Pain

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Disclosures

My spouse/partner and I have the following relevant financial relationship with a commercial interest to disclose:

- Consultant

  MCSTAP (Massachusetts Consultation Service for Treatment of Addiction and Pain) funded by Massachusetts government

- Expert witness

  Vermont State Office of Attorney General

Pain

- Chronic pain affects 50 million U.S. adults
  - 20 million experience high-impact chronic pain that interferes with daily life or work activities
- #1 reason Americans access health care
- Costs the US $560 - $635 billion annually

  (direct medical costs & lost productivity)
- Leading cause of long-term disability

Two distinct entities

- **Acute Pain:** essential physiologic response to protect from further injury
- **Chronic Pain**: a maladaptive pathologic disorder of the somatosensory pain signaling pathways

"Chronic pain is relentless agony. It is often described as being imprisoned in one's body and tortured 24/7 with no means of escape…victims of chronic pain are often forced to cease life in perpetuity. They cannot work, care for their families, or engage in social activities"

Cindy Steinberg Testimony to Senate HELP Committee Hearing on "Managing Pain During the Opioid Crisis" 2.12.2019

Historical Perspective

1990-2000s

- Undertreatment of pain identified as public health issue
- JCAHO – Pain the "5th vital sign"
- Opioid prescribing liberalized
- Wave 1 of opioid overdose crisis: prescriptions

2010-

- Fear of opioid prescribing, discontinuation of treatment
- Wave 2: rise in overdose deaths from illicit drug supply
- Rise in suicide associated with chronic pain
- 2016 CDC guidelines for chronic pain

Abrupt discontinuation of pain medication leads to adverse opioid-related events

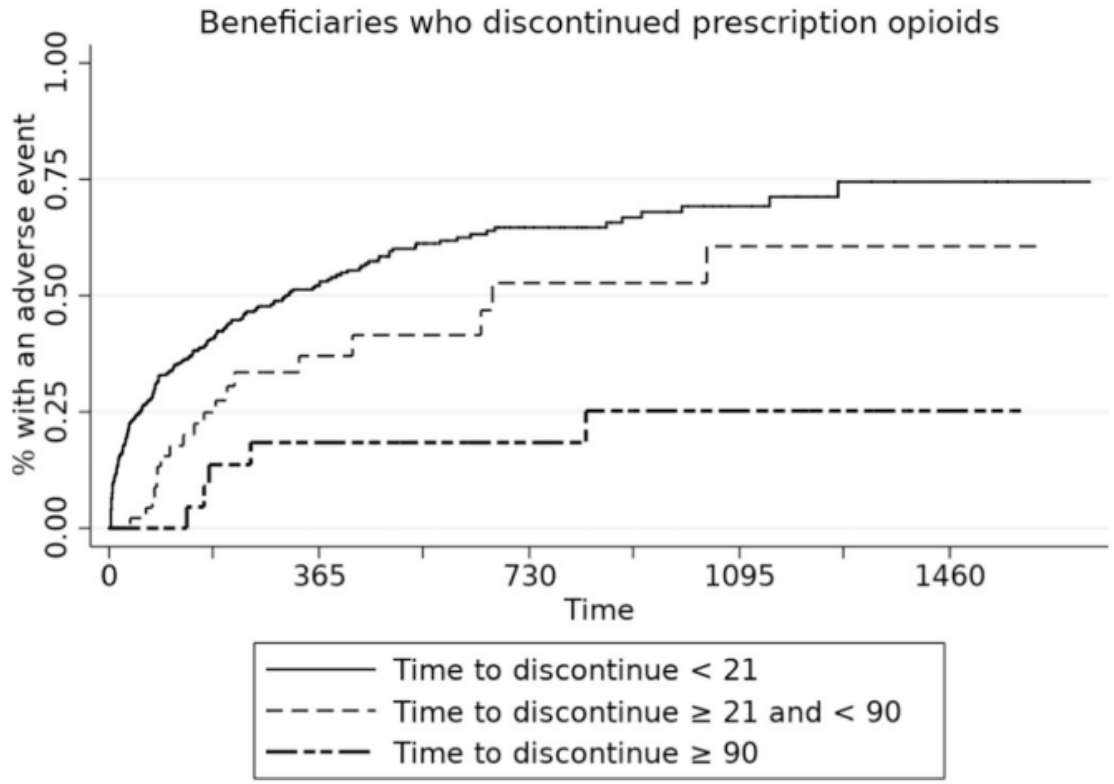
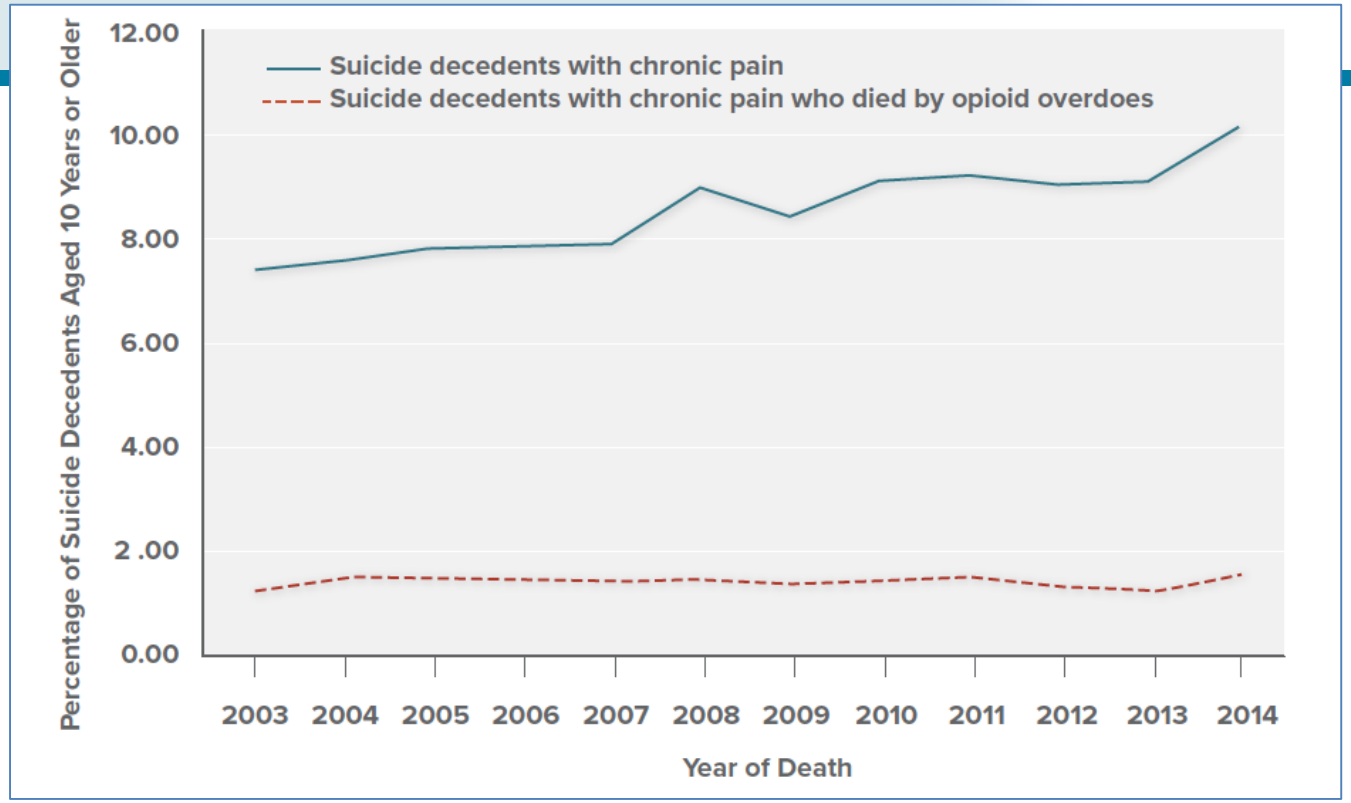


Fig. 3. Kaplan-Meier failure graph comparing opioid-related adverse event probabilities across time to discontinuation categories.

Mark T, Parish W. Opioid Medication Discontinuation and Risk of Adverse Opioid Related Health Care Events. J Subst Abuse Treat. 2019

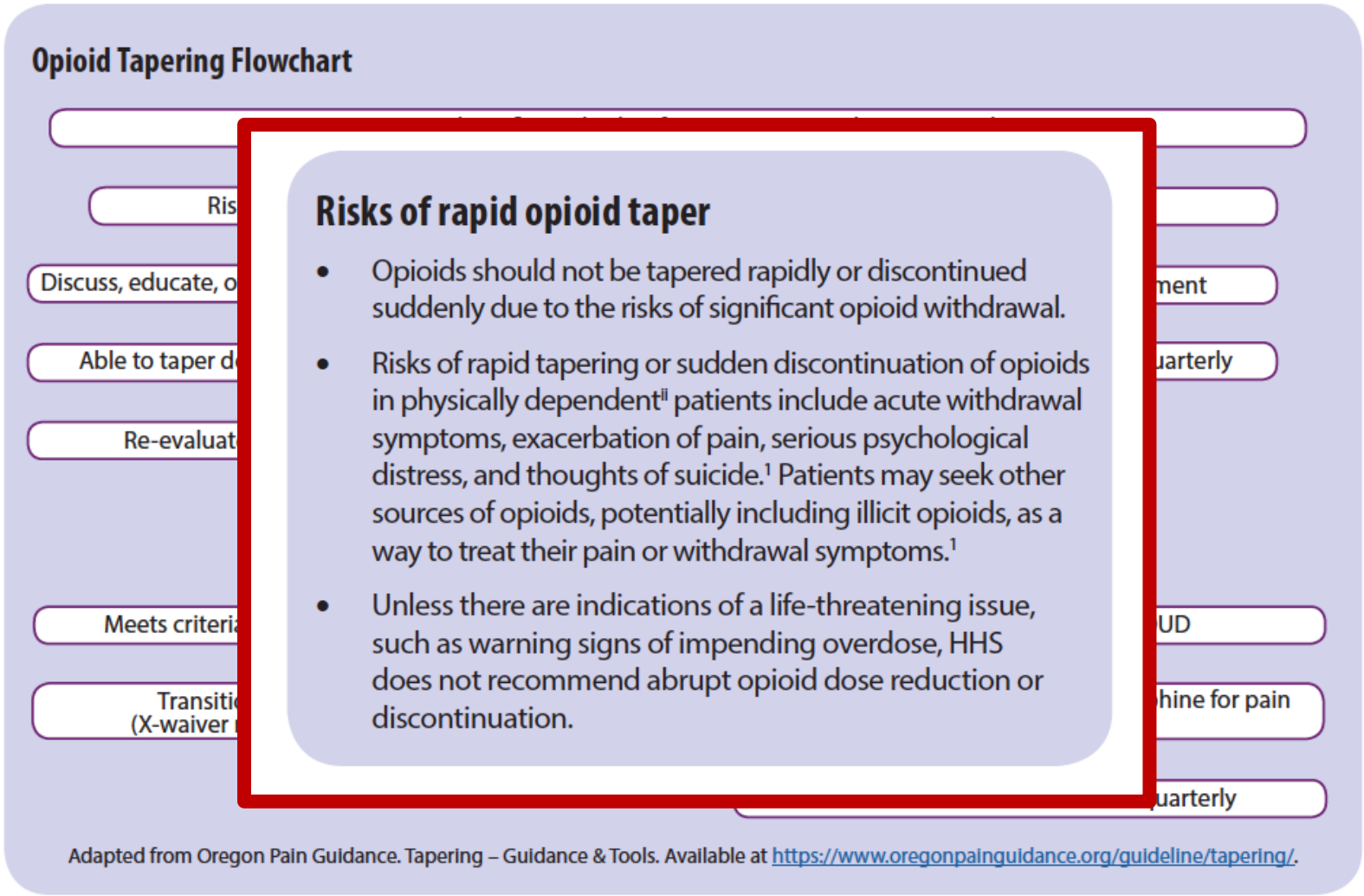
Suicide: deaths of despair



- The percentage of people who died by suicide and had evidence of chronic pain increased from 7.4% in 2003 to 10.2% in 2014
- Untreated pain, lack of access to treatment likely only worsening as health care professionals opt out of treating pain

Petrosky. *Ann Intern Med*. September 2018

2019 HHS guide to opioid taper



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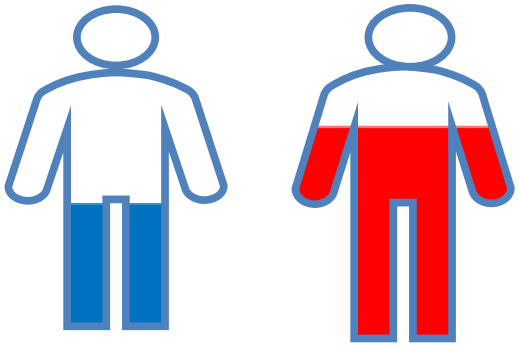
2019 –

- HHS guide to opioid taper highlights potential risks of opioid tapers, advise caution
- *More balanced prescribing?*

Racial disparities in opioid tapering

- Retrospective observational cohort study of patients on chronic opioids 2007-2012 at academic medical center in New York



50% Black 37% white
opioid dose reduction

Odds of dose reduction 82% higher in Black vs white patients
(AOR 1⁄4 1.82, 95% CI 1⁄4 1.22–2.70)

Having concurrent benzodiazepine prescription **not** associated with dose reduction

Buonora. Pain Med 2019

Women: opioids and pain

- Higher sensitivity to and increased pain experience
- More likely to misuse prescription opioids
- Higher rate of increase in opioid-related overdose between 1999-2010

CDC. Overdoses of Prescription Opioid Pain Relievers and Other Drugs Among Women. US, 1999– 2010. MMWR. July 5, 2013
HHS Pain Management Best Practices Inter-Agency Task Force Report September 2019

CHRONIC PAIN MANAGEMENT

Overlap between Pain and Addiction

- 52% of treatment seeking opioid-dependent veterans complained of moderate to severe chronic pain

- 37%-61% of patients taking methadone for opioid use disorder have chronic pain

- Pain plays a substantial role in initiating, continuing illicit opioid use

Trafton et al. 2000, Jamison et al. 2000, Rosenblum et al 2003 Karasz et al. 2004, Sharpe Potter J et al. 2010 from Alford D. PCSS 2015. Managing Acute & Chronic Pain with Opioid Analgesics in Patients on Medication Assisted Treatment

Patient

37 yo M Rx oxycodone for past 2 years for severe LBP with radiculopathy s/p MVC, requesting early refills for worsening pain, inappropriate/rude when told Rx not due, several ER visits for nausea, vomiting, diarrhea and requests for more pain medication.

1) You should:

A) Ignore this, he has been through a lot and must have been feeling lousy with gastroenteritis

B) Discontinue all opioids as clearly he is is addicted

C) Ask him to come in immediately for a medical follow up and assessment for opioid use disorder

D) Discharge him from your clinic

Patient continued

He admits to escalating his dose to help pain and worsening anxiety. You have forced him to buy oxycodone on the street to prevent withdrawal, and he concedes to chewing them with the hopes they will be more effective. He is still in agony despite doubling his dose and is at risk of losing his job due to absences. He would like something to alleviate the pain and stop the withdrawal.

2) You (pick all that apply):

A) Refer him to a detox and plan to never prescribe controlled substances

B) Diagnose him with opioid use disorder and offer to transition from oral oxycodone to SL buprenorphine/naloxone both for pain and opioid use disorder

C) Consider adjunctive therapies for pain and anxiety

D) Discuss the importance of behavioral support (chronic pain and opioid use disorder)

Clinical decision-making

Differential diagnosis

- Progression of disease
- Opioid-induced hyperalgesia
- Pseudo-addiction
- Self-medication
- Diversion

Approach

- Nonjudgmental
- Open-ended
- Clearly state your concerns
- Roll with resistance
- Be empathetic
- Provide reassurance

Buprenorphine for addiction and chronic pain

- Sublingual formulation approved for addiction ***not*** pain treatment
  - Can be used off-label

- Parenteral and transdermal formulations approved for pain ***not*** addiction treatment
  - **CAN NOT** be used off-label (DATA 2000)

- Presence of chronic pain NOT barrier to successful treatment of opioid addiction

Opioid-induced abnormal pain sensitivity: implications in clinical opioid therapy.
Mao J. Pain. 2002 Dec; 100(3):213-7.
Alford D, PCSS
Fox Subst Abus 2012

Opioid Agonists with Buprenorphine for acute pain?

Theoretical concern:

- *Buprenorphine (a partial mu agonist) may*
  - *antagonize the effects of previously administered opioids or*
  - *block the effects of subsequent administered opioids*

- Pre-clinical and clinical trials now suggest **effectiveness** of concurrent opioid agonists for patients maintained on buprenorphine
  - Buprenorphine + full opioid agonists resulted in additive or synergistic effects
  - Receptor occupancy by buprenorphine does not appear to cause impairment of mu-opioid receptor accessibility

Slide adapted from Dan Alford, MD

Kogel B, et al. European J of Pain. 2005
Englberger W et al. European J of Pharm. 2006
Vilkins. Addiction Medicine 2017
Jones. Am J Drug Alc Abuse 2009

Acute pain and Addiction

- Opioid debt
  - Maintenance medication is NOT analgesia
- Increased pain sensitivity
  - Higher opioid requirements
- Treating pain reduces addiction complications
  - Withholding opioids does not cure OUD
  - Giving opioids does not worsen OUD

1.Peng PW, Tumber PS, Gourlay D: Can J Anaesthesia 2005
2. Alford DP, Compton P, Samet JH. Ann Intern Med 2006
3. Kantor TG et al. Drug and Alc Dependence. 1980 21

Perioperative management: continue buprenorphine maintenance

- Avoids complexity of delaying surgery for taper
- Avoids withdrawal/re-induction, destabilization
- Achieves equivalent pain control
- Full agonist requirements lower than when buprenorphine stopped
- Buprenorphine dose adjustment: no consensus
  - varies by institution and severity of expected pain

Lembke Pain Medicine 2018
Vilkins, Bagly, Alford. J Addict Med 2017
Macintyre PE et al. Anaesth Intensive Care 2013
Acampora et al, J Clin Psych: 2020

Perioperative Buprenorphine Management

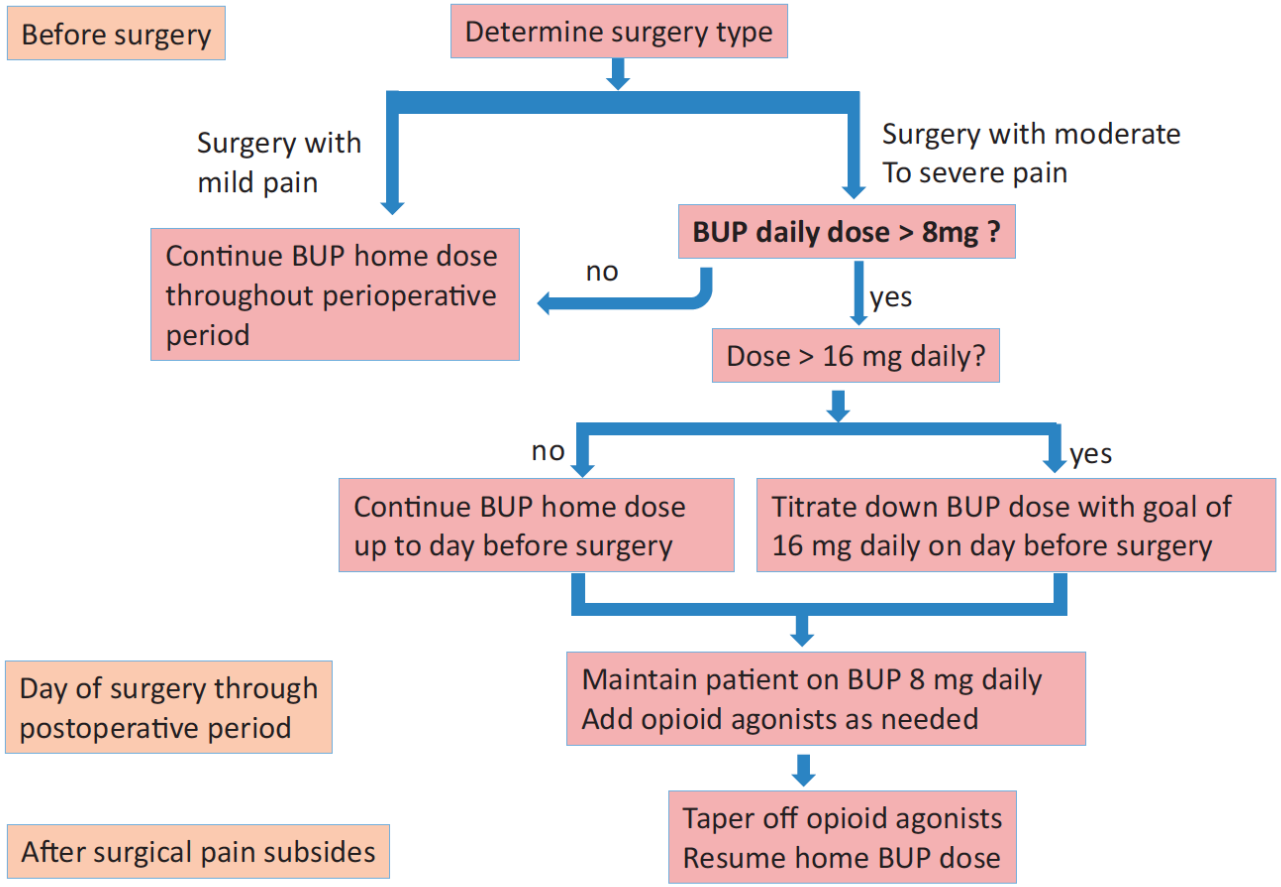


Figure 1. Algorithm for perioperative management of buprenorphine. BUP = buprenorphine.

Quaye, Zhang. Perioperative Management of Buprenorphine: Solving the Conundrum. *Pain Medicine 2019*

Patient 2

39 yo veteran, well known to you, with severe alcohol use disorder and OUD in sustained remission on buprenorphine/naloxone 8/2 mg SL BID, with history of severe 3rd degree burns causing chronic pain.

Also on Gabapentin, Duloxetine, and engaged in CBT with a therapist and connected to a recovery coach.

Complains of ongoing pain, inability to sleep and so severe that he fears relapse to heroin and alcohol, which numbs his pain.

You: (select all that apply)

A) DC buprenorphine/naloxone and refer him to a methadone maintenance treatment program

B) DC buprenorphine/naloxone and start him on short acting oxycodone round the clock and aqua therapy

C) Add an additional 4/1 mg buprenorphine/naloxone at bedtime and titrate up another 4 mg if needed in 48 hr to 8/2 mg TID

D) D/c buprenorphine/naloxone and start naltrexone

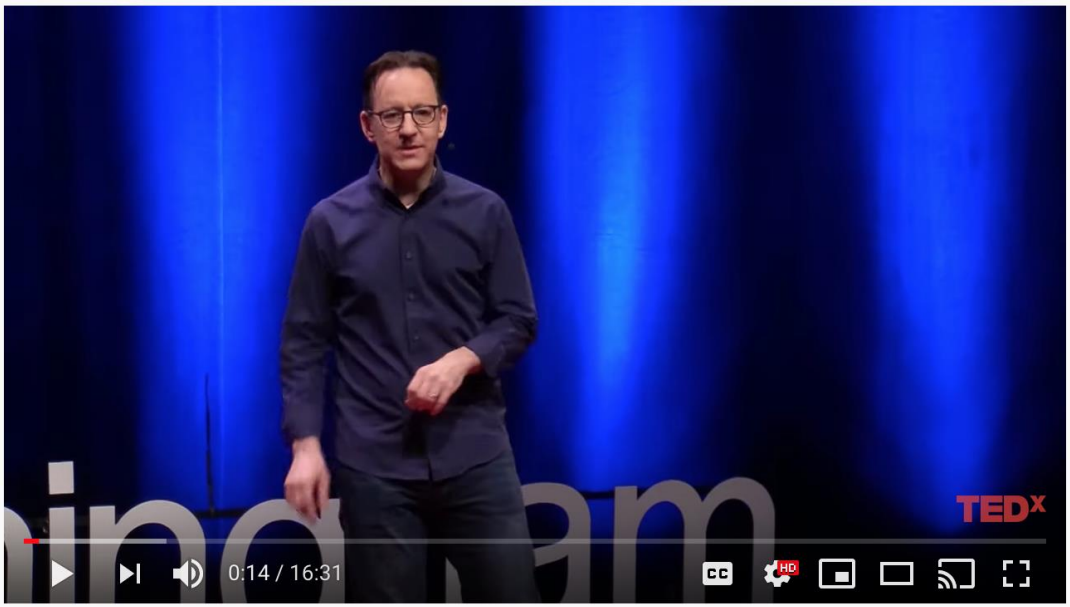
E) Refer him to an inpatient addiction treatment program

Take home points

- Evidence is mixed for long term opioid and non-opioid modalities in treating chronic pain
- Time to undo the misinterpretation of CDC guidelines to reach balanced prescribing
- Overlapping pain and opioid addiction can be treated with sublingual buprenorphine
- Acute pain treatment is important in addiction
- It is both safe and effective to continue Buprenorphine (and methadone) perioperatively

Resources

TEDx talk on pain and addiction



We need to measure the opioid crisis differently | Stefan Kertesz | TEDxBirmingham

Opioid Prescribing On-Line Courses

NP HF
NURSE PRACTITIONER HEALTHCARE FOUNDATION

CO*RE

AMERICAN SOCIETY OF ADDICTION MEDICINE
FOUNDED 1954
ASAM

SCOPE of Pain
Safe and Competent Opioid Prescribing Education

Medscape

AANP
American Association of
NURSE PRACTITIONERS™

PCSS MAT TRAINING

PROVIDERS' CLINICAL SUPPORT SYSTEM
For Medication Assisted Treatment

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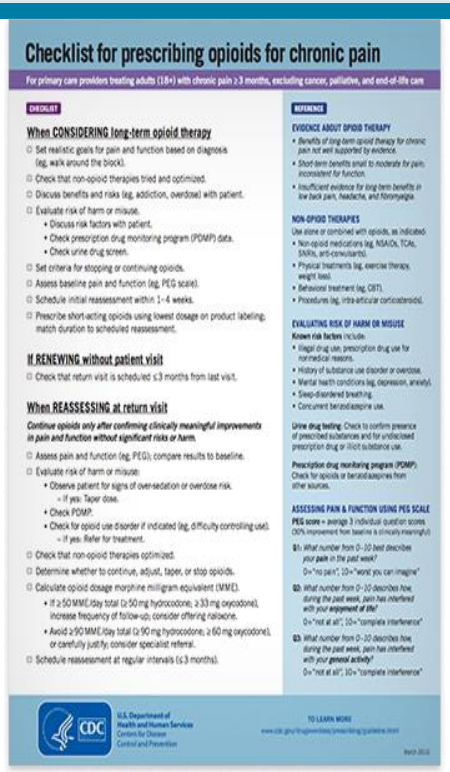
Tools and Materials



- **Provider and patient materials**
  - Checklist for prescribing opioids for chronic pain
  - Fact sheets
  - Posters
  - Web banners and badges
  - Social media web buttons and infographics
- **CDC Guideline for Prescribing Opioids for Chronic Pain can be incorporated and applied in a primary care practice setting**
- **CDC Opioid Overdose Website**

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