolites & is to be avoided. If a patient with chronic pain is on meperidine, convert patient to an equi-analgesic dose of one of the other opioids.
“Opioid Naïve” vs. “Opioid Tolerant”

**Opioid Naïve** = anyone who has not used opioids in the dosage or duration defined as opioid tolerant

**Opioid Tolerant** - receiving any of the following *for at least 1 week*:
- oral morphine 60 mg/day;
- transdermal fentanyl 25 mcg/hour;
- oral oxycodone or hydrocodone 30 mg/day;
- oral hydromorphone (Dilaudid) 8 mg/day;
- or an equi-analgesic dose of any other opioid

**Opioid tolerant** - implies a lesser susceptibility to the effects of opioids, both therapeutic and adverse

**Opioid addiction** → aberrant behavior (Dr. Metchnikoff’s talk)
Characteristics of long acting opioids (e.g., MS Contin, OxyContin, Methadone, Fentanyl patch)

- Indicated for constant or frequent/recurrent pain that is unlikely to remit or resolve in the foreseeable future.

- **Do not** dose long acting formulation more often than q 8 hrs unless during loading period in an inpatient monitor setting. *Never* use PRN (slow onset)
  - Educate patients and family members

- When taken orally after crushed, dissolved or via NG/Gtube it is changed into immediate release formulation leading to potential risk of overdose (duration of action becomes 2-3 hrs instead of 8-10 hrs).
  - Exceptions: methadone & buprenorphine are long acting by chemical structure without risk of manipulation thus used in addiction medicine preferentially

- For chronic pain, most patients won’t become pain free
  - Set realistic goal = enhance functional status/QOL!
Methadone in pain control

› **Benefits:**
  - Long acting (dosed BID-TID)
  - Can administer crushed or as oral solution through G or J tube
  - NMDA receptor antagonism → effective for neuropathic pain

› **Potential issues:**
  - Variable bioavailability- Analgesic effect is only 8-10 hours
  - Metabolites have long T\(_{1/2}\) (up to 3 days) so takes 5-7 days for steady state
    › Clinically assess patient by phone w/in 3-5 days of start or dose increase important
  - Potential drug interactions via Cyt p450 (esp. CYP2B6, CYP3A4 affecting levels)
  - Risk of VT/Torsades if QTc >450 mg- need risk assessment of patients
    › Consider baseline EKG if heart disease, low K/Mg, other QTc prolonging medications
    › Contraindicated if baseline QTc >500ms
    › Rare except in doses>100mg or IV loading
Methadone pharmacokinetics
Not linear with increasing equianalgesic dosing

<table>
<thead>
<tr>
<th>PO Morphine equivalent</th>
<th>Methadone: Morphine ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;100 mg</td>
<td>1:3</td>
</tr>
<tr>
<td>100-300 mg</td>
<td>1:5</td>
</tr>
<tr>
<td>300-500 mg</td>
<td>1:10</td>
</tr>
<tr>
<td>500-1000 mg</td>
<td>1:15</td>
</tr>
<tr>
<td>&gt;1000 mg</td>
<td>1:20</td>
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</table>
Methadone pharmacokinetics

*Not* linear with increasing equianalgesic dosing

<table>
<thead>
<tr>
<th>PO Morphine equivalent</th>
<th>PO Morphine: Methadone ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;30 mg</td>
<td>2:1</td>
</tr>
<tr>
<td>31-99 mg</td>
<td>4:1</td>
</tr>
<tr>
<td>100-299 mg</td>
<td>8:1</td>
</tr>
<tr>
<td>300-499 mg</td>
<td>12:1</td>
</tr>
<tr>
<td>500-999 mg</td>
<td>15:1</td>
</tr>
<tr>
<td>1000-1200 mg</td>
<td>20:1</td>
</tr>
<tr>
<td>&gt;1200 mg</td>
<td>Consider expert pain or palliative consultation</td>
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</table>
Transdermal Fentanyl in Pain Control

- Precautions:
  - Heat increases absorption (caution: sauna, hot bath/showers)
  - Drug interactions (CYP450- P3A4)
  - Requires SubQ reservoir for duration of action – Variable in cachectic patients
  - OD/deaths seen with Heroin containing Carfentanyl (1000x potency of Fentanyl)

- OVMC Pharmacy form on intranet (initiate or change dose)

  Form must be signed by “authorized fentanyl prescriber”
  (any licensed providers, including fellows and residents with DEA qualifies but must be on the authorization list to prescribe at OVMC).

On any opioid at 60-100mg OME/24hours for ≥ 7 days (oral morphine equivalent)
May only be dose-adjusted every 7 days after initial titration at day 3
Federal DEA Schedules
(“Controlled Substances” = Need triplicate pad; “😊” = opioids; “😢” = cannabinoids)

**Schedule 1: Extreme abuse potential - non medical use only**
- Heroin
- LSD
- Marijuana (THC+CBD) - legalized in some states
  - US Federal Government owns patent for CBD ...
- MDMA (“Estacy”)

**Schedule 2: High abuse potential; No refills**
- Morphine (MS Contin®)
- Fentanyl
- Hydromorphone (Dilaudid®)
- Oxycodone (OxyContin®, Percocet®)
- Hydrocodone (Norco®, Vicodin®)
- Amphetamines (Ritalin®, Adderall®, Methamphetamine)
- Cocaine
- Methadone
- Phencyclidine (“PCP”)
- Short-acting barbiturates (Pentobarbital, Secobarbital)
- Nabilone (Cessamet® – synthetic THC)

**Schedule 3: Medium abuse potential; can refill all ≥ Schedule 3 (including phone/fax)**
- Tylenol w/Codeine (Tylenol #3®)
- Dronabinol (Marinol® - synthetic THC)
- Buprenorphine (Subutex®, Suboxone®)
- Testosterone (and other anabolic steroids)
- Ketamine (“Special K”)

**Schedule 4: Low abuse potential**
- Benzodiazepines (Xanax®, Ativan®, Klonipin®, Librium, Restoril®)
- Zolpidem (Ambien®), Zopiclone (Imovane®), Eszopiclone (Lunesta®)
- Long-acting barbiturates (Phenobarbital)
- Tramadol (Ultram®)
- Carisoprodol (Soma®)

**Schedule 5: Lowest abuse potential**
- Codeine cough syrups
- Diphenoxylate (Lomotil®)
- Pregabalin (Lyrica®)
Opioid Case #1
short acting to long acting

★ 30 yo male with metastatic neuroendocrine tumor to liver requiring 2mg IV Morphine q 4 hrs w/good pain control.
★ IV to PO 1:3 → How much long acting opioid should you start?

- 2 x 6 doses = 12 mg IV morphine
- 12 x 3 IV to PO = 36mg PO Morphine
How much MS Contin to start?
- 15mg po q12hr or BID
Opioid Case #2
Long acting opioid taper

53 yo male with locally advanced H&N carcinoma. He has severe odynophagia/dysphagia and was taking 8 tablets of Norco 10/325mg daily, now S/P PEG placement for chemo/XRT, needs long acting opioid for care transition to board and care facility.

- What is the PO Morphine equivalent?
  - 120mg PO morphine equivalent

What long acting opioid would you consider?
- MS contin 30mg TID or Oxycontin 20mg TID after a 25% dose reduction for incomplete cross tolerance
- if unable to swallow tablets Conversion to Methadone --> 50% dose reduction → 60mg/3 = 20mg(7mgTID)

After his disease go into CR, patient has only occasional pain, how to taper his long acting opioid and which breakthrough opioid to consider?
- 10-20% reduction every 1-2 weeks, Morphine elixir q 3-4 hours for BTP if still dysphagia to tablets
Opioids in Chronic Pain Management: Guidelines and Principles – Part 2

Chris Metchnikoff, MD
Director of Outpatient Palliative Care
Olive View-UCLA Medical Center
Statistics: Scope of the Chronic Pain Problem

- Over **100 Million** in U.S. with **Chronic Pain**
  - 25 million have moderate to severe chronic pain
  - 42% with pain lasting > 1 year
  - 33% report pain as disabling
  - 63% have seen primary care physician for help
  - Pain accounts for **20% of outpatient visits**

- Chronic pain costs an estimated **$600 Billion annually** in U.S.
  - Healthcare expenses
  - Lost income
  - Lost productivity

- **Chronic pain** can be a disease in itself
  - Pathologic, maladaptive disorders of somatosensory pain signaling pathways that persists well after the acute injury
  - Management approaches designed for acute, self-limited pain are inadequate and inappropriate for treating chronic pain

American Academy of Pain Medicine. [www.painmed.org](http://www.painmed.org)
Institute of Medicine. *2011 Relieving Pain in America*. Washington DC
• An estimated **1 out of 5 patients with non-cancer pain** or pain-related diagnoses are **prescribed opioids**

• The amount of opioids prescribed and sold in the US **quadrupled** since 1999, **but** the **overall amount of pain** reported by Americans **hasn’t changed**

• **249 million prescriptions** for opiate pain medications were written by health care providers in 2013, making **opioids the most commonly prescribed class of medication in America**
  
  • **Hydrocodone with Acetaminophen (Norco®, Vicodin®)** is the #1 **most commonly prescribed prescription medication in the US**
  
  • Enough prescriptions for opioids are written for every American adult to have a bottle of pills each year
Rates of Prescription Opioid Sales, Deaths & Substance Abuse Treatment Admissions

In 2010, Prescription Opioids were the Primary Driver of OD deaths …

Not shown:

- Alcohol: 88,000 deaths/year
- Tobacco: 480,000 death/year
In 2016: 63,632 total drug OD deaths
  • Any opioid: 66.4% (42,249)
    • Fentanyl & synthetic opioids: 45.6% (19,413)
      • 79.7% also involved other drugs:
        • Rx opioids: 20.9%
        • Heroin: 29.8%
        • Cocaine: 21.6%
        • Benzodiazepines: 17%
        • Alcohol: 11.1%
        • Psychostimulants: 5.4%
        • Antidepressants: 5.2%
  • Heroin: 37% (15,469)
  • Rx opioids: 40% (17,087)

In 2017: 70,237 total drug OD deaths
  • Any opioid: 67.8% (47,621)
    • Fentanyl & synthetic opioids: 40.5% (28,466)
      • 47% increase from 2016-2017
    • Heroin: 22.0% (15,482)
    • Rx opioids: 24.2% (17,029)
  • Cocaine: 19.8% (13,942)
  • Benzodiazepines: 16.4% (11,537)
    • 10-fold increase from 1999-2017
3 Waves of the Rise in Opioid Overdose Deaths

Wave 1: Rise in Prescription Opioid Overdose Deaths
Wave 2: Rise in Heroin Overdose Deaths
Wave 3: Rise in Synthetic Opioid Overdose Deaths

National Drug Overdose Death Trends

Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018
Opioid & Chronic Pain Statistics

• In 2014, nearly 2 million Americans aged 12 or older either abused or were dependent on prescription opioids
  • Nearly 4.3 million Americans engaged in non-medical use of prescription opiates in the last month
    • 20% of adults & adolescents in their lifetime have taken prescription drugs for non-medical use

• No evidence exists for long-term benefit of opioids in pain and function (versus no opioids) for chronic non-cancer pain

• However, extensive evidence exists for possible harms of opioids
  • 4-6% who misuse prescription opioids transition to heroin
  • 80% of people who use heroin first misused prescription opioids
  • From 1999 to 2014, more than 165,000 people died from overdose related to prescription opioids
    • 130 Americans die each day after overdosing on opioids (Rx & illicit)
      • 40 (30.8%) of which involve prescription opioids
      • Overdose often on combination of prescription opioids, heroin, & illicitly manufactured fentanyl (Carfentanyl)
Where Prescription Opioids Were Obtained

- Prescribed by one doctor: 17.3%
- Obtained free from friend or relative: 55%
- Took from friend or relative without asking: 4.8%
- Got from drug dealer or stranger: 4.4%
- Other source: 7.1%

2010 National Survey on Drug Use and Health: SAMHSA, Office of Applied Studies; 2011
Recommended Treatments for Common Chronic Pain Conditions

• Identify and address co-existing mental health conditions (e.g. depression, anxiety, PTSD)
  • Can screen with PHQ-9, GAD-7, & PC-PTSD

• Focus on functional goals and improvement, engaging patients actively in their pain management
  • *No pain is not* the goal... *rather*, reduction of suffering and improving function
    • A **30% improvement in pain and function** is considered clinically meaningful

• Use disease-specific treatments when available, such as:
  • Triptans for migraines
  • Gabapentin/Pregabalin/Duloxetine for neuropathic pain

• Use first-line non-opioid medication options preferentially to the extent possible
  • Evidence suggests that non-opioid treatments (including non-opioid medications and non-pharmacologic therapies) can provide relief to those suffering from chronic pain, and are safer
## Chronic Pain Affected by Comorbidities

<table>
<thead>
<tr>
<th>Condition</th>
<th>Incidence Chronic Pain Patients</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>33 - 54%</td>
<td>Cheatle M, Gallagher R, 2006</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dersh J, et al., 2002</td>
</tr>
<tr>
<td>Anxiety Disorders</td>
<td>16.5 - 50%</td>
<td>Knaster P, et al., 2012</td>
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<tr>
<td></td>
<td></td>
<td>Cheatle M, Gallagher R, 2006</td>
</tr>
<tr>
<td>Personality Disorders</td>
<td>31 - 81%</td>
<td>Polatin PB, et al. 1992</td>
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<tr>
<td></td>
<td></td>
<td>Fischer-Kern M, et al., 2011</td>
</tr>
<tr>
<td>PTSD</td>
<td>49% veterans</td>
<td>Otis, J, et al., 2010</td>
</tr>
<tr>
<td></td>
<td>2% civilians</td>
<td>Knaster P, et al., 2012</td>
</tr>
<tr>
<td>Substance Use Disorders</td>
<td>15 - 28%</td>
<td>Polatin PB, et al. 1992</td>
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<td></td>
<td></td>
<td>Cheatle M, Gallagher R, 2006</td>
</tr>
</tbody>
</table>
Chronic Pain Management Multidimensional Care

It's More Than Medications

- Exercise
- Manual therapies
- Acupuncture
- Orthotics
- TENS
- Other modalities (heat, cold, stretch)
- Cultivate Well-being
- NSAIDS
- Anticonvulsants
- Antidepressants
- Topical agents
- Opioids
- Others

Medication

Procedural

Physical

Psycho-behavioral

- CBT/ACT
- Tx mood/trauma issues
- Address substances
- Meditation
- Nerve blocks
- Steroid injections
- Trigger point injections
- Stimulators
- Pumps

SELF CARE

Restore Function

Reduce Pain

Improve Quality of Life
Opioids in Perspective

• The efficacy and safety of chronic opioid therapy for chronic pain has been **inadequately studied***

• Opioid prescribing needs to be more selective and conservative

• Opioids for chronic pain...
  
  • help *some* patients
  
  • harm *some* patients
  
  • are *only one tool* for managing severe chronic pain
  
  • are indicated *only* when alternative safer non-opioid treatment options are inadequate

Dowell D et al. *JAMA* 2016
Manchikanti L et al. *Pain Physician* 2011
Screening for Opioid Misuse, Abuse, & OUD

• As many as 1 in 4 patients receiving long-term opioid therapy in primary care settings struggle with Opioid Use Disorder (OUD)

• The Drug Abuse Screening Test (DAST-10)
  • A validated 10-item brief screening tool for all patients in primary care to screen for potential substance abuse that assesses drug use – not including alcohol or tobacco use – in the past 12 months
Patients receive 1 point for every "yes" answer with the exception of question #3, for which a "no" answer receives 1 point.

**Interpreting the DAST 10**

In these statements, the term "drug abuse" refers to the use of medications at a level that exceeds the instructions, and/or any non-medical use of drugs.

The various classes of drugs may include: cannabis (e.g., marijuana, hash), solvents, tranquilizers (e.g., Valium), barbiturates, cocaine, stimulants (e.g., speed), hallucinogens (e.g., LSD) or narcotics (e.g., heroin).

Remember that the questions do not include alcohol or tobacco.
# DAST-10 Scores & Zones

<table>
<thead>
<tr>
<th>Score</th>
<th>Risk Level</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Zone 1: No risk</td>
<td>Simple advice: Congratulations this means you are abstaining from excessive use of prescribed or over-the-counter medications, illegal or non-medical drugs.</td>
</tr>
<tr>
<td>1-2</td>
<td>Zone 2: At Risk Use - “low level” of problem drug use</td>
<td>Brief Intervention (BI). You are at risk. Even though you may not be currently suffering or causing harm to yourself or others, you are at risk of chronic health or behavior problems because of using drugs or medications in excess; and continued monitoring</td>
</tr>
<tr>
<td>3-5</td>
<td>Zone 3: “intermediate level”</td>
<td>Extended BI (EBI) and RT – your score indicates you are at an “intermediate level” of problem drug use. Talk with a professional and find out what services are available to help you to decide what approach is best to help you to effectively change this pattern of behavior.</td>
</tr>
<tr>
<td>6-10</td>
<td>Zone 4: Very High Risk, Probable Substance Use Disorder</td>
<td>EBI/RT- considered to be at a “substantial to severe level” of problem drug use. Refer to specialist for diagnostic evaluation and treatment.</td>
</tr>
</tbody>
</table>
Overview of the 2016 CDC’s 12 Recommendations

• This applies for opioid prescription for chronic pain **outside of active cancer treatment, palliative care, and end-of-life care**

• Of primary importance, **non-opioid therapy is preferred for treatment of chronic non-cancer pain**

• Improve communication about benefits and risks of opioids for chronic non-cancer pain
  • Opioids should be used only when benefits for pain and function are expected to outweigh risks
  • Before starting opioids, clinicians should establish treatment goals with patients and consider how opioids will be discontinued if benefits do not outweigh risks

• Improve safety and effectiveness of pain treatment
  • Opioids are **NOT** first-line therapy
  • Non-pharmacologic therapy and non-opioid pharmacologic therapy are preferred

• Reduce risks associated with long-term opioid therapy
When opioids are used, clinicians should:

- Prescribe the lowest effective dosage
- Carefully reassess benefits & risks when considering increasing dosage to $\geq 50$ mg OME/day; avoid $\geq 90$ mg OME/day
  - Overall, opioid related overdose risk is dose-dependent
    - Dosages of 50 to 99 mg OME/day associated with increased risk for opioid overdose by factors of 1.9 to 4.6 (compared to $< 20$ mg OME/day)
    - Dosages $\geq 100$ mg OME/day with increased risk for opioid overdose by factors of 2.0 to 8.9 (compared to $< 20$ mg OME/day)
When opioids are used, clinicians should:

- Evaluate benefits and harms of continued opioid therapy with patients \textit{at least every 3 months}.

- Review prescription drug monitoring program data (CURES), when available, \textit{at least every 3 months} for high-risk combinations or dosages.

- For patients with OUD, clinicians should offer or arrange evidence-based treatment, such as:
  
  - \textbf{Medication-Assisted Treatment (MAT)}, including behavioral therapy plus either: \textbf{Methadone}, \textbf{Buprenorphine}, or \textbf{Naltrexone}.
    
    - Increases retention in treatment and decreases mortality in patients with OUD.
    
    - There is enhanced effectiveness when psychosocial treatments used in conjunction with MAT.
Assessing Opioid Misuse Risk: Opioid Risk Tool (ORT)

- **Opioid Risk Tool (ORT)**
  - A validated scoring tool that assesses risk of aberrant behaviors when patients are prescribed opioids for chronic pain
  - Perform on *initial patient visit* for new patients already on opioids
  - Perform *prior* to prescribing opiate therapy for established patients

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th>Male</th>
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<tbody>
<tr>
<td><strong>Family history of substance abuse</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol</td>
<td>1</td>
<td>3</td>
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<tr>
<td>Illegal drugs</td>
<td>2</td>
<td>3</td>
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<tr>
<td>Prescription drugs</td>
<td>4</td>
<td>4</td>
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<tr>
<td><strong>Personal history of substance abuse</strong></td>
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<tr>
<td>Alcohol</td>
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<td>Illegal drugs</td>
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<td>Prescription drugs</td>
<td>5</td>
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<td><strong>Age between 16-45 years</strong></td>
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<td><strong>History of preadolescent sexual abuse</strong></td>
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<td><strong>Psychological disease</strong></td>
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<td>ADHD, OCD, bipolar, schizophrenia</td>
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<td>2</td>
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<tr>
<td>Depression</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Scoring

0-3 low risk
4-7 moderate risk
>8 high risk

Webster LR, Webster RM. Pain Medicine, 2006
Opioid Misuse Risk Stratification: How Should It Be Used?

• **Level of concern that should be communicated to the patient**
  • “Despite being in recovery from alcoholism, you are at higher risk for developing problems with the opioid pain medication.”

• **Level of monitoring that should be implemented**
  • Frequency of visits, urine drug testing, etc.
  • High risk patients may need to agree to random call-backs

• **Need for pain and/or addiction consultant**
  • If available

• **Some patients may be too risky for opioid analgesics**
  • For example, patient with recent opioid addiction
When are Opioids Indicated?

• Pain is moderate to severe
• Pain has significant impact on function and quality of life
• Non-opioid pharmacotherapy has been tried and failed

• Patient agreeable to...
  • take opioids exactly as prescribed
    • e.g., no unsanctioned dose escalation
  • have opioid use closely monitored
    • e.g. pill counts, urine drug testing

• Prescribe short durations for acute pain
  • Long-term opioid use often begins with treatment of acute pain
  • When opioids are used for acute pain, prescribe the 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
    • 3 days or less will often be sufficient
    • More than 7 days rarely needed

Always start low and go slow
Continuation of Opioids

• Before writing the next prescription...you should be convinced that...
  • ...there is benefit (pain, function, QOL)
    • Decrease in average PEG score after initiation of trial of opioids by $\geq 30\%$
  • ...benefits outweigh observed harms/risks
    • Following all parts of chronic pain care plan, including those from their Controlled Substance Agreement
Assessing Opioid Therapy Benefit: PEG scale

• PEG (Pain intensity, interference with Enjoyment of life, and interference with General activity) scale:
  • A 3-item validated tool to measure and track over time clinically meaningful improvement in function and pain

Always Plan for Potential “Exit Strategy”

• Emphasize criteria for tapering in initial patient-prescriber agreement
  • Documentation of lack of pain reduction and/or lack of functional improvement
  • Documentation of opioid medication or prescription misuse or abuse
  • Positive Utox for any illicit substance
  • Failure to comply with all aspects of treatment plan

• Distinguish between abandoning opioid therapy, abandoning pain management, and abandoning patient

• Taper off opioid therapy, with or without specialty assistance
Evaluate Benefits & Harms of Opioid Therapy Frequently

• Evaluate benefits and harms:
  • Within 1 to 4 weeks of starting initial “trial” of opioid therapy
  • For every dose escalation for chronic non-cancer pain

• Evaluate benefits and harms of continued therapy at least every 3 months when on a stable dose

• The Current Opioid Misuse Measure (COMM):
  • a validated tool that helps to identify whether a patient, currently on long-term opioid therapy, may be exhibiting aberrant behaviors associated with misuse of opioid medications
Assessing Opioid Misuse Risk: Current Opioid Misuse Measure (COMM)

- 17 items
- Takes ~ 10 min to complete
- Helps for deciding level of monitoring
- Score range: 0 – 68
- **Scores > 9 detect probable opioid misuse**
  - Sensitivity 77%
  - Specificity 66%

- **Key Elements:**
  - Over-sedation
  - Consequences of overuse
  - Multiple prescribers
  - Medication misuse
  - Active mental health issues
  - Compulsive use
  - Obtaining meds from someone else
  - Loss of control

Evaluate Benefits & Harms of Opioid Therapy Frequently

- If benefits do not outweigh harms of continued opioid therapy, optimize other non-opioid therapies and work with patients to taper opioids to lower dosages or to taper off opioids.

- Patients who should be tapered off of chronic opioid therapy include those who:
  - Exhibit repeated aberrant drug-related behaviors
  - Do not demonstrate progress toward therapeutic goals
  - Experience intolerable adverse effects

- In general, decrease the morphine equivalent dosing by 10% per week for most patients.
  - If on chronic opiate therapy for many years, decrease by 10% per month.
    - The University of Washington provides an excel file to assist with recommended opioid therapy tapers:
      - Official DHS Pain Group has opioid taper guidelines on eConsult.
Discontinuation of Opioids

• *Do not* have to prove addiction or diversion - *only* assess and reassess the risk-benefit ratio

• If patient is unable to take opioids safely or is nonadherent with monitoring then discontinuing opioids is appropriate even in setting of benefits

• Need to determine how urgent the discontinuation should be based on the severity of the risks and harms

• Document rationale for discontinuing opioids

You are abandoning the opioid therapy **NOT** the patient
Discontinuation of Opioids (cont.)

• Stress how much you believe / empathize with patient’s pain severity and impact
• Express frustration re: lack of good pill to fix it
• Focus on patient’s strengths
• Encourage therapies for “coping with” pain
• Show commitment to continue caring about patient and pain, even without opioids
  • Patients who are withdrawn from opioid therapy should continue to be treated for their painful conditions
    • As well as for substance abuse or psychiatric conditions as needed
• Schedule close follow-ups during and after taper
Discontinuation of Opioids (cont.)

• Using the Risk/Benefit Framework:
  • Useful to Avoid Pitfalls…
    • “But I really, really need opioids.”
    • “I thought we had a good relationship / I thought you cared about me.”
    • “If you don’t give them to me, I will drink / use drugs / hurt myself.”
    • “Can you just give me enough to find a new doctor?”
  • RESPONSE: “I cannot prescribe a medication that is not helping you (or is hurting you).”
Discontinuation of Opioids (cont.)

• **Possible Opioid “Exit Strategy” Paths:**
  - Patient’s behavior consistent with **drug addiction**
    - Refer for addiction management or co-management
  - Patient **unable or unwilling to cooperate with outpatient taper**
    - Provide sufficient opioid for 1-month taper
    - Refer to inpatient or outpatient program or similar service, as available
  - No apparent addiction problem, and patient able to cooperate with office-based taper
    - Taper gradually over **1-2 months**
    - Implement **non-opioid pain management**
      - Psychosocial support
      - CBT
      - PT
      - Non-opioid analgesics

Katz N. PainEDU.org 2007
Webster LR et al. AOAWMP. 2007
Use Strategies to Mitigate Risk of Prescription Opioids

• Incorporate into the management plan strategies to mitigate risk, including considering offering Naloxone for opioid overdose risk factors
  • History of overdose (OD)
  • History of Substance Use Disorder (SUD)
  • Higher opioid dosages (≥ 50 mg OME/day)
    • Naloxone **recommended** by CDC for at risk pts with > 50mg OME/day, **required** as of 1/1/2019 for ≥ 90 OME/day
  • Concurrent benzodiazepine, alcohol, or other sedative use

• **Utox screen:** consider before initiation and episodic (q 6-12 months)-may need to specify which synthetic opioid to check
  • Almost always [+]: morphine, codeine, heroin, cocaine
  • Always [-]: synthetic opiates (methadone, fentanyl, meperidine), tramadol, buprenorphine
  • [+/-]: hydrocodone, oxycodone, hydromorphone (Dilaudid)

• **Document, document, document** and communicate
“Universal Precautions”: Not evidence-based, but has become “standard” of care

- Agreements “contracts” (“PPA” & “CSA”), informed consent
- Monitor for benefit and harm with frequent face-to-face visits
  - Discuss risks of opioid medications
  - Responsibility to look for early signs of harm
  - Discuss agreements, pill counts, drug tests, etc. as ways that you are helping to protect patient from getting harmed by medications
- Monitor for adherence, addiction, and diversion
  - Random Utox
  - Random pill counts
  - q28 day supply & refill policy (so always filled on same day every 4 weeks)
  - Prescription monitoring program data (PDMP = CURES in California)

Use consistent approach (“Universal Precautions”) BUT apply it individually to match risk

FSMB Guidelines 2004
www.fsmb.org
Patient-Provider Agreements (PPA): “Controlled Substance Agreements” (CSA)

- **Common Components to Medication Management:**
  - One prescriber, One pharmacy
  - Use as directed (dose, schedule, guidance on missed doses)
    - No adulteration of pills or patches
    - ER/LA opioid analgesic tablets must be swallowed whole
  - Don’t abruptly discontinue opioids
  - Refill, renewal policies
  - Safe storage (away from family, visitors, pets), protected from theft
  - Safe disposal (read product-specific information for guidance)
  - No diversion, sharing or selling (illegal and can cause death in others)

Implementing “Universal Precautions” in Pain Medicine: Use a Health-Oriented, Risk/Benefit Framework

• **NOT…**
  - Is the patient good or bad?
  - Does the patient deserve opioids?
  - Should this patient be punished or rewarded?
  - Should I trust the patient?

• **RATHER…**
  - Do the benefits or opioid treatment outweigh the untoward effects and risks for this patient (or public health / society at large)?

**Judge the opioid treatment NOT the patient**
Prescription Drug Monitoring Programs (PDMP)

• **PDMP**: statewide electronic database on dispensed controlled substance prescriptions
  
  • Review the patient’s history of controlled substance prescriptions using state prescription drug monitoring program data (CURES) to determine whether the patient is receiving opioid dosages or dangerous combinations that put patient at high risk for overdose
    
    • Review when starting opioid therapy for chronic non-cancer pain and periodically during opioid therapy, from every prescription to every 3 months
  
  • Prescription data available to prescribers and pharmacists (usually for the past year, and including information on date dispensed, patient, prescriber, pharmacy, medicine, and dose)
  
  • A substantially underutilized resource
    
    • Many states now mandate use before writing for controlled substances

www.pdmpexcellence.org/sites/all/pdfs/Brandeis_PDMP_Report.pdf
Prescription Opioid Pill Counts

- **Objective information that can:**
  - Confirm medication adherence
  - Minimize diversion

- **Strategy:**
  - **28 day supply** (rather than 30 days) prevents running out on weekends
  - Prescribe so that patient should have residual medications at appointments
  - Ask patient to bring in medications at each visit
  - For identified risks or concerns, can request random call-backs for immediate counts
Using Urine Drug Testing (Utox)

- Objective information that can provide:
  - Evidence of therapeutic adherence
  - Evidence of use or non-use of illicit drugs

- Use urine drug testing before starting opioid therapy, and at least annually to assess for presence or absence of prescribed medications as well as other controlled prescription and illicit drugs

- Discuss urine drug testing openly with patient
  - “If I send your urine right now, what will I find in it…”

- Document time of last medication use

- One medical data point to integrate with others
  - Cannot discriminate elective use, addictive use and diversion

- Dedicated deceivers can beat the system

Heit HA and Gourlay DL. JPSM. 2004
Christo PJ et al. Pain Physician. 2011
Using Urine Drug Testing (cont.)

- Urine drug screens (“Utox”) are usually immunoassays
  - Quick and relatively inexpensive
  - Need to know what is included in testing panel
  - Risk of false negatives due to cut offs
  - Risk of false positives due to cross reactions
  - Unexpected findings can be verified with Gas Chromatography/Mass Spectroscopy (GC/MS)

Identify a toxicologist/clinical pathologist for questions regarding unexpected results

Avoid Concurrent Opioid & Benzodiazepine Prescribing

- Avoid prescribing opioids concurrently with benzodiazepines whenever possible given concern for overdose and death.

Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2017 on CDC WONDER Online Database; released December, 2018.
Is my patient addicted to opioids?

• Clinical syndrome presenting as aberrant medication taking behaviors (pattern and severity)... “the four C’s”:
  • Loss of Control
  • Compulsive use
  • Continued use despite harm
  • Cravings

- Addiction is a behavioral maladaptation
- Physical Dependence is a biologic adaptation

Aberrant Medication-Taking Behaviors: The Spectrum of Severity

- Requests for increase opioid dose
- Requests for specific opioid by name, “brand name only”
- Non-adherence w/ other recommended therapies (e.g., PT)
- Running out early (i.e., unsanctioned dose escalation)
- Resistance to change therapy despite AE (e.g. over-sedation)
- Deterioration in function at home and work
- Non-adherence w/ monitoring (e.g. pill counts, urine drug tests)
- Multiple “lost” or “stolen” opioid prescriptions
- Illegal activities – forging scripts, selling opioid prescription
Does my patient have an Opioid Use Disorder (OUD)?

- * Tolerance
- * Withdrawal
- Use in larger amounts or duration than intended
- Persistent desire to cut down
- Giving up interests to use opioids
- Great deal of time spent obtaining, using, or recovering from opioids
- Craving or strong desire to use opioids
- Recurrent use resulting in failure to fulfill major role obligations
- Recurrent use in hazardous situations
- Continued use despite social or interpersonal problems caused or exacerbated by opioids
- Continued use despite physical or psychological problems

* This criterion is NOT considered to be met for those individuals taking opioids solely under appropriate medical supervision


Mild OUD: 2-3 Criteria
Moderate OUD: 4-5 Criteria
Severe OUD: ≥6 Criteria
Possible Addiction

- **Stay in the Risk/Benefit mindset:**
  - Give specific and timely feedback why patient’s behaviors raise your concern for possible addiction (e.g., loss of control, compulsive use, continued use despite harm)
  - Remember patients may suffer from both chronic pain and addiction
  - May need to “agree to disagree” with the patient
  - Benefits no longer outweighing risks
  - “I cannot responsibly continue prescribing opioids, as I feel it would cause you more harm than good.”
  - Always offer referral to addiction treatment
Addiction Medicine Specialist: When to Refer

• **When patient:**
  • Is using illicit drugs
  • Is experiencing problems with other prescription drugs (especially benzodiazepines and other sedatives)
  • Abuses or is addicted to alcohol
  • Agrees they have an opioid addiction and wants help
  • Has dual or trio diagnosis of pain, addiction, and psychiatric disease

• **Making Addiction Treatment Referrals:**
  • Substance Abuse and Mental Health Services Administration (SAMHSA) treatment locator
  • State resources (Department of Public Health)
    • Acute treatment services ("detoxes")
    • Medication-Assisted Treatment (MAT)
      • *Methadone maintenance treatment programs*
      • *Office-based opioid treatment with buprenorphine or naltrexone*
  • AA / NA 12-step programs
    • *Free*
    • *Widely available and effective*
Opioid Mediation-Assisted Treatment (MAT)
• **Goals:**
  - Alleviate physical withdrawal
  - Opioid blockade
  - Alleviate drug craving
  - Normalized deranged brain changes and physiology

• **Some options:**
  - **Naltrexone** (mu-opioid antagonist)
  - **Methadone** (full mu-opioid agonist)
  - **Buprenorphine** (partial mu-opioid agonist)
MAT Pharmacotherapy: Naltrexone

- Pure mu-opioid antagonist
  - Bad for patient with OUD and Chronic Pain
  - No special DEA license needed

- Oral naltrexone
  - Well tolerated, safe
  - Duration of action 24-48 hours
  - FDA approved 1984

- Injectable naltrexone (Vivitrol®)
  - IM injection (w/ customized needle) once/month
  - FDA approved 2010
  - Patients must be opioid free for a minimum of 7-10 days before treatment
  - Expensive (need to “fail” PO naltrexone first before submitting DHS TAR for initiation of IM treatment)
MAT Pharmacotherapy: Methadone

• Full mu-opioid agonist

• PO onset of action 30-60 minutes

• Duration of action
  • 24-36 hours to treat opioid addiction
  • 6-8 hours to treat pain

• Proper dosing for opioid addiction
  • 20-40 mg for acute withdrawal
  • > 80 mg for craving, “opioid blockade”

• Can use off-label for chronic pain if no concern for concurrent OUD

• **Cannot use for OUD**, even if patient also has concurrent Chronic Pain (requires special DEA waiver at special federally designated “methadone clinics”)
MAT Pharmacotherapy: **Buprenorphine**

- **Buprenorphine** *(Subutex®)* “mono”
- **Buprenorphine + naloxone** *(Suboxone®)* “combo”
  - DEA Schedule III
  - Sublingual tablets and films
  - Treatment of OUD
  - High mu-receptor affinity
  - Slow mu-receptor dissociation
  - Ceiling effect for respiratory depression
  - Can prescribe with standard DEA license “off-label” for Chronic Pain if no concern for concurrent OUD
  - Can get **DATA 2000 “X-license”** federal waiver so can prescribe for OUD, with or without concurrent Chronic Pain
    - 8-hour training: 4 hour online, 4 hour in-person
      - Free for house staff & fellows
SUMMARY

• Opioids can be effective and safe but are imperfect
• Use risk/harm - benefit framework
• Use consistent approach, but set level of monitoring to match risk
• Judge the treatment and not the patient
• If there is benefit in the absence of harm, continue opioids
• If there is no benefit or if there is harm, discontinue opioids
DRUG-FREE AMERICA

AGE 0-4 AMPICILLIN
4-12 RITALIN
12-18 APPETITE SUPPRESSANTS
18-24 NO-DOZ
24-38 PROZAC
38-65 ZANTAC
65—EVERYTHING ELSE