Managing Pain Safely and Effectively: CDC Guideline for Prescribing Opioids

INJURY PREVENTION CENTER

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Disclosures

- No Conflicts of Interest
- No Financial Disclosures

JAMA

ORIGINAL CONTRIBUTION

Association Between Opioid Prescribing Patterns and Opioid Overdose-Related Deaths

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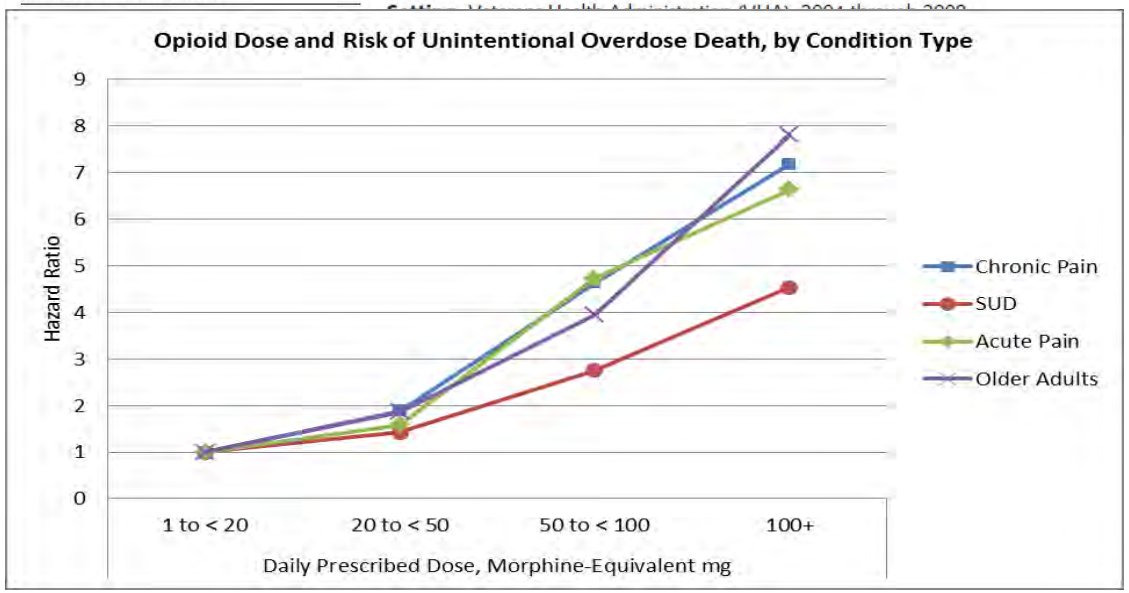
Context The rate of prescription opioid–related overdose death increased substantially in the United States over the past decade. Patterns of opioid prescribing may be related to risk of overdose mortality.

Objective To examine the association of maximum prescribed daily opioid dose and dosing schedule ("as needed," regularly scheduled, or both) with risk of opioid overdose death among patients with cancer, chronic pain, acute pain, and substance use disorders.

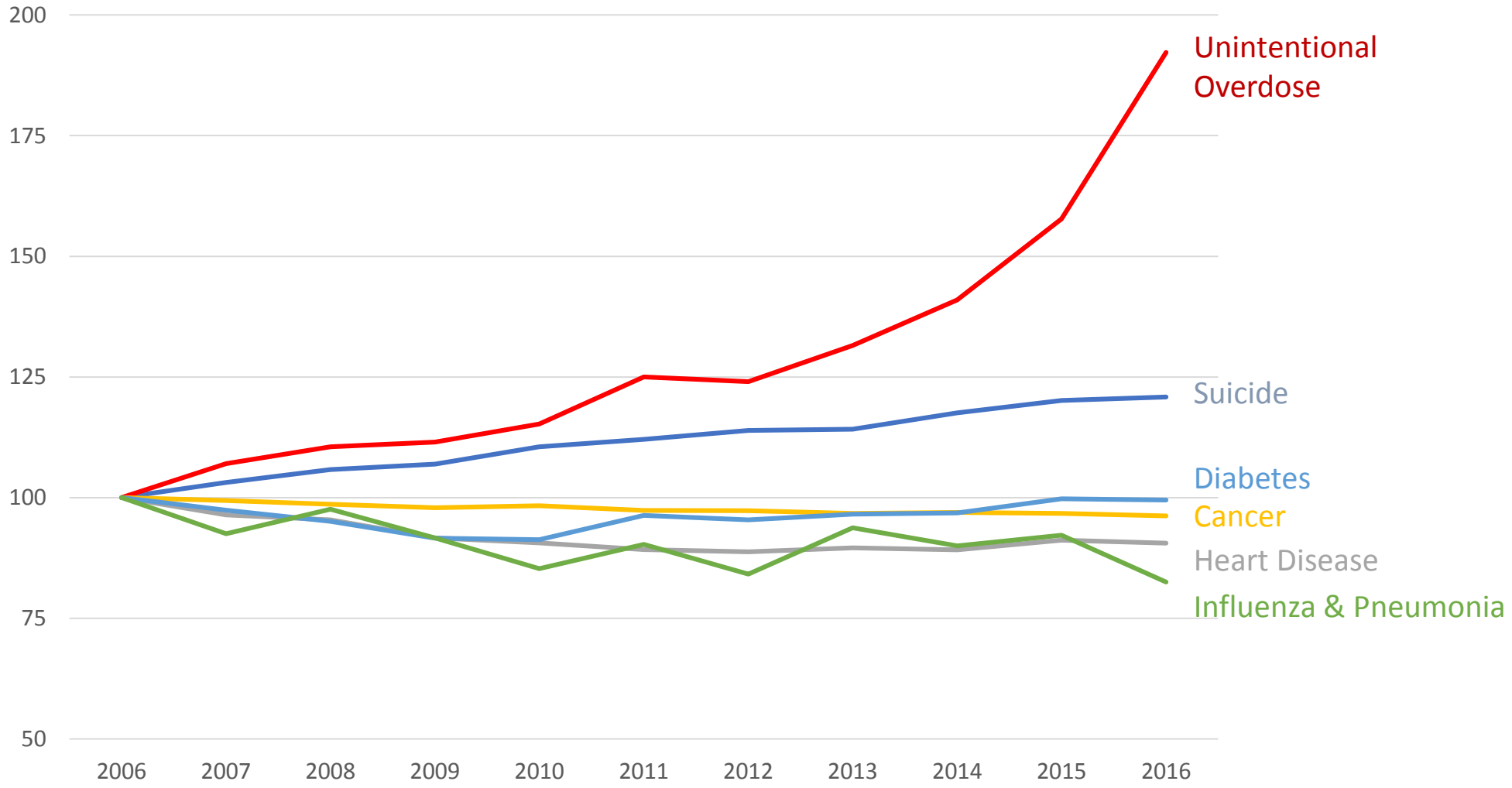
Design Case-cohort study.



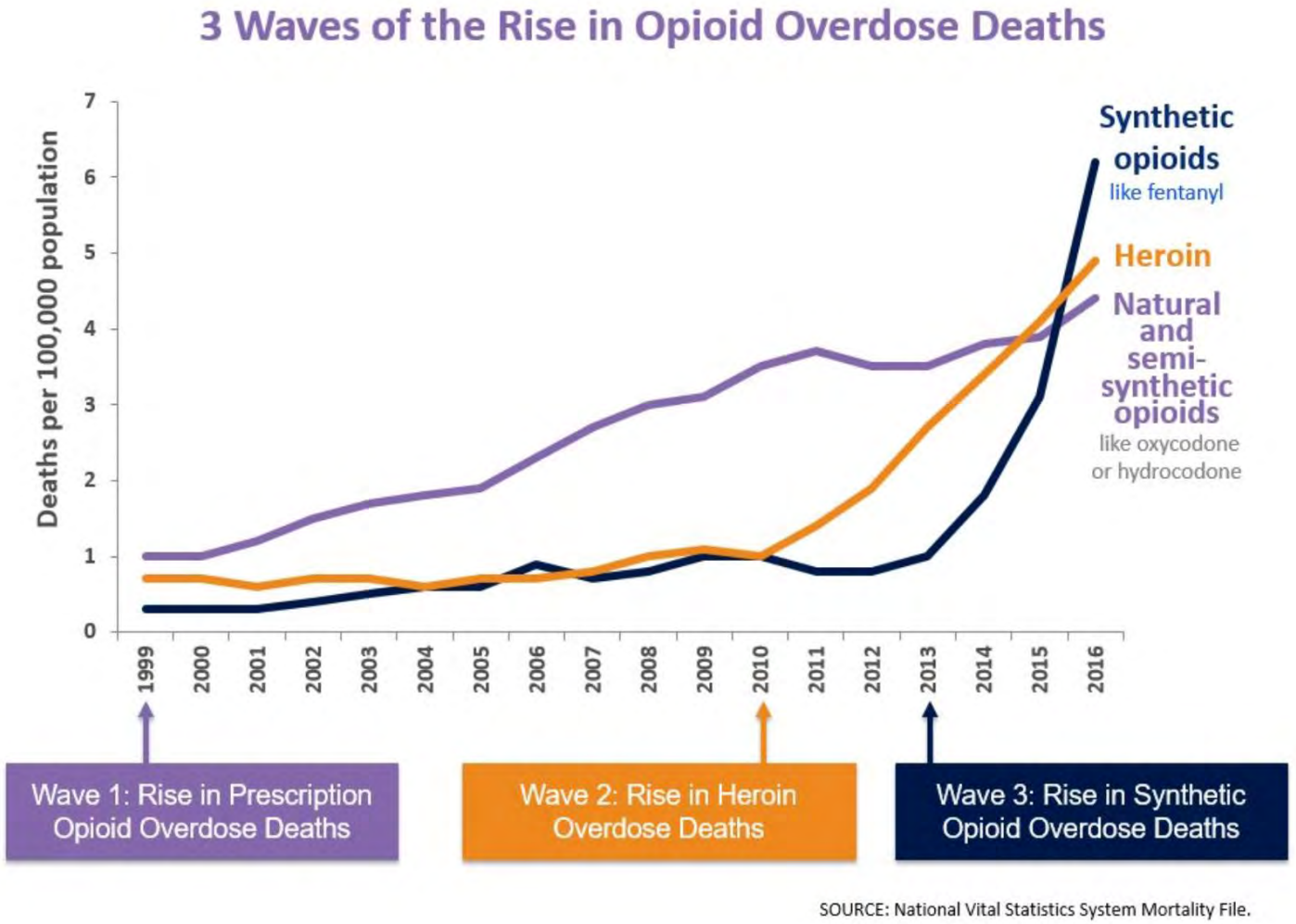
What You Will Learn

- Review the Epidemiology of the Prescription Opioid Epidemic
- Overview of Essential Elements Necessary to Address the Prescription Drug Epidemic
- Discuss the Role of Safer Opioid Prescribing
- Review the 12 CDC Guidelines for Safer Opioid Prescribing for Chronic Pain
- Tools and Resources
- Wrap up and Questions

Index Death Rates Among U.S. Adults



The Opioid Epidemic…by the numbers



1999-2016

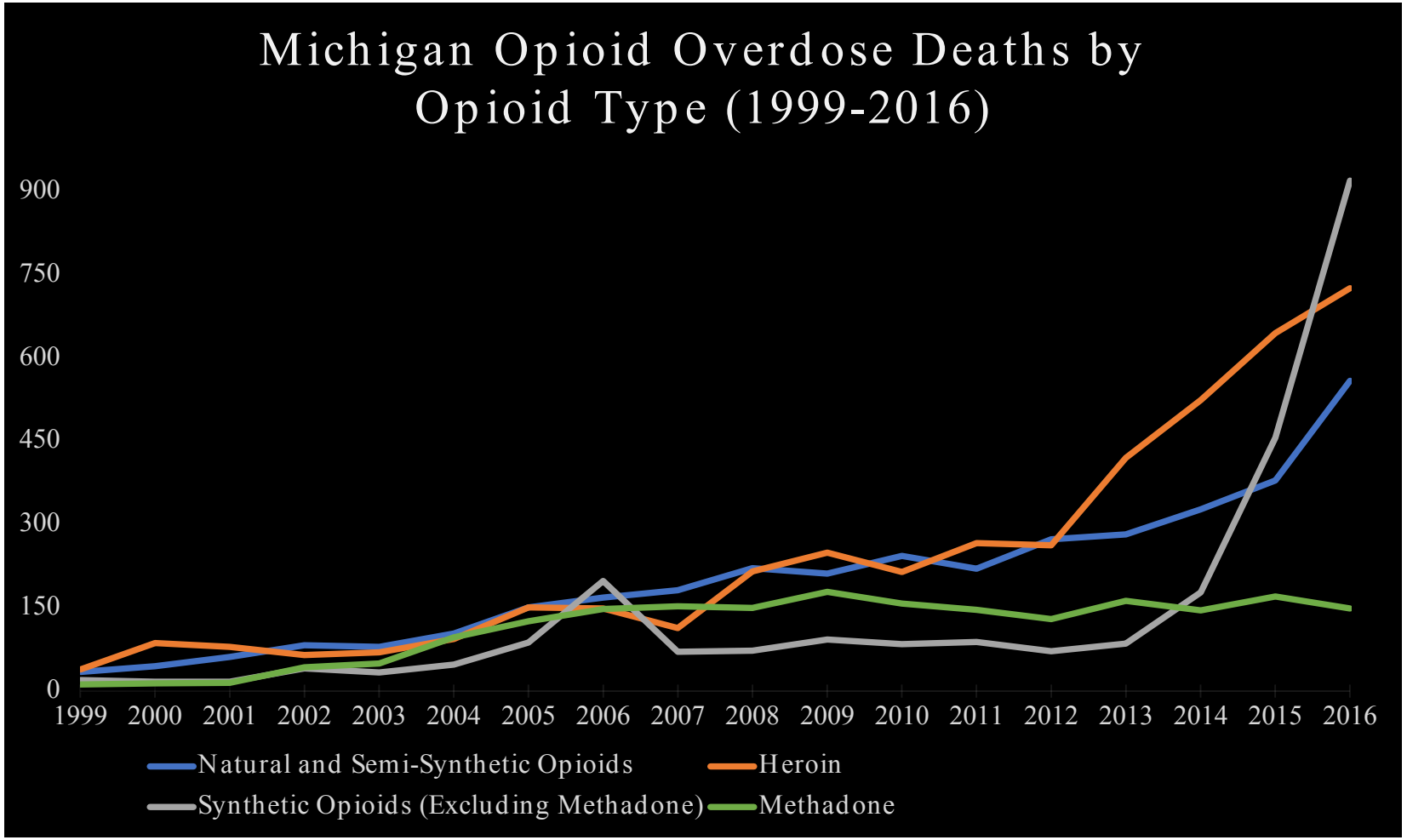
- >350,000 died of a opioid overdose

Three waves of the U.S. Opioid Epidemic

- First wave = Increased Prescription Opioid Overdose due to increased Prescribing in early 1990s
- Second wave = Increased Heroin Overdose in the early
- Third wave = Synthetic Opioid Overdoses (e.g., fentanyl)

80% of those who use heroin first misused prescription opioids

The Opioid Epidemic…by the numbers

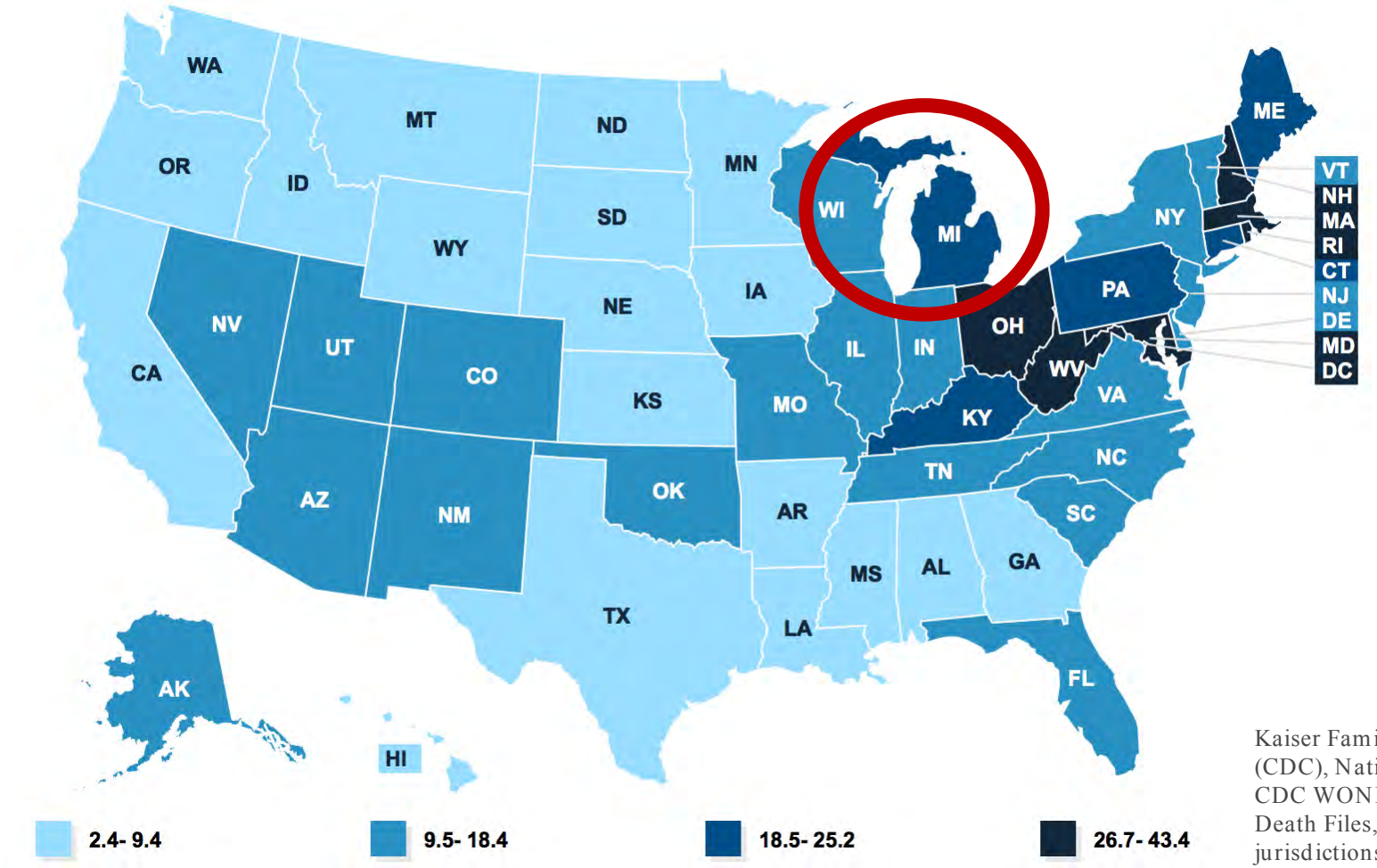


- **Number of Michigan fatalities resulting from opioid overdoses has increased exponentially since 1999, accounting for 2,357 deaths in 2016**

Kaiser Family Foundation analysis of Centers for Disease Control and Prevention (CDC), National Center for Health Statistics. Multiple Cause of Death 1999-2016 on CDC WONDER Online

The Opioid Epidemic…by the numbers

Opioid Overdose Death Rate (Per 100,000 population, age-adjusted)



In 2016, Michigan ranked 11th out of 51 U.S. States and the District of Columbia in Opioid Overdose Mortality (18.5 deaths per 100,000 people), a 36% increase from 2015.

Kaiser Family Foundation analysis of Centers for Disease Control and Prevention (CDC), National Center for Health Statistics. Multiple Cause of Death 1999-2016 on CDC WONDER Online Database, released 2017. Data are from the Multiple Cause of Death Files, 1999-2016, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program.

The Opioid Epidemic…by the numbers

In 2016,

42,249 people died from opioid overdose

116 people died every day in 2016 from opioid-related drug overdose

2.1 million people had a opioid use disorder

>900K used heroin; 170K for the first time
15,469 deaths due to heroin overdose

$504 billion

COST TO U.S. ECONOMY

11.5 people misused prescription opioids;
2.1 million people for the first time

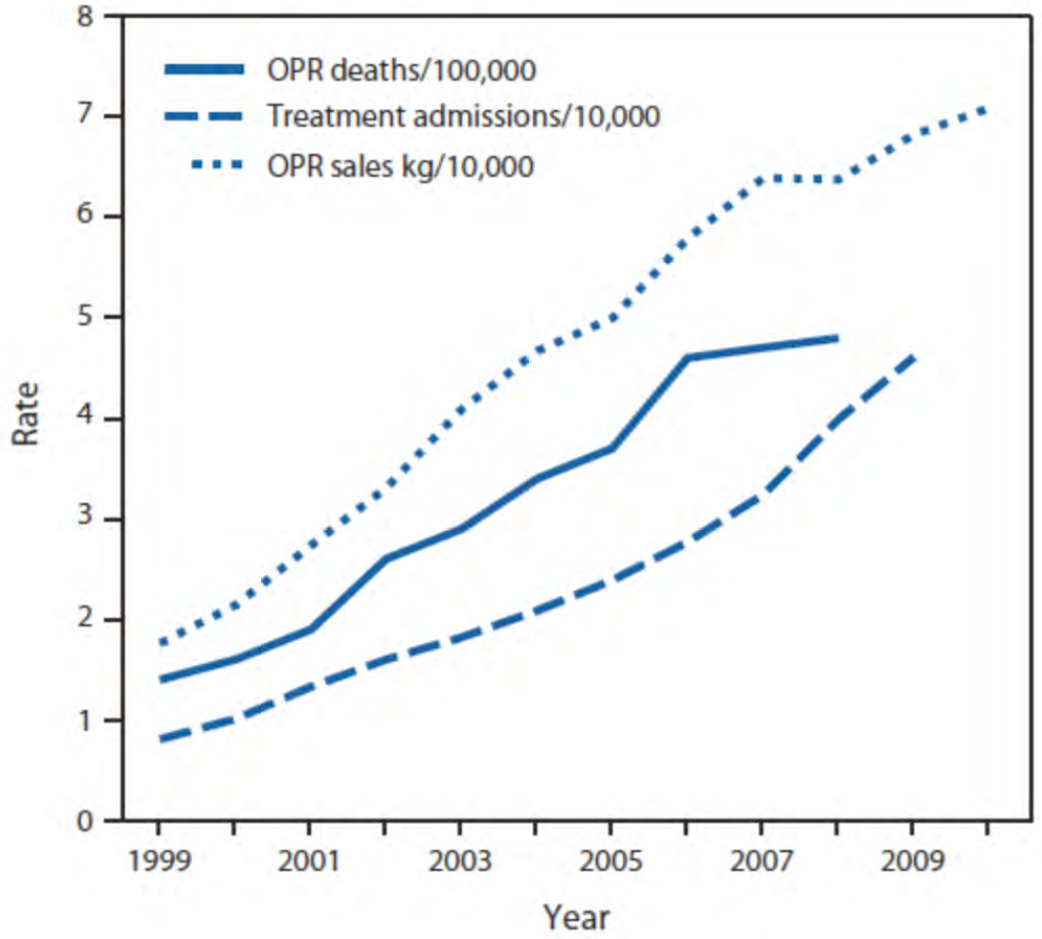
17,087 deaths attributed to opioid overdoses on commonly prescribed medications

19,413 deaths due to overdoses on synthetic opioids (other than methadone)

Sources: https:/ / www.hhs.gov/ opioids/ about-the-epidemic/ index.html; 2016 National Survey on Drug Use and Health; Mortality in the United States, 2016 NCHC Data Brief. No 293, December 2017; CEA Report: The underestimated cost of the Opioid Crisis, 2017.

More Prescribing = More Opioid Deaths

U.S. Opioid Pain Reliever (OPR) overdose deaths, treatment admissions and OPR sales (kg/ sold) (1999-2010)



The impact of the increase in opioid prescribing observed in the late 1990s and early 2000s was a sharp increase in both opioid pain reliever (OPR) overdose deaths and admissions to hospitals for substance use treatment

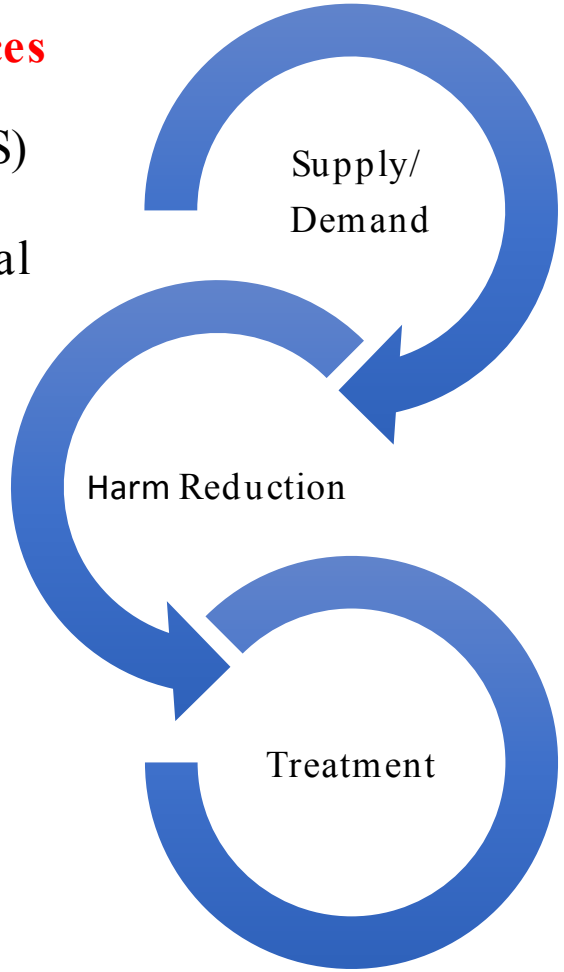
Addressing The Opioid Epidemic

Prescribing Practices

PDMPs (i.e., MAPS)

Diversion Control/ Safe Disposal

Harm Reduction Strategies
- Naloxone availability
- Needle exchange



Community/ Patient Education

Expanded Access to Treatment Services

Improved Data/ Research and Surveillance

Safer Opioid Prescribing Guidelines

With Opioid misuse becoming a national crisis, there was a need for development of clear and consistent guidelines for prescribing.

- Previous guidelines were developed, but inconsistent
- Prior national guidelines were several years old
- Need for clear, consistent guidelines

Primary Audience: Primary Care Providers, Nurse Practitioners, Physician Assistants.
Use: Treating patients 18 + years of age for chronic pain

Does not include active cancer treatment, palliative care, and end-of-life care

Safer Opioid Prescribing Guidelines

Framework: 12 Recommendations; 3 categories

- Determining when to initiate or continue opioid use in the treatment of chronic pain
- Opioid selection, dosage, duration, follow-up, and discontinuation
- Assessing risk and addressing harms of opioid use

Safer Opioid Prescribing Guidelines

Determining when to initiate or continue opioids for chronic pain

Focus area #1

What to consider:

Recommendation 1

Non-pharmacologic therapies and Non-opioid pharmacologic therapy are preferred for chronic pain to opioid use.

Alternative Tx Options

Recommendation 1

- Opioid Therapy should be considered only if expected benefits for pain and function are anticipated to outweigh the risks to patient
- If opioids are used for pain control, they should be combined with non-pharmacologic and non-opioid pharmacologic therapy, as appropriate
- Non-Pharmacologic therapies that have been shown to be effective include:
  - Exercise
  - Exercise + Behavioral Therapies (e.g., CBT)
  - Interdisciplinary rehabilitation
- Non-Opioid Pharmacological Therapies
  - Topical Medications: Lidocaine, Capsaicin
  - First line: Non-steroidal Anti-inflammatory Medications, Acetaminophen
  - Second line: Serotonin/ Norepinephrine reuptake inhibitors (SNRIs); Tricyclic antidepressants (TCAs)
- Neuropathic pain = Gabapentin; Pregabalin
- Migraines = Beta Blockers; Calcium Channel Blockers; Tripans (acute); Anti-emetics (acute)
- Arthrocentesis and Intra-articular injections of glucocorticoids

What to consider:

Recommendation 2:

Establish realistic goals for patients treatment and pain before beginning opioid therapy

Discuss how/when opioid therapy will be discontinued if does not prove beneficial.

Recommendation 3:

Discuss risks and potential benefits of opioid therapy both before beginning treatment and periodically throughout treatment period.

Establishing Treatment Goals

- Acute vs. Chronic Pain Treatment (>3-months = chronic pain treatment)
- Consider that you are **probably starting treatment for chronic pain anytime >30-day supply of opioids**

- Before initiating opioid therapy for chronic pain
  - Determine **how effectiveness will be evaluated** (validated scale)
  - Establish **treatment goals** with patients.
    - Written Treatment Plans - outline plan of course, treatment goals, expectations for monitoring, situations for discontinuing or tapering dosage (e.g., failure to adhere to clinic policies)
    - Treatment goals = Pain relief, functional status (e.g., walking the dog, returning to work)
  - Have an **Exit Strategy** if therapy is unsuccessful
    - Plan for tapering and discontinuing opioids

Assess progress using 3-item validated PEG Assessment Scale*

- Pain average (0-10)
- Interference with Enjoyment of life (0-10)
- Interference with General activity (0-10)

*clinically meaningful improvement defined as 30% improvement in scores for both pain and function

Risks/Benefits of Opioid Treatment

- Patients highlight lack of information regarding opioids and concerns re: safety of medications

- Be explicit/ realistic about benefits - - Role in **short-term pain management**, but **no evidence** for opioids improving pain/ function with **long-term use** and **complete relief of pain unlikely**
- Emphasize goal of **improvement in pain and function**.
  - Function can improve even when pain present

- Anticipatory Guidance:
  - Serious (e.g., fatal **respiratory depression, opioid use disorder**) adverse effects
  - Common adverse effects (e.g., constipation, tolerance, withdrawal symptoms with cessation)
  - **Increased risks of overdose**
    - Especially at **higher dosages**
    - Combined with other drugs **(e.g., benzos = 10X risk** than opioid alone**)** or alcohol
  - Opioids and driving (initiation, dosage change, combined with CNS depressants)
  - Need for Periodic reassessment to ensure goals are being met, PDMP and urine checks
  - Safe Storage of Medications and Safe Disposal
  - Risks to family members and individuals in the community.

Safer Opioid Prescribing Guidelines

Opioid selection, dosage, duration, follow-up and discontinuation

Focus area #2

What to consider:

Recommendation 4:

When beginning therapy, immediate-release opioids should be prescribed instead of extended-release/long acting opioids.

Recommendation 5:

When beginning opioid treatment, start with the lowest effective dosage.

Use caution with any dose
Start low, go slow- reassess pain and function
Increase frequency of follow-ups

IR vs. ER/LA Opioid Therapy

Original Investigation

Prescription Opioid Duration of Action and the Risk of Unintentional Overdose Among Patients Receiving Opioid Therapy

Matthew Miller, MD, ScD; Catherine W. Barber, MPA; Sarah Leatherman, PhD; Jennifer Fonda, BS; John A. Hermos, MD; Kelly Cho, PhD; David R. Gagnon, MD

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Supplemental content at jamainternalmedicine.com

IMPORTANCE The unprecedented increase in unintentional overdose events that has occurred in tandem with escalating sales of prescription opioids over the past 2 decades has raised concerns about whether the therapeutic use of opioids has contributed to increases in overdose injury. Few controlled studies have examined the extent to which ecologic measures of increases in opioid prescribing and overdose injuries reflect risk among patients prescribed opioids, let alone whether some opioid regimens are safer than others.

OBJECTIVE To examine whether the risk of unintentional overdose injury is associated with the duration of opioid action (ie, long-acting vs short-acting formulations).

DESIGN, SETTING, AND PARTICIPANTS A propensity score–adjusted cohort study was conducted using population-based health care utilization data from the Veterans Administration Healthcare System. The patients were veterans with chronic painful conditions who began therapy with opioid analgesics between January 1, 2000, and December 31, 2009.

MAIN OUTCOMES AND MEASURES Unintentional overdoses that are explicitly coded using *International Classification of Disease, Ninth Revision* codes as drug or medication poisonings of accidental intent (E850.x-860.x) or undetermined intent (E980.x or drug poisoning [960.x-980.x] without an accompanying external cause of injury code).

RESULTS A total of 319 unintentional overdose events were observed. Patients initiating therapy with long-acting opioids were more than twice as likely to overdose compared with persons initiating therapy with short-acting opioids. After adjustment for age, sex, opioid dose, and other clinical characteristics, patients receiving long-acting opioids had a significantly higher rate of overdose injury than did those receiving short-acting opioids (hazard ratio [HR], 2.33; 95% CI, 1.26-4.32). The risk associated with long-acting agents was particularly marked during the first 2 weeks after initiation of treatment (HR, 5.25; 1.88-14.72).

CONCLUSIONS AND RELEVANCE To our knowledge, the findings of the present study provide the first evidence that the risk of unintentional overdose injury is related to the prescribed opioid's duration of action. If replicated in other cohorts, our findings suggest that clinicians weighing the benefits and risks of initiating different opioid regimens should consider not only the daily dose prescribed but also the duration of opioid action, favoring short-acting agents whenever possible, especially during the first 2 weeks of therapy.

- Risk of overdose higher in patients initiating therapy with LA opioids as compared to those initiating therapy with IR opioids [HR=2.33], especially during the first two weeks of therapy
- No evidence that ER/ LA is safer or more effective for management of chronic pain
- Recommendation: ER/ LA should be reserved for severe continuous pain in opioid tolerant patients when alternate treatment options are not effective
  - Methadone should be avoided as the first line choice

Miller et al. Prescription opioid duration of action and the risk of unintentional overdose among patients receiving opioid therapy. JAMA Internal Medicine. 2015.

Rule of Thumb: Start Low & Go Slow

- Similar to other medications, goal is lowest effective dosage and small dose increases.
  - Begin with lower dosage; Titrate slowly
  - Caution when combining multiple drugs (especially in elderly)
  - Assess for potential drug-drug interactions

- If total opioid dosage >50 MME/ day
  - Reassess pain, function, and treatment ; Increase frequency of follow-up
  - Consider offering naloxone teaching/ education and kit for reversal

- Avoid increasing opioid dosages to >90 MME/ day. If patient with escalating dosage requirements,
  - Discuss alternate pain therapies
  - Consider tapering opioids
  - Consider pain specialist consultation

  - Patients already taking >90 MME/ day
    - Re-evaluate continued use of high opioid dosages given potential overdose risk
    - Consider tapering plan

What to consider:

Recommendation 6 & 7

Recommendation 6:

For *acute pain* treatment with opioids, low dosage with a short duration of time should be considered, if possible.

3- 5 days or less will often be sufficient; more than 7 days will rarely be needed.

Recommendation 7:

Evaluate benefits and harms with patients within 1 to 4 weeks of starting opioid therapy for chronic pain or of dose escalation.

Then re-evaluate continued therapy with patients every 3 months or more frequently.

If benefits do not outweigh harms consider alternatives, lowering dosage and/or discontinuation of opioid treatment.

General Acute Care Opioid Recommendations

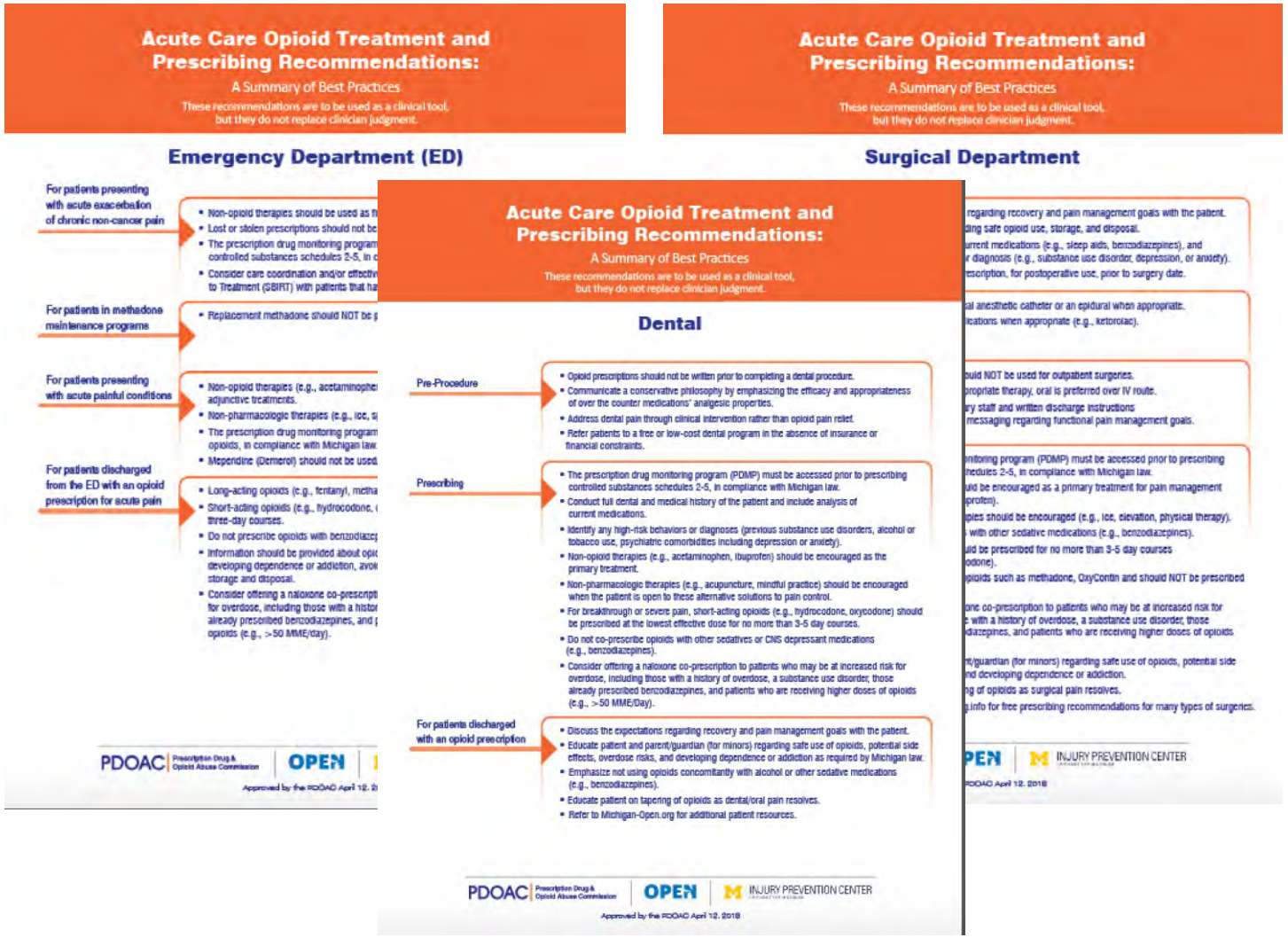
- Non-Opioid therapies (NSAIDS, Non-pharmacologic) should be used as first line therapy

- Prescribe the lowest effective dose
  - Prescribe amount to match the expected duration of pain severe enough to require opioids
  - Short acting opioids should be for < 3 days and rarely more than 7 days are needed
  - Do not prescribe additional opioids “just in case”
  - Re-evaluate patients with severe acute pain that continues longer than the expected duration to confirm or revise the initial diagnosis and to adjust management accordingly.

- No replacement of lost or stolen prescriptions (including methadone)
- Do not prescribe ER/ LA opioids for acute pain treatment.
- Consider Naloxone co-prescription for patients with >50 MME/ day
- Avoid co-prescribing with benzodiazepines
- Utilization of PDMPs in accordance with recently pasted Michigan laws

Specialty Specific Acute Care Prescribing Recommendations

- Despite CDC guidelines, remains a gap in recommendations for prescribing, especially for acute care – ED, Dental, Surgical
- New acute care prescribing recommendations developed for EM, dental prescribing, and post-surgical prescribing
- Approved by LARA and Prescription Drug and Opioid Abuse Commission
- Handouts available



OPEN
OPIOID PRESCRIBING ENGAGEMENT NETWORK

MSQC
Michigan Surgical Quality Collaborative

Opioid Prescribing Recommendations for Opioid-naïve Patients

Procedure	Hydrocodone (Norco) 5 mg tablets Codeine (Tylenol #3) 30 mg tablets Tramadol 50 mg tablets	Oxycodone 5 mg tablets Hydromorphone (Dilaudid) 2 mg tablets
Laparoscopic Cholecystectomy	15	10
Laparoscopic Appendectomy	15	10
Inguinal/Femoral Hernia Repair (open/laparoscopic)	15	10
Open Incisional Hernia Repair	30	20
Laparoscopic Colectomy	30	20
Open Colectomy	30	20
Ileostomy/Colostomy Creation, Re-siting, or Closure	40	25
Open Small Bowel Resection or Enterolysis	30	20
Thyroidectomy	10	5
Hysterectomy		
Vaginal	20	10
Laparoscopic & Robotic	25	15
Abdominal	35	25
Breast Biopsy or Lumpectomy Alone	10	5
Lumpectomy + Sentinel Lymph Node Biopsy	15	10
Sentinel Lymph Node Biopsy Alone	15	10
Simple Mastectomy ± Sentinel Lymph Node Biopsy	30	20
Modified Radical Mastectomy or Axillary Lymph Node Dissection	45	30
Wide Local Excision ± Sentinel Lymph Node Biopsy	30	20

- M-OPEN Post-Surgical Prescribing Recommendations
- Data shows that when patients prescribed fewer pills, they consume fewer pills with no evidence for changes in their pain or satisfaction scores
- Recommendations based on patient-reported data around post-operative opioid consumption
- Recommendations are designed for opiate naï ve patients
- Meet/ Exceed self-reported use of 75% patients
- Opioidprescribing.info (more info on post-surgical prescribing)

Follow-Up with Opioid Therapy

- No good evidence regarding the effectiveness of frequent monitoring intervals
  - 3-months of therapy increases risk for opioid use disorder
  - Risk for overdose with ER/ LA opioids high during first 2 weeks of therapy
  - Patients w/ o significant pain relief at 1 month unlikely to experience relief at 6 months

- Re-evaluate patients within 1-4 weeks of starting long-term therapy or of dosage increase
  - Greatest potential to mitigate risk for opioid use disorder if f/ u less than 3 months
  - Consider sooner follow-up for ER/ LA opioids and particularly for methadone (3 days)
  - Re-evaluate continued opioid therapy every 3 months

- At follow up, discuss with patients:
  - Opioids continue to meet treatment goals; Benefits continue to be > Risks
  - Common or serious adverse events or early warning signs (e.g., sedation, slurred speech, cravings, difficulty controlling use; greater quantity to control pain, work or family problems)

Tapering Guidelines

When to taper?

- No sustained clinically meaningful improvement in pain and function
- Opioid dosages >50 MME/ day without evidence of clinical benefit
- Concurrent use of benzodiazepines that can not be tapered
- Patients requests reduction or discontinuation of opioid therapy
- Patients experience overdose or other serious adverse events/ warning signs.

How to taper?

- No high quality evidence comparing different tapering protocols
- Guidelines in general recommend reducing dosage by 10-50% of original dosage weekly
- 10% dose reduction is a reasonable starting dose and adjust by patient response
  - Taper slowly enough to minimize opioid withdrawal symptoms; consider clonidine for symptoms
  - Slower taper in patients with longer duration of use; may have to pause and restart as tolerated
  - Note – opioid withdrawal in pregnancy associated with spontaneous abortion/ premature labor
- Opiates can be stopped when taking less than once a day
- More rapid tapering may be indicated with adverse events (e.g., overdose)
- Optimize non-opioid pain management and psychosocial support
- Referral patients with opioid use disorder to treatment services

Safer Opioid Prescribing Guidelines

Assessing risk and addressing harms of opioid use

Focus area #3

What to consider:

Recommendation 8:

Before starting and periodically during continuation of opioid therapy, clinicians should evaluate risk factors for opioid-related harms.

Overdose Education & Naloxone Distribution

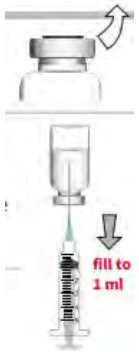
Patients at potential risk for opioid overdose and/or opioid related harms should be considered for co-prescription with naloxone:

- Prior overdose, opioid intoxication/ poisoning
- Substance abuse and/ or non-medical opioid use
- Higher dosage opioid use (≥ 50 MME/ day)
- Opioid Pain Med Prescription (and)
  - Are concurrently prescribed methadone/ buprenorphrine
  - Moderate or Severe Obstructive Sleep Apnea (OSA)
  - Poorly controlled respiratory disease
  - Renal Dysfunction, hepatic disease, cardiac illness
  - Concurrent alcohol or benzodiazepine use or abuse
  - Poorly controlled depression
  - Special Populations (Elderly; Pregnancy)
- Resumption of opioid use after period of abstinence
- Recent incarceration/ release from prison with history of opioid use
- Remote ability to access EMS services in an emergency (e.g., rural populations)

Overdose Education & Naloxone Distribution

Auto-injector

Intra-nasal



Intra-muscular

Naloxone for Overdose Prevention

Naloxone HCl 1 mg/mL
2 x 2 mL as pre-filled Luer-Lock needless syringe
(NDC 76329-3369-1)

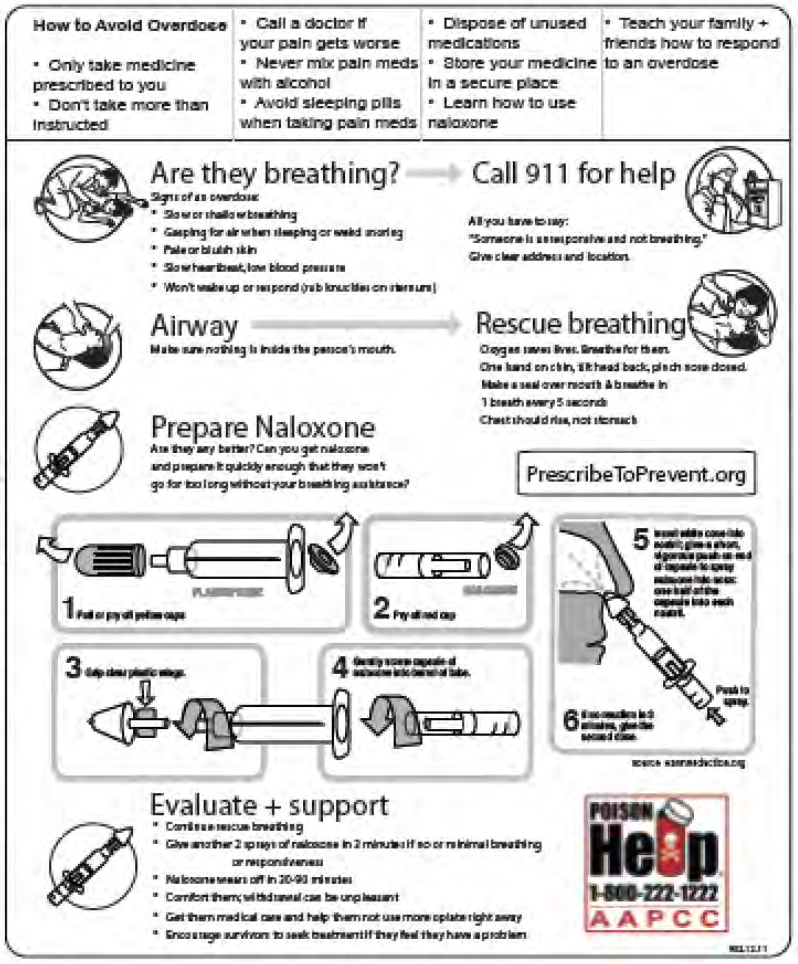
Refills: _____

2 x Intranasal Mucosal Atomizing Device (MAD 300)

Refills: _____

For suspected opioid overdose, spray 1mL in each nostril.
Repeat after 3 minutes if no or minimal response.

Pharmacist: Call 1-800-788-7999 to order MAD 300.



- Naloxone Formulations
- Naloxone Kits
- Good Samaritan Laws
- Standing Naloxone Order

What to consider:

Recommendation 9:

Review the patient's history of controlled substance prescriptions using state PDMP- MICHIGAN AUTOMATED PRESCRIPTION SYSTEM (MAPS)

Review PDMP data before beginning opioid therapy and periodically throughout course of therapy

Recommendation 10:

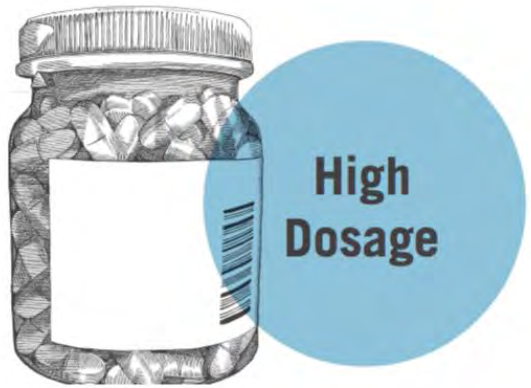
When prescribing opioids for chronic pain, use urine drug testing before starting opioid therapy

Consider UDS at least annually to assess for prescribed medications use and illicit drugs.

Prescription Drug Monitoring Programs (PDMPs)

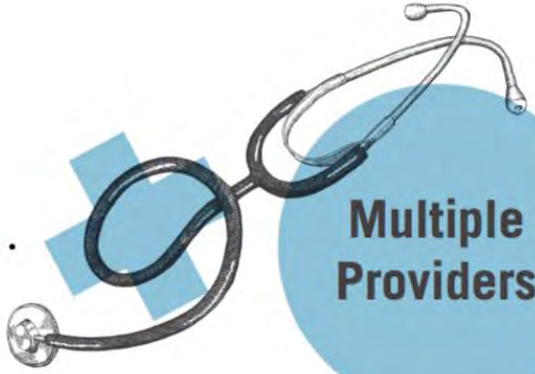
What are you looking for when you check PDMP System?

Most fatal overdoses associated with patients receiving opioids from multiple providers and/or from high daily opioid doses



High Dosage

Talk to your patient about the risks for respiratory depression and overdose. Consider offering to taper opioids as well as prescribing naloxone for patients taking 50 MME/day or more.



Multiple Providers

Counsel your patient and coordinate care with their other prescribers to improve safety and discuss the need to obtain opioids from a single provider. Check the PDMP regularly and consider tapering or discontinuation of opioids if pattern continues.

Drug Interactions

Whenever possible, avoid prescribing opioids and benzodiazepines concurrently. Communicate with other prescribers to prioritize patient goals and weigh risks of concurrent opioid and benzodiazepine use.

What to consider:

Recommendation 11 & 12

Recommendation 11:

Avoid prescribing opioid pain medication and benzodiazepines concurrently whenever possible.

Possible alternatives: cognitive behavioral therapy, specific anti-depressants approved for anxiety, other non-benzodiazepine medications

Coordinate care with mental health professionals, when possible

Recommendation 12:

Offer or arrange evidence-based treatment (usually MAT with buprenorphine or methadone in combination with behavioral therapies) for patients with opioid use disorder.

Discuss concerns with your patient and provide an opportunity for patient concerns.
Assess for OUD using DSM-5 criteria.

Opioid Use Disorder Treatment

- Counseling and Community Support (without medication)
- **Medication Assisted Treatment (MAT):** a comprehensive method of addressing opioid use disorder by combining medication, behavioral counseling therapy, and case management services
  - **Methadone** (opioid agonist) and **Buprenorphine** (partial agonist) are approved by the FDA for treatment of opioid use disorders
  - Injectable extended release **naltrexone** (antagonist) is approved by the FDA for prevention of relapse after detoxification

Benefit of Medication Assisted Treatment (MAT)

- Treatment Program Retention
- Reduces opioid use/ misuse
- Reduces criminal activity
- Reduces risk of overdose and opioid related overdose deaths
- Reduces risk of HIV, HBV, and HCV infections
- Increases social functioning/ rates of employment

RP Mattick et al. Cochrane Database of Systematic Reviews (2009)
RP Mattick et al. Cochrane Database of Systematic Reviews (2014)
Schwartz et al. Am J Public Health (2013)
ACOG & ASAM. (2012)

Important Things to Convey

- I hear you and I believe you
- I care and I want to help you
- The brain plays a huge role in pain (interpreting signals of pain, severity of pain)… that does not mean the pain is not real.
    - There is hope for you to have control over your pain.
- Pain plays an important role in telling us there is something wrong (i.e., the goal is not necessarily pain free)

Questions?

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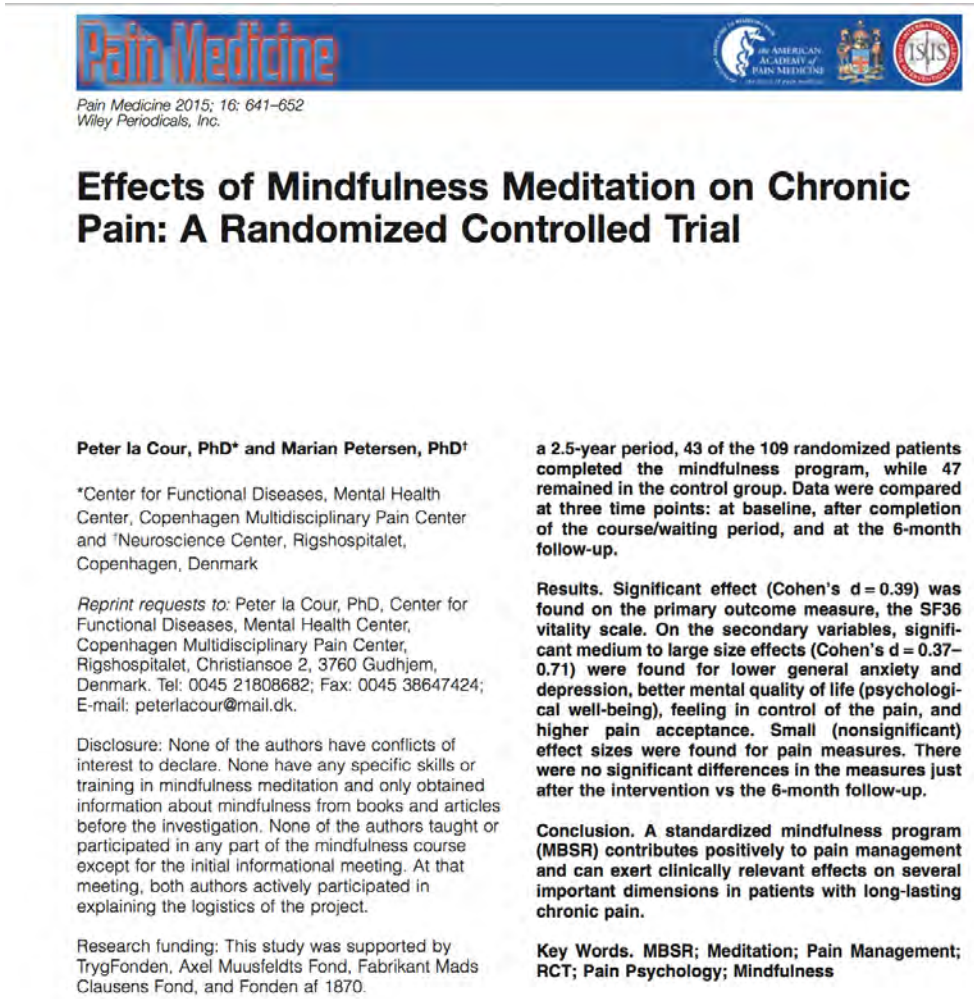
Extra Slides

Rx Opioids and the Transition to Heroin

- Non-medical use of Rx Opioids is the **strongest risk factor for heroin use**
  - Majority **(~75-80%)** of current heroin users **initiated their opioid use** with **non-medical prescription opioid use**
  - Only **(3-5%) of patients** who misuse Rx opioids **transition** to heroin use
- **Rise of heroin overdose deaths** occurred **before** large scale state interventions were instituted, suggesting transition to heroin is **not solely** an **impact of state policies or changes in prescribing practices**
- Transition to heroin more likely **progression of addiction disease** in a subgroup of non-medical prescription opioid users (i.e., those with frequent non-medical use and/ or prescription opioid abuse/ dependence)
- Transition also **likely the result of market forces**, including **increased accessibility**, **reduced prices**, and **higher purity** of heroin

Compton W, et al. NEJM. 2016; 374; 154-63; Cicero et al. JAMA Psychiatry; 2014; 71-(7): 821-826

Alternative Treatments



Pain Medicine

Pain Medicine 2015; 16: 641–652
Wiley Periodicals, Inc.

Effects of Mindfulness Meditation on Chronic Pain: A Randomized Controlled Trial

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Disclosure: None of the authors have conflicts of interest to declare. None have any specific skills or training in mindfulness meditation and only obtained information about mindfulness from books and articles before the investigation. None of the authors taught or participated in any part of the mindfulness course except for the initial informational meeting. At that meeting, both authors actively participated in explaining the logistics of the project.

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a 2.5-year period, 43 of the 109 randomized patients completed the mindfulness program, while 47 remained in the control group. Data were compared at three time points: at baseline, after completion of the course/waiting period, and at the 6-month follow-up.

Results. Significant effect (Cohen's d = 0.39) was found on the primary outcome measure, the SF36 vitality scale. On the secondary variables, significant medium to large size effects (Cohen's d = 0.37–0.71) were found for lower general anxiety and depression, better mental quality of life (psychological well-being), feeling in control of the pain, and higher pain acceptance. Small (nonsignificant) effect sizes were found for pain measures. There were no significant differences in the measures just after the intervention vs the 6-month follow-up.

Conclusion. A standardized mindfulness program (MBSR) contributes positively to pain management and can exert clinically relevant effects on several important dimensions in patients with long-lasting chronic pain.

Key Words. MBSR; Meditation; Pain Management; RCT; Pain Psychology; Mindfulness

- Mindfulness-Based Stress Reduction
- Developed with Chronic Pain Patients
- Benefits Health Overall
- Standardized mindfulness programs contribute positively to pain management

Alternative Treatments

Essentials of Pain Medicine (Fourth Edition)

2018, Pages 551–558.e2

Chapter 61 – Tai Chi and Chronic Pain

David Flamer, MD, FRCPC, Philip Peng, MBBS, FRCPC, Founder (Pain Med)

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Abstract

Tai Chi is an ancient Chinese martial art with a growing interest. It is an aerobic exercise of mild to moderate intensity. The practice of Tai Chi involves an interaction of physical movement, meditation, and deep breathing. A review of the literature suggests a beneficial role of Tai Chi for improving physical and psychological health, and as an alternative treatment option for specific chronic pain condition such as osteoarthritis, fibromyalgia, and chronic low back pain. Future high-quality trials are required to assess for its role in other chronic pain conditions.

- Tai Chi
- Gentle on the body
- Improves Balance
- Beneficial role as an alternative treatment for chronic pain

Alternative Treatments

Clinical Review & Education

JAMA Clinical Evidence Synopsis

Acupuncture for Chronic Pain

Andrew J. Vickers, DPhil; Klaus Linde, MD

CLINICAL QUESTION Is acupuncture associated with reduced pain outcomes for patients with chronic pain compared with sham-acupuncture (placebo) or no-acupuncture control?

BOTTOM LINE Acupuncture is associated with improved pain outcomes compared with sham-acupuncture and no-acupuncture control, with response rates of approximately 30% for no acupuncture, 42.5% for sham acupuncture, and 50% for acupuncture.

Although acupuncture is widely used to manage chronic pain, it remains highly controversial, largely due to the lack of a clear mechanism of benefit. Several systematic reviews of acupuncture for chronic pain have included trials of variable quality, typically leading to a finding that limitations in the data do not allow definitive conclusions to be drawn.[1] Meta-analyses have been limited due to variation in study end points used in randomized trials.[2] We conducted an individual patient data meta-analysis of acupuncture for chronic pain, restricted to high-quality trials from 29 of 31 eligible trials.[3]

Summary of Findings

The 29 trials included 18 comparisons of acupuncture vs no-acupuncture control (typically routine care; n = 14 597) and 20 com-

Discussion

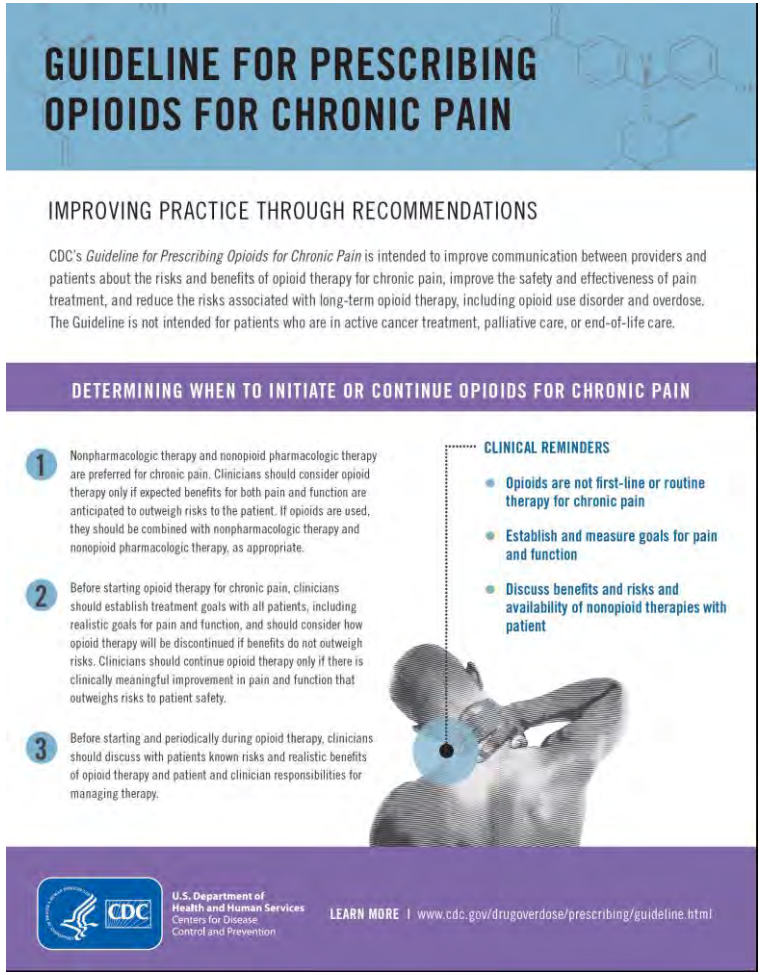
Acupuncture is associated with reductions in chronic pain compared with sham acupuncture and no acupuncture. Differences between acupuncture and sham acupuncture are smaller than those between acupuncture and no acupuncture. The search for eligible trials was repeated in October 2013. An eTable of eligible papers published 2011–2013 is included in the Supplement. There is no reason to believe that recently published data would change the results of the meta-analysis because either the results are very similar to the meta-analytic estimates or the trials are very small.

Limitations

Participants were not blinded to the comparison between acupuncture

- Acupuncture
- Evidence that verum AND sham Acupuncture perform better than opioid treatment
- Some insurance companies and the VA now cover acupuncture

Tools and Resources



Additional resources that are available for providers and patients:

Posters
Fact Sheets
Checklists
Education on Epidemic

https:/ / www.cdc.gov/ drugoverdose/ index.html

https:/ / www.cdc.gov/ drugoverdose/ prescribing/ clinical-tools.html

Access the full CDC guideline for prescribing opioids for chronic pain at:

https:/ / www.cdc.gov/ mmwr/ volumes/ 65/ rr/ rr6501e1.htm