



National Institutes
of Health

12th
ANNUAL

May 31- June 1, 2017

NIH PAIN
CONSORTIUM
SYMPOSIUM

Complex Pain Management with Addiction

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Content Outline

- Prescription opioids and the opioid epidemic
- Chronic illnesses of pain and addiction
- Substance use disorders in patients with complex pain
- Opioid therapy in complex pain patients with history of substance use disorder
 - Opioid-sparing strategies
 - Risk mitigation practices
 - Relapse prevention
- Benefits of recovery in complex pain management



Prescription opioids and the Opioid Epidemic

CDC Newsroom

CDC

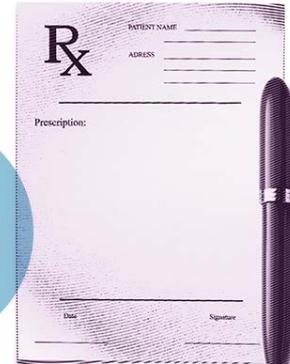
Drug overdose deaths hit record numbers in 2014

Over 47,000 deaths last year, mostly due to opioid pain relievers and heroin



More than
40
PEOPLE

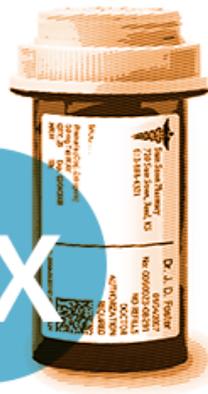
die every day from overdoses involving **prescription opioids**.



At least
HALF

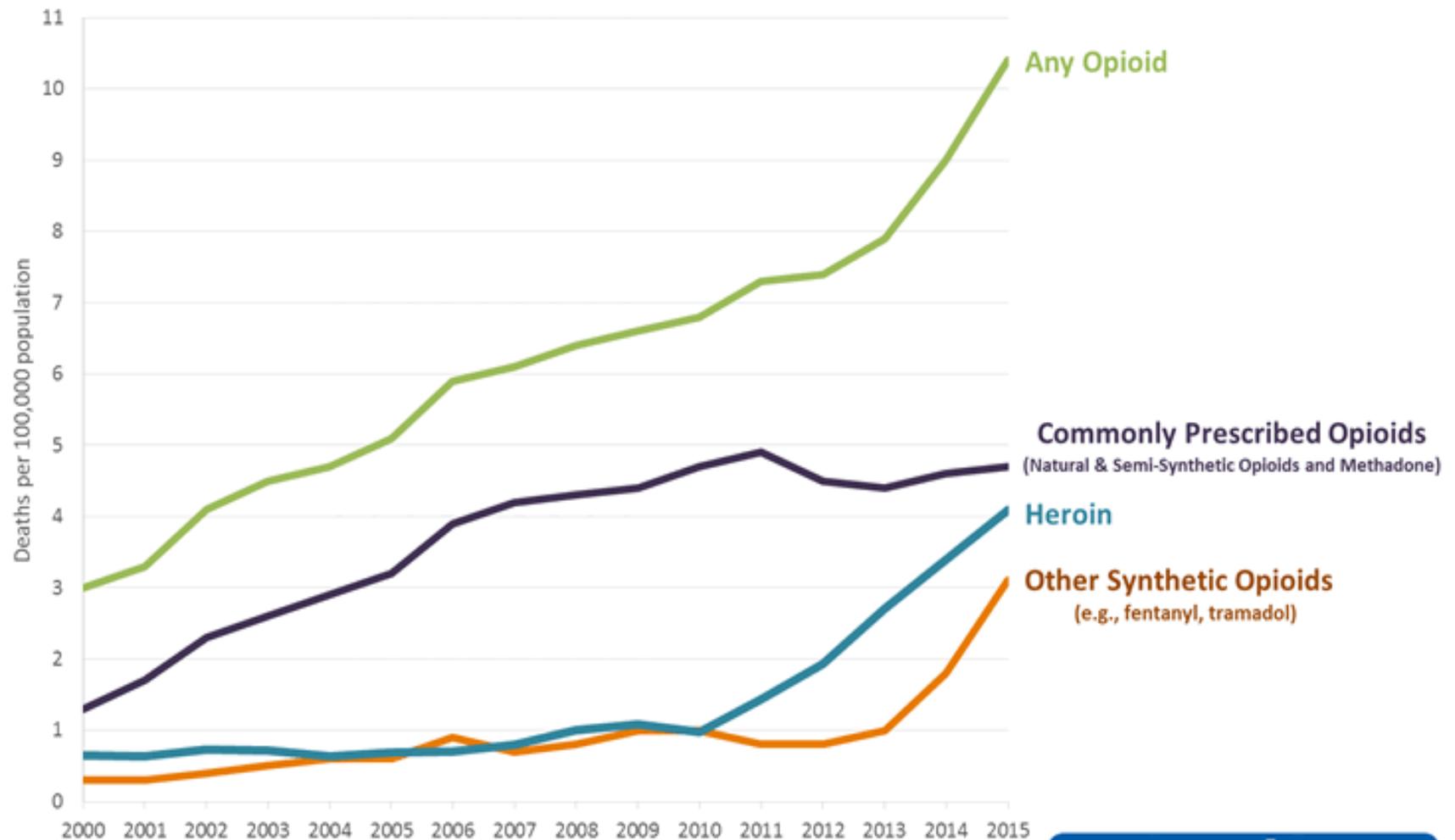
of all opioid overdose deaths involve a **prescription opioid**.

4x



From 1999 to 2013, the amount of prescription opioids dispensed in the U.S. nearly **quadrupled**.

Overdose Deaths Involving Opioids, United States, 2000-2015



SOURCE: CDC/NCHS, National Vital Statistics System, Mortality. CDC WONDER, Atlanta, GA: US Department of Health and Human Services, CDC; 2016. <https://wonder.cdc.gov/>.

www.cdc.gov
Your Source for Credible Health Information

Epidemiology: Complex pain patients are not prescription opioid abusers

Prescription Opioid Abusers

- Younger 18-26yr
- Male
- Hispanic > White (non-hispanic) > Black (non-hispanic)



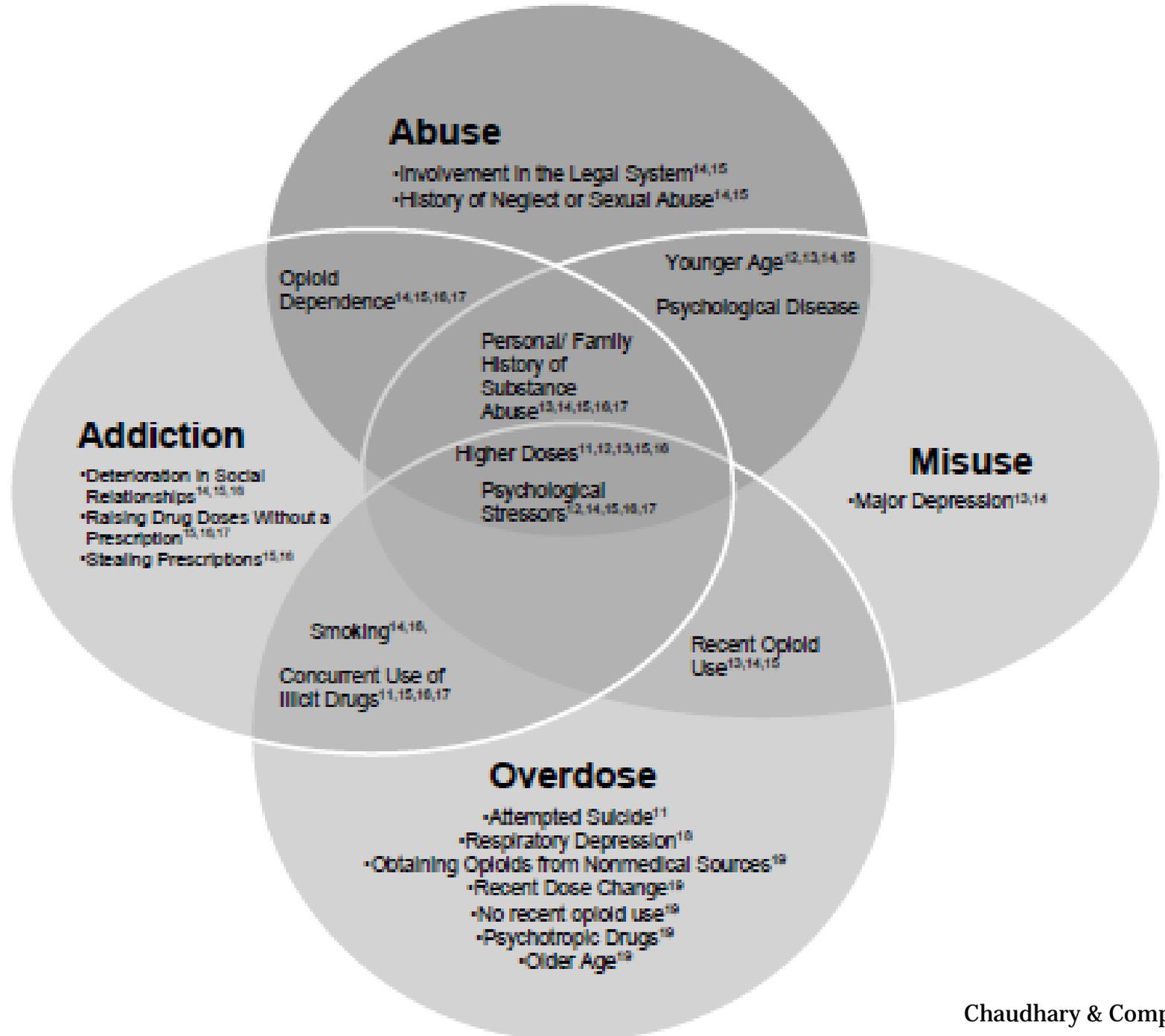
2015 National Survey on Drug Use and Health
Retrieved from <http://www.samhsa.gov/data/>

Complex Pain Patients

- Older 45yr+
- Female
- White (non-hispanic) > Black (non-hispanic) > Hispanic

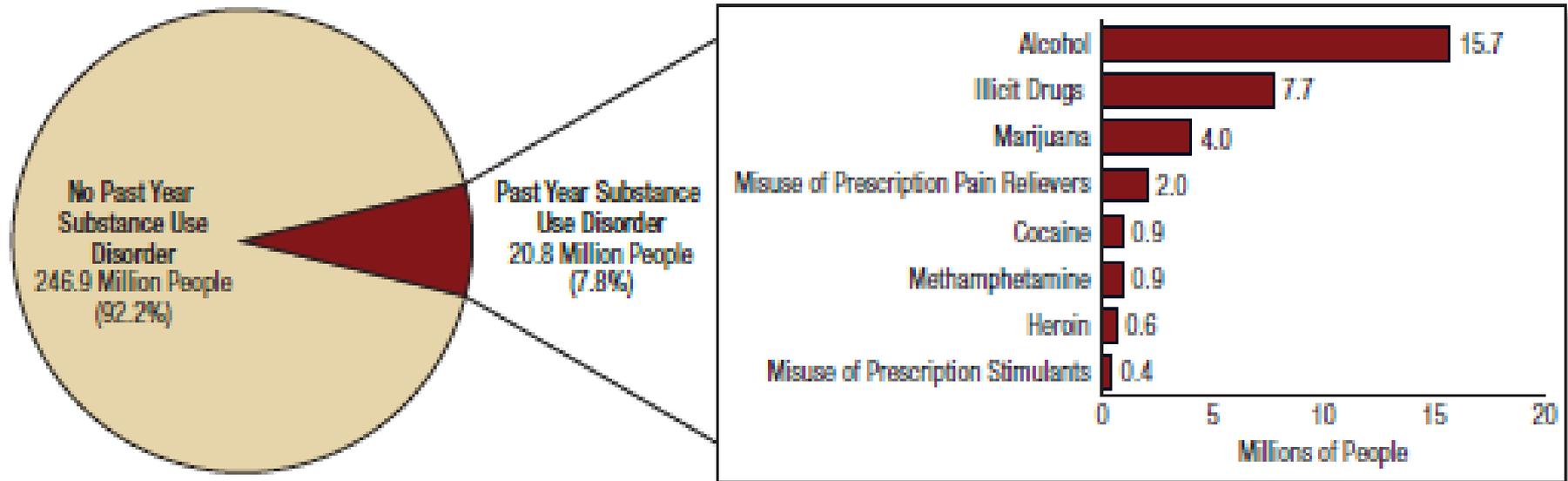


Nahin RL. Estimates of pain prevalence and severity in adults: United States, 2012. *Pain*. 2015. 16(8):769-80.



Substance Use Disorder: A prevalent chronic disease

Figure 27. Numbers of People Aged 12 or Older with a Past Year Substance Use Disorder: 2015



Approximately 8% of Americans meet diagnostic criteria for a SUD

Economic Burden of Substance Use Disorders

	Healthcare	Overall	Year estimate based on
Alcohol	\$27 billion	\$249 billion	2010
Illicit Drug Abuse	\$11 billion	\$193 billion	2007
Prescription Opioid Abuse	\$26 billion	\$78.5 billion	2013

National Drug Intelligence Center. National Drug Threat Assessment. Washington, DC: United States Department of Justice; 2011. www.justice.gov/archive/ndic/pubs44/44849/44849p.pdf (PDF, 8MB)

Birnbaum, HG. et al. Societal Costs of Prescription Opioid Abuse, Dependence, and Misuse in the United States. Pain Medicine 2011; 12: 657-667.

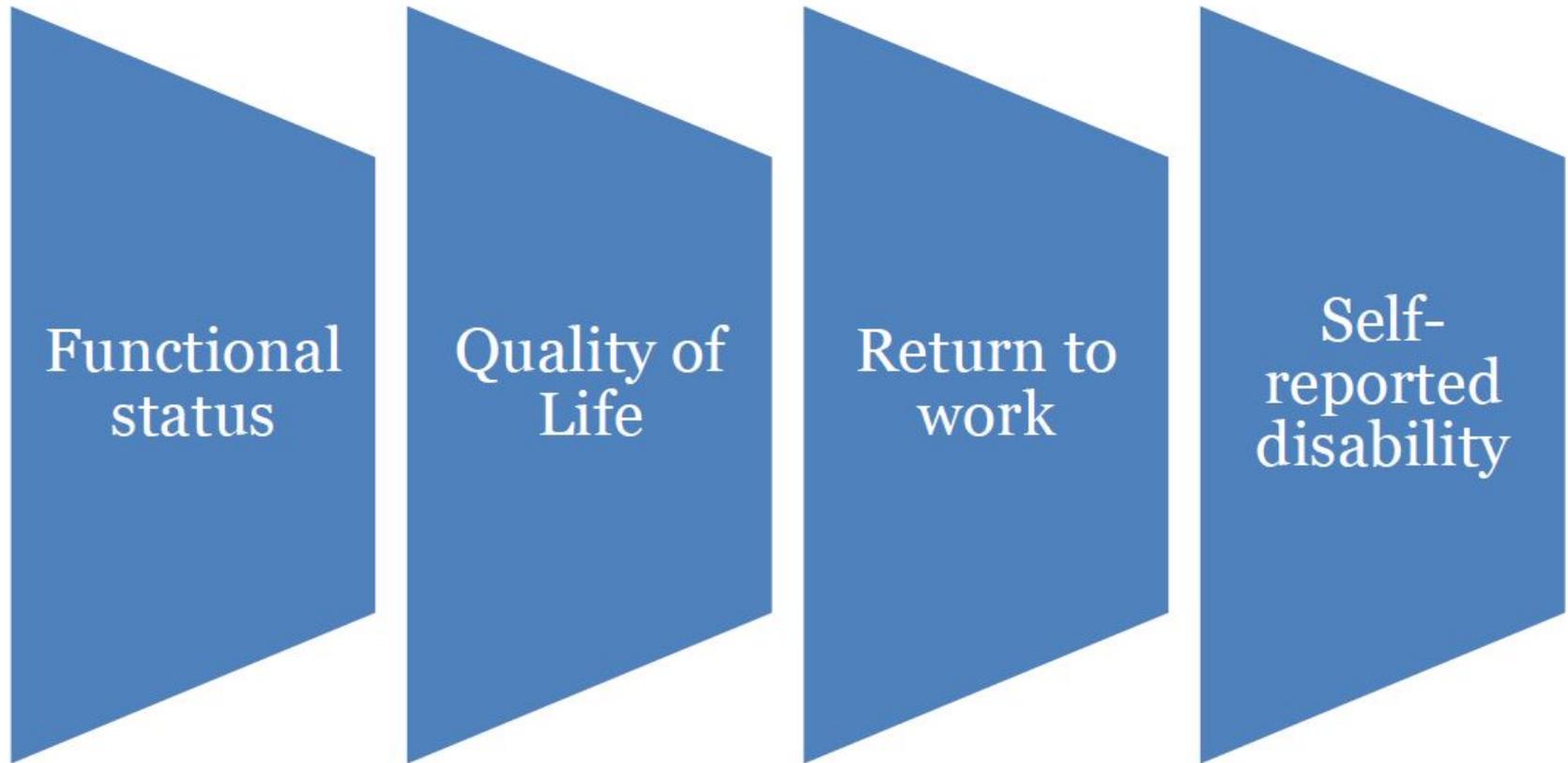
Florence, CS et al. The Economic Burden of Prescription Opioid Overdose, Abuse, and Dependence in the United States, 2013; Medical Care. Volume 54, Number 10, October 2016.

Like complex pain, SUD is a chronic disease

- Pathological basis
- Known risk factors
- Predictable course
- Treatments of known efficacy
 - Treatment requires behavioral changes
 - Most successful when treatment is ongoing
- Characterized by remissions and exacerbations
 - Exacerbation = Relapse
 - precipitated by stressors (both inter- and intra-personal)



Chronic pain and Substance Use Disorder share desired treatment outcomes:



Indicators of a Substance Use Disorder

- More substance (drug, alcohol) is used than intended or planned.
- Inability to cut down or control substance use.
- Much of time obtaining, using or recovering from substance.
- Craving or a strong desire to use substance.
- Inability to fulfill role obligations at work, school, or home.
- Continued substance use despite accumulating consequences.
- Reduced participation in social, occupational, or recreational activities due to substance use.
- Substance use in situations in which it is physically hazardous.
- Continued use despite health problems caused/exacerbated by substance.
- Need for increased amounts of substance to achieve desired effect.
- Characteristic withdrawal syndrome for substance when not used.

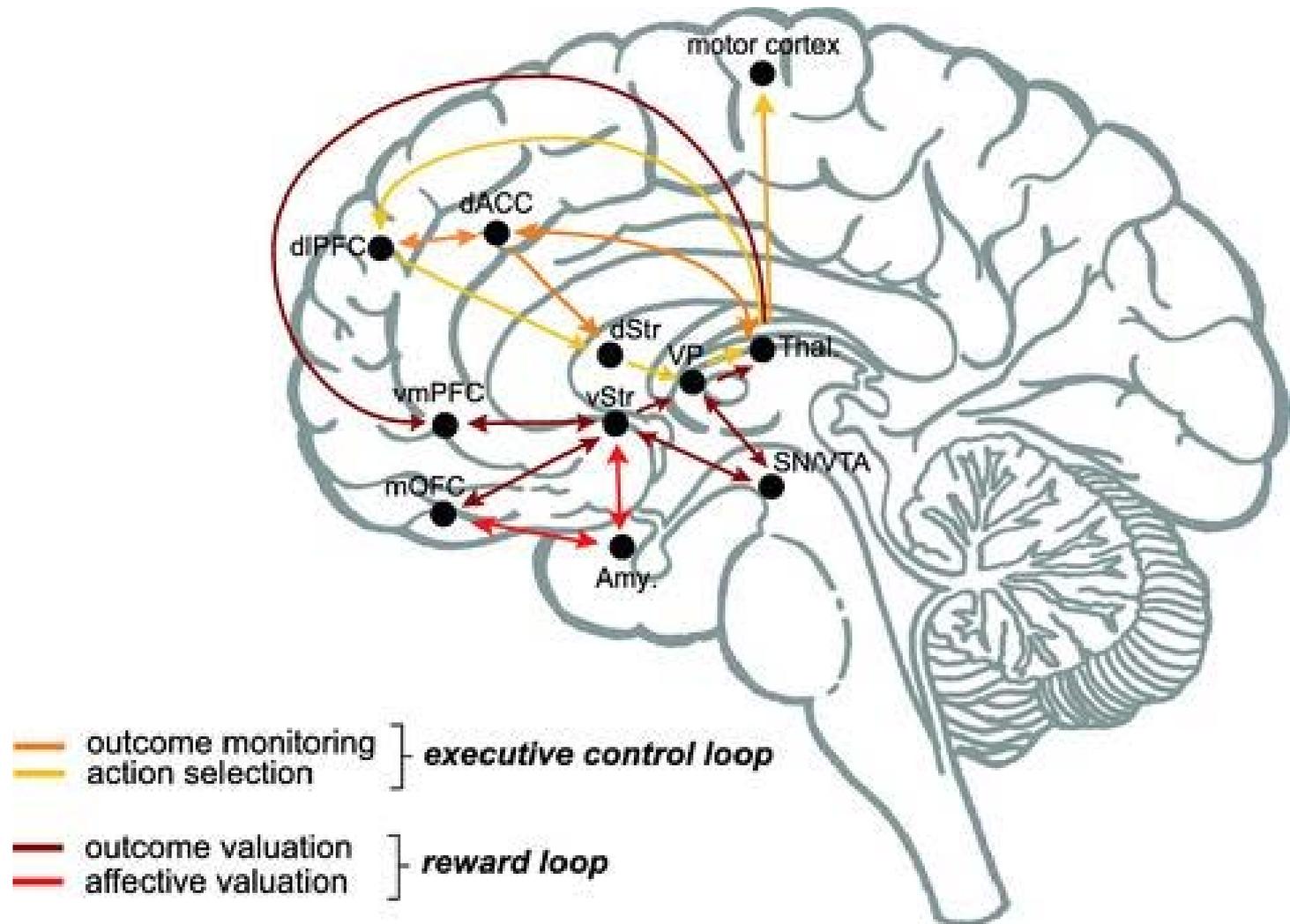
(adapted from APA, 2013)

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(adapted from APA, 2013)

Drivers of Behavior: Reward vs. Executive Control



Prevalence of Substance Use Disorder in patients with complex pain

Primary care clinics	3%-26%
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Pain clinics	2%-14%
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- Rates of carefully diagnosed addiction in primary care are approximately 8%
- Rates of misuse, abuse, and addiction-related aberrant behaviors range from 15% to 26%

Risk factors for SUD in chronic pain patients

- Personal history of drug misuse or addiction
 - including nicotine dependence
- Family history of addiction
- Younger age
- Psychiatric illness (depression, anxiety disorder)
- Early drug or alcohol misuse (<13yo)
- Childhood trauma (physical, sexual, emotional)

Chronic Pain in patients with Opioid Use Disorder

- Up to 50%-60% of MAT patients (methadone, buprenorphine) report chronic pain.
 - In 25%-35% of cases, pain is rated as severe
- Higher severity of chronic pain is associated with:
 - more chronic illness
 - poorer psychosocial, physical & social functioning
 - high rates of mental illness (primarily major depression)
- Presence of chronic pain portends poorer MAT outcomes:
 - more likely to engage in continued polydrug use
 - require higher doses of methadone
 - experience higher ratings of opioid craving
 - more likely to relapse to opioid use

Elevated pain sensitivity in chronic pain patients at risk for opioid misuse

SOAPP = Screener and Opioid Assessment for Patients in Pain

Pain ratings for punctuate mechanical stimuli

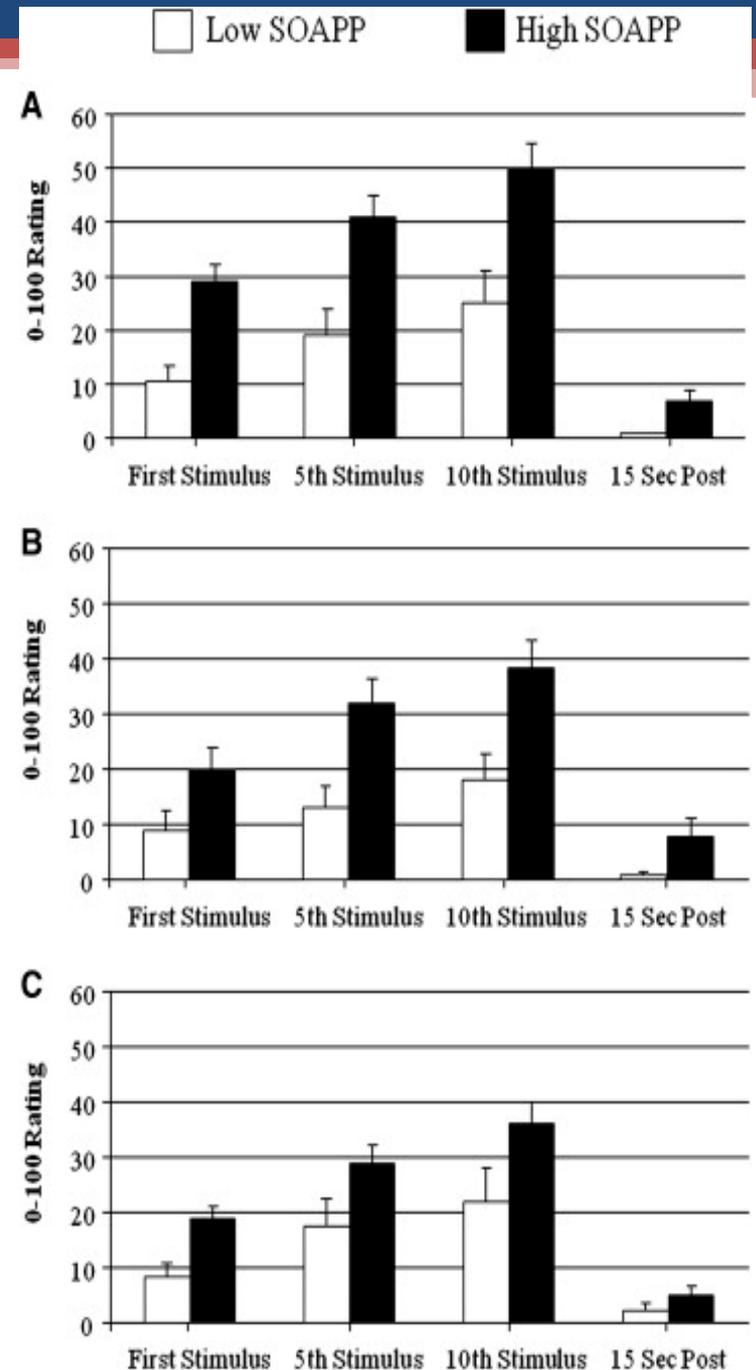


No Opioids

Low-Dose Opioids

High-Dose Opioids

Edwards RR ,et al. *The Journal of Pain*, 2011



Opioid responses by murine strain

	BALB/c (common inbred)	CXBH (recombinant inbred)	C57 (common inbred)	CXBK (recombinant inbred)
Pain Tolerance	↑	↑	↓	↓
Analgesic Response	↑	↑	↓	↓
Reinforcement/ Reward Responses	↓	↓	↑	↑
Opioid-induced hyperalgesia	↓		↑	



Patients with active SUD are not candidates for opioid therapy

By definition, active substance use disorder precludes the patient achieving the goals of chronic pain treatment, **functional restoration:**

- physical
- psychological
- family and social
- health care utilization
- appropriate medication use



Patients with addictive disease in remission can appropriately and effectively use opioids for chronic pain

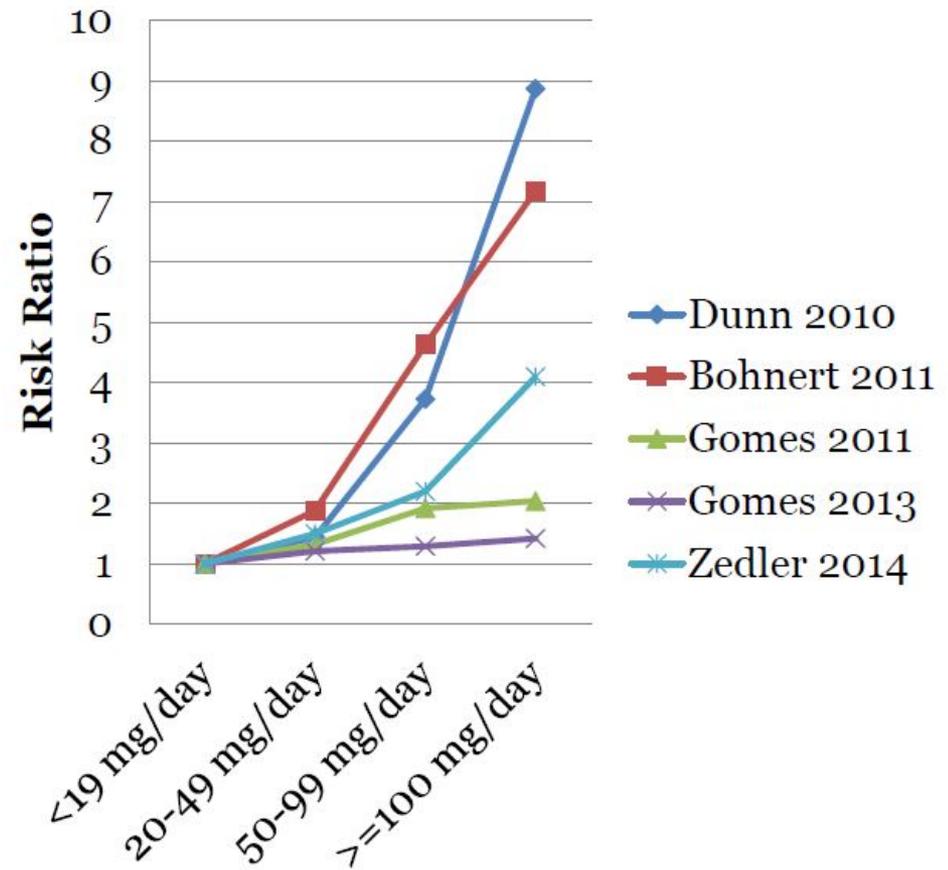
Requires expansion of treatment plan to integrate chronic disease of management of substance use disorder

- Opioid-sparing
- Risk mitigation strategies
- Relapse prevention



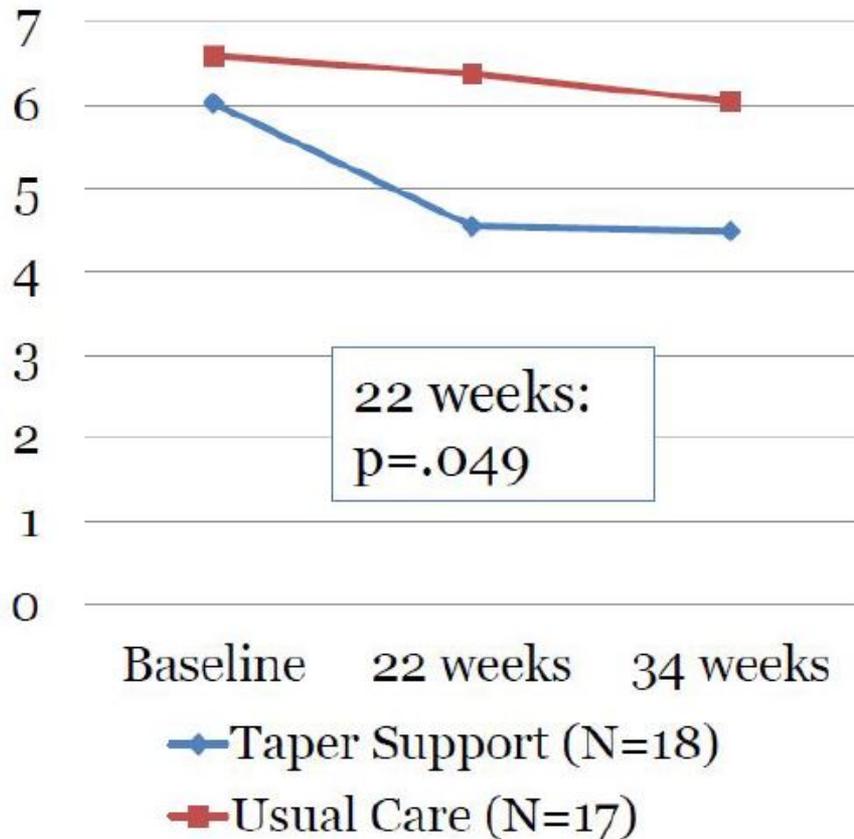
Increased risks with higher opioid dose in chronic pain patients

- Inadequate evidence of long-term benefit
- Growing evidence of dose-dependent harms

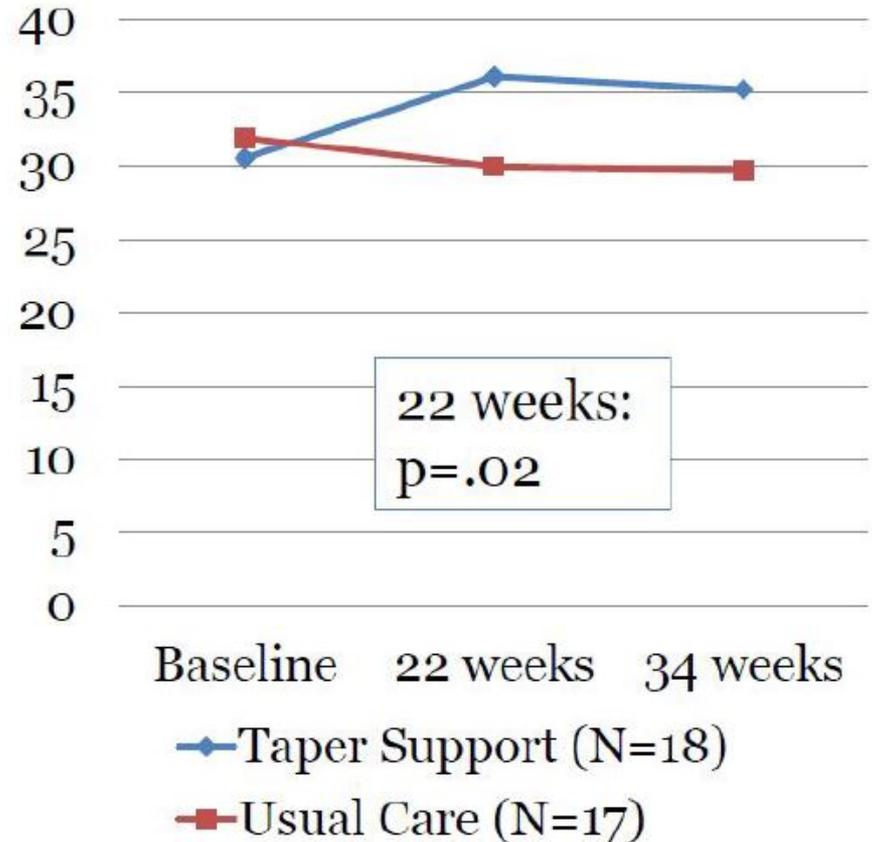


Improvements with Opioid Taper

BPI Pain Interference



Pain Self-Efficacy



Opioid-Induced Hyperalgesia: Experimental pain more severe after 4wks hydromorphone tx

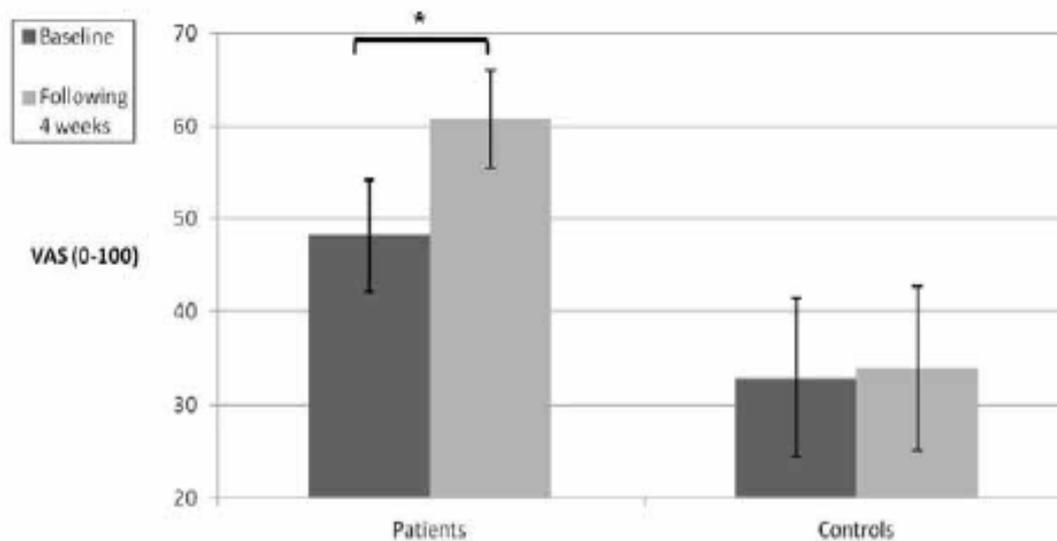
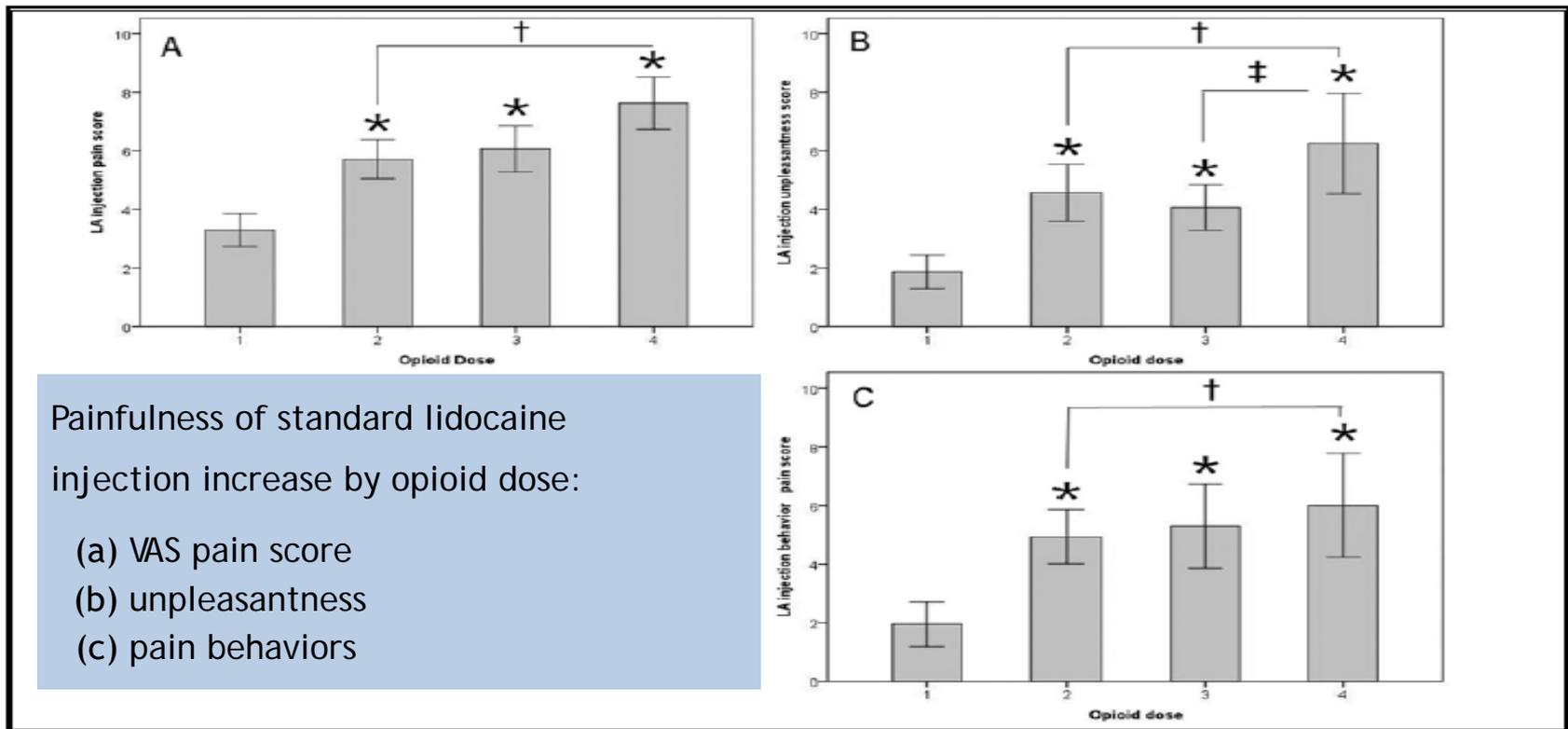


Fig. 3: Intensity of the phasic heat pain response at baseline and following a 4-week regimen of oral hydromorphone treatment. Intensity of phasic heat pain response at baseline (dark grey) and 4 weeks later (light grey) (following 4 weeks of oral hydromorphone treatment for the patient group). A significant difference was found in the patient group ($P < 0.05$), but not in the control group. Data are presented as mean \pm standard deviation.

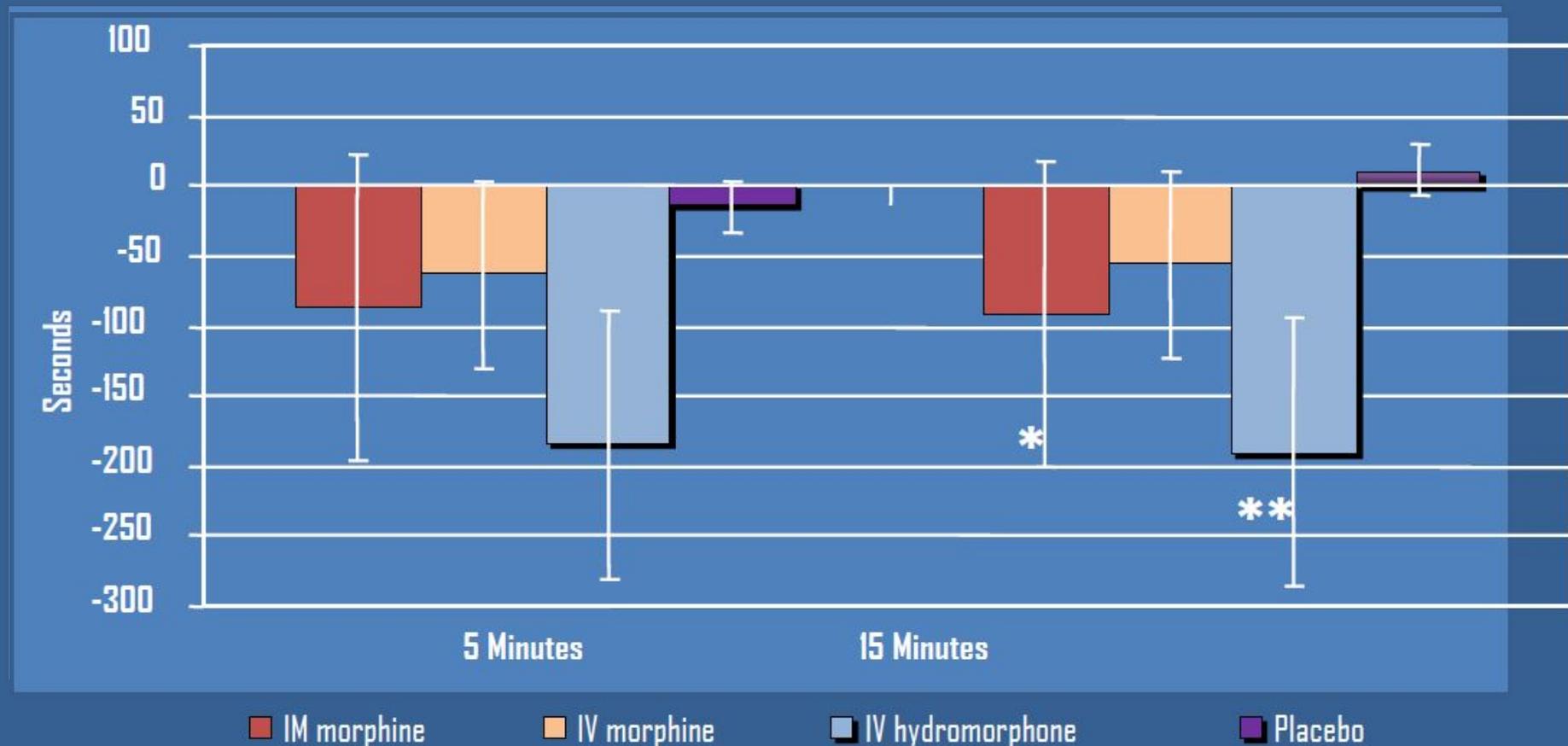
(Suzan et al., 2013)

Chronic pain and opioid-induced hyperalgesia



Opioid Sparing: Minimize opioid withdrawal and craving

“withdrawal hyperalgesia”



“Risk Mitigation” Strategies

- Risk prediction instruments
- Opioid treatment agreement
- Patient education
- Urine toxicology
- Pill counts
- Prescription Drug Monitoring Programs (PDMP)
- Monitoring instruments
- Use of abuse-deterrent formulations



GUIDELINE FOR PRESCRIBING OPIOIDS FOR CHRONIC PAIN

- Provides recommendations on:
- when to initiate or continue opioids for chronic pain
 - opioid selection, dosage, duration, follow-up and discontinuation
 - assessing risk and addressing harms of opioid use

Provides recommendations on:

- when to initiate or continue opioids for chronic pain
- opioid selection, dosage, duration, follow-up and discontinuation
- **assessing risk and addressing harms of opioid use**



GUIDELINE FOR PRESCRIBING OPIOIDS FOR CHRONIC PAIN

Key Question 4: What is the:

- “accuracy of instruments for *predicting risk* for opioid overdose, addiction, abuse or misuse;
- effectiveness of *risk mitigation* strategies;
- effectiveness of *risk management* strategies;
- comparative effectiveness of treatment strategies for *managing patients with addiction*”

Risk Assessment Tools*

- **SOAPP-R[®]** (Screeners and Opioid Assessment for Patients with Pain) (Butler et al., 2008)
 - 24 items, self-report
- **ORT (Opioid Risk Tool)** (Webster, 2005)
 - 5 items, self-Report
- **BRI (Brief Risk Interview)** (Jones et al., 2013)
 - 12 items, clinician administered

*Risk of aberrant behaviors



Opioid Treatment Agreement

1. I, _____ agree that Dr. _____ will be the only physician prescribing OPIOID (also known as NARCOTIC) for me and that I will obtain all of my prescriptions for opioids at one pharmacy. The exception would be an emergency situation or in the unlikely event that I run out of medication. Should such occasions occur, I will inform my physician as soon as possible.
2. I will take the medication at the dose and frequency prescribed by my physician. I agree not to increase the dose of opioid without first discussing it with my physician. I will not request earlier prescription refills.
3. I will attend all reasonable appointments, treatments and consultations as requested by my physician. I agree to other pain consultations/management strategies as necessary.
4. I understand that the common side effects of opioid therapy include nausea, constipation, sweating and itchiness of the skin. Drowsiness may occur when starting opioid therapy or when increasing the dosage. I agree to refrain from driving a motor vehicle or operating dangerous machinery until such drowsiness disappears.
5. I understand that using long-term opioids to treat chronic pain may result in the development of a physical dependence on this medication, and that sudden decreases or discontinuation of the medication will lead to the symptoms of opioid withdrawal. I understand that opioid withdrawal is uncomfortable but not life threatening.
6. I understand that there is a small risk that I may become addicted to the opioids I am being prescribed. As such, my physician may require that I have blood, urine or hair testing and/or see a specialist in addiction medicine should a concern about addiction arise.
7. I understand that the use of a mood-modifying substance, such as tranquilizers, sleeping pills, alcohol or illicit drugs (such as cannabis, cocaine, heroin or hallucinogens), can cause adverse effects or interfere with opioid therapy. Therefore I agree to refrain from the use of all of these substances without prior agreement from my physician.
8. I understand that I should check with my physician or pharmacist before taking other medications including over-the-counter and herbal products.
9. I agree to be responsible for the secure storage of my medication at all times. I agree not to give or sell my prescribed medication to any other person. Depending on the circumstances, lost medication may not be replaced until the next regular renewal date.
10. I consent to open communication between my doctor and any other health care professionals involved in my pain management, such as pharmacists, other doctors, emergency departments, etc.
11. I understand that if I break this agreement, my physician reserves the right to stop prescribing opioid medications for me.

Date: _____

- Single provider
- Take as prescribed
- Refill policy
- Treatment engagement
- Side effects
- Urine testing
- Other psychoactive drug use
- Safe storage

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- Single provider
- Take as prescribed
- Refill policy
- Treatment engagement
- Side effects
- Urine testing
- Other psychoactive

For patient with addiction:

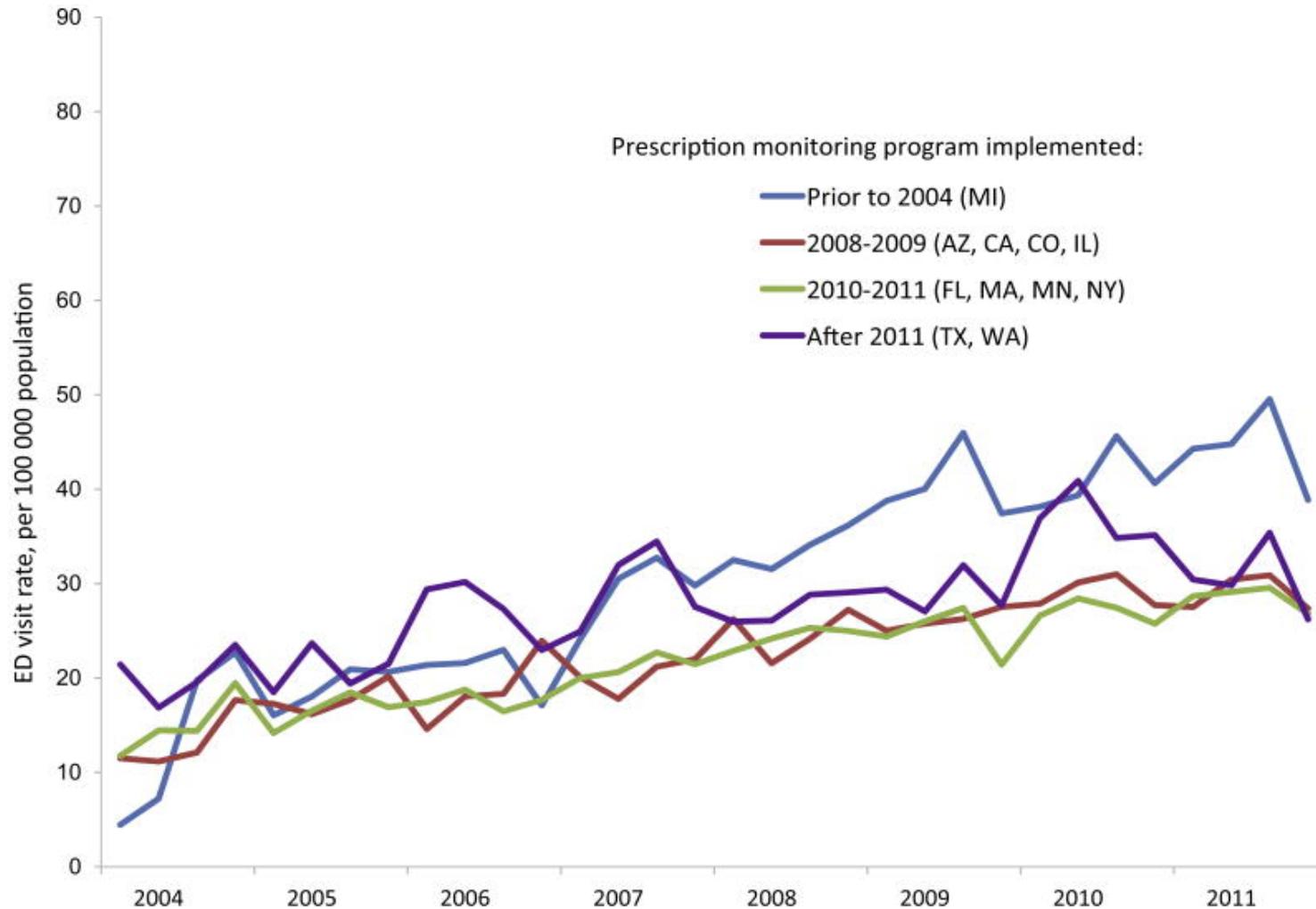
- Engagement in recovery efforts
- Plans should relapse occur

Date: _____

(Signature - Patient)

(Signature Physician)

Prescription Drug Monitoring Programs



Emergency department visits involving opioid analgesic misuse

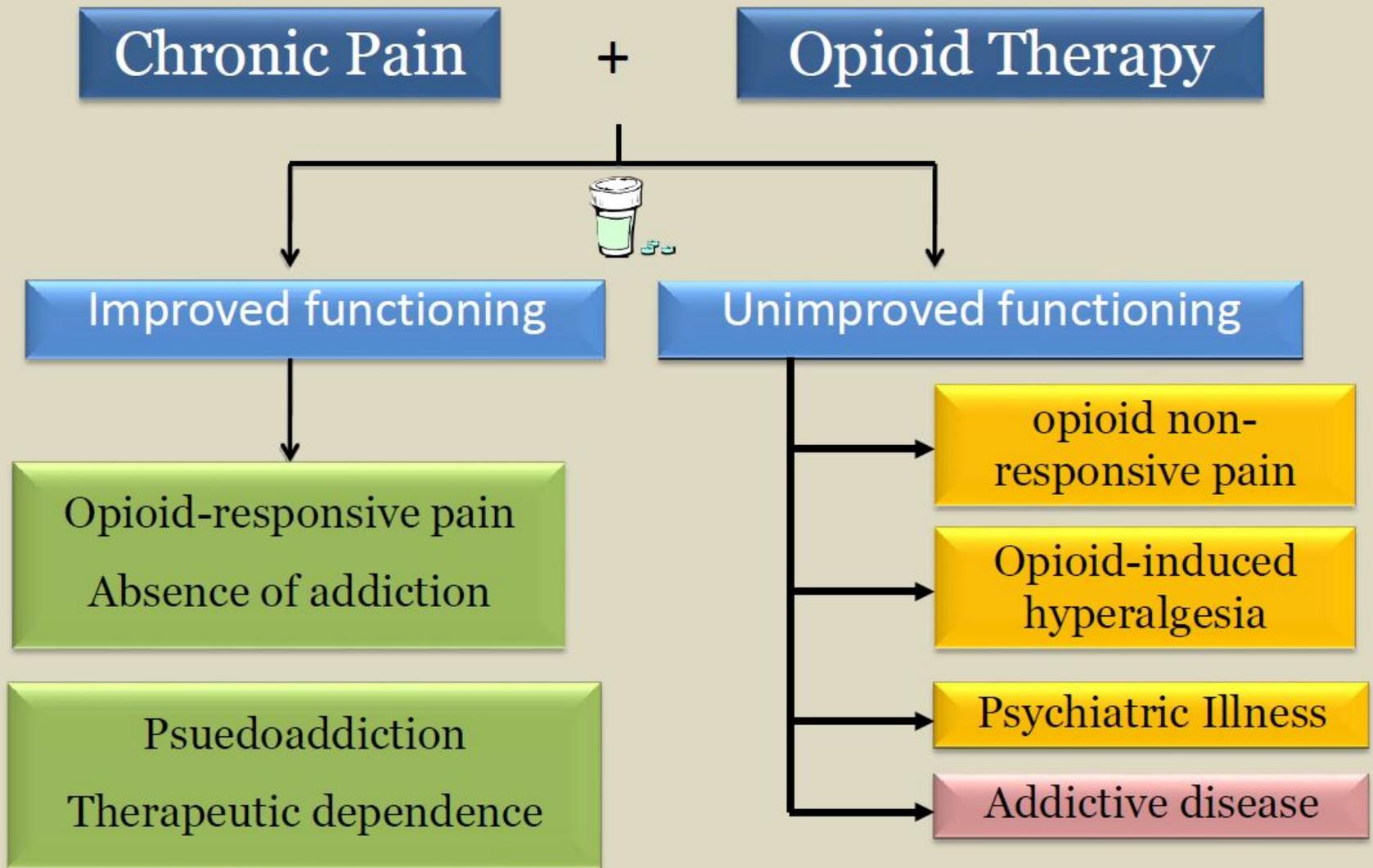
Monitoring Tools*

- **COMM™ (Current Opioid Misuse Measure)**
(Butler et al, 2007)
- **PDUQ (Prescription Drug Use Questionnaire)**
and self-report version PDUQ-p (Compton, et al.,
1998; 2008)
- **ABC (Addiction Behaviors Checklist)** (Wu et al.,
2006)
- **PMQ (Pain Medicine Questionnaire)** (Adams et al.,
2004)
- **POAC (Prescription Opioid Abuse Checklist)**
(Chabal et al., 1997)

* measure aberrant behaviors & behaviors in violation of treatment agreement, not substance use disorder

Medication Misuse \neq Addiction

- Hariharan et al. (2007): 17% of opioid contracts cancelled by physician
 - 10% due to illicit urine toxicology (cocaine, cannabis)
 - 5% due to prescription opioid abuse
 - 2% other rule violation
 - Compton et al. (2008): 28% discharged for medication misuse behaviors
 - 8% due to misuse of opioids
- ∴ Only 1/3 of those discharged from pain treatment were misusing/abusing opioids



The Effectiveness and Risks of Long-Term Opioid Therapy for Chronic Pain: A Systematic Review for a National Institutes of Health Pathways to Prevention Workshop

Roger Chou, MD; Judith A. Turner, PhD; Emily B. Devine, PharmD, PhD, MBA; Ryan N. Hansen, PharmD, PhD; Sean D. Sullivan, PhD; Ian Blazina, MPH; Tracy Dana, MLS; Christina Bougatsos, MPH; and Richard A. Deyo, MD, MPH

Outcome	Studies	Limitations	Consistency	Directness	Precision	Reporting Bias	Strength of Evidence
Risk assessment and risk mitigation strategies							
Diagnostic accuracy of instruments for predicting risk for opioid overdose, addiction, abuse, or misuse in patients with chronic pain being considered for long-term opioid therapy							
Opioid Risk Tool	3 studies of diagnostic accuracy (n = 496)	Moderate	Inconsistent	Direct	Imprecise	Undetected	Insufficient
SOAPP, version 1	2 studies of diagnostic accuracy (n = 203)	High	Consistent	Direct	Imprecise	Undetected	Low
Effectiveness of risk prediction instruments on outcomes related to overdose, addiction, abuse, or misuse in patients with chronic pain							
Outcomes related to abuse	None	-	-	-	-	-	Insufficient
Effectiveness of risk mitigation strategies, including opioid management plans, patient education, urine drug screening, use of prescription drug monitoring program data, use of monitoring instruments, more frequent monitoring intervals, pill counts, and use of abuse-deterrent formulations, on outcomes related to overdose, addiction, abuse, or misuse							
Outcomes related to abuse	None	-	-	-	-	-	Insufficient
Comparative effectiveness of treatment strategies for managing patients with addiction to prescription opioids							
Outcomes related to abuse	None	-	-	-	-	-	Insufficient

Key goal in opioid treatment of complex pain with addiction:

RELAPSE PREVENTION

- Assessment
 - What is the risk of relapse?
- Monitoring
 - How can relapse be identified?
- Management
 - How can chronic opioid treatment be provided to minimize risk of relapse?
 - How can relapse be managed?

Assessment of risk for relapse

Status of disease remission:

- How long has patient been in recovery?
- What is current status of addiction recovery efforts or treatment?
- What type(s) of drugs were abused?
- What are current stressors that might precipitate relapse?
 - unrelieved pain; withdrawal Sx; psychiatric Sx
- What are current protective factors against relapse?
 - coping responses; treatment engagement; social support
- How stable does patient feel in recovery?

Assessment of risk for relapse

Correlates of analgesic abuse in chronic pain patients with a history of addiction:

- Absence of family support
- Lack of 12-step involvement
- Recent history of polysubstance abuse (not alcohol abuse alone)
- Previous history of chronic opioid therapy
- Failure in improvement of pain symptoms

Monitoring for emergence of relapse

Like constipation and sedation, behaviors consistent with relapse must be assessed as a potential *medication-related adverse effect*.

Evidence of addiction in patients on opioid therapy

- Adverse consequences associated with opioid use
- Loss of control over the use of opioids
- Preoccupation with obtaining opioids
- Decline in function

Monitoring Medication Use behaviors

- **Addiction is a disease of behavior**
 - behavioral response to the opioid-analgesic regimen provides evidence for the presence of active addiction.
- **Objective evidence of medication use behaviors**
 - treatment contracts/medication agreements
 - urine toxicology

Management

Support recovery

- Regular and thoughtful urine toxicology
- Ongoing assessment of substance abuse treatment
- Ongoing assessment and management of psychiatric disorders
- Ongoing assessment of life or pain-related stressors
- Avoid opioid withdrawal

Management

Be prepared for it's emergence

- Prescriber of opioids for chronic use is accountable for having a management strategy in place if relapse occurs.
- Providing daily opioids without suitable addiction expertise or support in place puts both the pain-management practitioner and patient at risk for poor outcomes.
- If unable to manage relapse, knowledgeably refer patients to qualified specialists who can better treat the untoward response.

Management

Don't just discharge

- Relapse provides an opportunity to intervene in the *progression of addictive disease*
- Goal is a thoughtful and working partnership between addiction and pain specialists
 - Provider continue treatment for pain while also supporting addiction treatment
- As opposed to discharge, it is incumbent upon the pain-management provider to take an advocacy role in the management of addiction

Published in final edited form as:

J Addict Dis. 2013 January ; 32(1): 68–78. doi:10.1080/10550887.2012.759872.

A Preliminary Study Comparing Methadone and Buprenorphine in Patients with Chronic Pain and Co-existent Opioid Addiction

Anne M. Neumann, Ph.D.¹, Richard D. Blondell, M.D.¹, Urmo Jaanimägi, M.S.¹, Amanda K. Giambrone, M.P.H.², Gregory G. Homish, Ph.D.³, Jacqueline R. Lozano, M.D.⁴, Urszula Kowalik, B.S.⁴, and Mohammadreza Azadfard, M.D.¹

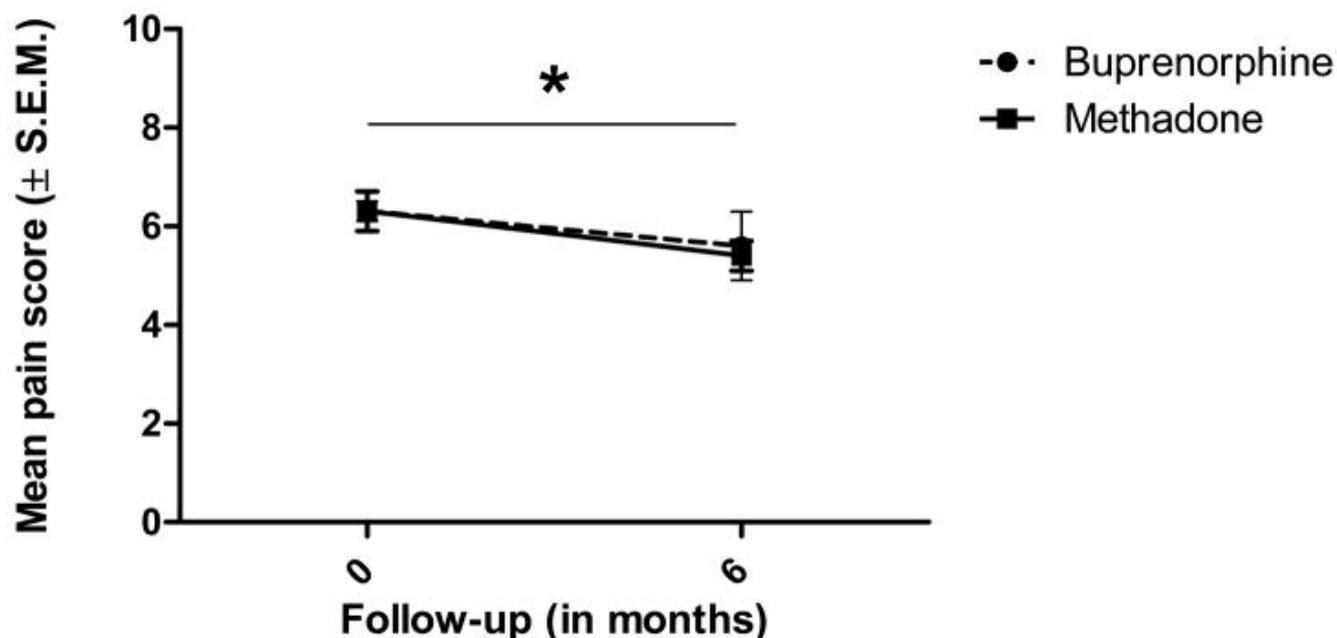


Figure 2.

Pain as a function of Treatment and Follow-up. No significant interaction (Treatment x Follow-up) was found, but a main effect of Follow-up: Both 6-months buprenorphine/naloxone and methadone treatments resulted in a significant analgesia ($p = 0.043$).

Interventions for chronic disease management

- Motivational interviewing
- Cognitive behavior therapy
- Acceptance therapy
- Psychiatric assessment
- Stress management
- Functional Assessment



Remission of Addictive Disease Improves Pain and Functionality

- Ability to comply with regimes
- Enhanced cognitive skills
- Behavior modification techniques
- Improved social support
- Management of psychiatric issues
- Improved stress control

Future Directions

- What are effective strategies for managing acute pain in complex pain patients who are in drug-free recovery?
- How do opioids prescribed for opioid use disorder affect the pain experience of patients with complex pain?
- How can multi-modal approaches to complex pain be modified to best manage patients with SUD?
- How does opioid antagonist therapy for opioid use disorder affect complex pain management?

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Thank you!

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