Opioids: Past, Present and Future

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Immediate Past President, Florida Osteopathic Medical Association
Speaker of the House, Florida Medical Association
Disclosure

- No financial or other material conflicts of interest
- Not representative of any institution or organization
LEAVE THE PAST IN THE PAST.
History

- 1804: pharmacist discovers morphine
- 1874: chemist synthesizes diacetylmorphine
- 1898: pharmaceutical commercialization
- 1914: Harrison Narcotics Tax Act
- 1973: graduate student discovers opioid receptor
ADDICTION RARE IN PATIENTS TREATED WITH NARCOTICS

To the Editor: Recently, we examined our current files to determine the incidence of narcotic addiction in 39,946 hospitalized medical patients1 who were monitored consecutively. Although there were 11,882 patients who received at least one narcotic preparation, there were only four cases of reasonably well documented addiction in patients who had no history of addiction. The addiction was considered major in only one instance. The drugs implicated were meperidine in two patients,2 Percodan in one, and hydromorphone in one. We conclude that despite widespread use of narcotic drugs in hospitals, the development of addiction is rare in medical patients with no history of addiction.

Jane Porter
Hershel Jick, M.D.
Boston Collaborative Drug Surveillance Program
Waltham, MA 02154

Boston University Medical Center

Chronic Use of Opioid Analgesics in Non-Malignant Pain: Report of 38 Cases

Russell K. Portenoy and Kathleen M. Foley

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(Received 10 June 1985, accepted 28 October 1985)

Summary

Thirty-eight patients maintained on opioid analgesics for non-malignant pain were retrospectively evaluated to determine the indications, course, safety and efficacy of this therapy. Oxycodeone was used by 12 patients, methadone by 7, and levorphanol by 5; others were treated with propoxyphene, meperidine, codeine, pentazocine, or some combination of these drugs. Nineteen patients were treated for four or more years at the time of evaluation, while 6 were maintained for more than 7 years. Two-thirds required less than 20 morphine equivalent mg/day and only 4 took more than 40 mg/day. Patients occasionally required escalation of dose and/or hospitalization for exacerbation of pain; doses usually returned to a stable baseline afterward. Twenty-four patients described partial but acceptable or fully adequate relief of pain, while 14 reported inadequate relief. No patient underwent a surgical procedure for pain management while receiving therapy. Few substantial gains in employment or social function could be attributed to the institution of opioid therapy. No toxicity was reported and management became a problem in only 2 patients, both with a history of prior drug abuse. A critical review of patient characteristics, including data from the 16 Personality Factor Questionnaire in 24 patients, the Minnesota Multiphasic Personality Inventory in 23, and detailed psychiatric evaluation in 6, failed to disclose psychological or social variables capable of explaining the success of long-term management. We conclude that opioid maintenance therapy can be a safe, salutary and more humane alternative to the options of surgery or no treatment in those patients with intractable non-malignant pain and no history of drug abuse.
From 1999 to 2013, the amount of prescription opioid pain relievers prescribed & sold in the U.S. nearly quadrupled.

Yet there has not been an overall change in the amount of pain that Americans report.

Source: Centers for Disease Control and Prevention
How did we get here?

- 1980s: opioids for non-malignant pain
- 1996: the 5th vital sign; OxyContin released
- 2001: TJC weighs in
- 2006: HCAHPS pain questions
- 2016: 4.6 opioid-related OD deaths every hour, US

Some states have more opioid prescriptions per person than others.

Number of opioid prescriptions per 100 people, 2016

Oxycodone deaths in Florida

Florida Physician Prescribing Rates, 2007 to 2016

Figure 2. Florida physician prescribing rate, 2007 to 2016 Source: CDC U.S. Prescribing Rates
## Drug overdose deaths

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>US</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>63,600</td>
<td>70,237</td>
<td>10.4</td>
</tr>
<tr>
<td><strong>Florida</strong></td>
<td>4,728</td>
<td>5,088</td>
<td>7.6</td>
</tr>
</tbody>
</table>

### USA

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heroin</td>
<td>15,469</td>
<td>15,482</td>
<td>0.1</td>
</tr>
<tr>
<td>Methadone</td>
<td>3,373</td>
<td>3,194</td>
<td>-5.3</td>
</tr>
<tr>
<td>All opioids</td>
<td>42,249</td>
<td>47,600</td>
<td>12.7</td>
</tr>
<tr>
<td>Semi-synthetic opioids</td>
<td>14,487</td>
<td>14,495</td>
<td>0.1</td>
</tr>
<tr>
<td>Synthetic opioids</td>
<td>19,413</td>
<td>28,466</td>
<td>46.6</td>
</tr>
</tbody>
</table>

Increase in psychostimulant deaths since 2010

Nationwide, deaths involving meth were 6762 in 2016 (3.5 x 2011 level)

In Florida, deaths involving meth increased 408% since 2013
- 115 Americans die every day
- $504B in economic cost, 2015
- 3 – 10% chronic users post-op
- 80% post-op opioids go unused
- 11.7M opioids Rx in USA, 2016
- 3.3B opioids available for diversion/misuse
- 4 – 6% who misuse opioids transition to heroin
- 80% of heroin users misused opioids first
Regulatory/Agency Actions

- **2014-17**: Approval of a new formulations of naloxone for community use, including autoinjector and intranasal products

- Development of abuse deterrent (AD) opioid formulations

- Much more…
Jun 10, 2015 – FL HB751, Emergency Treatment and Recovery Act


Mar 16, 2016 – CDC Guideline for Prescribing Opioids for Chronic Pain

Jul 7, 2016 – National Governors Association: Finding Solutions to the Prescription Opioid and Heroin Crisis: A Roadmap for States

Jul 22, 2016 – US S.524, Comprehensive Addiction and Recovery Act

http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6450a3.htm
http://www.cdc.gov/drugoverdose/prescribing/guideline.html
State of Emergency Issued


Original Post: May 3rd @ 3:20pm

Dear Florida Pharmacists and Pharmacies:

Today following Governor Scott’s Executive Order declaring the opioid epidemic a state of emergency in Florida, Dr. Philip, State Surgeon General, declared a public health emergency and issued a naloxone standing order for emergency responders.

Florida HB 21

- Signed by Gov. Scott on March 19, 2018
- Mostly effective July 1, 2018

Impact on key areas

- Prescription Drug Monitoring Program (PDMP)
- Controlled substance prescribing
- Pain management clinic registration
- Continuing medical education
E-FORCSE

- Electronic - Florida Online Reporting of Controlled Substances Evaluation program: Florida's Prescription Drug Monitoring Program (PDMP): [https://florida.pmpaware.net](https://florida.pmpaware.net)

- Created by the 2009 legislature, an initiative to encourage safer prescribing of controlled substances and to reduce drug abuse and diversion within the State

- Operational 9/1/11; Health care practitioner (HCP) access 10/17/11; law enforcement access 11/14/11

- Health Information Designs, Inc. developed a database that collects and stores prescribing and dispensing data for controlled substances in Schedules II, III, and IV

- PDMP purpose: to provide information to HCPs to guide their decisions in prescribing and dispensing controlled substances
Laws Setting Limits on Certain Opioid Prescriptions

- **Statutory limit: 14 days**
- **Statutory limit: 7 days**
- **Statutory limit: 5 days**
- **Statutory limit: 3-4 days**
- **Statutory limit: Morphine Milligram Equivalents (MME)**
- **Direction or authorization to other entity to set limits or guidelines**
- **No limits**

*Note: The map displays the state's primary opioid prescription limit and does include additional limits on certain providers or in certain settings. Arizona allows prescriptions up to 14 days following surgical procedures and North Carolina allows up to 7 days for post-operative relief. Maryland requires the "lowest effective dose." Minnesota’s limit is for acute dental or ophthalmic pain. The map also does not reflect limits for minors that exist in at least eight states.*

When does dependence begin?

*Days’ supply of the first prescription is expressed in days (1–40) in 1-day increments. If a patient had multiple prescriptions on the first day, the prescription with the longest days’ supply was considered the first prescription.*

[Graph showing the probability of continuing use over days of supply of the first opioid prescription.]

http://www.newsweek.com/cdc-opiate-addiction-572498

https://www.cdc.gov/mmwr/volumes/66/wr/mm6610a1.htm
Purpose of issue of prescription

- Legitimate medical purpose
- Practitioner
- Usual course of practice
- Corresponding responsibility

Title 21 CFR, Part 1306 – Prescriptions, 1306.04, US DOJ, DEA
Counterfeit-proof Rx pads

- Controlled substance Rx must be written on a counterfeit-resistant pad produced by an approved vendor, or electronically prescribed
- Otherwise, risk of Rx rejection and confiscation

http://www.floridashealth.com/mqu/counterfeit-proof.html

http://www.deadiversion.usdoj.gov/ecomm/e_rx/faq/faq.html
Dr. Ali Ababwa
1234 Main Street
Anytown, Florida 33312
555-867-5309

Date: October 16, 2018
Patient Name: Jasmine Akrabah DOB: 09/19/1975
Address: 1111 Center Lane, Anytown, Florida 33312

Percocet (5/325)
Disp. # 10 (Ten)
Sig: Take one tab by mouth every 6 hours PRN post-op pain
No Refills

DEA # BA1222103

Signature
Opioid Prescribing Recommendations: Summary of 2016 CDC Guidelines

**Determining when to initiate or continue opioids for chronic pain**
- Opioids are not first-line or routine therapy
- Establish treatment goals before starting opioid therapy and a plan if therapy is discontinued
- Only continue opioid if there is clinically meaningful improvement in pain and function
- Discuss risks, benefits and responsibilities for managing therapy before starting and during treatment

**Opioid selection, dosage, duration, follow-up and discontinuation**
- Use immediate-release (IR) opioids when starting therapy
- Prescribe the lowest effective dose
- When using opioids for acute pain, provide no more than needed for the condition
- Follow up and review benefits and risks before starting and during therapy
- If benefits do not outweigh harms, consider tapering opioids to lower doses or taper and discontinue

**Assessing risk and addressing harms of opioid use**
- Offer risk mitigation strategies, including naloxone for patients at risk for overdose
- Review PDMP* data at least every 3 months and perform UDT** at least annually***
- Avoid prescribing opioid and benzodiazepines concurrently when possible
- Clinicians should offer or arrange MAT**** for patients with OUD†

*Prescription drug monitoring program
**Urine drug testing
***Some VA facilities may require more frequent testing
****Medication-assisted treatment
†Opioid use disorder
In The News...

- **Aug 2016**: influx of fentanyl-laced counterfeit pills and toxic compounds further increases risk of fentanyl-related ODs and fatalities

- **Sep 2016**: FDA adds boxed warnings to Rx opioids and BZDs
  - DEA issues carfentanil warning
In The News…

- **Aug 2017**: As of Jan 2018, GA docs will be required to take 3hrs of CME on opioid prescribing before license renewal.
- **Sep 2017**: FDA requires 74 opioid manufacturers to develop physician training.
- **CDC awards $28.6M to help states fight opioid overdose epidemic.**
- **States and cities sue opioid manufacturers and distributors.**

[Source](https://www.cdc.gov/media/releases/2017/p0905-opioid-funding.html?utm_source=PolicyCrush&utm_campaign=e9785151b3-EMAIL_CAMPAIGN_2017_09_06&utm_medium=email&utm_term=0_fe688512b8-e9785151b3-115534997)
In The News…

- Jan 1 2018: TJC requires opioid stewardship
  - Designate a leader
  - Engage patients
  - Identify and monitor high-risk patients
  - Facilitate PDMP access
  - Screen patients
  - Non-pharmacological pain management
  - Identify treatment programs
  - Conduct PI activities
October 24, 2018
SUPPORT for Patients and Communities Act
$8.5B appropriation

- Expands recovery centers
- Curbs drug shipments
- Lifts treatment restrictions
- Frees new painkiller research
- Changes Medicare and Medicaid provisions

MISSING: provider education, labeling opioid bottles with risk
<table>
<thead>
<tr>
<th>MEDICARE AND DRUG PROVISIONS</th>
<th>PROVISION</th>
<th>HOUSE</th>
<th>SENATE</th>
<th>FINAL BILL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Changes provider reimbursements to incentivize the use of non-opioid drugs for post-surgical pain</td>
<td>✔</td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td></td>
<td>Requires CMS to test a bundled payment model to expand Medicare coverage for opioid treatment programs</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td></td>
<td>Improves providers’ ability to prescribe medication-assisted therapy drugs by expanding physician authorization</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td></td>
<td>Establishes grant programs to incentivize hospitals and emergency departments to use opioid alternatives</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td></td>
<td>Provides the National Institutes of Health authority to direct more funding toward opioid alternative research</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td></td>
<td>Allows CMS to waive limits on telemedicine reimbursement for substance abuse and related mental health disorders</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td></td>
<td>Mandates electronic prescribing in Medicare Part D for controlled substance prescriptions</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td></td>
<td>Requires Part D plans to establish drug management programs for beneficiaries with substance abuse risk</td>
<td>✔</td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td></td>
<td>Establishes a demonstration initiative to encourage providers to use certified e-health records</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td></td>
<td>Allows Medicare Part D plans to suspend payments to pharmacies under investigation for fraud</td>
<td>✔</td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td></td>
<td>Allows CMS to identify Part D enrollees with histories of opioid overdoses and add them to monitoring systems</td>
<td>✔</td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td></td>
<td>Requires a review of opioid prescriptions and screening for abuse disorder in the initial Medicare preventive exam</td>
<td>✔</td>
<td></td>
<td>✔</td>
</tr>
</tbody>
</table>
## Comparison of select provisions in the House, Senate, and final opioid packages

<table>
<thead>
<tr>
<th>MEDICAID PROVISIONS</th>
<th>HOUSE</th>
<th>SENATE</th>
<th>FINAL BILL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allows Medicaid to pay for opioid-related residential treatment at large facilities by removing Institutes for Mental Disease exclusion</td>
<td>✔</td>
<td>✗</td>
<td>✔</td>
</tr>
<tr>
<td>Allows Medicaid to pay for residential pediatric recovery centers for infant care</td>
<td>✗</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Requires Medicaid and Medicaid managed care plans to implement safety limits for opioid prescriptions and refills</td>
<td>✔</td>
<td>✗</td>
<td>✔</td>
</tr>
<tr>
<td>Establishes a demonstration program to expand provider capacity for substance abuse treatment</td>
<td>✔</td>
<td>✗</td>
<td>✔</td>
</tr>
<tr>
<td>Ensures CHIP coverage for substance abuse disorder services for children and pregnant women</td>
<td>✔</td>
<td>✗</td>
<td>✔</td>
</tr>
<tr>
<td>Extends 90 percent federal Medicaid match for “health homes” that treat opioid addiction</td>
<td>✔</td>
<td>✗</td>
<td>✔</td>
</tr>
<tr>
<td>Expands Medicaid availability for juvenile inmates and adult inmates during the 30 days prior to release</td>
<td>✔</td>
<td>✗</td>
<td>✔</td>
</tr>
</tbody>
</table>
## Comparison of select provisions in the House, Senate, and final opioid packages

<table>
<thead>
<tr>
<th>Provision</th>
<th>House</th>
<th>Senate</th>
<th>Final Bill</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OTHER PROVISIONS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increases FDA and U.S. Customs funding and authority to prevent illegal shipping of manufactured opioids</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Clarifies the FDA’s post-market drug authorities to consider reduced efficacy over time</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Establishes a $10 million annual grant program to establish or operate comprehensive opioid recovery centers</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Reauthorizes and extends grants for the comprehensive opioid abuse grant program, worth $330 million annually</td>
<td>✓</td>
<td>✗</td>
<td>✓</td>
</tr>
<tr>
<td>Reauthorizes the Office of National Drug Control Policy, the High-Intensity Drug Trafficking program and other DOJ programs</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>OFFSETS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase number of months employer-sponsored plans must cover end-stage renal disease services before Medicare coverage begins</td>
<td>✓</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Require employer group plans to report prescription drug coverage to determine primary payer situations in Medicare</td>
<td>✓</td>
<td>✗</td>
<td>✓</td>
</tr>
<tr>
<td>Institute medical loss ratios for state Medicaid managed care plans that currently do not have such ratios</td>
<td>✓</td>
<td>✗</td>
<td>✓</td>
</tr>
</tbody>
</table>

Source: Congress.gov; Capital Alpha Partners; ML Strategies

By Tucker Doherty, POLITICO Pro DataPoint
Jan 1, 2019: CMS addresses opioid crisis

- Hard safety edit at pharmacy
- 90 MME threshold
- Encourage drug management program

Medicare Prescription Drug Coverage

- Also called Part D
- Provides outpatient prescription drugs
- All Medicare beneficiaries are eligible
  - Can have Part A and/or Part B
- Coverage for Part D is provided by:
  - Prescription Drug plans (PDP’s), also known as stand alone plans
  - Medicare Advantage Prescription Drug Plans (MAPD’s)
Early Mar 2019: Purdue Pharma explores bankruptcy filing
Consequences

- Opioid use disorder
- Addiction
- Addiction treatment
- Withdrawal
- Toxicity/overdose
- Overdose treatment
Risks of Opioid Therapy

- **Mortality** (of all-causes)
  - Hazard ratio (HR) 1.64 for long acting opioids for non-cancer pain

- **Overdose deaths** (unintentional)
  - HR 7.18-8.9 for MED > 100 mg/d

- **Opioid use disorder**
  - For patients on long-term opioids (> 90 days)
    - HR 15 for 1-36 mg/d MED
    - HR 29 for 36-120 mg/d MED
    - HR 122 for > 120 mg/d MED

*MED=Morphine Equivalent Daily Dose (in mg/d)
### DSM-5 Criteria for OUD (Rx opioids)

(2 or more criteria)

<table>
<thead>
<tr>
<th>DSM-5 Criteria</th>
<th>Example behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Craving or strong desire to use opioids</td>
<td>Describes constantly thinking about opioids</td>
</tr>
<tr>
<td>Recurrent use in hazardous situations</td>
<td>Repeatedly driving under the influence</td>
</tr>
<tr>
<td>Using more opioids than intended</td>
<td>Repeated requests for early refills</td>
</tr>
<tr>
<td>Persistent desire/unable to cut down or control opioid use</td>
<td>Unable to taper opioids despite safety concern or family’s concern</td>
</tr>
<tr>
<td>Great deal of time spent obtaining, using or recovering from the effects</td>
<td>Spending time going to different doctor’s offices and pharmacies to obtain opioids</td>
</tr>
<tr>
<td>Continued opioid use despite persistent opioid-related social problems</td>
<td>Marital/family problems or divorce due to concern about opioid use</td>
</tr>
<tr>
<td>Continued opioid use despite opioid-related medical/psychological problem</td>
<td>Insistence on continuing opioids despite significant sedation</td>
</tr>
<tr>
<td>Failure to fulfill role obligations</td>
<td>Poor job/school performance; declining home/social function</td>
</tr>
<tr>
<td>Important activities given up</td>
<td>No longer active in sports/leisure activities</td>
</tr>
</tbody>
</table>
This tool should be administered to patients upon an initial visit prior to beginning opioid therapy for pain management. A score of 3 or lower indicates low risk for future opioid abuse, a score of 4 to 7 indicates moderate risk for opioid abuse, and a score of 8 or higher indicates a high risk for opioid abuse.

<table>
<thead>
<tr>
<th>Mark each box that applies</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<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>
</tr>
<tr>
<td>Illegal drugs</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Rx drugs</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td><strong>Personal history of substance abuse</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Illegal drugs</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Rx drugs</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td><strong>Age between 16—45 years</strong></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>History of preadolescent sexual abuse</strong></td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td><strong>Psychological disease</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADD, OCD, bipolar, schizophrenia</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Depression</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

**Scoring totals**
Addiction treatment

- Inpatient
  - Short term
  - Long term
  - Partial hospitalization

- Outpatient
  - Intensive programs
  - Clinics

- Medication-assisted treatment programs

http://www.samhsa.gov/medication-assisted-treatment
MAT

- Component of comprehensive treatment
- Methadone
- Buprenorphine
- Naltrexone/naloxone?
<table>
<thead>
<tr>
<th></th>
<th>Buprenorphine/Naloxone*</th>
<th>Methadone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment setting</td>
<td>Office-based</td>
<td>Specially licensed OTP</td>
</tr>
<tr>
<td>MOA</td>
<td>Partial opioid agonist*</td>
<td>Opioid agonist</td>
</tr>
<tr>
<td>FDA-approved?</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Reduces cravings?</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>OUD classification?</td>
<td>Mild—Moderate</td>
<td>Mild/Moderate/Severe</td>
</tr>
<tr>
<td>Candidates</td>
<td>None/few failed attempts</td>
<td>Many failed attempts</td>
</tr>
<tr>
<td>Recommended for those using ongoing short-acting opioids?</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Psychosocial intervention recommendations</td>
<td>Addiction-focused MM</td>
<td>Individual counseling and/or contingency management</td>
</tr>
</tbody>
</table>

http://buprenorphine.samhsa.gov/
http://www.opioidprescribing.com/naloxone_module_1-landing
http://www.pcessmat.org
https://www.samhsa.gov/medication-assisted-treatment
Withdrawal

- Rhinorrhea
- Diarrhea
- Yawning
- Anxiety
- Mydriasis

- Lacrimation
- Vomiting
- Hyperventilation
- Hostility

Clinical Opiate Withdrawal Scale

Lofexidine

Overdose treatment

- **BLS**

- **Naloxone**
  - Injectable (*Narcan*)
  - Autoinjectable (*Evzio*)
  - Nasal spray (*Narcan*)

- **Active monitoring**

https://www.drugabuse.gov/related-topics/opioid-overdose-reversal-naloxone-narcan-evzio
- **Pharmacological**
  - Antidepressants
  - Anticonvulsants
  - Acetaminophen
  - NSAIDs
  - Anesthetics
  - Corticosteroids
  - Non-BZD muscle relaxers
Nonpharmacological

- Heat/cold
- Osteopathic manipulation
- Physical therapy
- Chiropractic
- Acupuncture
- TENS?
- Biofeedback
- Cognitive behavioral therapy
- Exercise
Timing is everything

- **Low back pain**
  - 40%-60% less likely to use opioids over 2 years if PT seen within 2 weeks of onset
    - Childs et al 2015; Fritz et al 2013

- **Neck pain**
  - 41% less likely to receive opioid therapy for neck pain in the next 12 months
    - Horn et al, 2018

- **Knee pain**
  - 33% less likely over 12 months
    - Stevans et al 2017
Abuse-deterrent opioids

- **Hydrocodone**: Hysingla ER; Vantrela ER; Zohydro ER
- **Hydromorphone**: Exalgo
- **Morphine ER**: Morphabond; Arymo ER
- **Morphine ER/Naltrexone**: Embeda
- **Oxycodone IR**: Oxaydo; Roxybond
- **Oxycodone ER**: Oxycontin; Xtampza ER
- **Oxycodone ER/Naltrexone**: Targiniq ER; Troxyca ER
- **Oxymorphone ER**: Opana ER
Next generation

- Different targets than opioid receptors
- Longer acting agents
- Nerve fiber inactivation
- OTC naloxone
Opioid epidemic strategy

- Improving access to prevention, treatment, and recovery services, including the full range of medication-assisted treatments
- Targeting availability and distribution of overdose-reversing drugs
- Strengthening our understanding of the crisis through better public health data and reporting
- Providing support for cutting edge research on pain and addiction
- Advancing better practices for pain management

Thank you

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