#### **Red Flags**

Low Back Pain

Low Back Pain Red Flag (fpnotebook.com)

Headaches

Headache Red Flag (fpnotebook.com)

**Abdominal Pain** 

Abdominal Pain Evaluation (fpnotebook.com)

#### **Assessment Tools**

Chronic Pain Management Toolkit - Brief Pain Inventory (aafp.org)

#### **Opioids**

Opioid Risk Tool (ORT) – most commonly used, but not necessarily with the best evidence

#### **Opioid Risk Tool**

This tool should be administered to patients upon an initial visit prior to beginning opioid therapy for pain management. A score of 3 or lower indicates low risk for future opioid abuse, a score of 4 to 7 indicates moderate risk for opioid abuse. and a score of 8 or hisher indicates a high risk for opioid abuse.

Mark each box that applies	Female	Male			
Family history of substance abuse					
Alcohol	1	3			
Illegal drugs	2	3			
Rx drugs	4	4			
Personal history of substance abuse					
Alcohol	3	3			
Illegal drugs	4	4			
Rx drugs	5	5			
Age between 16—45 years	1	1			
History of preadolescent sexual abuse	3	0			
Psychological disease					
ADD, OCD, bipolar, schizophrenia	2	2			
Depression	1	1			
Scoring totals					

Prescription Opioid Misuse Index (POMI) – closely aligned with DSM criteria for OUD; COMM also aligned with DSM, but much longer than POMI

1539789463 tfp222opioidscreeningfv.pdf (acfp.ca)

Screener and Opioid Assessment for Patients with Pain (SOAPP) (a more behaviour-based assessment)

Microsoft Word - SOAPP Version 1 14Q.SFB.doc (asu.edu)

## **Opioids in Special Populations**

Pain Medications in Pregnancy

# FDA pregnancy risk classification categories for pain medications

FDA classification	Definition	Examples
Category A	- No risk to fetus in controlled human studies.	Multivitamin
Category B	<ul> <li>No teratogenic risk to fetus in animal studies.</li> <li>No teratogenic risk to fetus report in well controlled human studies.</li> </ul>	Acetaminophen, ibuprofen, naproxen, morphine, fentanyl, oxycodone, hydromorphone, methadone, caffeine, SSRIs, prednisolone.
Category C	<ul><li>Teratogenic or embryocidal risk in animal studies.</li><li>No controlled studies in human.</li></ul>	Codeine, tramadol, gabapentin, lamotrigine, venlafaxine, duloxetine, lidocaine, sumatriptan, aspirin, ketorolac, celebrex.
Category D	- Positive evidence of human fetal risk, benefits outweigh risks	TCA, carbamazepine, topiramate, benzodiazepine
Category X	- Positive evidence of significant fetal risk.	Ergotamine

All **opioid** are **category D** if used for prolonged periods or in large doses near term.

James P. Rathmell, et al. Anesth Analg 1997;85:1074-87.

Safe	Caution	Avoid
Acetaminophen Short-term use of morphine, fentanyl, oxycodone, hydromorphone, methadone Prednisolone	Ibuprofen Naproxen Lidocaine Sumatriptan	Codeine, Celebrex tramadol TCA SNRIs Anticonvulsants Ergotamine high-dose/long-term use of opioids

Summary of medication safe in pregnancy

Summary of medications safe in lactation

Safe	Caution	Avoid
Acetaminophen Short-term use of morphine, fentanyl, oxycodone, hydromorphone, methadone Prednisolone	Ibuprofen Naproxen Lidocaine Sumatriptan	Codeine, Celebrex tramadol TCA SNRIs Anticonvulsants Ergotamine high-dose/long-term use of opioids

# Summary of pain medications safe in liver failure

Safe	Caution	Avoid
Gabapentin Pregabalin Fentanyl	Acetaminophen NSAIDs and COX-2 inh Tramadol Morphine Hydromorphone Methadone TCA Venlafaxine	Meperidine Codeine Oxycodone Carbamazepine Duloxetine

Limited data on topiramate and lamotrigine

Summary of pain medications safe in renal dysfunction

Safe	Caution	Avoid
Fentanyl Methadone Carbamazepine Amitriptyline Nortriptyline	Acetaminophen Tramadol Morphine Hydromorphone Oxycodone Topiramate Venlafaxine Gabapentin Pregabalin	NSAIDs and COX-2 inh Meperidine Codeine Duloxetine

Limited data on lamotrigine

Summary of pain medications safe in hemodialysis

Safe	Caution	Avoid
Fentanyl Methadone Carbamazepine Amitriptyline Nortriptyline	Acetaminophen Tramadol Morphine Hydromorphone Oxycodone Topiramate Venlafaxine Gabapentin Pregabalin	NSAIDs and COX-2 inh Meperidine Codeine Duloxetine

Limited data on TCAs, venlafaxine, duloxetine

#### **Opioid Tapers**

#### **Opioid Manager Tool**

Opioid Switching form Layout 1 (mcmaster.ca)



# **Opioid Conversion Chart**

There are differences in the literature regarding opioid conversion ratios. The conversion ratios listed below are the conversion ratios commonly used in practice at Our Lady's Hospice and Care Services (OLH&CS). The information outlined below is intended as a guide only. ALL OPIOID CONVERSIONS OUTLINED BELOW ARE APPROXIMATE ONLY. Therefore, all medication doses derived using the information below should be checked and prescribed by an experienced practitioner. The dosage of a new opioid is based on several factors including the available equi-analgesic dose data, the clinical condition of the patient, concurrent medications and patient safety. It is recommended that the new dose should be reduced by 30-50% to allow for incomplete cross-tolerance. The patient should be monitored closely until stable when switching opioid medications.

#### GOLDEN RULE: WHEN CHANGING FROM ONE OPIOID TO ANOTHER ALWAYS CONVERT TO MORPHINE FIRST.

ORAL MORPHINE TO ORAL OPIOID	os	ORAL OPIOIDS TO PARENTERAL OPIOIDS		PARENTERAL MORPHINE TO OTHER	OPIOIDS	TRANSDERMAL OPIOID TO ORAL	MORPHINE
PO → PO	RATIO	PO → IV/SC	RATIO	IV/SC → IV/SC	RATIO	$TD \rightarrow PO$	RATIO
Morphine → Oxycodone	1.5:1	Morphine → Morphine	2:1	Morphine → Oxycodone	1.5:1°	Buprenorphine $\rightarrow$ Morphine	1:75
$Morphine \to Hydromorphone$	5:1	Oxycodone → Oxycodone	2:1	Morphine $\rightarrow$ Hydromorphone	5:1	Fentanyl → Morphine	1:100
		Hydromorphone → Hydromorphone	2:1	Morphine → Alfentanil	15:1		

(Note: This table does not incorporate recommended dose reductions of 30-50%.)

MOI	RPHINE		ODONE <sup>α</sup>	HYDROMORPHONE		FENTANYL	ALFENTANIL <sup>β</sup>	BUPRENORPHINE
24 ho	our dose	A 2:1 ratio with mor	24 hour dose A 2:1 ratio with morphine may also be used. See preparations outlined below.		24 hour dose		24 hour dose	
ORAL	IV/SC	ORAL	IV/SC	ORAL	IV/SC	TRANSDERMAL"	IV/SC	TRANSDERMAL*
5mg	2.5mg	3.33mg	1.66mg	1mg	0.5mg	-	-	-
10mg	5mg	6.66mg	3.33mg	2mg	1mg		0.3mg	5 micrograms/ <u>hour</u> *
14.4mg	7.2mg	9.6mg	4.8mg	2.88mg	1.44mg	6 micrograms/hour	0.5mg	
20mg	10mg	13.33mg	6.66mg	4mg	2mg	-	0.7mg	10 micrograms/ <u>hour</u> *
28.8mg	14.4mg	19.2mg	9.6mg	5.76mg	2.88mg	12 micrograms/hour	1	-
30mg	15mg	20mg	10mg	6mg	3mg	-	1mg	15 micrograms/hour*
50mg	25mg	33.33mg	16.66mg	10mg	5mg	-	1.5mg	25 micrograms/hour*
60mg	30mg	40mg	20mg	12mg	6mg	25 micrograms/hour	2mg	35 micrograms/hour*
100mg	50mg	66.66mg	33.33mg	20mg	10mg		3.3mg	52.5micrograms/hour
120mg	60mg	80mg	40mg	24mg	12mg	50 micrograms/hour	4mg	70 micrograms/ <u>hour</u> *
150mg	75mg	100mg	50mg	30mg	15mg	-	5mg	
180mg	90mg	120mg	60mg	36mg	18mg	75 micrograms/hour	6mg	
240mg	120mg	160mg	80mg	48mg	24mg	100 micrograms/hour	8mg	

"National and international guidelines also support the use of a 21 ratio when switching between morphine and oxycodone.
Oxycodone is available as immediate release casuates for \$1,000 man, [1001 fl.mm/m] or instained release tablets 5mm, 20mm, 20mm, 40mm, and 50mm, 0xycodones solution for injection is available in 10mm/m] and 10mm/m] and 50mm/m] it trengthat the same of the

Oxycodine is available as minestire release equitive Medicine' document and 20mg, liquid Jamg/min 20 long/min 20 long/min

<sup>8</sup> Transdermal fentanty and buprenorphine patches are prescribed in micrograms (mg)/hour. Equivalent doses are based on the 24 hour dose of fentanyl or buprenorphine received from a patch. See product literature for further information are also as a second patch of the patch of

Drug	Route	Equianalgesic Dose
Morphine	Parenteral PO	10 mg 30 mg (chronic) 60 mg (acute)
Codeine	PO	200 mg
Fentanyl	Transdermal	12.6 to 25 mcg/hr
Hydrocodone	PO	20-30 mg
Hydromorphone	Parenteral PO	1.3 to 1.5 mg 7.5 mg
Meperidine	Parenteral PO	75 mg 300 mg
Methadone	Parenteral PO	Variable drug titration
Oxycodone	PO	20-30 mg
Oxymorphone	PO Parenteral	10 mg 1 mg
Tramadol	РО	undetermined
Buprenorphine	Parenteral	0.3 mg
Tapentadol	PO	100-150 mg

## **Opioid Rotation Pearls**

- Always convert to MMED first
- Drop the dose of the new opioid by 25-50%
- Breakthrough dose should be between 10-20% of the total daily dose

#### **Opioid Taper Pearls**

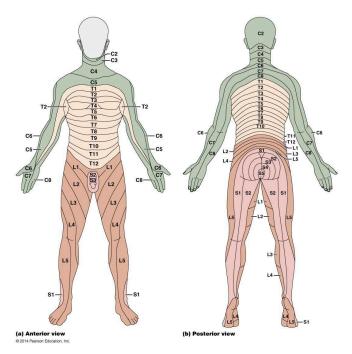
- Consider the pain diagnosis and ensure you are offering alternatives
- Don't sweat the small stuff if the patient is on a stable dose below the watchful limit and has improved function with it
- Ask permission to provide information
- Use motivational interviewing
- Provide information on health risks with opioids

Sleep-disordered breathing	42.3 -70% (among MM)	MM – methadone maintenance
(includes both, OSA and CSA)	71%- 100% (among CNCP)	CNCP – chronic non-cancer pain
Central sleep apnea (CSA)	0 - 60% (among MMPs) 17–80% (among CNCP)	CPAP is only somewhat helpful
Non-cardiac pulmonary edema	Rare	Mostly with overdose
Obstructive sleep apnea (OSA)	10 –35.2% (among MM) 20–39% (among CNCP)	CPAP / BiPAP
Bowel dysfunction	41-95%	Laxatives are only somewhat helpful
Narcotic Bowel Syndrome in regular opioid users	4-6%	(Farmer, Gallagher et al. 2017)
Hypogonadism	70-95%	Depending on the applied criteria
Sexual dysfunction:	Prévalence (MM) 52% (95% CI, 0.39–0.65).	MM vs buprenorphine maintenance OR (4.01, 95% CI, 1.52–10.55, P 0.0049) acros studies
Oligo/amenorrhoea	23% - 81% oral or intrathecal	Transdermal buprenorphine is not associated with this particular Toxicity
QT-interval prolongation with methadone	2.2%	At the dose used for addiction maintenance
QT-interval prolongation with other opioids	Not known	Sporadic case reports only
Dysuria in advanced cancer pain	~15%	Prevalence of dysuria in cancer pain without opioids is not known
Adrenal insufficiency in sickle cell	>19%	OR (general population) is 2375, adrenal insufficiency in pain population is likely higher than in general population.
Nephrotoxicity / rhabdomyolysis	Rare	Mostly with overdose. Reported in methadone use.
Immune suppression / infection rates in regular users	Not known aOR is 2-4 among older and ICU patients.	Morphine, fentanyl and codeine, methadone appear the most suppressive. Buprenorphine could be the safest.
New onset depression	~ 20% after 90 days of use	Associated with longer duration of use.
Pruritus / opioid-induced itch published work: I. Kudrina, S. Markovitz,	<b>2-10%</b> 8.5% irian, Y. Shir	Patients on oral morphine Epidural opiates

- Go slow
- Get comfortable with suboxone
- Prescribe adjuncts to manage withdrawal symptoms
  - O Clonidine 0.1mg po tid prn M:84
  - Loperamide 2mg po prn up to 8x/day M:112
  - O Dimenhydrinate 50mg po q6h prn M:112
  - o Ibuprofen 600mg po q6h prn M:112
  - Acetaminophen long-acting 650mg po q6h prn M:112
  - o Diazepam 5mg po daily prn M:30, dispense max 10 doses/month
  - If dropping long-acting by a significant amount (ex. fentanyl 100mcg to 75mcg), ensure breakthroughs available for an intermediate dose

## **Neuropathic Pain**

DN4 - 20100922NAIH3NeuropathicPainDiagnosticQuestionnaireDN4-1.pdf (casn.ca)



Pharmacologic management of chronic neuropathic pain (cfp.ca)

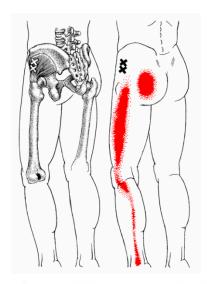
## **Myofascial Pain**

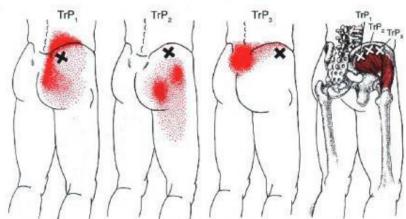
The Trigger Point & Referred Pain Guide (triggerpoints.net)

https://www.ncbi.nlm.nih.gov/books/NBK542196/

**Example Gluteus Minimus** 

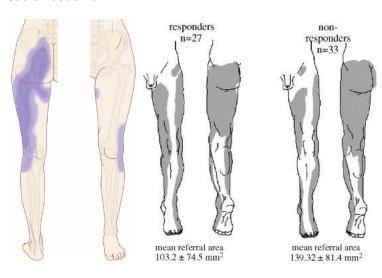
**Gluteus Maximus** 





# Referred Joint/Ligament Pain

## Sacroiliac Joint

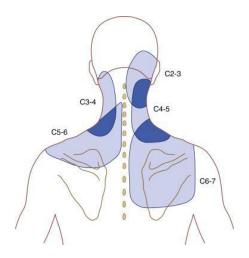


## Facet Joints

# **Lumbar Facet Referral Patterns**



# Cervical Facet Joints



## Headaches

Migraines! Migraines! Migraines!

