OPIOID PRESCRIBING, ADULT, GUIDELINE

Updated: February 16, 2023

Clinical Pathway Summary

CLINICAL PATHWAY NAME: Opioid Prescribing, Adult, Guideline

PATIENT POPULATION AND DIAGNOSIS: All adult patients (18+ years of age) excluding hospice and end of life care.

APPLICABLE TO: Corewell Health West, Corewell Health South

BRIEF DESCRIPTION: To provide standardized prescribing guidelines for post-procedure or condition specific pain management, including opioid and non-opioid medication.

LAST REVISED: January 2023

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Clinical Pathways Clinical Approach

TREATMENT AND MANAGEMENT:

Definitions:

- **Pain:** The Institute of Medicine defines pain as, “An unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of suchdamage” (IOM, 2011).
  - Pain can be considered cancer and non-cancerous pain. Non-cancerous pain can be considered acute, transitional or chronic pain.
  - **Acute Pain:** Acute pain is defined at pain less than 1 month per the proposed new CDC 2022 guidelines.
  - **Transitional Pain:** Pain that last more than 4-6 weeks or the normal healing process buthas not lasted 3 months or more.

- **Chronic Pain**: Pain that last more than 3 months or longer than the normal healing process. Chronic Pain can be the result of a disease or other medical condition (IOM,2011).

- **Short-acting opioid:** Opioid drug which exerts analgesic effect for a short duration of time (e.g.4-6 hours) and are intended for the treatment of acute pain. Examples include: morphine, oxycodone, hydromorphone.
- **Long-acting opioid:** Opioid drug which exerts analgesic effect for a longer duration than short-acting opioids (e.g. 12-24 hours) and are intended for the treatment of chronic (lasting greater than 90 days) pain. Examples include: sustained release formulations of oxycodone and morphine, transdermal fentanyl, and methadone.
- **Non-opioid therapy**: Methods of managing chronic pain that does not involve opioids. These methods can include, but are not limited to, acetaminophen (Tylenol®) or ibuprofen (Advil®, Motrin®), cognitive behavioral therapy, physical therapy and exercise, medications for depressionor for seizures, or interventional therapies (injections) (CDC, 2017).
- **Non-pharmacologic therapy:** Treatments that do not involve medications, including physical treatments (e.g., exercise therapy, weight loss) and behavioral treatments (e.g., cognitive behavioral therapy) (CDC, 2022).
- **Opioid:** Natural or synthetic chemicals that interact with opioid receptors on nerve cells in the body and brain and reduce the intensity of pain signals and feelings of pain. This class of drugs that include the illegal drug heroin, synthetic opioids such as fentanyl, and pain medications available legally by prescription, such as oxycodone, hydrocodone, codeine, morphine, and manyothers. Opioid pain medications are generally safe when taken for a short time and as prescribedby a doctor, but because they produce euphoria in addition to pain relief, they can be misused (CDC, 2017).
- **Opioid Tolerant:** Patients who are taking, for 1 week or longer, at least:
  - 60 mg oral morphine/day or
  - 25 mcg transdermal fentanyl/hour or
  - 40 mg oral oxycodone/day or
  - 9 mg oral hydromorphone/day, or
  - An equianalgesic dose of any other opioid (see Table 1 below)
- **Opioid Naïve:** Patients who do not meet the above definition of opioid tolerant, and who have not taken opioid doses at least as much as those listed above for 1 week or longer.
- **Oral Morphine Equivalent (OME):** See MME
- **Milligram Morphine Equivalent (MME):** Value assigned to opioids to represent their relative potencies.
- **Morphine Equivalent Daily Dose (MEDD):** A calculation of the amount of all opioids consumedby a patient daily using MME to calculate totals.
- **Risk Evaluation and Mitigation Strategies (REMS**): Drug safety program that the U.S. Food and Drug Administration can require for certain medications with serious safety concerns to helpensure the benefits for the medication outweigh its risks. REMS are designed to reinforce medication use behaviors and actions that support the safe use of that medication.
  - The ***Opioid Analgesic REMS Patient Counseling Guide*** ***https://opioidanalgesicrems.com/RpcUI/rems/pdf/resources/patient_counseling_document.pdf*** and the specific drug's ***Medication Guide*** has been created to assist providers with:
    - counseling patients and/or their caregivers of risks of opioid medications
    - on the safe use, proper storage and disposal of these products
- **Opioid Risk Tool (ORT) Assessment**: Assesses the risk of addiction to prescription opioidmedication. Low Risk: 0-3, Moderate Risk: 4-7, High Risk 8+.

This guideline will set the standard for pain management in the acute care setting at Spectrum Health. A discussion between providers who are outside of these guidelines may be necessary toascertain the rationale for either over or under prescribing when compared to this guideline.

General Guideline for pain management in the hospital and at hospital discharge:
This guideline is intended to direct safe opioid prescribing based on established best practices by specialty and by procedure or condition. The goal is to individualize the patient's plan and limit excessive prescription opioids, while addressing the patient's pain and overall function.
It is intended to address the most common procedures/conditions in any given specialty. At any time, any healthcare team member can raise a concern with the prescribing provider if there is a possible patient safety concern.

It is not meant to be absolute – realizing that some patients will be opioid tolerant, some patients will have other co-morbid risks to opioids and some patients may not be candidates for opioids. It is meant to be flexible and improve communication between providers and patient about the risks and benefits of their treatment plan. Some providers also may care for a population that falls outside of these guidelines as they have a more complex patient population.

No punitive measures should be taken against a prescriber for not following these guidelines. A discussion with that provider about their practice and the potential need to vary would be appropriate. Providers should not be compared to one another; they should be compared to this guideline as a standard.

Long-acting opioids should be reserved for use in opioid-tolerant patients.

Fentanyl products for buccal, lozenge, and transdermal administration (Abstral®, Actiq®, Duragesic®, Fentora®, Lazanda®, Onsolis®, or Subsys®) should only be prescribed for opioid-tolerant patients.

Use caution when prescribing both opioids and benzodiazepines for a patient. Avoid benzodiazepines if possible due to increased likelihood for opioid related sedation and respiratory depression.

Order sets should be utilized to guide pain management when available.

Specialty guidelines may include hospital as well as post-hospital pain management recommendations.

Prescribers should follow all legal requirements for prescribing opioids including:

- Discussion and completion of the start talking form
- Prescription drug monitoring program (PDMP) review and documentation
- No more than a 7-day supply of opioids for acute pain episodes
- See Prescribing of Controlled Substances for details

MEDD should be closely monitored and extra precautions should be taken when greater than or equal to 50 MME/day is being utilized by the patient. For opioid naïve patients, patients in general should be prescribed less than 50 MME daily.

Safe Opioid prescribing among opioid tolerant patients should also be closely monitored and should not exceed 90 MME without consideration of a referral to a higher level of care, weaning their opioids, or adding adjunctive non opioid pain medications or interventions to address their needs.

Naloxone should be offered to and patient with any opioid pain prescription regardless of MME. However, special attention should be pain to those being prescribed 90 MME daily or greater, or those with 50 MME and a benzodiazepine prescription, as they are at higher risk of accidental overdose.

If prescribing greater than 90 MME daily, or greater than or equal to 50 MME with benzodiazepines consider co-prescribing naloxone and ensure there is early follow-up with physician. Naloxone Distribution for Opiate Overdose Prevention

Equianalgesic Dosing can be used for appropriate opioid conversion.
Equianalgesic dosing chart recommended by CAPC (Center to Advance Palliative Care).

Table 1. Equianalgesic Doses of Opioids

Drug	Oral Route	Parenteral Route	PO:IV
Morphine sulfate	30 mg	10 mg	3:1
Oxycodone	20 mg	N/A	N/A
Hydrocodone	30 mg	N/A	N/A
Hydromorphone	7.5 mg	1.5 mg	5:1
Oxymorphone	10 mg	1 mg	10:1
Oxymorphone ER	10 mg	N/A	N/A
Fentanyl	--	0.1 mg (100 mcg)	N/A

Providers should calculate MME when prescribing opioids to patients. Consider use of the CDC application https://www.cdc.gov/drugoverdose/prescribing/app.html

Acute Care Hospitalist

The use of opiates falls in five scenarios for those practicing Acute Care Medicine. Evidence based guidelines are discussed below in this scenario. The guidelines described are not mutually exclusive in each scenario.

Acute Pain Management:

1. Consider non-pharmacological therapy and non-opiate analgesics as first-line treatment.
2. When opiates are preferred use them in addition to non-pharmacologic and non-opiate therapy.
3. When an opiate is chosen, prefer oral route with lowest effective dose of a short acting opiate and for a shortest duration.
4. When you are converting from one opiate to another remember that the cross tolerance is not the same; therefore, reduce the MME dose of the newer opiate by 30-50% to account for incomplete cross tolerance.
5. Do not prescribe extended release (ER) and long acting (LA) formulations of opiates in opioid- naïve patients and pregnant patients.
6. Avoid co-prescribing opiates with benzodiazepines and other central nervous system (CNS) depressants (e.g. skeletal muscle relaxants)
7. Always co-prescribe naloxone
8. Morphine is contraindicated in renal failure and should be avoided if GFR less than 50. Opioid doses should be reduced in liver failure.

Cancer Pain Management:

1. If managing acute or chronic pain, follow the acute and chronic non-cancer pain (CNCP) guidelines.

2. Consider collaboration with palliative care.
3. Offer hospice info visit if there is an end-of-life situation.

Chronic Non-Cancer Pain: (Example: sickle cell disease)

1. Continue home doses if there is no respiratory depression and there are no interactions.
2. Identify risk factors for respiratory distress – Use Michigan Opioid Safety Score (MOSS), reduce or stop the opiates if the scores are high.
3. Use opioid risk tool to risk stratify patients for abuse potential.
4. Quantify total opiate dose in MME and at greater than 50 MME reassess and at greater than 90 MME avoid any further escalations in opiate therapy.

Managing acute pain in patients with opiate use disorder on opiate agonist therapy (OAT):

1. If pain is acute and there is an indication do not deprive them of appropriate pain management. Manage just as you manage acute pain in a hospitalized patient.
2. Understand that these patients are more tolerant to opiates and if there is an indication, they may require a higher dose of opiate therapy.
3. Continue the opiate agonist therapy (buprenorphine or methadone) at the doses they take at home while you manage their acute pain.
4. Liaise with their OAT prescriber at the time of discharge.
5. See Management of Pain for Patients with Opioid Use Disorder Therapy for details.
6. You will not worsen a person's opioid use disorder by treating their acute pain.

At Discharge:

1. Michigan Automated Prescription System (MAPS) review for any opiate prescription of greater than 3 days.
2. Before an opioid is prescribed to any patient, a health professional must provide information to the patient regarding danger, disposal, etc. and obtain the patient signature on the Opioid Start Talking form.
3. Co-prescribe naloxone for appropriate patients.
4. Avoid prescribing opioids in patients with alcohol use disorder or patients who have chronic use of benzodiazepines.
5. Consider tapering opioids in motivated patients with diagnosed Opioid Use Disorder (OUD).
6. If someone is on greater than 90 MME for chronic non-cancer pain, mention in the discharge summary for the prescriber of chronic opiates to start weaning the opiates.

References:

- Guidelines for Prescribing Opiates for Chronic Pain; www.cdc.gov/drugoverdose/prescribing/guideline.html
- New Persistent Opioid Use After Minor and Major Surgical Procedures in US Adults: Brummet et.at *JAMA Surg*. 2017;152(6):e170504
- Incidence of and Risk Factors for Chronic Opioid Use Among Opioid-Naive Patients in the Postoperative Period:Eric C.Sun et al *JAMA Intern Med*. 2016;176(9):1286-1293
- Acute Pain Management for Patients Receiving Maintenance Methadone or Buprenorphine Therapy; Daniel P. Alford et al. *Ann Intern Med.* 2006;144:127-134.
- New consensus statement targets inpatient opioid prescribing; Maria G Tanzi;J Hosp Med. 2018;13(4):263–71

- Opioid Prescribing: A Systematic Review and Critical Appraisal of Guidelines for Chronic Pain; Teryl K. Nuckols et.al;*Ann Intern Med.* 2014;160:38-47.
- The Joint Commission Sentinel Event Alert. August 8, 2012;49. www.jointcommission.org.
- Improving Pain Management for Hospitalized Medical Patients; Society Of Hospital Medicine Implementation Guide
- Kent County Health Department. (2018). Opiate Surveillance Report. Kent County: MI
- Savage SR et al. *J Pain Symptom Manage.* 2003; 26(1):655-667; Jamison RN et al. *Clin Neuropsychol.* 2013; 27(1):60-80.
- National Pharmaceutical Council, Section IV: Management of Acute Pain and Chronic Non- Cancer Pain

Emergency Department

These guidelines provide a general approach in the prescribing of opioids and other controlled substances in the emergency setting. They are not intended to replace clinical judgment, which should always be utilized to provide the most appropriate care to meet the unique needs of each individual patient.

1. Prior to prescribing opioids, consider if non-opioids or non-pharmacologic therapies are adequate for pain control.
2. Prior to prescribing opioids, consider a patient's risk of addiction, abuse, or diversion.
3. Perform screening for OUD.
4. Whenever indicated, review the patient's history of controlled substance prescriptions using the Michigan Automated Prescription System (MAPS). This can be used to determine whether the patient is receiving opioid dosages or dangerous combinations that put him or her at high risk for overdose and can be used to identify prescribing patterns that are concerning for diversion. Michigan state law requires prescribers to review the MAPS report before prescribing any controlled substance for greater than a three-day supply.
5. When prescribing opioid therapy, use immediate-release opioids rather than extended-release or long-acting opioids.
6. When prescribing opioids, determine the lowest effective dose and the shortest duration of time necessary to treat the condition. Prescriptions for three days or less will most often be sufficient. Under Michigan law, a provider shall not prescribe more than a 7-day supply when treating acute pain.
7. Avoid prescribing opioid pain medication concurrently with benzodiazepines or other strong sedatives.
8. Avoid using intravenous or intramuscular opioid injections for patients with exacerbations of chronic pain.
9. Avoid prescribing controlled substances for patients who have run out of previously prescribed medication or have had previous prescriptions lost or stolen. A single dedicated provider, such as a primary care provider or pain specialist, should provide all opioids to treat chronic pain.
10. Communicate with a patient's dedicated provider whenever necessary (and possible) to best honor existing patient-physician pain contracts, to ensure realistic expectations about the opioid use practices in the emergency department, and discuss if an outpatient plan exists that would allow safe variance from typical emergency provider opioid prescribing practice.
11. Identify patients at risk of opioid addiction or overdose and offer appropriate resources, such as naloxone kits and/or referral to appropriate psychiatric, substance abuse, or pain management specialists in the patient's best interests, and as required by law.
12. When prescribing opioids, offer a Naloxone kit and education.

Surgical Services

- There is strong evidence that **multimodal pain management strategies and guidelines** can be effective in improving patient outcomes and reducing the use of opioids
- Education of our patients is important. You can begin by asking your patient a few questions. Some suggestions are below, or you can develop your own.
    - "We typically prescribe 10 oxycodone after a lap chole and find that most patients only need about 4 pills. Is that ok with you?"
    - "Opioids do have the risk of leading to addiction in some patients. Is this something you're concerned about or have you ever had issues with addiction in the past?"
    - "It is important that you dispose of leftover opioids when you're done, it is dangerous to have them in your house. Do you know where to dispose of them?
    - "Tylenol and Motrin are all that some patients need to control their pain after surgery. Are you able to take those medications?"
- Use multimodal pain management strategies with patient education, establishing expectations of pain level and pain relief with acetaminophen, ibuprofen, then opioids if needed.
    - Ibuprofen 200mg with acetaminophen 500mg Q4 hours prn for pain, increasing to ibuprofen 400mg and acetaminophen 1000mg Q4 hours prn pain if needed.
        - Note: maximum recommended total daily dose of acetaminophen is 4000 mg
    - For breakthrough pain: hydrocodone/acetaminophen (Norco) 5/325 mg one Q4 to 6 hours prn ***OR*** oxycodone 5 mg one Q4 to 6 hours prn breakthrough pain.

Table 2. Pill totals for prescriptions

Procedure	**Hydrocodone/acetaminophen (Norco) 5mg/325 mg tablets** **Codeine/acetaminophen (Tylenol #3) 30 mg tablets** **Tramadol (Ultram) 50 mg tablets**	**Oxycodone 5 mg Tablets**
• Laparoscopic cholecystectomy • Laparoscopic appendectomy • Inguinal/femoral hernia repair (open/laparoscopic) • Lumpectomy +/- sentinel lymph node biopsy • Breast biopsy or sentinel lymph node biopsy	15 tablets	10 tablets
Hysterectomy • Vaginal • Laparoscopic & robotic • Abdominal	 20 tablets 30 tablets 40 tablets	 15 tablets 20 tablets 25 tablets
• Wide local excision +/- sentinel lymph node biopsy • Simple mastectomy +/- sentinel lymph node biopsy	30 tablets	20 tablets
Laparoscopic colectomy	35 tablets	25 tablets
• Open incisional hernia repair • Open colectomy	40 tablets	25 tablets

*These guidelines are based on suggestions made at the Michigan Surgical Quality Collaborative, The OpioidPrescribing Engagement Network (michigan-open.org/), and multiple articles in peer-reviewed journals. https://michigan-open.org/wp-content/uploads/2019/02/Surgery-Best-Practices.pdf

Orthopaedic Joint Replacement

- Incorporate a patient education program about appropriate opioid use, alternative pain management strategies and opioid weaning strategies and methods with a goal of weaning off of opioids 5-7 days

after surgery.

- Prescribe opioids for less than or equal to a 7-day supply.
- Prescribe only one opioid medication at a time and prescribe less than 50 OME per day for opioid-naïve patients.
    - Consider avoiding medications which are pro-drugs of the active agent (examples include codeine, tramadol).
    - Avoid “extended release” or “long-acting” formulations as these medications are not appropriate for acute perioperative pain management (examples include OxyContin® or MSContin®).
- Scheduled, round-the-clock acetaminophen should be prescribed unless using acetaminophen-containing opioid formulations (i.e. hydrocodone/acetaminophen, Vicodin®, Percocet®, etc.).
    - Consider avoiding combination medications that include acetaminophen.
    - Limit acetaminophen dose to 3,000 - 4,000 mg per 24 hours in patients with normal liver function.
- Avoid prescribing concurrent benzodiazepines.
    - High risk of overdose with combined opioid and benzodiazepine therapy.
    - If patient is on benzodiazepines preoperatively, do not acutely discontinue given the high morbidity with benzodiazepine withdrawal.
- Non-steroidal anti-inflammatory drug (NSAID) therapy can be beneficial for post-operative pain management, however the potential effects of gastric irritation, bleeding and interactions with venothromboembolic (VTE) prophylaxis (potentially increasing VTE risk) should be considered.

Procedure	**Discharge pain management**	**Example**

Total Hip Arthroplasty (THA) script	**opioid dose**	**acetaminophen dose**	**pill quantity**	**sig. (PRN)**	**OME/day**	**Acetaminophen/ day**	**total OME**
Total Hip Replacement	Limit initial scripts to 225 OME or less. A 30 tablet prescription is sufficient in the majority of cases.						
oxycodone	5mg	--	30	1 tab q4 hrs.	45	--	225
hydromorphone	2mg	--	30	1 tab q4 hrs.	48	--	240
hydrocodone/ acetaminophen (Vicodin, Norco)	5mg	325 mg	30	1-2 tabs q6 hrs.	20-40	2,600 mg	150
tramadol	50mg	--	30	1-2 tabs q6 hrs.	20-40	--	150

Total Knee Arthroplasty (TKA) script	**opioid dose**	**acetaminophen dose**	**number of pills**	**sig. (PRN)**	**OME/ day**	**Acetaminophen/ day**	**total OME**
Total Knee Replacement	Limit initial script to 300 OME or less. A 40-50 tablet prescription is sufficient in the majority of cases.						
oxycodone	5mg	--	40	1 tab q4 hrs.	45	--	300
hydromorphone	2mg	--	40	1 tab q4 hrs.	48	--	320
hydrocodone/ acetaminophen (Vicodin, Norco)	5mg	325 mg	50	1-2 tabs q6 hrs.	20-40	2,600 mg	250
tramadol	50mg	--	50	1-2 tabs q6 hrs.	20-40	--	250

*Adapted from the Michigan Arthroplasty Registry Collaborative Quality Initiative (MARCQI) *Evidence Based OpioidPrescribing Guidelines for Elective Primary Total Hip and Knee Arthroplasty in Opioid Naïve Patients.*

References:

1. Goesling J, Moser SE, Zaidi B, et al. Trends and Predictors of Opioid Use Following Total Knee and Total Hip Arthroplasty. *Pain*. 2016;157(6):1259-1265.
2. Hill M V., Mcmahon ML, Stucke RS, Barth RJ. Wide variation and excessive dosage of opioid prescriptions for common general surgical procedures. *Ann Surg*. 2017;265(4):709-714.

doi:10.1097/SLA.0000000000001993.
3. Lee JS, Howard RA, Klueh MP, et al. The Impact of Education and Prescribing Guidelines on Opioid Prescribing for Breast and Melanoma Procedures. *Ann Surg Oncol*. 2018:1-8. doi:10.1245/s10434-018-6772-3.
4. Lee JS, Hu HM, Brummett CM, et al. Postoperative opioid prescribing and the pain scores on hospital consumer assessment of healthcare providers and systems survey. *JAMA - J Am Med Assoc*. 2017;317(19):2013-2015.
5. Hannon CP, Calkins TE, Li J, et al. *Large Opioid Prescriptions Are Unnecessary After Total Joint Arthroplasty: A Randomized Controlled Trial*. Abstract presented at AAHKS Annual Meeting, November 3, 2018.
6. Login at: https://michigan.pmpaware.net/login
7. Available at: https://www.michigan.gov/documents/mdhhs/MDHHS-5730_621248_7.dot
8. Michigan Government FAQ document:https://www.michigan.gov/documents/lara/LARA_DHHS_Opioid_Laws_FAQ_05-02-2018_622175_7.pdf
9. Available at: https://www.regulations.gov/document?D=FDA-2011-N-0021-0001. FDA, 76 FR 2691 – 2697, Jan 14, 2011. Accessed November 24, 2018.
10. McNeil Consumer Healthcare. TYLENOL Dosage for Adults. Available at https://www.tylenol.com/safety-dosing/usage/dosage-for-adults. 2016; Accessed: November 21, 2018.

Orthopaedic Trauma

Operative Fractures (Inpatient Stay): Ex, Proximal Femur, Acetabulum/Pelvis, Pilons, Plateaus etc.

Status	Opioid	Non-Opioid
Inpatient	Oxycodone 5mg one tablet PO Q 4 hours PRN or Oxycodone 5mg two tablets PO Q 6 hours PRN for moderate pain Hydromorphone 1mg IV Q 3 hours PRN for severe breakthrough pain	Ketorolac 15mg IV Q 6 hours x 5 doses, followed by ibuprofen 600 mg PO Q 8 hours Gabapentin 100mg one tab PO TID Scheduled acetaminophen 1000mg PO Q 8 hours
Post Discharge		
Week 1 (at discharge)	Oxycodone 5mg one tablet PO q 4 hours PRN Dispense - #42 (1 time Rx, No Refills)	Ibuprofen 600mg PO Q 8 hours x 7 days (Rx Given) Gabapentin 100mg one tablet PO TID x 7days (Rx given) Scheduled acetaminophen 1000mg PO Q8 hours) x 7 days
Refill Plan:	Hydrocodone/acetaminophen 5mg/325mg **or** Tramadol 50mg **(Only if necessary – 3 Rx max)**	NSAIDs PRN as directed Gabapentin if necessary (up to 1800mg/day)
Week 2	1 tablet PO Q 4 hours PRN Dispense - #42	Scheduled acetaminophen 500mg PO Q12 hours (can increase as combined opioid analgesic decreases)
Week 3	1 tablet PO Q6 hours PRN Dispense - #28	Scheduled acetaminophen 500mg PO Q12 hours (can increase as combined opioid analgesic decreases)
Week 4	1 tablet PO Q8 hours PRN Dispense - #21	Scheduled acetaminophen 1000mg PO Q8 hours (can increase as combined opioid analgesic decreases)

Weeks 5+	Narcotics completed	NSAIDs PRN as directed acetaminophen PRN as directed Gabapentin if necessary (then wean)

Reference: 1) Hsu JR, Mir H, Wally MK, Seymour RB. Clinical Practice Guidelines for Pain Managementin Acute Musculoskeletal Injury. J Orthop Trauma. 2019

Minor Operative Fractures (Outpatient): Ex. Simple Ankles, Clavicles

Status	Opioid	Non-Opioid
Post Discharge	Hydrocodone/acetaminophen 5mg/325mg **or** Tramadol 50mg One tab PO Q 6 hours PRN Dispense - #28 (1 time Rx, No Refills)	Ibuprofen 600mg PO Q 8 hours x 7 days (Rx Given) Gabapentin 100mg one tablet PO TID x 7 days (Rx given) Scheduled acetaminophen 1000mg PO Q12 hours (can increase as combined opioid analgesic decreases)
Refill plan:	Hydrocodone/acetaminophen 5mg/325 mg **or** Tramadol 50mg (Only if necessary), **2 Rx max**	NSAIDs PRN as directed Gabapentin if necessary (up to 1800mg/day)
Week 2	1 tablet PO Q 8 hours PRN Dispense - #21	Scheduled acetaminophen 500mg PO Q12 hours (can increase as combined opioid analgesic decreases)
Week 3	1 tablet PO q12 hours PRN Dispense #14	Scheduled acetaminophen 500mg PO Q12 hours (can increase as combined opioid analgesic decreases)
Week 4	No further narcotics	NSAIDs PRN as directed acetaminophen PRN as directed

Non-operative Fractures:

Injury Category	Opioid	Non-Opioid
Minor Injury: (Ex: small bones, distal radius, Foot fractures)	Tramadol 50mg (Only If necessary - 2 Rx Max) 1 tablet PO q 6 hours PRN Dispense - #20, then #10	NSAIDs PRN as directed Scheduled acetaminophen 1000mg PO Q8 hours, then PRN as directed
Major injury: (Ex: Large bones, humerus, tibia)	Hydrocodone/acetaminophen 5 mg/325mg **or** Tramadol 50mg (Only If Necessary – **2 Rx Max**) 1 tablet PO q 6 hours PRN Dispense – #20, then #10	NSAIDs PRN as directed Scheduled Acetaminophen 1000mg PO Q12 hours, then PRN as directed

Orthopaedic Foot and Ankle

Procedure	Opioid Naive	Opioid Tolerant/High risk for pain
Tier 1 procedures: • Soft tissue mass • Neuroma	Hydrocodone/acetaminophen (Norco) 5mg/325mg Quantity: #15 1 to 2 tablets PO q6h PRN	Hydrocodone/acetaminophen (Norco) 5mg/325 mg Quantity: #20 1 to 2 tablets PO q 6h PRN

• simple hardware removal • simple soft tissue procedures • simple single hammertoe	pain (40 OME/day)	pain
Tier 2 procedures: • Bunion (other than lapidus) • multiple hammertoes • metatarsal fractures • fibular fracture • complex hardware removal • tarsal tunnel release	Hydrocodone/acetaminophen (Norco) 7.5mg/325mg Quantity: #25 1 to 2 tablets PO q6h PRN pain. (60 OME/day).	Hydrocodone/acetaminophen (Norco) 10mg/325mg Quantity: #40 1 to 2 tablets PO q 6h PRN pain Not to exceed 8 tablets/day (80 OME/day)
Tier 3 procedures: • Haglunds resection with Achilles reconstruction • multiple procedures • reconstructions (forefoot or rearfoot) • calcaneal fractures • most rearfoot bony work • midfoot fusions (including lapidus)	Oxycodone 5mg Quantity: #40 1 to 2 tablets PO q4h PRN pain (90 OME/day) Acetaminophen 650mg every 6 hours	Oxycodone 5mg Quantity: #60 1 to 2 tablet PO q4h prn pain (90 OME/day) Acetaminophen 650mg every 6 hours.

Orthopaedic Hand and Upper Extremity

General Recommendations:

- For soft tissue procedures consider only using acetaminophen and/or ibuprofen (good clinical evidence)
- Use ibuprofen and/or acetaminophen for breakthrough pain
- Use regional anesthesia
- Use local anesthetic at end of case
- Inform patients about use of multimodal approach (elevation, ice, NSAID's)
- For patients greater than 60 years old reduce amount of recommended opioids by 20%
- Instruct patients to keep the hand/limb elevated above the heart at all times and unless contraindicated perform full fist ROM 250 x a day until the follow up appointment
- Instruct patient to use an ice pack in the axilla and/or antecubital area continuously for the first 5 days post-op and inform the patients that it helps reduce the amount of pain pills needed

Procedure	**Discharge pain management**
Amputation hand Corrective osteotomy radius	Hydrocodone/acetaminophen (Norco®) 5mg/325mg Quantity: 20 1 to 2 tablets PO q 4 to 6 hours PRN
ORIF radius Nerve Repair Elbow arthroplasty	Hydrocodone/acetaminophen (Norco®) 5mg/325mg Quantity: 15 1 to 2 tablets PO q 4 to 6 hours PRN

LRTI Wrist arthroplasty Ulnar shortening PRC Tendon transfers Lateral epicondylectomy Intercarpal fusion Wrist fusion	Hydrocodone/acetaminophen (Norco®) 5mg/325mg Quantity: 12 1 to 2 tablets PO q 4 to 6 hours PRN
Cubital tunnel Implant arthroplasty hand ORIF/CRPP hand fracture Amputation finger	Hydrocodone/acetaminophen (Norco®) 5mg/325mg Quantity: 10 1 to 2 tablets PO q 4 to 6 hours PRN
Depuy	Hydrocodone/acetaminophen (Norco®) 5mg/325mg Quantity: 8 1 to 2 tablets PO q 4 to 6 hours PRN
Wrist scope Tenolysis Tendon repair hand/finger Ganglion excision wrist	Hydrocodone/acetaminophen (Norco®) 5mg/325mg Quantity: 5 1 to 2 tablets PO q 4 to 6 hours PRN
DeQuervain's Finger Mass	Hydrocodone/acetaminophen (Norco®) 5mg/325mg Quantity: 4 1 to 2 tablets PO q 4 to 6 hours PRN
CTR Ganglion excision finger	Hydrocodone/acetaminophen (Norco®) 5mg/325mg Quantity: 3 1 to 2 tablets PO q 4 to 6 hours PRN
Trigger finger/thumb	Hydrocodone/acetaminophen (Norco®) 5mg/325mg Quantity: 0

If more than 1 procedure performed, prescribe the higher quantity of pills

Postpartum/OB Procedures

Purpose: To assist OB providers for pain management in women who are postpartum or postop both while inpatient and upon discharge in order to reduce opioid dependence and addiction.

Recommendations:

Procedure	Inpatient pain management	Discharge pain management
Spontaneous vaginal delivery	--Epidural, inhaled nitrous oxide (NO) in labor with butorphanol (Stadol) as adjunct only --NSAIDs, acetaminophen, ice pack, perineal benzocaine spray (1 spray up to 4 times daily as needed) --Opioids only upon request (1 tab per request and max of 3 tabs)	--NSAIDs, Acetaminophen, ice pack, perineal benzocaine spray (1 spray up to 4 times daily as needed) --No opioid prescription
Operative vaginal deliveries or deliveries with episiotomy; 3rd/4th degree repairs	--NSAIDs, acetaminophen, ice pack, perineal benzocaine spray (1 spray up to 4 times daily as needed) --Opioids only upon request (2 tabs per request and max of 6 tabs)	--NSAIDs, acetaminophen, ice pack, perineal benzocaine spray (1 spray up to 4 times daily as needed) --No opioid prescription
Cesarean section Operating Room Skin closure PACU	--Duramorph intrathecal or epidural (w/catheter placed) with IV ketorolac (Toradol) **No narcotics should be administered for 12 hours after a neuraxial opioid has been administered unless discussed with anesthesia** --TAPS block with PCA (no catheter)	--NSAIDS, acetaminophen --Rx (after MAPS lookup): hydrodocone/acetaminophen (Norco) 5/325 (max of 15-20 tabs) or Oxycodone 5 (max of 15-20 tabs)

Postpartum	--Lidocaine injection (10 mL) at skin incision after closure --IV ketorolac (Toradol) (30mg) in recovery --PO NSAIDs, acetaminophen, ice pack -- oxycodone 5 mg (1-2 tabs q 4h PRN breakthrough pain)	
Obstetric D&C/D&E/cerclage	For OR case: Propofol sedation or Spinal anesthesia --IV ketorolac (Toradol) (30mg) in recovery --PO NSAIDs, acetaminophen, ice pack, abd binder --Hydrocodone/acetaminophen (Norco) 5/325 vs oxycodone 5 mg1-2 tabs q 4h PRN breakthrough pain)	--NSAIDS, acetaminophen --Rx (after MAPS lookup): --Hydrodocone/acetaminophen (Norco) 5/325 (max of 10 tabs) or oxycodone 5 (max of 10 tabs)
Manual placental removal	Same as SVD	Same as SVD
PUBS	--Lidocaine injection (10 mL)	--Acetaminophen --No opioid prescription

*Abbreviations: Duramorph (preservative-free morphine), NO (nitrous oxide), NSAIDs (nonsteroidal anti-inflammatory drugs), PACU (Post-anesthesia care unit), PCA (patient controlled analgesia), TAPS (transversus abdominis plane block)

--Be mindful of total acetaminophen intake. In patients with normal liver function, 4g/24 hrs is max dose.
--These recommendations are in keeping with new legislative mandates from the State of Michigan.

Disclaimer: This information is designed to assist the provider in the clinical management of women who are in the late preterm period and as educational resource. The use of this information is voluntary. This information should not be considered as inclusive of all proper treatments or methods of care or as a statement of the standard of care but instead represent guidelines for management. It is not intended to substitute for the independent professional judgement of treating clinician. Variations in practice may be warranted when, in the reasonable judgement of the treating clinician, such course of action in indicated by the condition of the patient, limitations of available resources, regional experience or advances in knowledge or technology.

References:
MSQC
ACOG Practice Bulletin 177: Obstetric Analgesia and Anesthesia, April 2017. ACOG Committee Opinion 742: Postpartum Pain Management, July 2018.
Bateman BT et al. Obstet Gynecol 2017;130:29-35

Pathway Information

OWNER: Dr. Colleen Lane

EXPERT IMPROVEMENT TEAM (EIT): Pain Management and Opioid Prescribing Steering Committee

CLINICAL PRACTICE COUNCIL (CPC): Clinical Excellence Council

CPC APPROVAL DATE: March 14, 2023

References

Center for Disease Control and Prevention. (2017). Commonly used terms. https://www.cdc.gov/drugoverdose/opioids/terms.html

Dowell D, Haegerich TM, Chou R. (2016). CDC Guideline for Prescribing Opioids for Chronic Pain — United States. MMWR Recomm Rep 2016;65(No. RR-1):1–49. DOI: http://dx.doi.org/10.15585/mmwr.rr6501e1.

Institute of Medicine (U.S.). (2011). *Relieving pain in America: A blueprint for transforming prevention, care, education, and research*. Washington, D.C: National Academies Press.

REMS Program. http://www.opioidanalgesicrems.com/https://www.accessdata.fda.gov/drugsatfda_docs/rems/Opioid_analgesic_2018_09_18_FDA_Blueprint.pdf

U.S. Food & Drug Administration. (2018). Opioid medications. https://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm337066.htm