

# Best Practices in Opioid Prescribing and Pain Management After Surgery

**Jennifer F. Waljee, MD, MPH**

Associate Professor of Surgery

George D. Zuidema Endowed Professor of Surgery

Co-Founder and Co-Director, Michigan Opioid Prescribing Engagement Network



# Our Team



**Mark Bicket, MD, PhD**  
Assistant Professor, Anesthesia



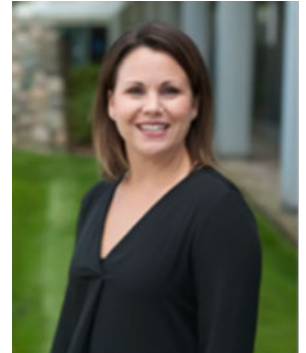
**Chad Brummett, MD**  
Bert N. LaDu Professor,  
Anesthesia  
Senior Associate Chair,  
Research



**Michael Englesbe, MD**  
Cyrenus G. Darling Sr. M.D. and  
Cyrenus G. Darling Jr. M.D.  
Professor, Surgery,



**Jennifer Waljee, MD, MPH,  
MS**  
George D Zuidema Professor,  
Surgery, Associate Professor,  
Surgery



**Beth Seese**  
Program Director



# Our Goals



Reduce  
Opioid Use



Eliminate unnecessary  
opioid exposures



Educate Providers,  
Patients and  
Communities



# Our Initiatives



Prescribing  
Recommendations



Community  
Outreach



Naloxone

Transitions  
of Care



Dentistry



Opioid Use  
Disorder



Painless: The  
Opioid Musical



Educate Providers,  
Patients and Communities



Inform Policy



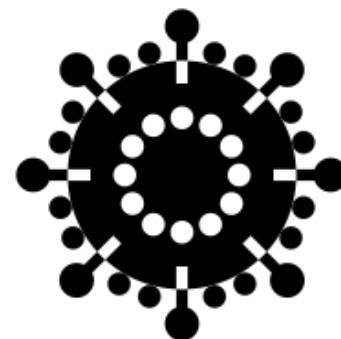
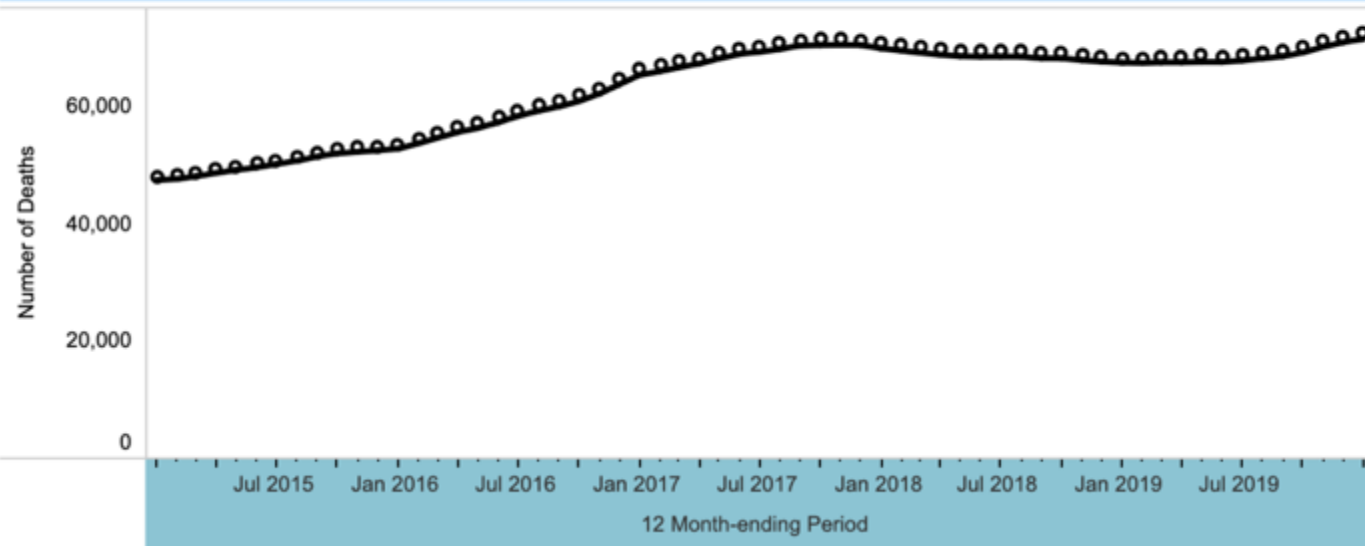
Centers for Disease Control and Prevention  
CDC 24/7: Saving Lives, Protecting People™

## National Center for Health Statistics

Based on data available for analysis on:

8/2/2020

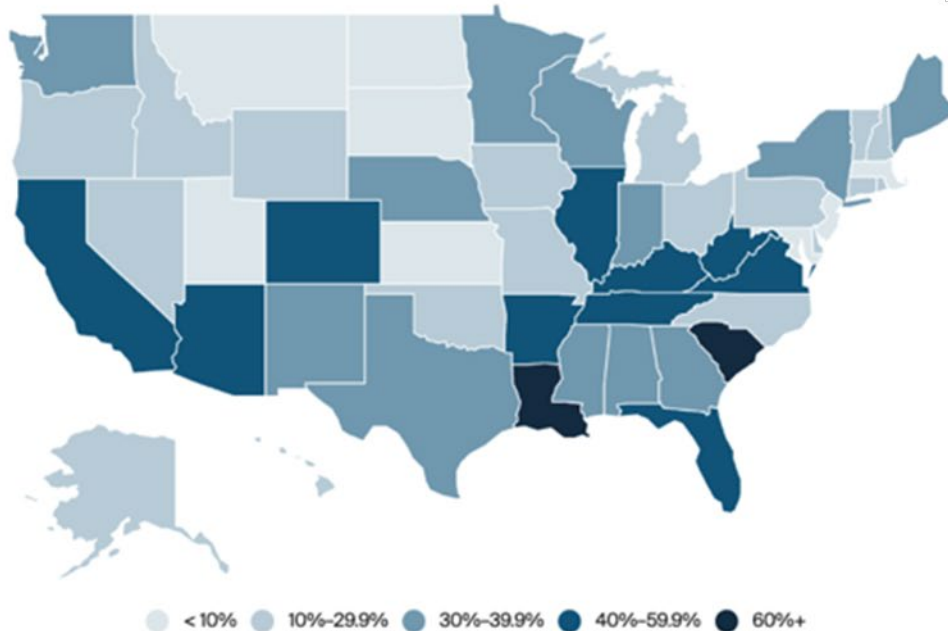
Figure 1a. 12 Month-ending Provisional Counts of Drug Overdose Deaths: United States





## National Center for Health Statistics

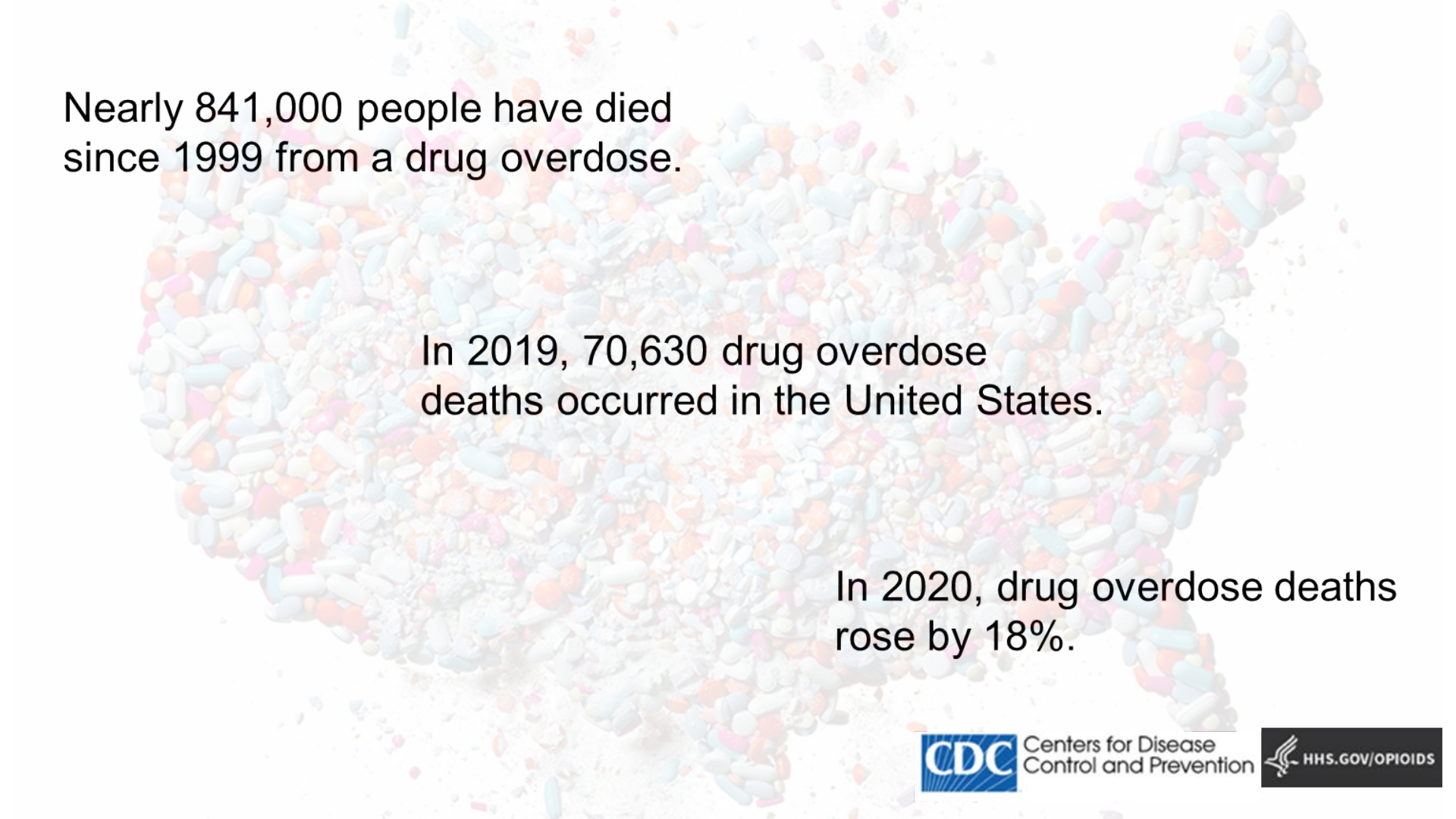
**Estimated percent increase in overdose deaths,  
January–August 2020 vs. January–August 2019**



**Percent Change for  
United States**

**6.6**





Nearly 841,000 people have died  
since 1999 from a drug overdose.

In 2019, 70,630 drug overdose  
deaths occurred in the United States.

In 2020, drug overdose deaths  
rose by 18%.



Centers for Disease  
Control and Prevention



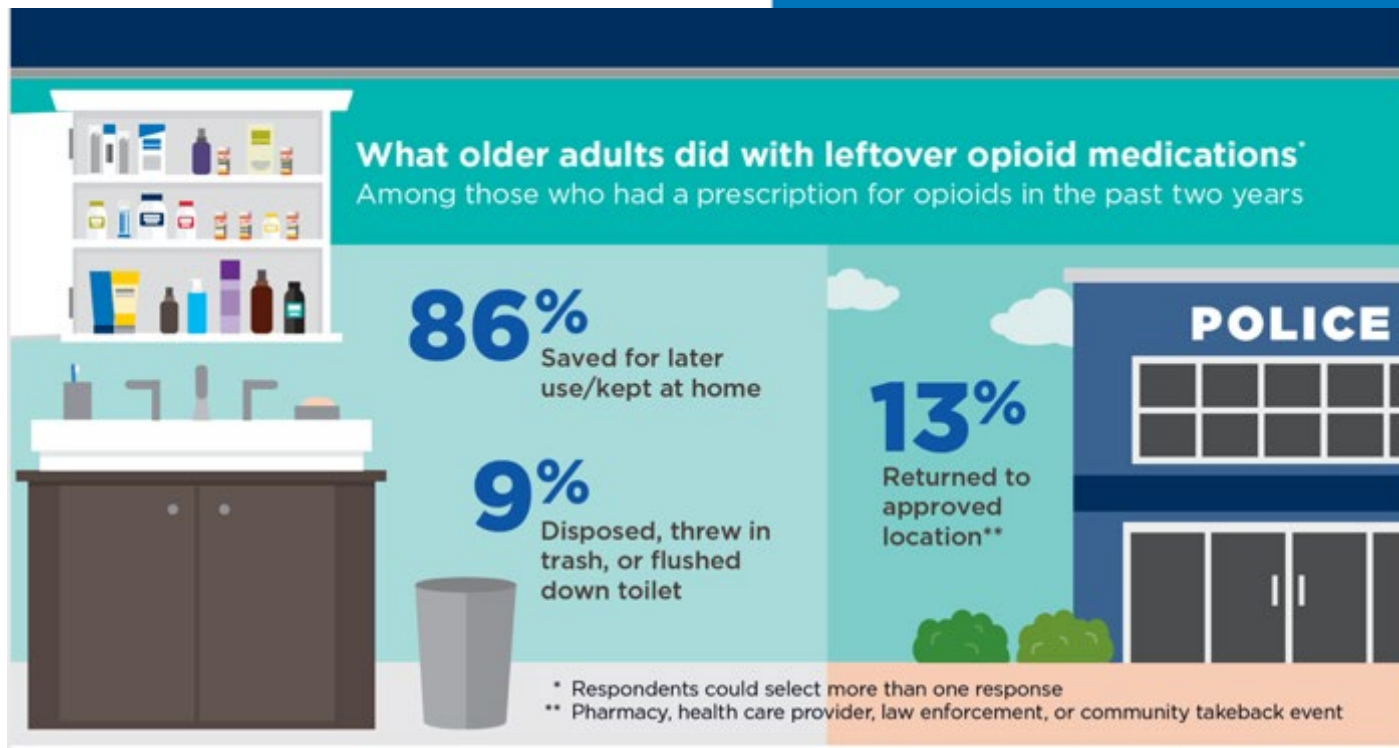




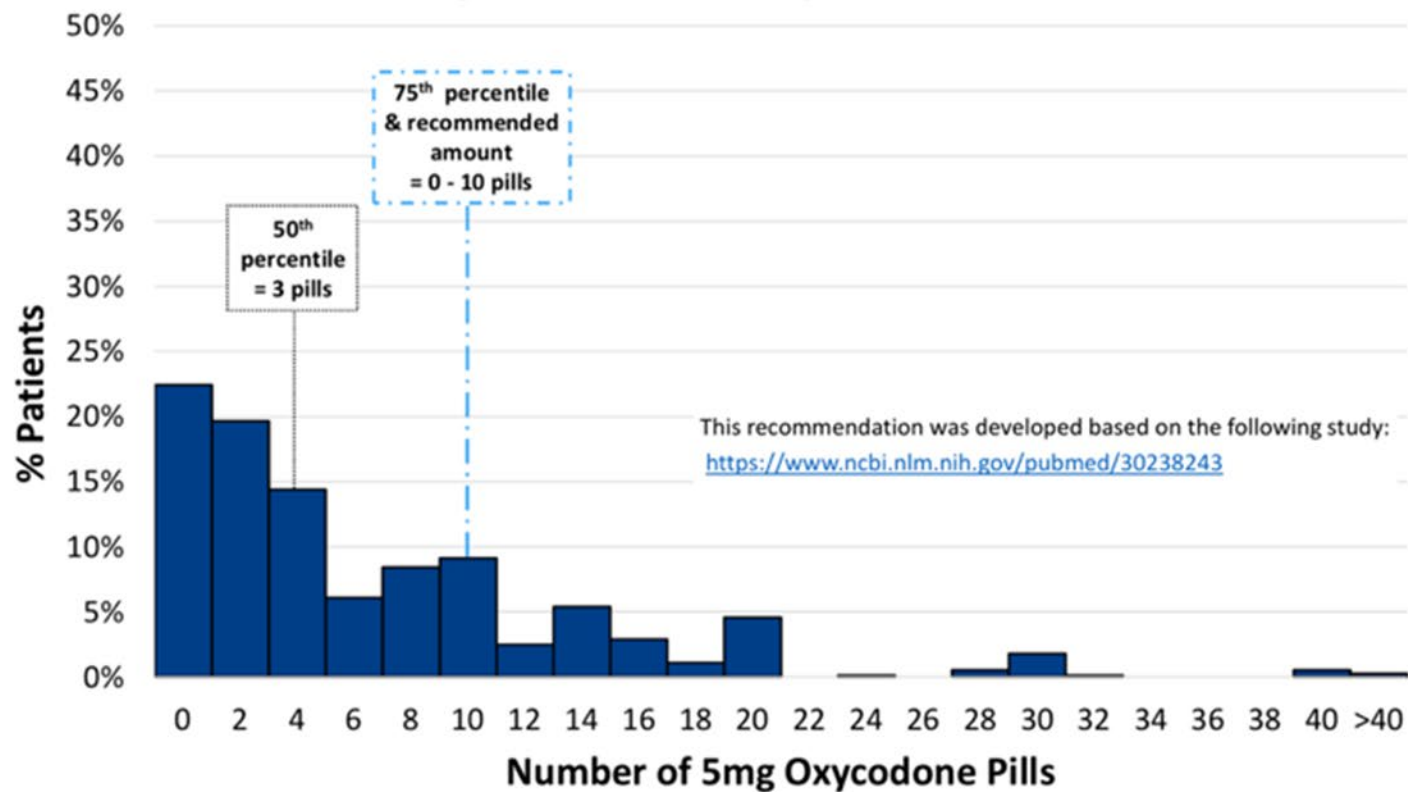
# NATIONAL POLL ON HEALTHY AGING

UNIVERSITY OF MICHIGAN

July/August 2018



## Patient Reported Consumption for Minor Hernia



**723**

opioid naïve  
patients

**28**

hospitals

January 1, 2018

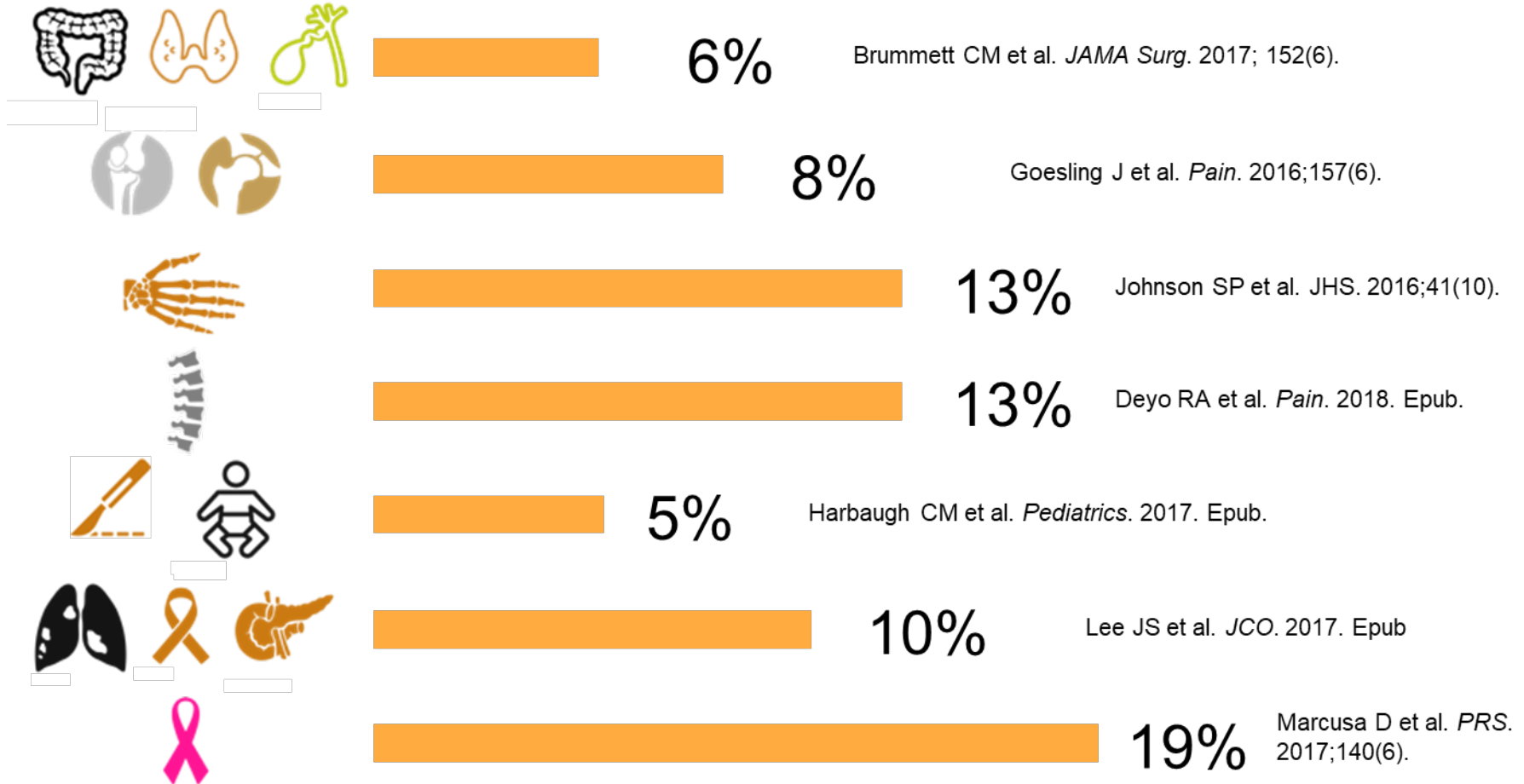
to

May 31, 2018

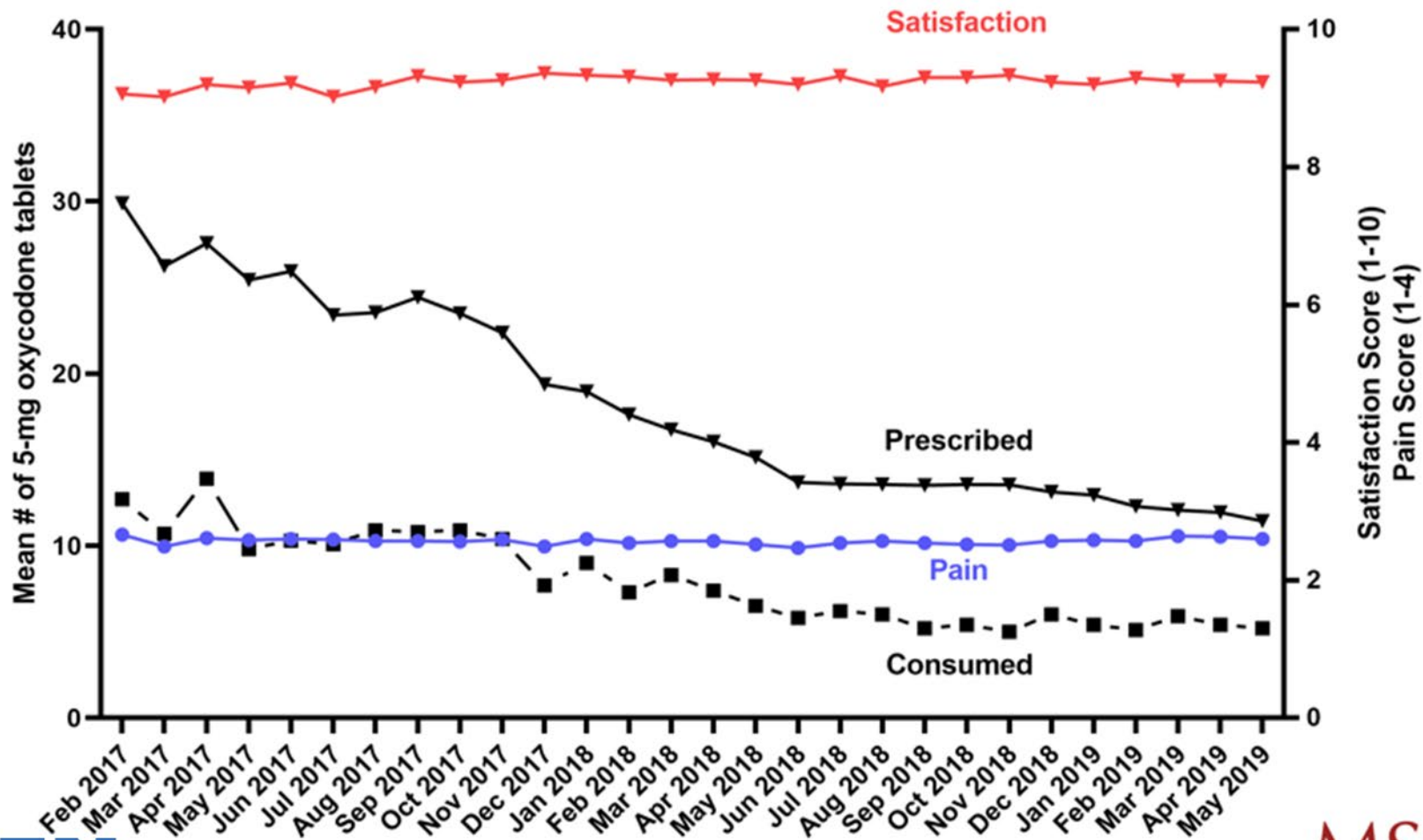
The amount of opioid prescribed after surgery was not associated with patient satisfaction or refill rate



# New Persistent Opioid Use







# Prescribing Recommendations

## UPDATED 2019

Procedure	Oxycodone* 5mg tablets
Dental Extraction	0
Thyroidectomy	0 - 5
Laparoscopic Anti-reflux (Nissen)	0 - 10
Appendectomy – Lap or Open	0 - 10
Laparoscopic Donor Nephrectomy	0 - 10
Hernia Repair – Major or Minor	0 - 10
Sleeve Gastrectomy	0 - 10
Laparoscopic Cholecystectomy	0 - 10
Open Cholecystectomy	0 - 15
Colectomy – Lap or Open	0 - 15
Ileostomy/Colostomy Creation, Re-siting, or Closure	0 - 15
Open Small Bowel Resection or Enterolysis	0 - 20
Prostatectomy	0 - 10

Procedure	Oxycodone* 5mg tablets
Carotid Endarterectomy	0 - 10
Cardiac Surgery via Median Sternotomy	0 - 15
Cesarean Section	0 - 15
Hysterectomy – Vaginal, Lap/Robotic, or Abdominal	0 - 15
Breast Biopsy or Lumpectomy	0 - 5
Lumpectomy + Sentinel Lymph Node Biopsy	0 - 5
Sentinel Lymph Node Biopsy Only	0 - 5
Wide Local Excision ± Sentinel Lymph Node Biopsy	0 - 20
Simple Mastectomy ± Sentinel Lymph Node Biopsy	0 - 20
Modified Radical Mastectomy or Axillary Lymph Node Dissection	0 - 30
Total Hip Arthroplasty	0 - 30
Total Knee Arthroplasty	0 - 50

\*If prescribing hydrocodone 5mg, the number of tablets remains the same as listed above.

# Resources



## Provider Resources



## Prescribing Recommendations

**Acetaminophen and Non-Steroidal Anti-Inflammatory Drugs Quick Reference Sheet**

**Recommend:** +

**KEY POINTS**

- Use acetaminophen when non-steroidal anti-inflammatory drugs are not needed for pain.
- Use acetaminophen when non-steroidal anti-inflammatory drugs are needed for pain.

**ACETAMINOPHEN SAFETY AND SIDE EFFECTS**

Side Effect	Signs and Symptoms	Management
Liver toxicity	Yellowing of the skin and eyes, dark urine, fatigue, nausea, vomiting, abdominal pain	Stop acetaminophen, seek medical attention
Bleeding	Easy bruising, bleeding from gums, nose, or stomach	Stop acetaminophen, seek medical attention

**NON-STEROIDAL ANTI-INFLAMMATORY SAFETY AND SIDE EFFECTS**

Side Effect	Signs and Symptoms	Management
Gastrointestinal bleeding	Black stools, blood in stool, abdominal pain	Stop NSAID, seek medical attention
Cardiovascular events	Chest pain, shortness of breath, swelling, fatigue	Stop NSAID, seek medical attention

**CLINICAL SPECIFIC RECOMMENDATIONS**

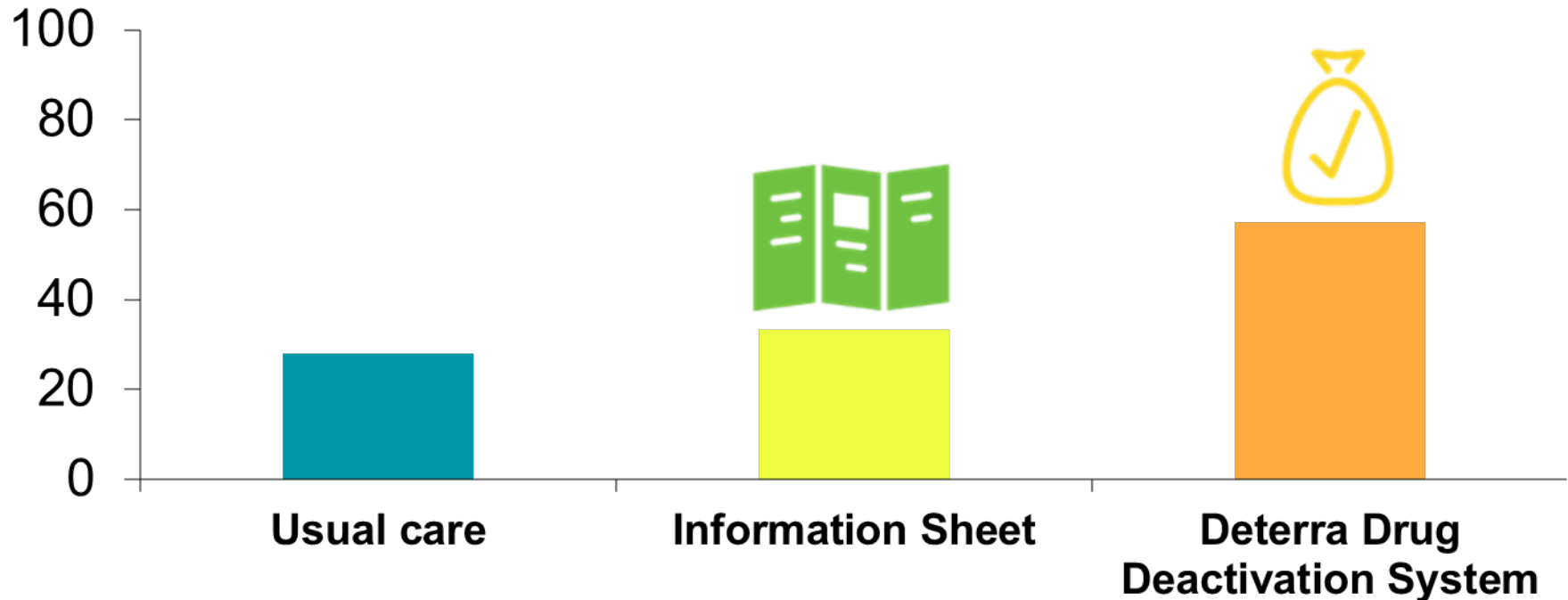
- For patients with a history of liver disease, avoid acetaminophen.
- For patients with a history of gastrointestinal bleeding, avoid NSAIDs.



## Patient Resources



# Activated Charcoal Bag for In-Home Disposal Increased Self-Reported Opioid Disposal after Surgery



Brummett CM, Steiger R, Englesbe MJ, Khalsa C, DeBlanc JJ, Denton LR, Waljee JF. Effect of an Activated Charcoal Bag on Disposal of Unused Opioids After an Outpatient Surgical Procedure: A Randomized Clinical Trial. JAMA Surgery. 2019



# Postop Prescribing Practices Influence Outcomes



Increased amount of  
opioid prescribed



Increased opioid  
consumption



Preoperative opioid  
prescription



Increased risk of refill and  
new chronic use



High prescribing



Increased risk of new  
chronic use



# Patient Satisfaction and Pain Control Using an Opioid-Sparing Postoperative Pathway



Healthy patients undergoing common surgical procedures



Counseled to use non-opioids as primary regimen



Provided small “rescue” prescription  
A of oxycodone

0

Median Opioid Pills Used = 0

A



Median Opioid Pills Leftover = 2

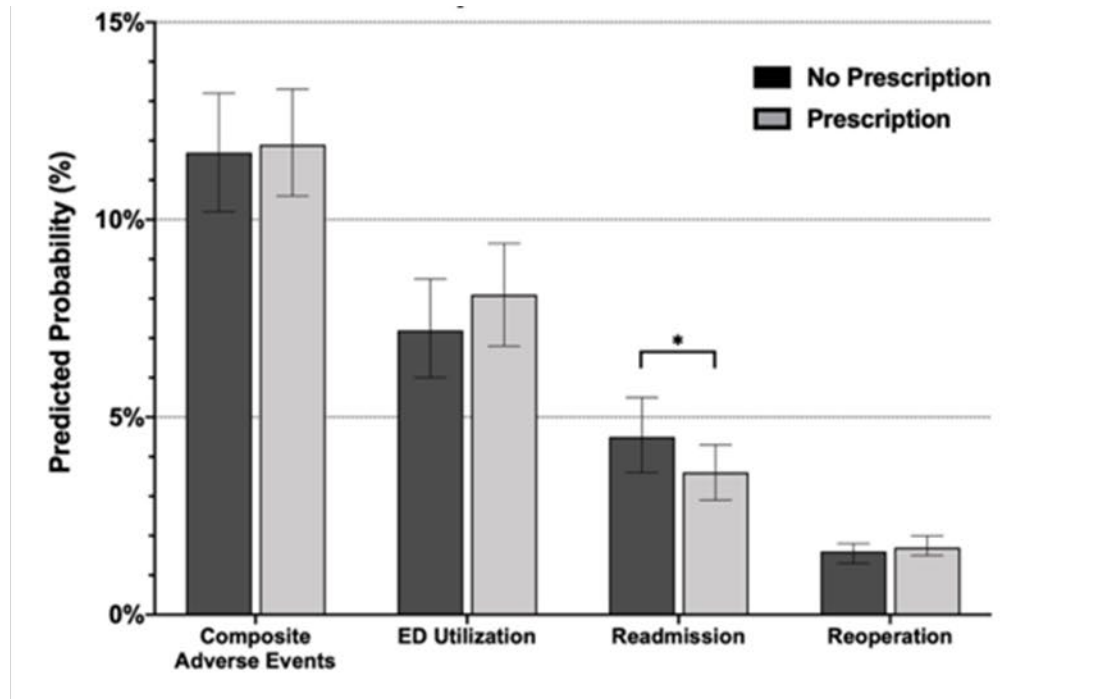


Median Pain Score = **Minimal**  
(none/minimal/moderate/severe)



Median Satisfaction (1-10) = **10**

# Opioid Free Surgery Does Not Increase Complications



Howard RA, Brown CS, Lai Y, Gunaseelan V, Brummett CM, Englesbe M, Waljee JF, Bicket M. The Association of Postoperative Opioid Prescriptions with Patient Outcomes. Annals of Surgery. 2021

# Who is 'high-risk'?



>50MME



Past history of  
SUD & OUD



Hx of or current  
MAT



Active recovery



Using a non-prescribed  
opioid prescription (i.e.,  
someone else's  
prescription)



Actively using any  
illicit substance



# Who is 'high-risk'?



# Perioperative Care Management



**SCREEN** for opioid related risk

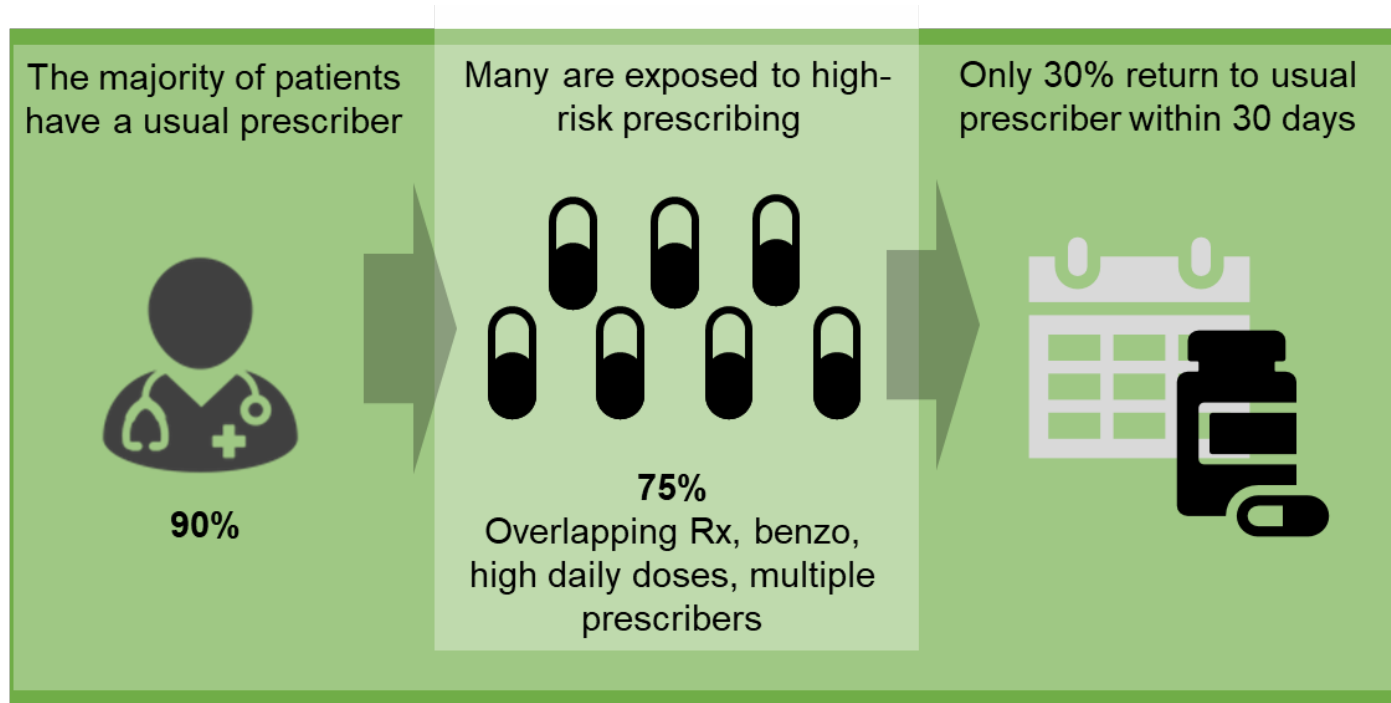


**COMMUNICATE** with patients and caregivers

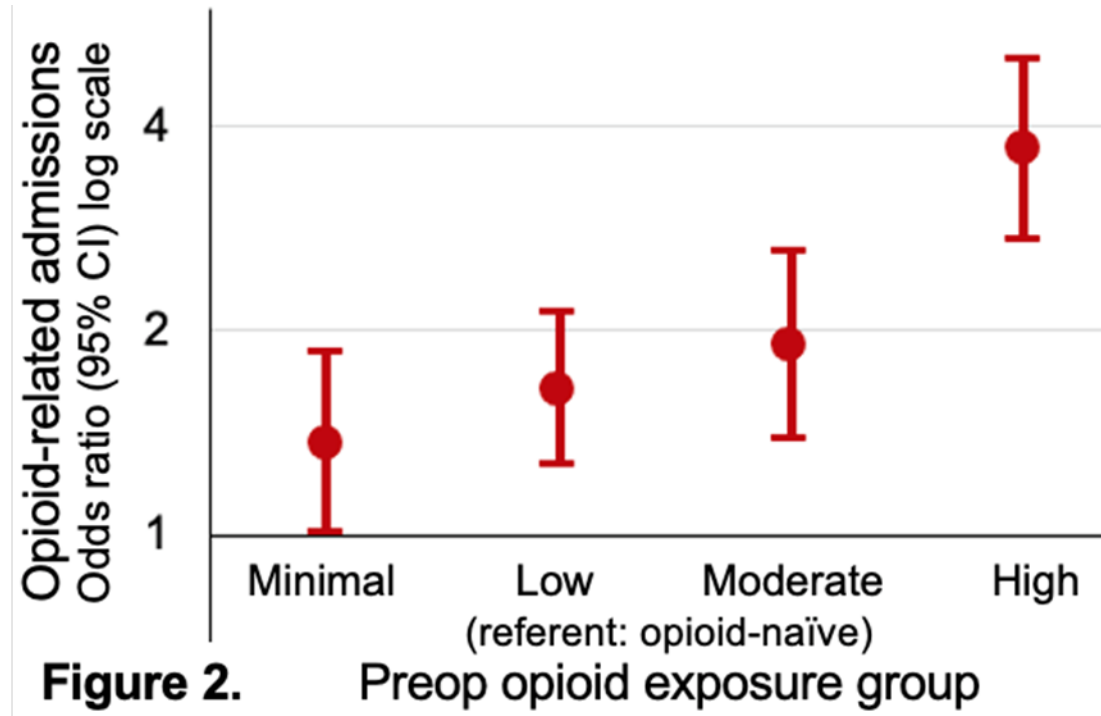


**COORDINATE CARE** across providers

# Uncoordinated care for opioid users associated with high risk prescribing



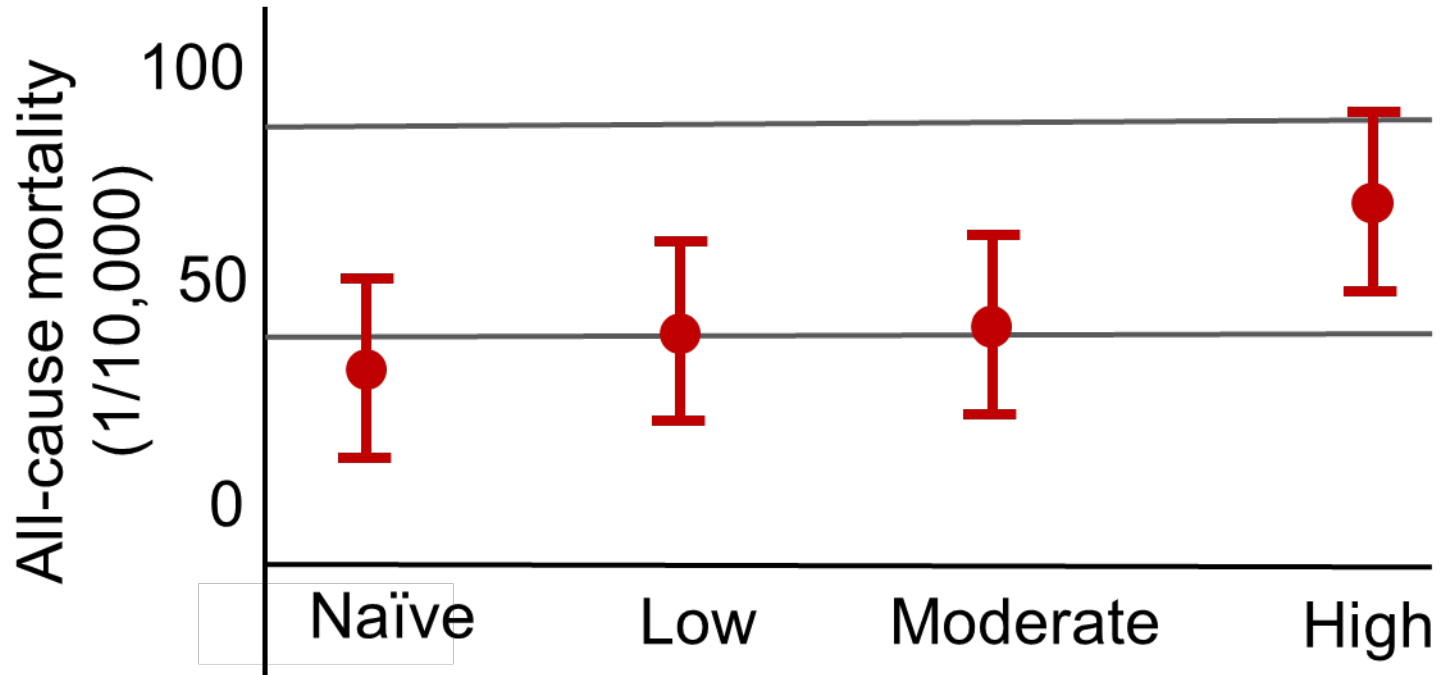
# Readmissions and Mortality are Higher Among Chronic Opioid Users



**Figure 2.**

Preop opioid exposure group

# Readmissions and Mortality are Higher Among Chronic Opioid Users



# TAPS / NIDA Quick Screen

## High Risk Score >27

- Provide feedback on screening results
- **Advise, Assess, Assist**
- **Arrange** referral
- Offer continuing support

## Moderate Risk Score 4-26

- Provide feedback
- **Advise, Assess, Assist**
- Consider referral based on clinical judgment
- Offer continuing support

## Lower Risk Score 0-3

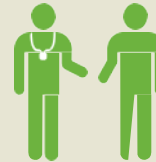
- Provide feedback
- Reinforce abstinence
- Offer continuing support



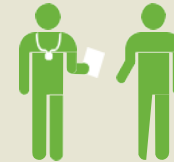
**Advise** — Provide medical advice related to patient's drug use



**Assess** — Determine patient's readiness to change



**Assist** — Offer help based on patient's readiness level



**Arrange** — Refer patient for specialty assessment and/or drug treatment, if necessary



# Co-Prescribing Naloxone



- History of overdose
- History of substance use disorder (SUD)
- Concurrently using benzodiazepines
- Opioid dosages higher than 50 MME/day

Consider for those with unknown opioid exposure and/or has recently been discharged from a facility with a period of abstinence

# Practical Guidelines for Postop Prescribing

**Educate**  
patients and set  
expectations

**Avoid co-prescribing**  
benzodiazepines and  
sedatives

**Encourage**  
Acetaminophen, NSAIDs,  
local anesthetics, and  
other non-opioid  
treatments

**Check a PDMP**  
before prescribing opioids

# Thank you!



<http://michigan-open.org>

[filip@med.umich.edu](mailto:filip@med.umich.edu)