Opioid Agonist Therapy 101:
An Introduction to Clinical Practice Workshop

Special Considerations: Acute, chronic and perioperative pain in the context of Opioid Agonist Therapy

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Faculty/Presenter Disclosure

* **Faculty:** Nicole Nakatsu

* **Relationships with commercial interests: (list None if no disclosures)**
  * **Grants/Research Support:** None
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  * **Consulting Fees:** None
  * **Other:** None

* **Mitigating potential bias: (delete this section if no disclosures above)**
  * Fresenius Kabi at the time I gave the talk sold no narcotics. The talk was on Opioid Stewardship and they had no input on the content

Learning Objectives

* Review definitions, pathophysiology, and classification of pain
* Understand the epidemiology and management of chronic pain
* Outline rational pharmaceutical options for pain management
* Review current guidelines for Opiate Replacement Therapy (OAT) with respect to patients with concurrent pain
* Discuss management of pain for patients on OAT with acute and chronic pain through case-based learning

Case 1: Jim

* 52 year old male
* Long standing history of alcohol use disorder
* Introduced to opiates via his wife
* Stabilized on methadone for a few years with a few minor relapses only
* No other medical history or medications

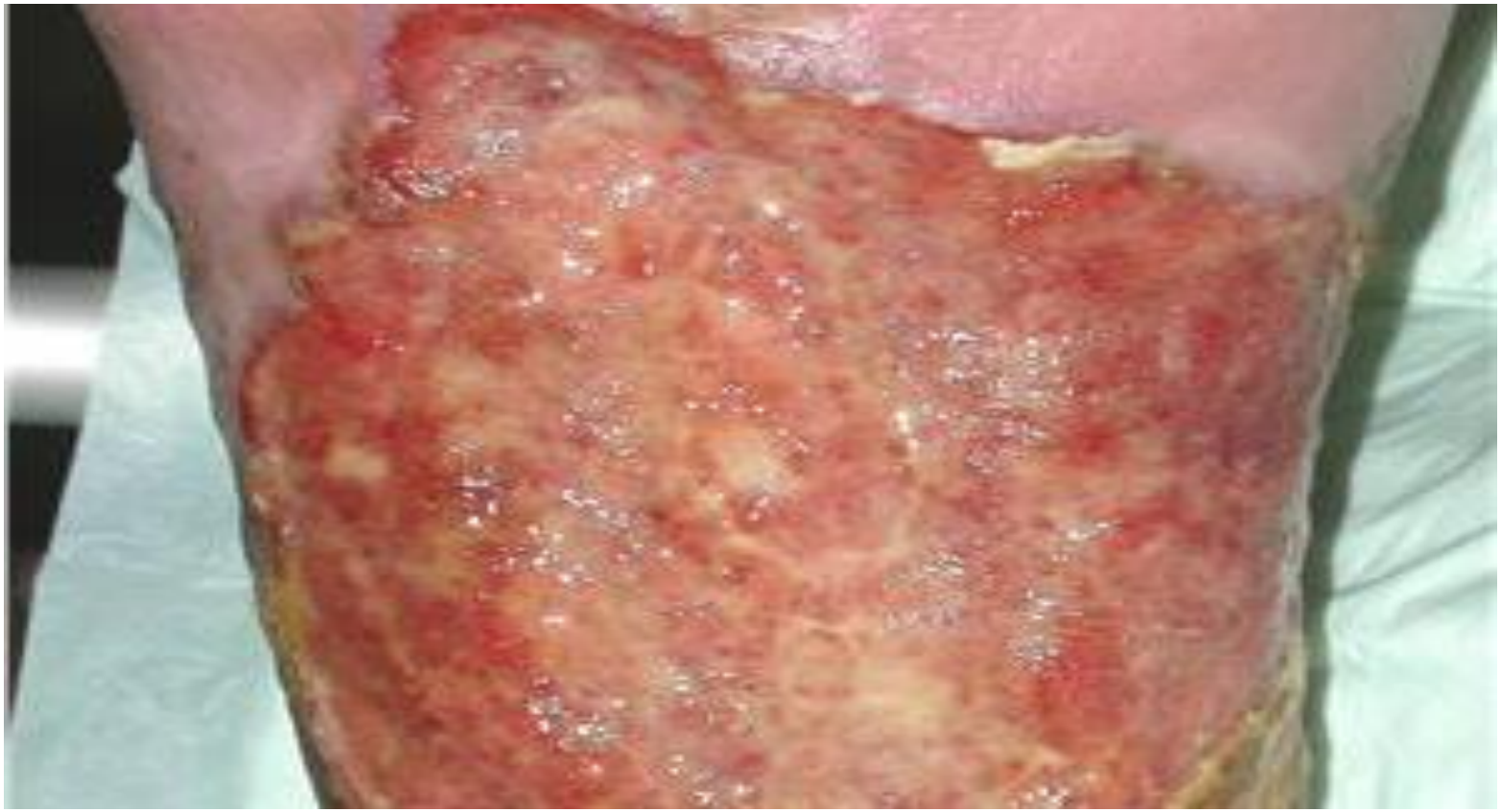
Case 1: Jim

* Jim's wife leaves for 2 weeks to visit with family
* Jim takes the opportunity to indulge in a few beer
* Unfortunately, while on a ladder, Jim falls and has an acute navicular fracture for non operative management
* He is having considerable pain, what do you do?

Case 2: Kathy

* Kathy is a 33 year old female
* She has a positive family history of substance abuse
* She herself has a long standing history of an opiate use disorder for which she is on 120 mg of methadone
* She also has known Crohn's Disease which is currently in remission
* She is transferred your clinic with the following….

Pyoderma Gangrenosum



Case 2: Kathy

* Kathy presents in crisis
* She is receiving Infliximab and prednisone and is being followed by a gastroenterologist as well as a dermatologist. She has had a poor response to therapy thus far
* She is in pain. How do you proceed?

Pain Overview

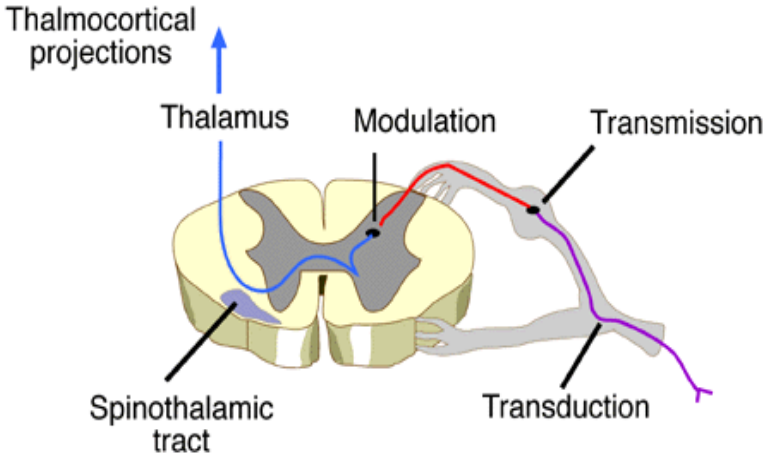
Definitions

* Nociception
  * The process by which information about a noxious stimuli is conveyed to the brain. It is the total sum of the neural activity that occurs ***prior to the cognitive processes*** that enable human to identify a sensation as pain

* Pain
  * An unpleasant sensory or emotional experience associated with actual or potential tissue damage, or described in terms of such damage….it is always subjective.

A picture is worth……

* Nociception



* Pain

Classification of Pain

* Type: nociceptive, neuropathic pain
* Temporal: acute pain, chronic pain
* Location: soft tissue, bones/joints, visceral pain

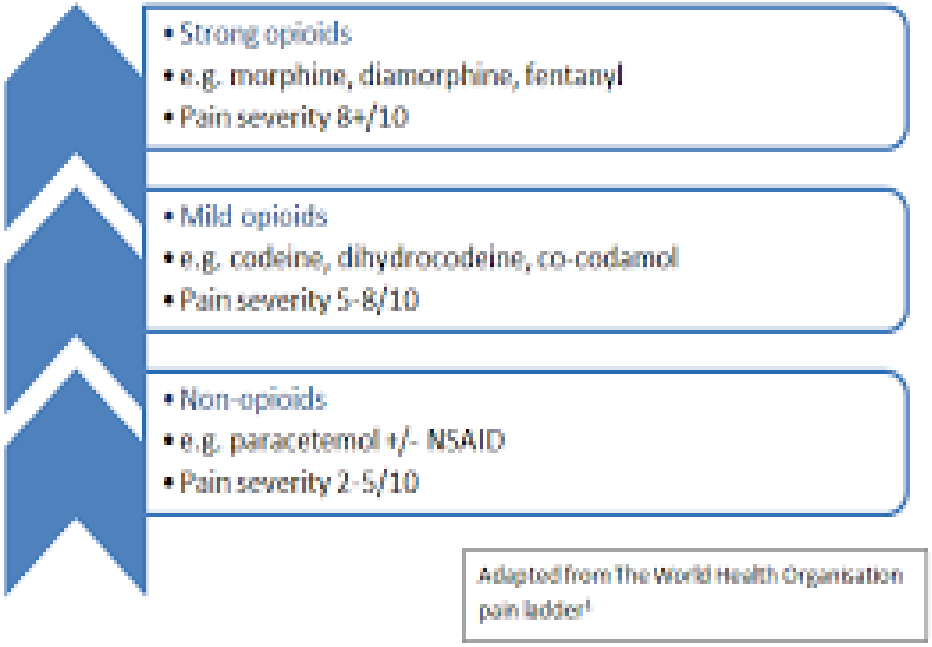
Goals of Chronic Pain Management

* Focus visits on function
* Identify complex interactions that may be driving or enhancing the pain experience
* Collaborative care models

Pain Overview

Pharmaceutical Options

Acute Nociceptive/Perioperative Pain



But what about the methadone/buprenorphine?

* Continue OAT
* OAT dose is baseline for preventing withdrawal and once daily dosing will not provide significant pain relief
* Split dosing may be an option for those eligible for carries
* People on OAT may have a lower pain threshold, increase pain sensitivity
* If using opioids start with dosing similar to that used for a person not on OAT
  * Caveat: may need to be larger and/or more frequent doses
* Avoid using person's abuse drug of choice if possible
* Shared decision making should always be sought
* Consideration of regional anaesthesia for perioperative pain

Buprenorphine hmmm…

* Buprenorphine binds tightly to the mu-opioid receptor as a partial agonist

Regulatory Toxicology and Pharmacology 59 (2011) 385–390

Contents lists available at ScienceDirect

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journal homepage: www.elsevier.com/locate/yrtph

Uniform assessment and ranking of opioid Mu receptor binding constants for selected opioid drugs ☆

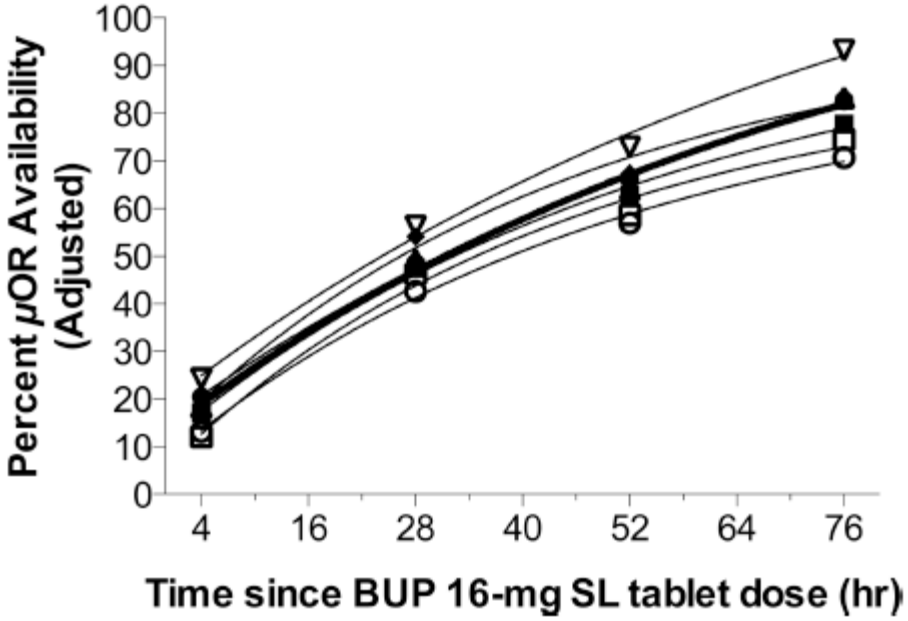
Donna A. Volpe [a,*], Grainne A. McMahon Tobin [a], R. Daniel Mellon [b], Aspandiar G. Katki [a], Robert J. Parker [a], Thomas Colatsky [a], Timothy J. Kropp [c], S. Leigh Verbois [c]

Drug	K_i (nM)	Drug	K_i (nM)	Drug	K_i (nM)
Tramadol	12,486	Hydrocodone	41.58	Butorphanol	0.7622
Codeine	734.2	Oxycodone	25.87	Levorphanol	0.4194
Meperidine	450.1	Diphenoxylate	12.37	Oxymorphone	0.4855
Propoxyphene	120.2	Alfentanil	7.391	Hydromorphone	0.3654
Pentazocine	117.8	Methadone	3.378	Buprenorphine	0.2157
		Nalbuphine	2.118	Sufentanil	0.1380
		Fentanyl	1.346		
		Morphine	1.168		

Drug Alcohol Depend. 2014 November 1; 0: 1–11. doi:10.1016/j.drugalcdep.2014.07.035.

Buprenorphine maintenance and *mu*-opioid receptor availability in the treatment of opioid use disorder: implications for clinical use and policy

Mark K. Greenwald[a,*], **Sandra D. Comer**[b], and **David A. Fiellin**[c]



The 2017 Canadian Guideline for Opioids for Chronic Non-Cancer Pain

Main editor

Jason Busse

2017 Canadian Guidelines for CNCP

Recommendation 3: For patients with chronic noncancer pain with an active substance use disorder

Strong Recommendation | AGAINST

We recommend against the use of opioids

2017 Canadian Guidelines for CNCP

Recommendation 5: For patients with chronic noncancer pain with a history of substance use disorder, whose nonopioid therapy has been optimized, and who have persistent problematic pain

Weak Recommendation

We suggest continuing nonopioid therapy rather than a trial of opioids

Other considerations

* Referral to a reputable pain clinic regarding pharmacological non opioid pain alternatives and non pharmacological alternatives
* Employ non opiate alternatives when possible
* Ensure patient is aware of short term nature of opiate prescribing when necessary
* Single prescriber
* Limited dispensing
* Close monitoring
* Split dosing?

Pain Overview
Pharmaceutical Options
What about my patient with acute pain on OAT?

Clinical Application

Case 1: Jim

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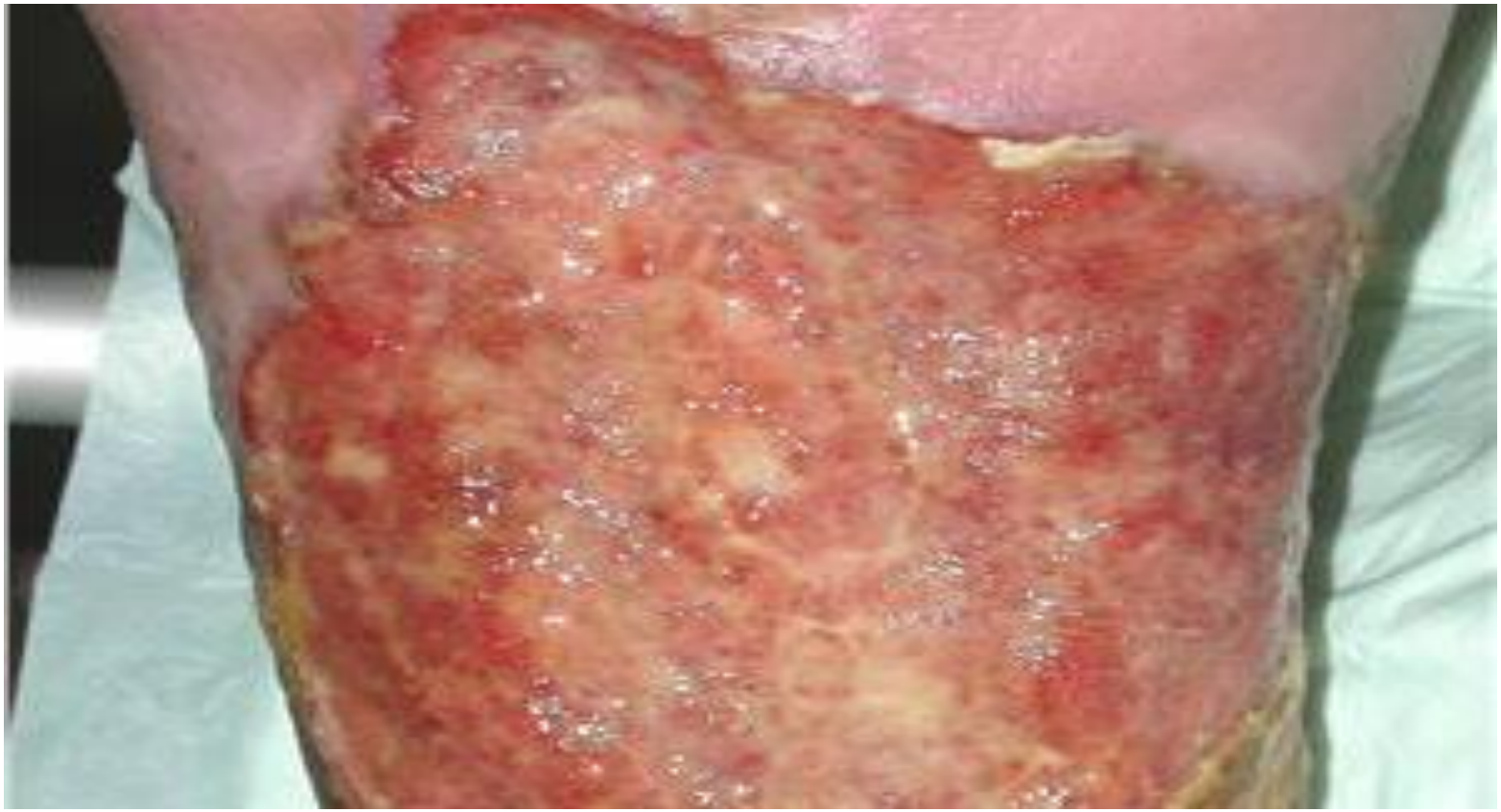

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Take Home Messages

* Appreciate the pain experience in the context of each individual patient
* Manage expectations early and set realistic goals
* Be aware of awakening the addiction circuitry and be ready to tighten treatment parameters for safety
* More research is needed regarding sub-populations of patients with chronic pain
* More research is needed regarding treatment of pain in patients with concurrent opiate use disorders
* Return to first principles, understand the type (s) of pain that you are attempting to palliate, and then choose medications appropriately

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Questions ???