UNIVERSITY of MARYLAND MEDICAL CENTER

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## ATTESTATION FOR REVIEW OF PAIN MANAGEMENT EDUCATION

I _____ have reviewed the educational material
*Print name*

provided as part of initial credentialing/recredentialing in order to meet requirements of the University of Maryland Medical Center.

_____ _____
**Signature** **Date**

Please return to Medical Staff Services using contact information given above with application. Thank you.

# PAIN AND OPIOD EDUCATION DOCUMENT

UNIVERSITY of MARYLAND MEDICAL CENTER

## Pain Management and Opioid Stewardship at UMMC

## Objectives of this program

1. Compare classifications of pain
2. Identify elements of screening and assessment
3. Define analgesic principles and management
4. Identify aspects and management of respiratory depression and sedation
5. Explain opioid overdose and prevention
6. Apply opioid stewardship to practice

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## Objective #2 Assessment/Screening

- Screen for pain upon admission/visit, when pain is suspected and with painful procedures, or relevant to outpatient visit
- Obtain a comprehensive pain assessment if pain present
  - UMMC suggests "OPQRSTU"
    - Onset,
    - Provoking factors
    - Quality
    - Region/radiation/relief
    - Severity*/side effects/associated symptoms {such as sleep interference, interference with function, depression, anxiety}
    - Timing
    - U = you (what pain means to the patient)

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## Establish Pain Management Treatment Goals

- An optimal goal:
  - is individualized
  - is realistic (e.g. not all pain can be relieved)
  - is mutually established with the patient/family
  - includes patient function (pain scores alone are insufficient)
- An optimal goal promotes:
  - rehabilitation
  - maximal pain relief with minimal side effects and patient/family burden (e.g., streamlined, multi-modal plan)

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## If a Patient Screens Positive for a Substance Use Disorder

- Offer treatment referrals to patients with substance use disorders and if patient is interested, facilitate a brief intervention and treatment
- Inpatient/ED resources (locations and times services are available vary)
  - Peer Recovery Counselors (some UMMC ED)
  - Substance Abuse Consult Team
  - Outpatient resources (also use when inpatient resources are unavailable)
    - Controlled Substance policy
    - https://bha.health.maryland.gov/Pages/Index.aspx
    - http://www.bhsbaltimore.org/for-individuals-and-families/crisis-services/
    - http://maryland.beaconhealthoptions.com/med_hc_professionals.html (for Maryland Medicaid patients)
- Use opioids with caution in patients with current/past history of substance use disorder

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## Objective # 3 Analgesic Principles & Management

Analgesic medications can be provided in a *"step-wise"** fashion, from least to most potent related to the degree of pain and the patient's response to treatment and side effects.

**Step 3 Severe Pain** *,**
-High dose oxycodone
-Hydromorphone
-Morphine
-Methadone

**Step 2:Moderate Pain***,**
-Low dose oxycodone
-Hydrocodone
-Tramadol
-Low Morphine

**Step 1:Mild Pain**
-Acetaminophen
-NSAIDS
-ASA

*adjuvant analgesics can be used in any step;
**non-opioid analgesics can be added to opioids in Steps 2 and 3

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## Multimodal Analgesia

- Consider the following first line treatments:
  - non-pharmacologic interventions (PT, Integrative medicine)
  - non-opioid medications
- Use multimodal analgesia
  - May reduce the total amount of opioid required
  - Ex.: for severe pain use an NSAID, an opioid and heat
- Consider providing three individual orders (one each for mild, moderate, and severe pain) for inpatients
  - If 2 drugs are ordered for the same pain level, ***you must provide an EXPLICIT, UNIQUE reason for when to give each med*** (e.g., use IV route if unable to take po or use X drug if Y drug is ineffective)




## Analgesic selection & dosing principles

Opioid dosing

- The starting dose is intended to be a safe level at which to initiate therapy
  - Give opioids often enough to keep pain controlled
  - More severe pain generally warrants a higher starting dose than moderate pain
  - Use the least invasive route
- Reassessment and titration to effect are essential
  - Titrate single agent opioids up instead of adding another opioid
- Dose and interval may be affected by:
  - diminished renal or hepatic function
  - previous opioid history and tolerance
  - genetic differences





## Opioid Naïve Starting Doses

***Severe pain…Score 7-10/10 = PAIN CRISIS!!***

| | Oral | IV |
|---|---|---|
| Oxycodone | 10 mg | — |
| Morphine | 15 mg | 2-5 mg |
| Hydromorphone | 4 mg | 0.5-1 mg |

***Acute moderate pain…Score 4-6/10***
Consider opioid analgesics
Oxycodone 5 mg
Hydrocodone (Vicodin,Lortab) 1 tab
Morphine 5-10 mg

***Acute mild pain…Score 1-3/10***
Acetaminophen and NSAIDS may be effective. Oral or IV ketorolac can also be considered for < 5 days.





Safety Point

## Opioid Equivalencies

- ***IV doses are lower than PO doses***
- ***IV to PO conversion ratios differ among opioids!***


Examples:

**morphine 1 mg IV = morphine 3 mg PO**

**hydromorphone* 1 mg IV = hydromorphone 5 mg PO**





## Converting - step by step

- Determine current 24-hour total opioid use and set up the equianalgesic conversion equation* for the chosen agent

| Equianalgesic values from the table | | Patient 24-hour opioid doses | | Solve for *X* |
|---|---|---|---|---|
| Value of current opioid / Value of new opioid | = | Total 24-hr dose of current opioid / *X* | = | Calculated 24-hr equianalgesic dose of new opioid |

- To account for incomplete cross-tolerance when switching between opioids, reduce the calculated 24-hour dose by 50% = total 24-hour starting dose**
- Divide the 24-hour starting dose by number of doses per day (typically 6/day for q4h dosing) = scheduled dose
- Then, titrate to effect

**USE THE UMMC CONVERSION TABLE IN PAIN POLICY!!!!*
***may be eliminated when switching between routes for the same opioid*





## Converting to a Long-acting Opioid

**Indications for use:**

- Multiple doses of shorter-acting opioids with frequent uncontrolled pain episodes
- Persistent malignant pain

## Converting to a long-acting opioid

- Add up the total number of mg of short acting opioid used in 24 hours
- change to a long-acting preparation with appropriate intervals.

**Example:**

Oxycodone 20 mg PO every 4 hours (20mg x 6 doses = 120 mg)

Administer this as a long-acting preparation at 120 mg/day which in this case would be Oxycontin 60 mg PO q12 hours.

**Another Example:**

Morphine 25 mg PO every 3 hours (25 mg x 8 doses = 200 mg/day total)

Convert to morphine (MS Contin) 60 mg PO every 8 hours. (The ideal dose would have been 200 mg into 3 doses but the MS Contin is available conveniently in 15, 30, 60, 90 mg doses and above).

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## Long Acting Special Consideration- Methadone

- **Methadone** has considerable analgesic and side effect variability
  - Provides 6 -12hrs of analgesia
  - Has a long ½ life (15-60 hrs), so side effects (e.g., sedation, effect on RR)
  - Has the potential for multiple drug interactions
- ***Consider contacting the Pain Service, Palliative Medicine or Substance Abuse Teams, if ordering methadone***
- **Outpatient** methadone prescriptions
  - Must say "for pain management"
  - Can't be written for methadone maintenance



## Calculating Rescue Doses

- An effective rescue dose* is typically 10-20% of the total 24 hour opioid dose
  - Order rescue dose of immediate-release opioid q3h or q4h PRN
  - Assess patient response
- After 16-24 hours (4 half-lives of a long-acting preparation) recalculate the scheduled dose: Total opioid usage in 24 hours (scheduled + rescue) ÷ doses per day = new scheduled dose
  - Titrate as appropriate
  - Goal is a balance of analgesia, functional status, and side effects

**Example:**
Oxycontin® 30 mg PO q12h = 60 mg/24h so the rescue dose would be 6-12 mg q4h. Oxycodone typically is dispensed as 5 or 10 mg and so a convenient and effective rescue dose might be 5-10 mg q4h PRN.

*Also called a "breakthrough dose"



## Side Effects: Prophylaxis and Treatment

- Inpatient and Outpatients:
  - Constipation: Automatically prescribe stimulant laxative (senna) to be given regularly. Reassess and titrate to effect. Consider addition of stool softener.
  - Nausea: Automatically prescribe PRN antiemetics such as Ondansetron IV/PO
  - Pruritis: Order PRN antihistamines (such as Loratidine, Diphenhydramine)



## Objective # 4

Safety Point

### Respiratory Depression & Sedation

- Sedation usually precedes respiratory depression
- Contributing Factors to Sedation and Respiratory Depression

| | |
|---|---|
| -Opioid naïve | -Age >65 |
| -History of Sleep Apnea | -Cachexia |
| -Marked obesity | -Underlying lung disease |
| -Renal insufficiency | -Other drugs |

*Monitoring oxygen saturation levels and respiratory rate alone is insufficient because $pCO_2$ levels can rise even when $O_2$ saturation is still reasonable.*



Safety Point

### UMMC Sedation Assessment & Treatment

| Score | Term | Description | |
|---|---|---|---|
| +4 | Combative | Overtly combative, violent, immediate danger to staff | |
| +3 | Very agitated | Pulls or removes tube(s) or catheter(s); aggressive | |
| +2 | Agitated | Frequent non-purposeful movement, fights ventilator | |
| +1 | Restless | Anxious but movements not aggressive vigorous | |
| 0 | Alert and calm | | |
| -1 | Drowsy | Not fully alert, but has sustained awakening (eye-opening/eye contact) to *voice* (≥10 seconds) | Verbal Stimulation |
| -2 | Light sedation | Briefly awakens with eye contact to *voice* (<10 seconds) | Verbal Stimulation |
| -3 | Moderate sedation | Movement or eye opening to *voice* (but no eye contact) | Verbal Stimulation |
| -4 | Deep sedation | No response to voice, but movement or eye opening to *physical* stimulation | Physical Stimulation |
| -5 | Unarousable | No response to *voice or physical* stimulation | Physical Stimulation |

*Intubated/sedated pediatric patients, use SBS (State Behavioral Scale)

-Opioid-induced sedation without clinically significant respiratory depression does not usually require treatment with naloxone

-Depending on degree of sedation:

–reduce opioid dose by 50 – 75%

## Adult and Pediatric Opioid Related Respiratory Depression Naloxone Guidelines

Safety Point

- Objective: reverse respiratory depression without reversing analgesia or causing withdrawal syndrome

| Age | Unstimulated RR associated with respiratory depression | Diluted naloxone (40 mcg/ml) dose* |
|---|---|---|
| Adult >17 years | ≤ 8 | 100 mcg (2.5 ml) IV Push |
| Adolescent >12-17yr | ≤12 | 100 mcg (2.5 ml) IV Push |
| Child >2-12 yr | ≤14 | 40 mcg (1 ml) IV Push |
| Infant ≥ 50 wks post conceptual age to 2 yr | ≤16 | 20 mcg (0.5 ml) IV Push |
| Neonate <50 wks post conceptual age | ≤20 | 10 mcg (0.25 ml) IV Push |

- Stay with the patient and provide verbal and tactile stimulation
- Dilute 1 amp naloxone (0.4 mg) in 9 mL normal saline = 10 mL of 0.04 mg/mL
- Give 0.5 mL (0.02 mg) IV push every 2 minutes until RR is higher than in table
- Repeat dosing may be required
- Continue close monitoring throughout, the *half-life of naloxone is less than most opioids* (about 45 minutes)
- The opioid can eventually be restarted at 25-50% of the previous dose

**Small naloxone doses preferred as naloxone poses risk for some patients*



## Objective # 5

## Opioid Overdose & Prevention

- Prescription and illicit opioid overdoses are on the rise
- Maryland statistics:
  - 2nd highest rate of opioid-related ED visits in the US
  - highest rate of opioid-related inpatient stays in the US
  - opioid overdose one of the top 4 mortality reasons
- **Clinicians SAVE LIVES** by:
  - using opioids judiciously
  - recognizing at risk patients for opioid overdose
  - implementing preventative strategies and treatment



## Preventing Opioid Overdose in Outpatients

- Identify patients at risk of opioid overdose:
  - history of prescription or IV drug abuse
  - opioid overdose or substance abuse disorder
  - high* or chronic opioid use
  - opioid use with antidepressants/benzos/alcohol
    - avoid co-prescribing of benzodiazepines and opioids
  - opioid use with major organ dysfunction (renal, cardiac, hepatic, or pulmonary)
  - history of mental illness
  - opioid naïve (little recent use of opioids)



## When to Prescribe Naloxone

- Offer a naloxone*,** prescription*** for patients ≥ to 13 y.o. or household members for any of the following reasons:
  - history of substance abuse disorder
  - daily dose of >50 mg oral morphine equivalents (OME) or > to:
    - 12 mg/day of oral hydromorphone
    - 30 mg/day of oral oxycodone
    - 50 mg/day of oral hydrocodone
    - 200 mg/day of oral tramadol
    - opioid prescription with a benzodiazepine or non-benzodiazepine sedating hypnotic prescription
    - other risk factors (e.g., ETOH abuse, drug using family/friends, etc.)
- Reinforce appropriate opioid use and safe disposal
- Educate the patient/family re: importance of OD prevention

**Pre-authorization is not required* ***Medical Assistance/other insurances cover naloxone scripts*
****Use the order set - UMMS Narcan for Overdose Prevention at Discharge*



## Objective # 6

## Outpatient Opioid Stewardship

- On each script, provide:
  - patient's date of birth
  - DEA number
  - sufficient (but not excessive) quantity to manage the pain

**Evidence-based Opioid Prescribing Recommendations for Surgery**
from https://opioidprescribing.info/?cfuaccusfcvaftbrewcvf

| Procedure | Hydrocodone (Norco) 5 mg tablets / Codeine (Tylenol #3) 30 mg tablets / Tramadol 50 mg tablets | Oxycodone 5 mg tablets |
|---|---|---|
| Laparoscopic Cholecystectomy | 10 | 10 |
| Laparoscopic Appendectomy | 15 | 10 |
| Inguinal/Femoral Hernia Repair (open/laparoscopic) | 15 | 10 |
| Open Incisional Hernia Repair | 40 | 25 |
| Laparoscopic Colectomy | 35 | 25 |
| Open Colectomy | 40 | 25 |
| Hysterectomy | | |
| Vaginal | 20 | 15 |
| Laparoscopic & Robotic | 30 | 20 |
| Abdominal | 40 | 25 |
| Wide Local Excision ± Sentinel Lymph Node Biopsy | 30 | 20 |
| Simple Mastectomy ± Sentinel Lymph Node Biopsy | 30 | 20 |
| Lumpectomy ± Sentinel Lymph Node Biopsy | 15 | 10 |
| Breast Biopsy or Sentinel Lymph Node Biopsy | 15 | 10 |

- Pain Clinic at University of Maryland Rehabilitation & Orthopedic Institute, requires referral
  - 410-448-6622
- Other outpatient non-pharmacologic management resources
  - See UMaryland CIM (Center for Integrative Medicine) YouTube Channel https://tinyurl.com/UMMC-IM-Videos
  - See Pain Management Intranet Web Page



## Opioid Stewardship

- ***Gradually reduce opioid dose to prevent withdraw symptoms***
  - Consider contacting Pain Service or Palliative Medicine Team
  - See UMMC Opioid Taper Guidelines
- ***Minimize long term problems associated with chronic opioid use***
  - Manage chronic pain with modalities other than opioids, unless function improves with opioids
  - Use opioids judiciously in patients with or at risk for substance use disorders
  - Educate patients about the risk, benefits, tolerance, addiction and discontinuation of opioid therapy
  - Use the lowest dose of opioid for the shortest period of time needed to manage the pain
  - Consider obtaining an opioid agreement (available in Epic®) when writing outpatient prescriptions for opioids if appropriate (e.g. SUD risk or on long term opioid therapy)
  - Reassess individual's benefits and risks when prescribing ≥ 50mg oral morphine equivalents (OME) per day if chronic, non-malignant pain
  - Avoid ≥ 90 OME/day for chronic, non-malignant pain, unless justified

# Maryland Medicaid Opioid Prescribing Policy

- Sets 30 day quantity limits on opioid prescriptions
- Requires prior authorization*,** every 6 months using designated forms if patient receiving:
  - ≥ 90 OME (includes the total daily dose of all opioids)***
  - high quantity of opioids
  - long acting opioids (MS Contin®, OxyContin®), fentanyl patches or methadone for pain#
- Prior authorization** includes, at a minimum

| Activity | Inpatient and ED | Outpatient |
|---|---|---|
| Check Prescription Drug Monitoring Program (PDMP) | X | X |
| Urine drug screen | | X |
| Obtain a prescriber-patient agreement | | X |
| Attest to benefits outweigh risk | X | X |
| Offer naloxone prescription | X | X |

*Exclusions: Patients with cancer treatment, sickle cell, or on hospice/palliative care*
**Some Managed Care Organizations may have more stringent policies than listed*
***If multiple opioid medications total ≥ 90 OME, you will need PA for or each drug*
#Must still use long-acting that is on formulary or request a non-formulary med



# When to Call the Experts

The patient has:

- signs or symptoms of neuropathic pain, which is not well controlled by NSAIDs/opioids, including reports of
  - hot, burning pain
  - sharp, shooting pain
  - electrical shocks

  - achy
  - pins and needles or other associated sensory changes
  - exaggerated pain response to light touch (stroking, clothing, bedding) or pain out of proportion to stimulus
- a history of substance abuse
  - consider a Substance Abuse consult +/- Pain Service consult



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# Inpatient Pain Services at UMMC

## PCA Service

-Manage PCAs for patients all areas except STC

-Provides recommendations on adjunct therapies

-Discontinue PCAs when tolerating PO diet

-Contact beeper 7622

-Order **PCA per protocol**

## MAPRAS

-Provide regional therapy that includes epidurals, nerve blocks

-Initiate and manage lidocaine infusions and multi-modal pain plans

-Manage complex pain management cases to all UMMC patients (except STC) on a consultation basis

-Contact beeper 7873

-Order an **APMS non STC consult**

## STC APMS

-Manage complex pain management patients which includes the use of oral, PCA, PCEA, and PNB

-Utilize adjunctive therapies as well as non-pharmacological therapies

-Provide recommendations for treating pain

-Contact beeper 9874

-Order a **APMS STC Consult**

**If a Pain Service is consulted to manage a patient's analgesic therapy, they are the <u>only</u> service that orders/discontinues opioids, sedatives and specialty analgesic therapies*



# Other Inpatient Services at UMMC

## Integrative Medicine

-Provide relaxation for pain, stress, and insomnia and the following therapies: art, music, guided imagery, aromatherapy, massage, acupuncture/acupressure, biofield healing

-Contact Beeper 10948 or 4482

-Order **Integrative Medicine Consult**

## Palliative Care

-Provide consultation to patients with serious, advanced illness, excluding chronic non-malignant pain

-Provide goals of care, advanced care planning, and end-of-life care consultation, including withdrawal of life-sustaining therapies

-Provide VAD preparedness planning

-Contact beeper 1809 Mon-Fri 8-1830

-Order **Palliative Medicine Consult**

## Child Life

-Provide services that include decreasing stress and increasing coping mechanisms

-Advocate for evidence-based pain management plans that are individualized and developmentally appropriate

-Contact Child Life on Pediatric units

## Resources

- Patient/Family education
  - Videos available on the TIGR video education system
    - Overdose Overview and Prevention
    - Multiple relaxation guided imagery/integrative techniques videos
    - Generic pain assessment and management
  - Printable patient education material available in Care Notes (English/Spanish)
    - Generic Pain Management
    - Medication
    - Opioid Overdose and Naloxone Administration
- Health Care professionals
  - Policy Stat for all pain management policies
  - Pain Intranet Page
    - Non-pharmacologic outpatient resources, including Integrative Medicine YouTube videos
  - Opioid Stewardship Page
    - Resources and educational materials



## Conclusion

- Identify if pain is nociceptive or neuropathic
- Assess if the pain is acute or chronic or a combination
- Perform a comprehensive pain assessment
- Establish treatment goals that are realistic and facilitate the rehabilitation process
- Screen for OSA especially in the post operative or patients undergoing moderate sedation
- For high risk patients, provide resources as appropriate
- Utilize a stepwise approach when using analgesic therapies which incorporates multi-modal therapy
- IV and PO opioids are not equivalent
- Assess and treat for side effects related to analgesic therapies
- Monitor for respiratory depression and identify if patient is at high risk for respiratory depression
- Utilize naloxone to reverse respiratory depression
- Provide naloxone to outpatients, especially patients at risk for overdose
- Incorporate opioid stewardship into practice
- Seek expert consultation if pain is difficult to control
- Provide patient and family educational resources related to analgesic therapies, naloxone, and opioid overdose