Perioperative pain control: our role in the opioid epidemic

Ryan Amadeo, MD, FRCPC
October 18, 2018

Disclosure

- Relationships with commercial interests
  - – none to declare.
- Other – I was almost and Orthopod!

Learning Objectives

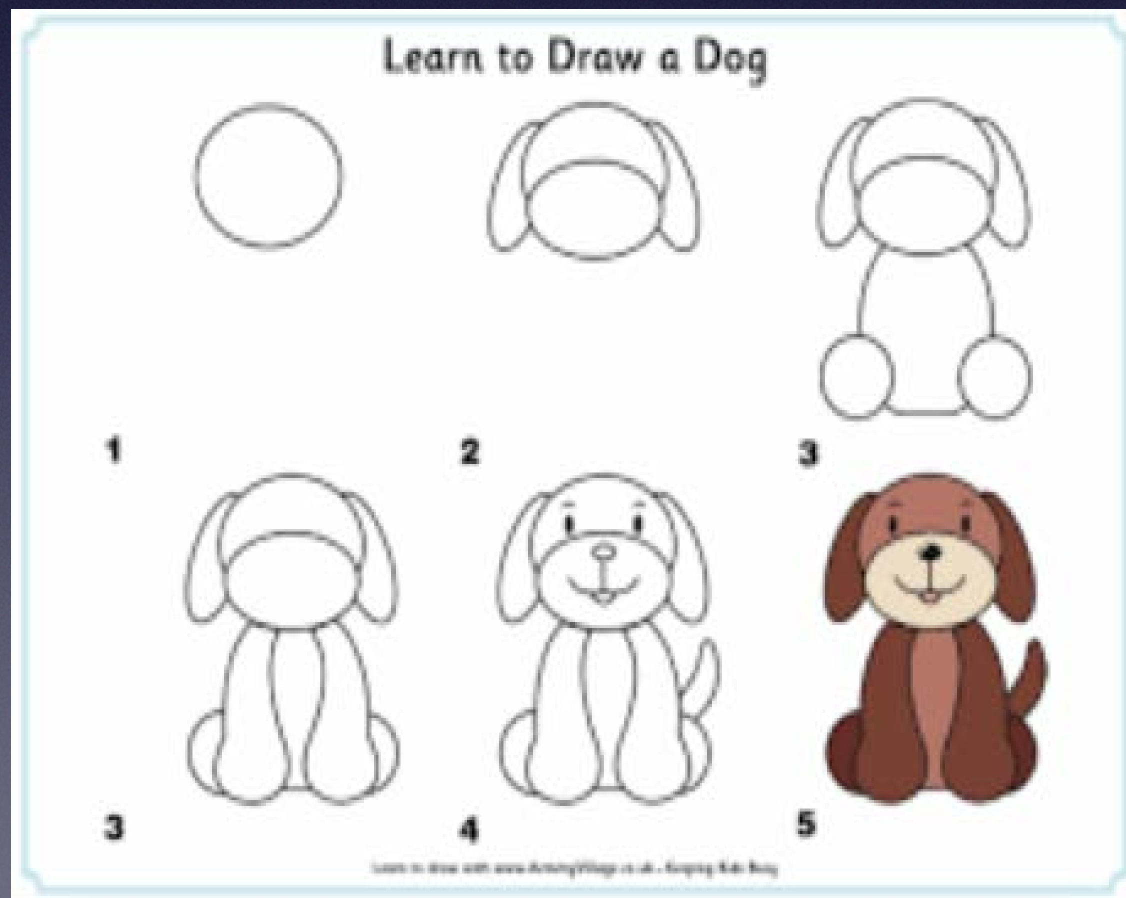
- To undertake a brief review of the history of opioids.
- To outline the opioid crisis in Canada.
- To determine if post operative analgesic prescribing is part of the problem?
- To outline a basic plan for responsible postoperative analgesic prescribing.

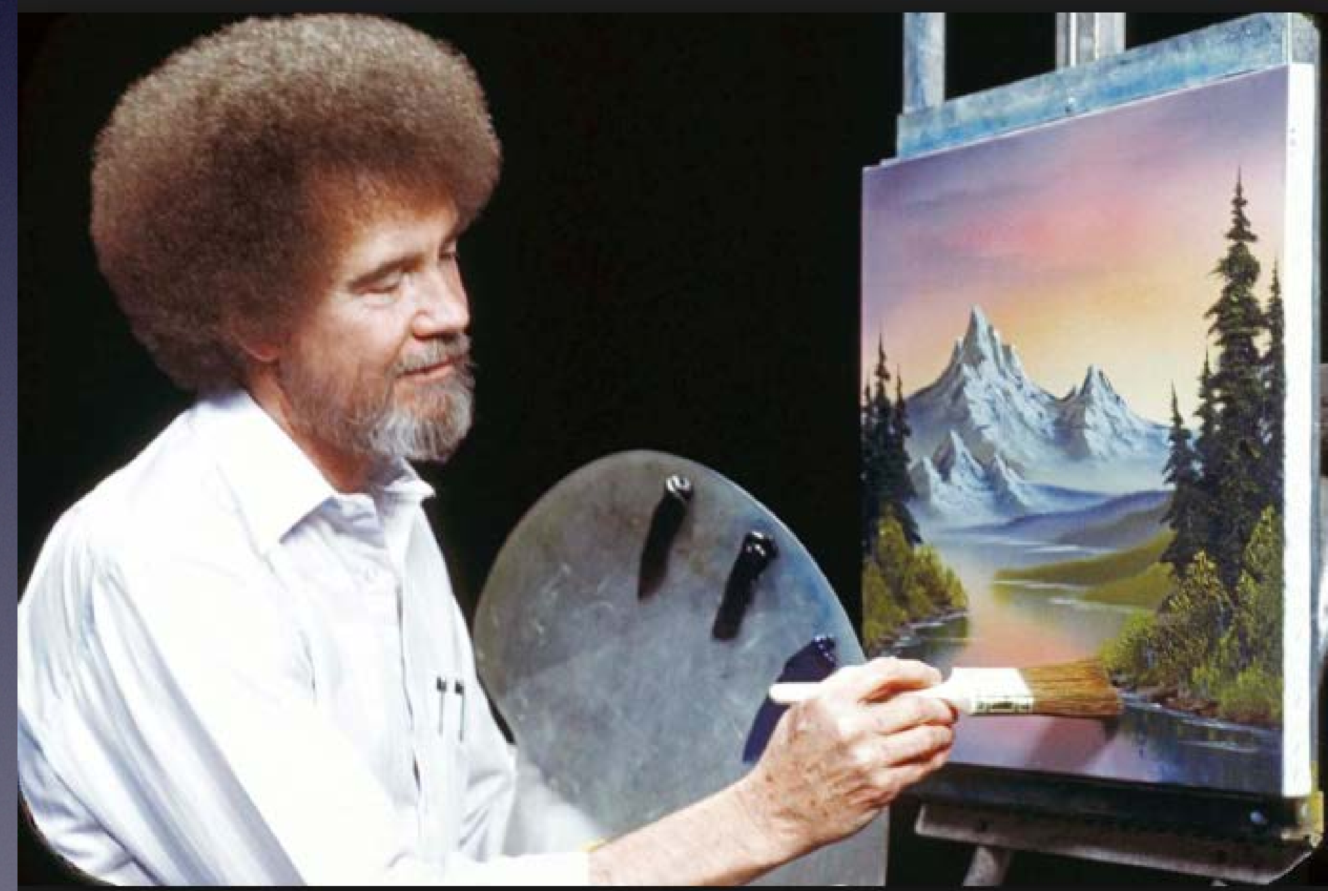
Mentoring in Orthopedic Surgery

Jason Old and John Marsh
October 18, 2018

Growing as an artist…

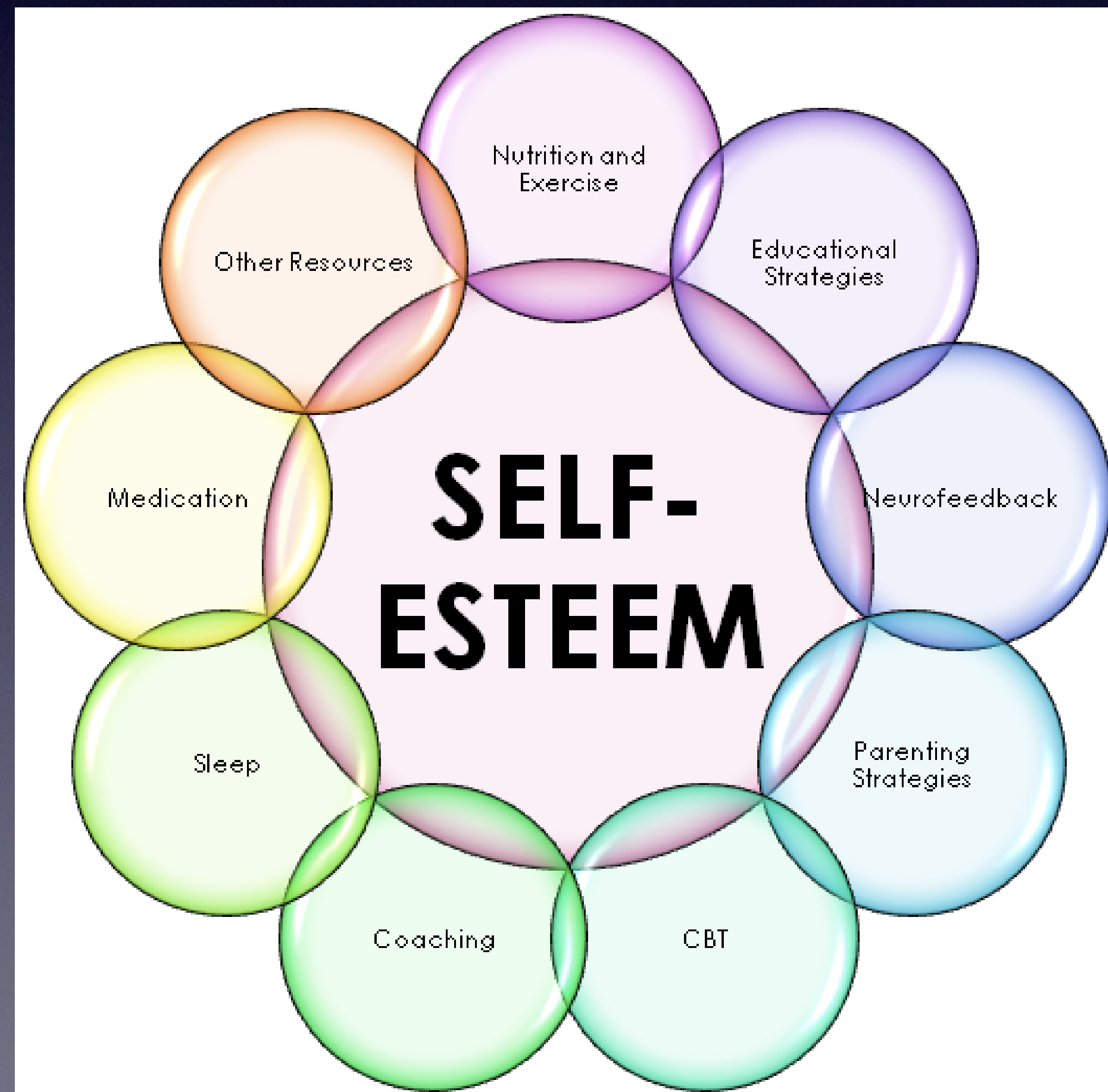
Jamie Dubberley
October 18, 2018





How to improve my self confidence…

Spine Surgery Rounds
October 18,, 2018



The History of Opium

℞ PRESCRIPTION

AGE

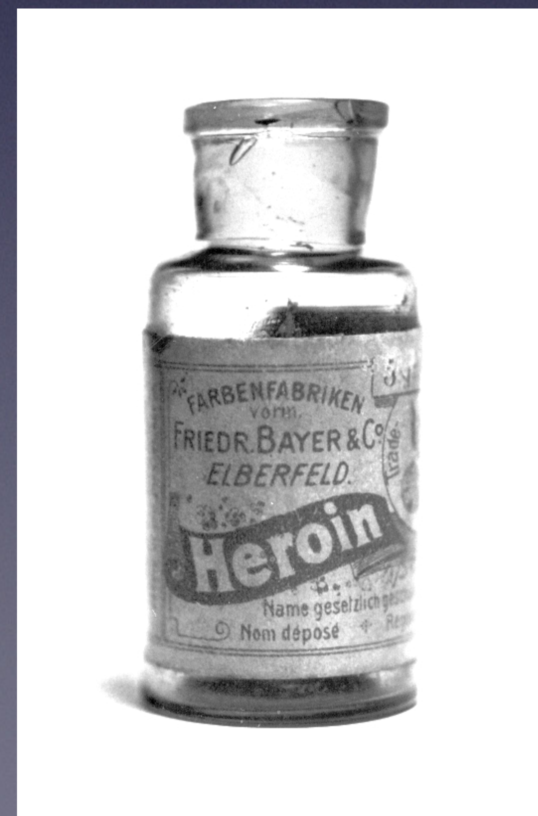
DATE

NAME

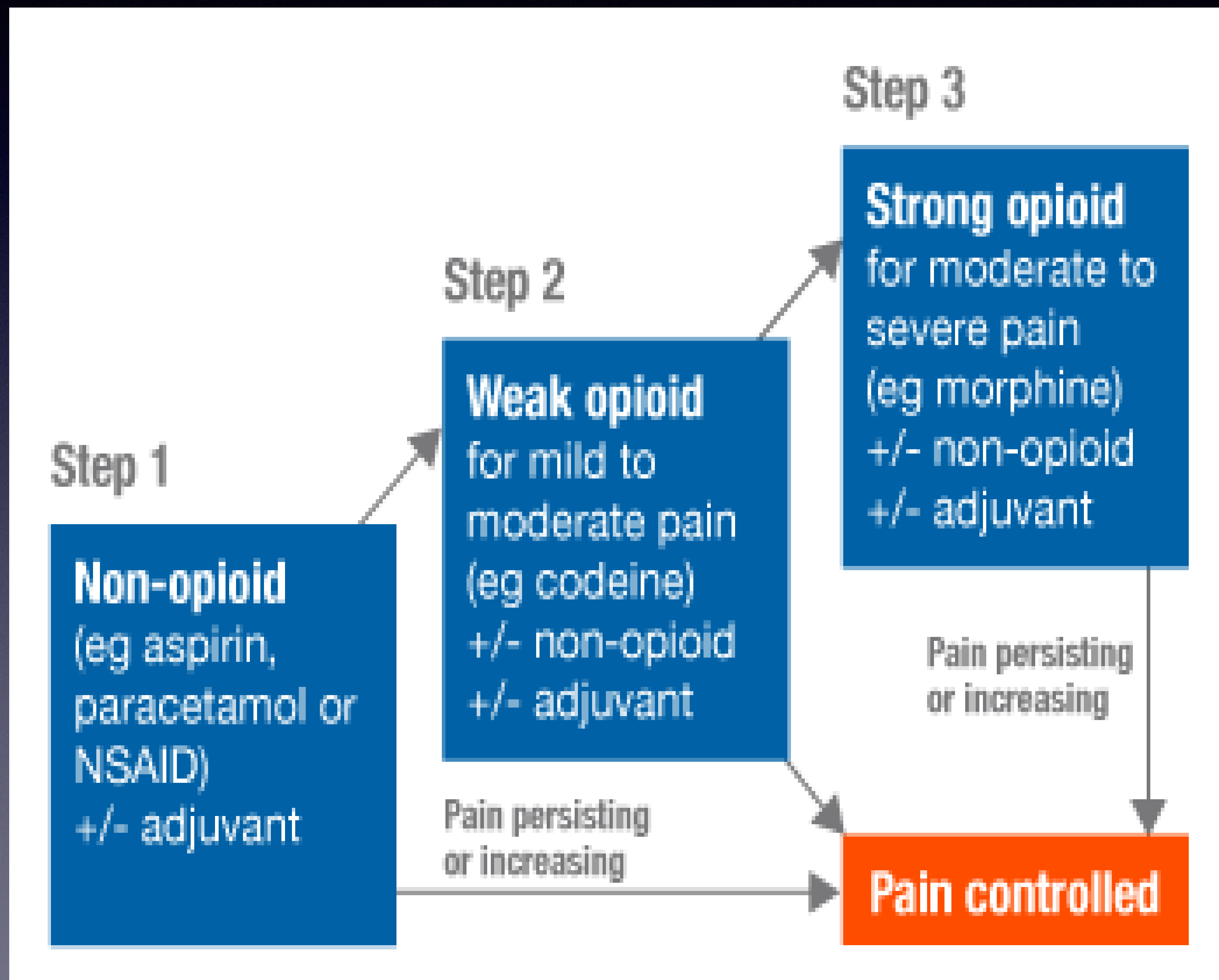
ADRESS

Opioids

HEROIN



WHO ANALGESIC LADDER



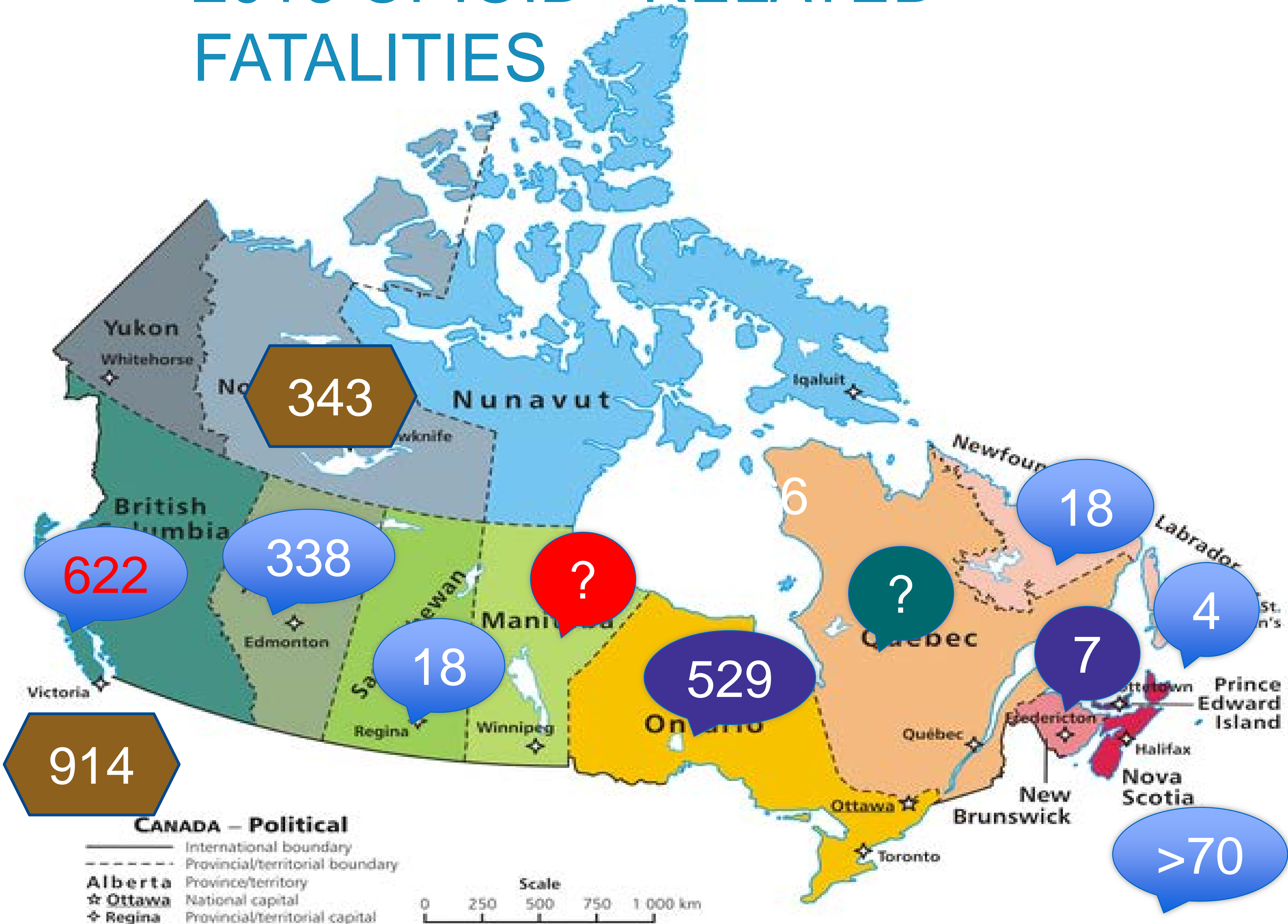
OXYCONTIN

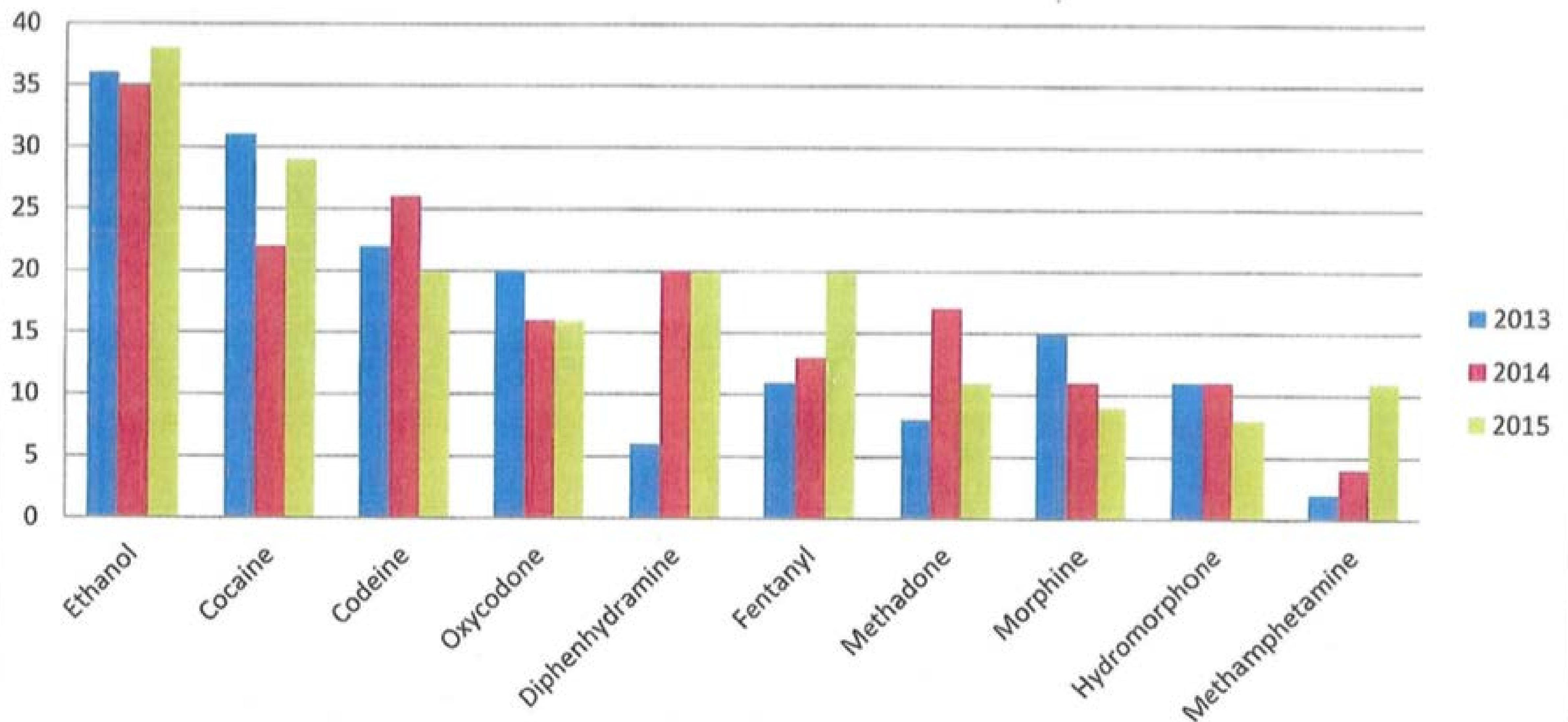
FENTANYL

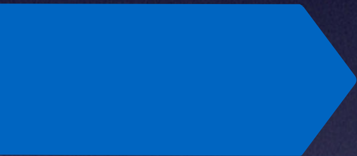
CARFENTANIL

WHERE DOES THAT LEAVE US… AN OPIOID CRISIS

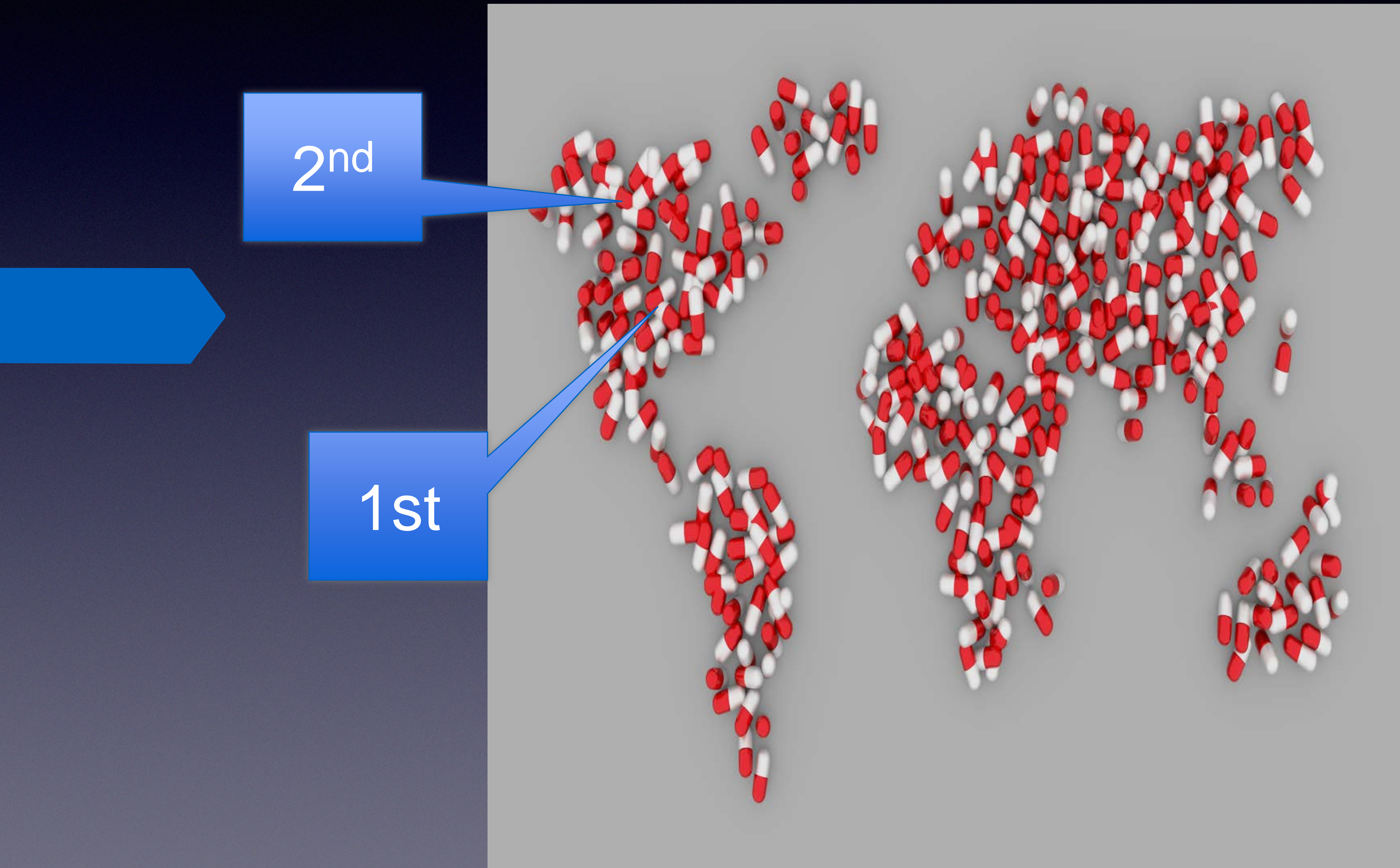
2016 OPIOID –RELATED FATALITIES




Drug and Alcohol Overdose Deaths
(primary or contributing cause) 2013-2015
source: OCME Nov 3, 2016
40
35
30
25
20
15
10
5
0
Ethanol
Cocaine
Codeine
Oxycodone
Diphenhydramine
Fentanyl
Methadone
Morphine
Hydromorphone
Methamphetamine
2013
2014
2015



WORLDWIDE OPIATE CONSUMPTION – Do we have a problem?



thestar.com

News · Canada

Rising hospitaliz opioid crisis puts Canada's health

The last decade has seen hospital admissio with more than 40 per cent of that increase

HOME / NEWS /

How to survive the opioid cris

Important advice for casual party-drug users taking illegal substances boug the black market

BY ROB EASTON

JUNE 29, 2017 3:56 AM

Fentanyl

HOME NEWS SPORTS ENTERTAINMENT LIFE MONEY OPINION FRUGAL UR PODCASTS AUCT

LOCAL ONTARIO CANADA WORLD

Celebration of LIGHTS Support patient care needs at Niagara Health Make a Donation Today »

NEWS LOCAL

The faces of an opioid crisis

By Allan Benner, The Standard
Wednesday, September 27, 2017 11:08:23 EDT AM

Julie Jocsak/ Standard Staff/Postmedia News Jennifer Johnston and Sandi Walker Tantardini are mothers who lost kids to drug overdoses. They speak at Niagara Region's health committee meeting Tuesday demanding action be taken on the opioid crisis. In front of them are photos of the five children that they and other women lost.

Recommend 1K

Heart-wrenching pain and frustration in a system they say failed their children brought five women to Niagara's public health committee meeting Tuesday.

POLITICS

With help from a UPS® Small Business Ambassador,

Health Canada to allow imports of drugs needed to treat opioid addiction

Dr. Theresa Tam poses in this undated handout.

PUBLIC HEALTH AGENCY OF CANADA/THE CANADIAN PRESS

SHERYL UBELACKER
TORONTO
THE CANADIAN PRESS
JUNE 28, 2017

NATIONAL POST

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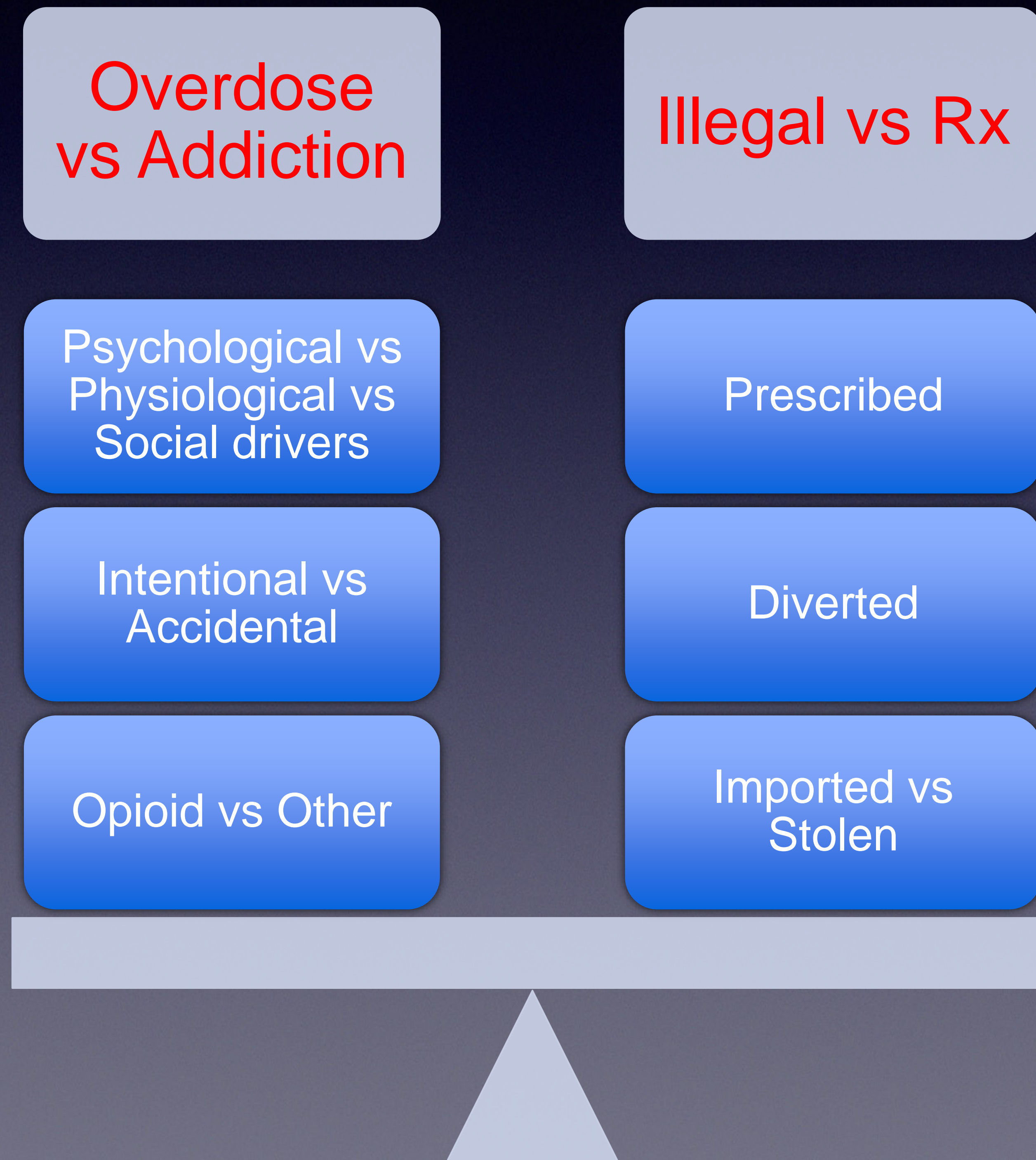
GET UP TO $3,500 TOTAL CREDITS ON ALL 2017 CRUZE MODELS
ENDS NOV 30
CRUZE HATCH PREMIER RS MODEL SHOWN
Find out more

'This is the tip of the iceberg': Health officials say no area of Canada is safe from opioid crisis

'We found rates varied across the country, but interestingly they were generally lower in the largest cities, such as Toronto, Montreal and Vancouver'

What is going on?



Are perioperative prescription opioids the problem?

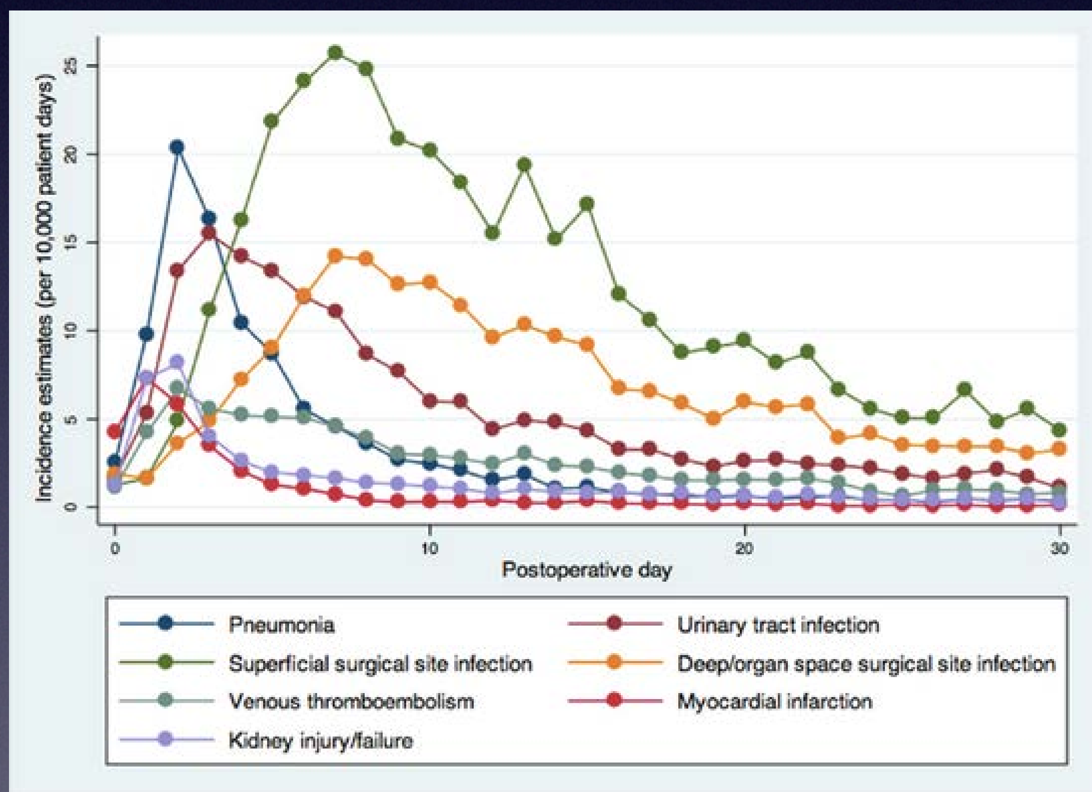


TABLE 2. Counts and Rates of Index Postoperative Complications Over 30 Days

Complication	Total	%
Index Wind, Water, Wound, or Walking (any)	60,706	9.88
Pneumonia	5947	0.97
Urinary tract infection	9459	1.54
Surgical site infection, either	32,243	5.25
Superficial surgical site infection	20,460	3.33
Deep or organ space SSI	11,847	1.93
Venous thromboembolism, either	4478	0.73
Deep venous thrombosis	2867	0.47
Pulmonary embolism	1838	0.30
Myocardial infarction	1813	0.30
Acute kidney injury/failure	2620	0.43

Are perioperative prescription opioids the problem?

- 80 % of heroin users start with prescription medications.
- 75% of opioid misuse starts from a medication NOT prescribed to the individual.
- 80% of opioid prescriptions filled remain unused.
- Consider efforts to reduce other perioperative complications such as VTE or wound infection.
  - 1 in 20 opioid-naïve patients continues to use opioids long after their surgical care is complete.

Persistent opioid use after surgery

ORIGINAL INVESTIGATION

Long-term Analgesic Use After Low-Risk Surgery

A Retrospective Cohort Study

Asim Alam, MD; Tara Gomes, MHSc; Hong Zheng, MSc; Muhammad M. Mamdani, PharmD, MA, MPH; David N. Juurlink, MD, PhD; Chaim M. Bell, MD, PhD

- Short-stay surgical patients (cataract, lap chole, TURP, vein stripping).
- 7% of patients demonstrate persistent use at one year.
- Previous data show 5% of opioid naïve patients remain on opioids at one year.

ARCH INTERN MED/VOL 172 (NO. 5), MAR 12, 2012 WWW.ARCHINTERNMED.COM

Opioid Consumption After Rotator Cuff Repair

Robert W. Westermann, M.D., Chris A. Anthony, M.D., Nic Bedard, M.D., Natalie Glass, Ph.D., Matt Bollier, M.D., Carolyn M. Hettrich, M.D., M.P.H., and Brian R. Wolf, M.D., M.S.

- 43% of patients filled an opioid Rx in the 3 months prior to rotator cuff repair.
- Patients filling an Rx 1 month prior were 3x as likely to remain on opioids at 3 months.
- Patients filling an Rx 3 months prior were 7x as likely to remain on opioids at 3 months.

Arthroscopy: The Journal of Arthroscopic and Related Surgery, Vol 33, No 8 (August), 2017: pp 1467-1472

Article

AMERICAN ORTHOPAEDIC FOOT & ANKLE SOCIETY

Pain Management After Outpatient Foot and Ankle Surgery

Foot & Ankle International®
2018, Vol. 39(2) 149–154
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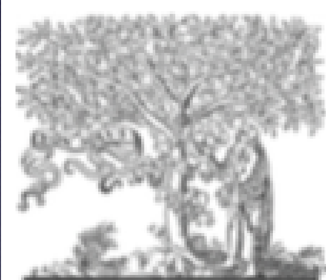
DOI: 10.1177/1071100717738495
journals.sagepub.com/home/fai

Akash Gupta, MD[1], Kanupriya Kumar, MD[2], Matthew M. Roberts, MD[1], Austin E. Sanders, BA[1], Mackenzie T. Jones, BA[1], David S. Levine, MD[1], Martin J. O'Malley, MD[1], Mark C. Drakos, MD[1], Andrew J. Elliott, MD[1], Jonathan T. Deland, MD[1], and Scott J. Ellis, MD[1]

The Journal of Arthroplasty 32 (2017) 2390–2394



ELSEVIER

Contents lists available at ScienceDirect

The Journal of Arthroplasty

journal homepage: www.arthroplastyjournal.org

Primary Arthroplasty

Opioid Use After Total Knee Arthroplasty: Trends and Risk Factors for Prolonged Use

Nicholas A. Bedard, MD *, Andrew J. Pugely, MD, Robert W. Westermann, MD, Kyle R. Duchman, MD, Natalie A. Glass, PhD, John J. Callaghan, MD

University of Iowa Hospitals and Clinics, Department of Orthopaedics, Iowa City, Iowa

- Chronic postoperative opioid use ranges from 5-15% at one year.
- Preoperative opioid use is a risk factor.
- Surgical procedure impacts chronic use.
- How can we prescribe responsibly?

THE ORTHOPAEDIC FORUM

A Prospective Evaluation of Opioid Utilization After Upper-Extremity Surgical Procedures: Identifying Consumption Patterns and Determining Prescribing Guidelines

Nayoung Kim, BS, Jonas L. Matzon, MD, Jack Abboudi, MD, Christopher Jones, MD, William Kirkpatrick, MD, Charles F. Leinberry, MD, Frederic E. Liss, MD, Kevin F. Lutsky, MD, Mark L. Wang, MD, PhD, Mitchell Maltenfort, PhD, and Asif M. Ilyas, MD

Investigation performed at the Rothman Institute at the Thomas Jefferson University, Philadelphia, Pennsylvania

- Soft tissue and boney procedures.
- Shoulder, elbow, wrist, hand.
- Mean Rx – 24 pills.
- Mean consumption 8 pills.
- Soft tissue – 5 pills for 2 days.
- Fractures – 13.0 for 4.5 days.
- Joint procedures – 14.5 for 5 days.

THE JOURNAL OF BONE & JOINT SURGERY · JBJS.ORG
VOLUME 98-A · NUMBER 20 · OCTOBER 19, 2016

A PROSPECTIVE EVALUATION OF OPIOID UTILIZATION AFTER UPPER-EXTREMITY SURGICAL PROCEDURES

JAMA Surgery | Original Investigation

Defining Optimal Length of Opioid Pain Medication Prescription After Common Surgical Procedures

Rebecca E. Scully, MD; Andrew J. Schoenfeld, MD, MSc; Wei Jiang, MS; Stuart Lipsitz, ScD;
Muhammad Ali Chaudhary, MBBS; Peter A. Learn, MD; Tracey Koehlmoos, PhD, MHA;
Adil H. Haider, MD, MPH; Louis L. Nguyen, MD, MBA, MPH

Table 2. Opioid Pain Medication Prescription Duration Information by Procedure Type After Common Surgical Procedures

Characteristic	Appendectomy (n = 34 516)	Choleystectomy (n = 48 622)	Inguinal Hernia Repair (n = 39 297)	ACL Repair (n = 16 511)	Rotator Cuff Repair (n = 14 840)	Discectomy (n = 16 647)	Mastectomy (n = 5233)	Hysterectomy (n = 39 474)
Initial opioid prescription duration, d								
Mean (SD)	5.79 (6.14)	5.72 (5.79)	6.26 (6.46)	7.37 (5.67)	6.90 (5.21)	9.32 (6.43)	6.23 (5.89)	5.73 (5.74)
Median (IQR) [range]	4 (3-5) [1-30]	4 (3-5) [1-30]	5 (3-6) [1-30]	5 (4-8) [1-30]	5 (4-8) [1-30]	7 (5-10) [1-30]	5 (3-6) [1-30]	4 (3-5) [1-30]

Abbreviations: ACL, anterior cruciate ligament; IQR, interquartile range.

Table 3. Opioid Pain Medication Refill Rate and Duration by Procedure Type for Opioid-Naive Patients After Common Surgical Procedures

Characteristic	Appendectomy (n = 34 516)	Cholecystectomy (n = 48 622)	Inguinal Hernia Repair (n = 39 297)	ACL Repair (n = 16 511)	Rotator Cuff Repair (n = 14 840)	Discectomy (n = 16 647)	Mastectomy (n = 5233)	Hysterectomy (n = 39 474)
Enrollees receiving ≥1 refill, No. (%)	4676 (13.6)	5513 (11.3)	5611 (14.3)	6485 (39.3)	5337 (36.0)	5017 (30.1)	1650 (31.5)	6818 (17.3)
Time to refill, d								
Mean (SD)	7.10 (5.65)	7.30 (5.73)	7.20 (5.52)	7.79 (4.73)	8.50 (5.48)	11.29 (6.71)	8.48 (5.53)	8.03 (5.31)
Median (IQR) [range]	6 (3-10) [1-45]	6 (3-10) [1-45]	6 (3-10) [1-45]	7 (5-11) [1-44]	8 (4-12) [1-45]	10 (7-15) [1-45]	7 (5-12) [1-44]	7 (4-11) [1-45]
Duration of first refill, d								
Mean (SD)	6.22 (7.19)	6.44 (7.47)	6.49 (7.43)	7.67 (8.09)	7.40 (7.50)	10.51 (7.85)	6.42 (6.43)	6.02 (6.44)
Median (IQR) [range]	4 (3-5) [1-60]	4 (3-6) [1-90]	4 (3-5) [1-42]	5 (4-8) [1-300]	5 (4-8) [1-300]	8 (5-13) [1-84]	5 (3-7) [1-60]	4 (3-5) [1-41]

Abbreviations: ACL, anterior cruciate ligament; IQR, interquartile range.

JAMA Surg. 2018;153(1):37-43. doi:10.1001/jamasurg.2017.3132
Published online September 27, 2017.

GUIDELINE CPD

Guideline for opioid therapy and chronic noncancer pain

Jason W. Busse DC PhD, Samantha Craigie MSc, David N. Juurlink MD PhD, D. Norman Buckley MD, Li Wang PhD, Rachel J. Couban MA MISt, Thomas Agoritsas MD PhD, Elie A. Akl MD PhD, Alonso Carrasco-Labra DDS MSc, Lynn Cooper BES, Chris Cull, Bruno R. da Costa PT PhD, Joseph W. Frank MD MPH, Gus Grant AB LLB MD, Alfonso Iorio MD PhD, Navindra Persaud MD MSc, Sol Stern MD, Peter Tugwell MD MSc, Per Olav Vandvik MD PhD, Gordon H. Guyatt MD MSc

Cite as: *CMAJ* 2017 May 8;189:E659-66. doi: 10.1503/cmaj.170363

CMAJ podcasts: author interview at https://soundcloud.com/cmajpodcasts/170363-guide

KEY POINTS

- We recommend optimization of nonopioid pharmacotherapy and nonpharmacologic therapy, rather than a trial of opioids, for patients with chronic noncancer pain.
- Patients with chronic noncancer pain may be offered a trial of opioids only after they have been optimized on nonopioid therapy, including nondrug measures.
- We suggest avoiding opioid therapy for patients with a history of substance use disorder (including alcohol) or active mental illness, and opioid therapy should be avoided in cases of active substance use disorder.
- For patients beginning opioid therapy, we recommend restricting to less than 90 mg morphine equivalents daily (MED) and suggest restricting the maximum prescribed dose to less than 50 mg MED.
- Patients already receiving high-dose opioid therapy (≥ 90 mg MED) should be encouraged to embark on a gradual dose taper, and multidisciplinary support should be offered where available to those who experience challenges.

Manitoba Standards

STANDARD OF PRACTICE

Part I – ACUTE PAIN OR POST-OPERATIVE ANALGESIA PATIENT

For patients with acute pain or who require post-operative analgesia, the member **shall:**

(a) Prescribe the lowest effective dose of immediate release preparations limited to what the patient will need before community follow-up will be resumed (three days or less will often be sufficient; more than seven days will rarely be needed; but in exceptional circumstances, then up to one month).

(b) When discharging patients from acute-care settings, or post-operatively, prescribe only the quantities of opioids that the patient will need before community follow-up will be resumed, or in accordance with the expected course of the illness where follow-up is not anticipated.

(c) Obtain a second opinion (by teleconference is permitted) from a member or authorized prescriber prior to prescribing opioids after thirty days from the time of the onset of the acute pain or surgery.

The Canadian Orthopaedic Association
L'Association Canadienne d'Orthopédie

COA Position Statement: Opioids and Orthopaedic Surgical Practice

Dr. Greg Stranges "position" paper

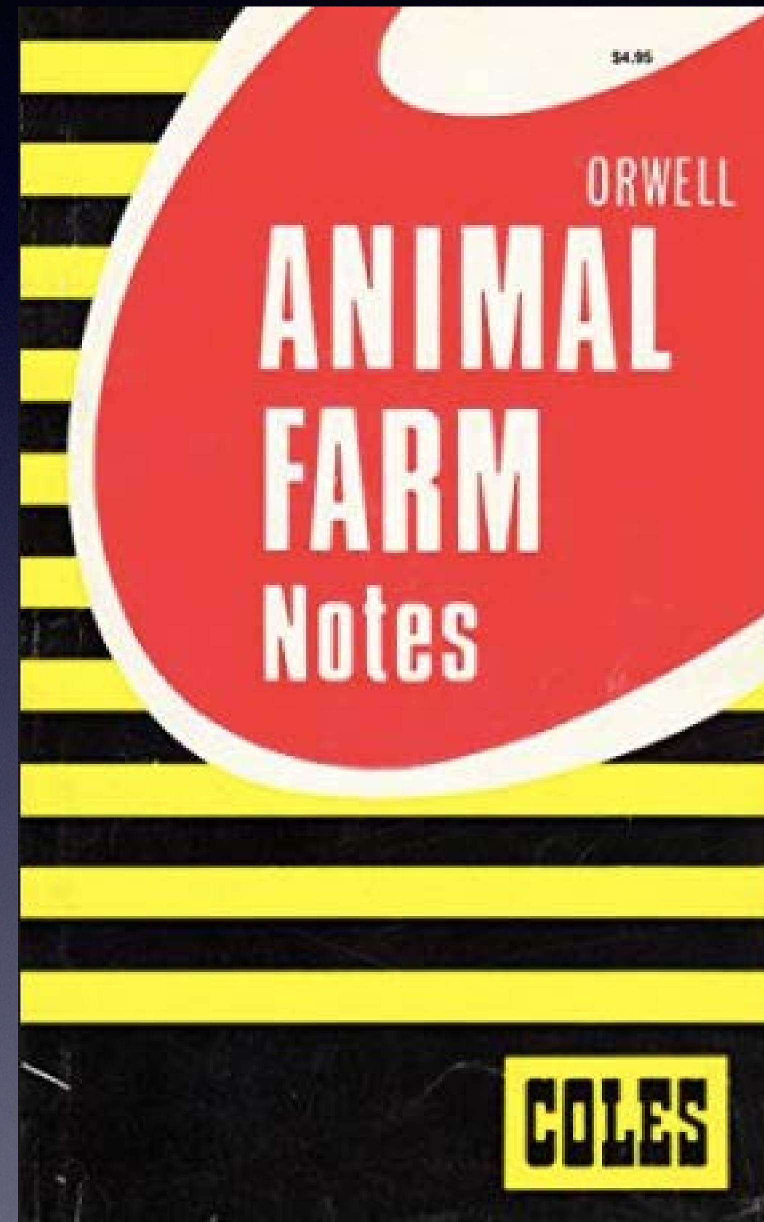
The Canadian Orthopaedic Association
L'Association Canadienne d'Orthopédie

COA Position Statement: Opioids and Orthopaedic Surgical Practice

- WHO analgesic ladder.
- Canadian guidelines for chronic opioid use in non-cancer pain.
- Acute pain service collaboration.
- Adjuvant medications and modalities.
- Rx less than two weeks in most cases.
- Risk assessment and information for patients.
- Safe Rx and disposal.

What can we do?

- Recognize AT RISK patient populations.
- Counsel patients preoperatively to expect adequate pain control (eg. eat, sleep, ambulate) but not to achieve zero pain.
- Use nonopioid alternatives for procedures with only mild pain.
- Explore other modalities for more severe pain, involve your Acute Pain Service.
- Where possible determine if patients are receiving opioids from other clinicians.



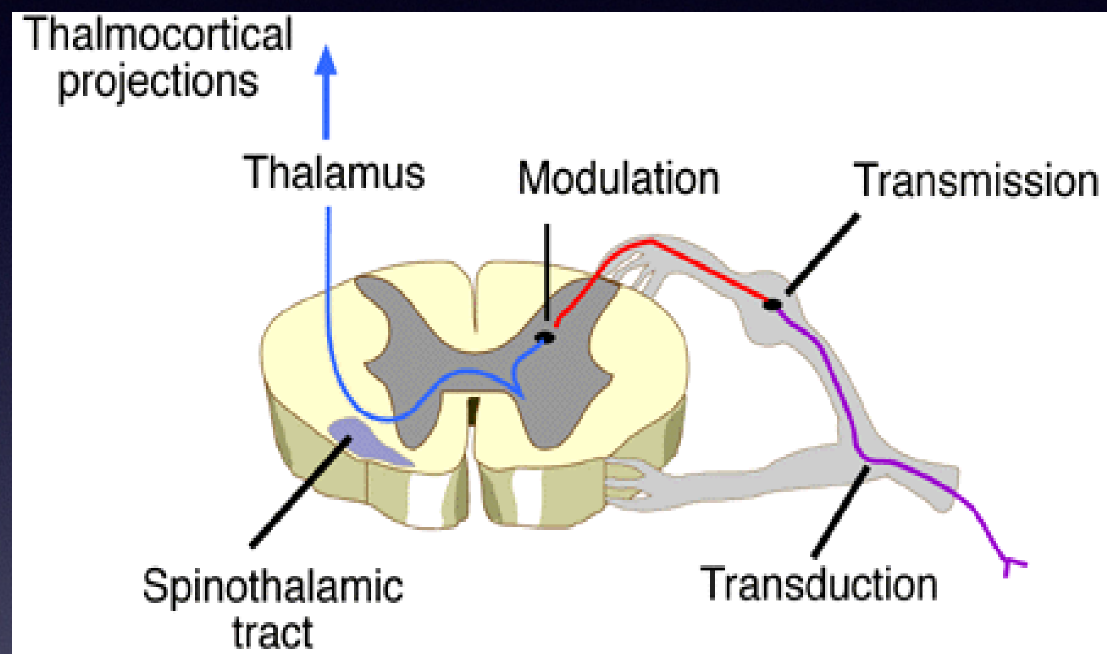
What can we do?

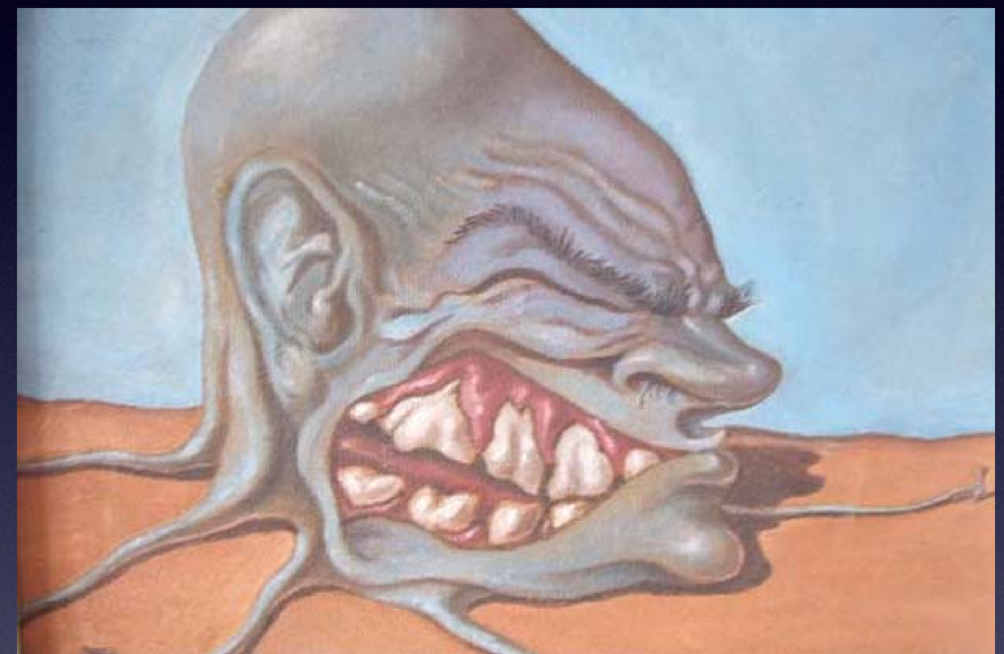
- Optimal orthopedic prescription length - 6-15 days.
  - Soft tissue – 10.
  - Boney – 15.
  - Arthroplasty – 15-30.
- Refills are better than large Rx.
- Hand over anticipated longer required use of opioids to a clinical environment that can monitor efficacy, safety, misuse, addiction and diversion.

A word on pain…

- There will be a tendency to stop prescribing opioids all together.
- Under treatment of perioperative pain leads to many other adverse outcomes, including chronic pain.
- With the intention of helping our patients, we inflict, hopefully temporarily, pain upon them.
- Opioids will continue to be an important tool, one that needs to be used carefully.

A picture is worth……



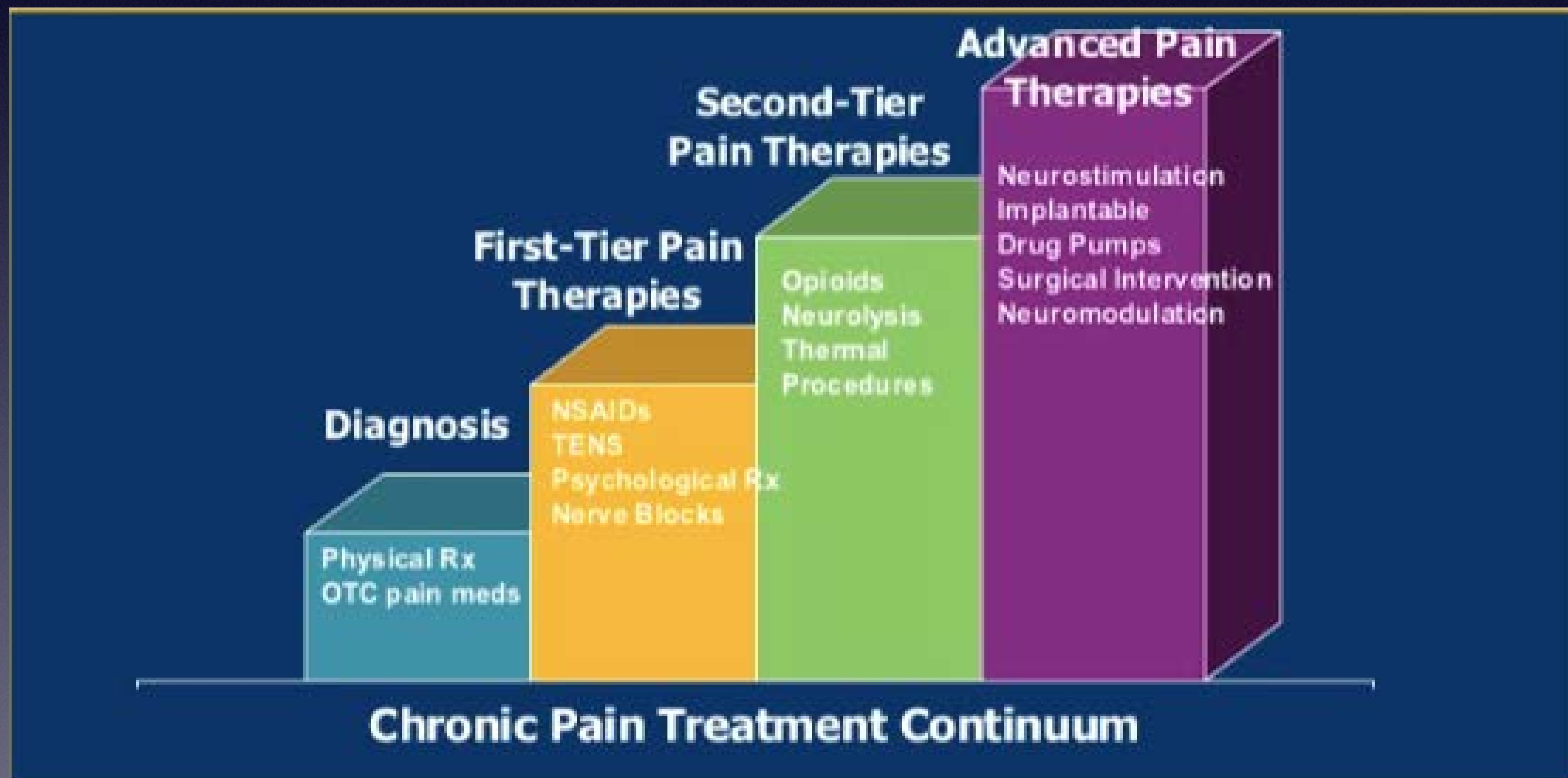


- Nociception
- Pain

Thank you

1. The goal is pain relief, NOT zero pain.
2. Be aware of risk
3. Lowest possible dose for the shortest possible amount of time.
4. Decrease the number of pills prescribed.
5. Advise re pill disposal.
6. Have a plan for follow up in primary care for ongoing pain.

Chronic Pain Syndrome Pathway



My buddy and keto, are both kind of neat-o!

…eating like caveman!

James Vernon and David Aimes

Oct 18, 2018

We all need to take part of the solution