PERIOPERATIVE MANAGEMENT OF MAT PATIENTS

Postoperative pain management of patients on buprenorphine and methadone poses a challenge for several reasons:

1. Opioid-induced Hyperalgesia: Patients on maintenance therapy for opioid use disorder with buprenorphine and methadone undergo changes in pain perception, leading to increased pain sensitivity. A procedure done under local anesthesia may be well-tolerated by a patient not on maintenance therapy, while the same procedure would cause more significant pain issues in a patient on maintenance therapy.
2. Cross-tolerance: The presence of buprenorphine or methadone impedes the ability of more potent opioids with better analgesic effects from attaching to the opioid receptor. This leads to more difficult pain control, and explains the higher doses of opioid analgesics that are necessary to adequately treat the pain of patients on maintenance therapy.
3. Concern from the provider that providing opioid analgesics will lead to illicit drug use.
4. Concern from the provider that the increased pain reports may be an attempt to obtain more opioids.

Buprenorphine Doses	Oxycodone	Morphine	Heroin	Methadone
2 mg	30 mg	60 mg	1-2 bags	10 mg
4 mg	60 mg	120 mg	3 bags	20 mg
6 mg	90 mg	180 mg	4 bags	30 mg
8 mg	120 mg	240 mg	6 bags	40 mg
12 mg	180 mg	360 mg	8 bags	60 mg
16 mg	240 mg	480 mg	10 bags	80 mg

Perioperative Management of the Buprenorphine Patient

1. Perioperative pain management is at the discretion of the practitioner performing the procedure.
2. Perioperative pain management should be part of the conversation/consent process for the procedure so that the patient knows what to expect. If a patient needs to have their buprenorphine modified at the provider's request pre-operatively, the patient needs to be informed of this and give consent before doses are temporarily modified.
3. In most instances, patients maintained on buprenorphine for opioid use disorder should continue buprenorphine through the perioperative period.
    a. Patients taking more than 12mg of buprenorphine daily:
        i. Pre-op: Taper to 12mg/day over 2-3 days prior to surgery.
        ii. Day of surgery: continue buprenorphine 12mg/day; multi-modal analgesia and/or regional anesthesia; if prescribing opioids, be aware that patients on buprenorphine require higher dose than opioid-naïve patients.
        iii. Post-op: Continue buprenorphine 12mg/day; patient may need full agonist for 2-4 days; higher level monitoring may be necessary; return to patient's regular dose of buprenorphine as soon as possible.
    b. Patients taking 12mg of buprenorphine daily or less:

   i. Pre-op: Continue normal dose of buprenorphine.
   ii. Day of surgery: continue normal dose of buprenorphine; multi-modal analgesia and/or regional anesthesia; if prescribing opioids, be aware that patients on buprenorphine require higher dose than opioid-naïve patients.
   iii. Post-op: Continue normal dose of buprenorphine; patient may need full agonist for 2-4 days; higher level monitoring may be necessary.
4. Non-opioid medications such as local anesthetics (lidocaine or bupivacaine), NSAIDs (e.g. ketorolac, ibuprofen, meloxicam), and acetaminophen among others do not act via the opioid receptors and will therefore not be impeded by buprenorphine. Generously utilizing these non-opioid medications are key to managing pain in patients with opioid use disorder.
5. Inadequately treating pain in patients with opioid use disorder is more likely to cause a relapse than adequate analgesia.
6. Acute pain with objective findings requires adequate analgesia, with the determination to use opioid or non-opioid agents being at the discretion of the practitioner performing the procedure.
7. The patient's dose of buprenorphine may be split to every 12 hours or every 8 hours to maximize the analgesics of buprenorphine for the patient experiencing post-operative pain.
8. The MAT Medical Director can be contacted for consultation

Perioperative Management of the Methadone Patient

1. Perioperative pain management is at the discretion of the practitioner performing the procedure, and post-operative pain management should be part of the conversation/consent process for the procedure so that the patient knows what to expect.
2. Doses of methadone are not typically held.
3. Non-opioid medications such as local anesthetics (lidocaine or bupivacaine), NSAIDs (e.g. ketorolac, ibuprofen, meloxicam), and acetaminophen among others do not act via the opioid receptors and will therefore not be impeded by methadone. Generously utilizing these non-opioid medications are key to managing pain in patients with opioid use disorder.
4. Because of the cross-tolerance of patients of methadone to other opioids, providers should be aware that higher doses of opioid analgesics may be required to achieve adequate pain relief.
5. Inadequately treating pain in patients with opioid use disorder is more likely to cause a relapse than adequate analgesia.
6. Acute pain with objective findings requires adequate analgesia, with the determination to use opioid or non-opioid agents being at the discretion of the practitioner performing the procedure.
7. The MAT Medical Director can be contacted for consultation.

Perioperative Management of the Naltrexone Patient

1. Oral naltrexone must be discontinued 3 days prior to procedure. Intramuscular naltrexone lasts 28 days and must be switched to oral naltrexone, which must be discontinued 3 days prior to procedure.
2. Discontinuation of naltrexone prior to an elective surgery presents a particularly vulnerable time for relapse for a patient with opioid use disorder.
3. Perioperative pain management is at the discretion of the practitioner performing the procedure. Discussion about naltrexone and pain management should be part of the conversation/consent process for the procedure so that the patient knows what to expect.
4. Non-opioid medications such as local anesthetics (lidocaine or bupivacaine), NSAIDs (e.g. ketorolac, ibuprofen, meloxicam), and acetaminophen among others do not act via the opioid receptors and will therefore not be impeded by naltrexone. Generously utilizing these non-opioid medications are key to managing pain in patients with opioid use disorder.
5. Because of the antagonistic effects of naltrexone, providers should be aware that higher doses of opioid analgesics given in a monitored setting may be required to achieve adequate pain relief.
6. Acute pain with objective findings requires adequate analgesia, with the determination to use opioid or non-opioid agents being at the discretion of the practitioner performing the procedure.
7. The MAT Medical Director can be contacted for consultation.

Attachments:
Texas Christian University Screen 5 (TCU-5)
MAT Care Coordination for Inmates Releasing on MAT into the Community
Clinical Opioid Withdrawal Scale (COWS)
Treatment Adjustment Form
Impairment Assessment Tool

References:

Alford et al. Acute Pain Management for Patients Receiving Maintenance Methadone or Buprenorphine Therapy. Ann Intern Med. 2006 January 17; 144(2): 127-134.

Crotty K, Freedman K, Kampman KM. The American Society of Addiction Medicine (ASAM) National Practice Guideline for the Treatment of Opioid Use Disorder: 2020 Focused Update. J. Addict Med. 2020 Mar/Apr; 14 supplement 1 2S.

Lembke et al. Patients Maintained on Buprenorphine for Opioid Use Disorder Should Continue Buprenorpine Through the Perioperative Period. Pain Med. 2019 Mar 1; 20(3): 425-428.

Substance Abuse and Mental Health Services Administration (SAMHSA). Use of Medication-Assisted Treatment for Opioid Use Disorder in Criminal Justice Settings. July 2019.

Vermont Department of Health, Division of Alcohol and Drug Abuse Programs, et al. The Vermont Buprenorphine Practice Guidelines. 2018, p1-27.

Client ID#	Today's Date	Facility ID#	Zip Code	Administration

TCU DRUG SCREEN V

During the last 12 months (before being locked up, if applicable) –

		Yes	No
1.	Did you use larger amounts of drugs or use them for a longer time than you planned or intended?	O	O
2.	Did you try to control or cut down on your drug use but were unable to do it?	O	O
3.	Did you spend a lot of time getting drugs, using them, or recovering from their use?	O	O
4.	Did you have a strong desire or urge to use drugs?	O	O
5.	Did you get so high or sick from using drugs that it kept you from working, going to school, or caring for children?	O	O
6.	Did you continue using drugs even when it led to social or interpersonal problems?	O	O
7.	Did you spend less time at work, school, or with friends because of your drug use?	O	O
8.	Did you use drugs that put you or others in physical danger?	O	O
9.	Did you continue using drugs even when it was causing you physical or psychological problems?	O	O
10a.	Did you need to increase the amount of a drug you were taking so that you could get the same effects as before?	O	O
10b.	Did using the same amount of a drug lead to it having less of an effect as it did before?	O	O
11a.	Did you get sick or have withdrawal symptoms when you quit or missed taking a drug?	O	O
11b.	Did you ever keep taking a drug to relieve or avoid getting sick or having withdrawal symptoms?	O	O

12. Which drug caused the most serious problem during the last 12 months? [CHOOSE ONE]

- O None
- O Alcohol
- O Cannaboids – Marijuana (weed)
- O Cannaboids – Hashish (hash)
- O Synthetic Marijuana (K2/Spice)
- O Opioids – Heroin (smack)
- O Opioids – Opium (tar)
- O Stimulants – Powder Cocaine (coke)
- O Stimulants – Crack Cocaine (rock)
- O Stimulants – Amphetamines (speed)
- O Stimulants – Methamphetamine (meth)
- O Bath Salts (Synthetic Cathinones)
- O Club Drugs – MDMA/GHB/Rohypnol (Ecstasy)
- O Dissociative Drugs – Ketamine/PCP (Special K)
- O Hallucinogens – LSD/Mushrooms (acid)
- O Inhalants – Solvents (paint thinner)
- O Prescription Medications – Depressants
- O Prescription Medications – Stimulants
- O Prescription Medications – Opioid Pain Relievers
- O Other (specify) _____

Client ID#	Today's Date	Facility ID#	Zip Code	Administration

13. How often did you use each type of drug during the last 12 months?	Never	Only a few times	1-3 times per month	1-5 times per week	Daily
a. Alcohol	O	O	O	O	O
b. Cannaboids – Marijuana (weed)	O	O	O	O	O
c. Cannaboids – Hashish (hash)	O	O	O	O	O
d. Synthetic Marijuana (K2/Spice)	O	O	O	O	O
e. Opioids – Heroin (smack)	O	O	O	O	O
f. Opioids – Opium (tar)	O	O	O	O	O
g. Stimulants – Powder cocaine (coke)	O	O	O	O	O
h. Stimulants – Crack Cocaine (rock)	O	O	O	O	O
i. Stimulants – Amphetamines (speed)	O	O	O	O	O
j. Stimulants – Methamphetamine (meth)	O	O	O	O	O
k. Bath Salts (Synthetic Cathinones)	O	O	O	O	O
l. Club Drugs – MDMA/GHB/ Rohypnol Ecstasy)	O	O	O	O	O
m. Dissociative Drugs – Ketamine/PCP (Special K)	O	O	O	O	O
n. Hallucinogens – LSD/Mushrooms (acid)	O	O	O	O	O
o. Inhalants – Solvents (paint thinner)	O	O	O	O	O
p. Prescription Medications – Depressants	O	O	O	O	O
q. Prescription Medications – Stimulants	O	O	O	O	O
r. Prescription Medications – Opioid Pain Relievers	O	O	O	O	O
s. Other (specify) _____	O	O	O	O	O

14. How many times before now have you ever been in a drug treatment program?
[DO NOT INCLUDE AA/NA/CA MEETINGS]

O *Never* O *1 time* O *2 times* O *3 times* O *4 or more times*

15. How serious do you think your drug problems are?

O *Not at all* O *Slightly* O *Moderately* O *Considerably* O *Extremely*

16. During the last 12 months, how often did you inject drugs with a needle?

O *Never* O *Only a few times* O *1-3 times/month* O *1-5 times per week* O *Daily*

17. How important is it for you to get drug treatment now?

O *Not at all* O *Slightly* O *Moderately* O *Considerably* O *Extremely*

TCU Drug Screen V (v.Sept14) 2 of 2

MAT Care Coordination for Inmates Releasing on MAT into the Community

Upon entering a Vermont Correctional Facility all Opioid Use Disorder Screening, Assessment, COWS taper (narcotic and non-narcotic), medically necessary MAT Induction, counseling and behavioral therapies will be provided based on current policies, protocols and clinical guidelines and comply with Vermont and Federal law.

1. During the MAT Medical determination assessment process, the nurse completing the medical intake, or the MAT Case Manager(s) will verify, with the inmate, which community they will release to, the date of their release, and the potential community treatment provider(s) they intend to use. The nurse doing the medical intake, or the MAT Case Manager will complete provide the inmate: an ROI, provide patient information about HUBS/Community Spokes and MAT FAQ to support continuity of care.

2. The MAT Care Coordinator will confirm the inmate's release date with the facility Living Unit Supervisor (LUS) and/or Caseworker and the LUS/ Caseworker will notify medical if there are any changes.

3. When the inmate' s release date is confirmed or estimated, the MAT Care Coordinator will make appointments with community-based providers. If an inmate is removed from MAT, the MAT Care Coordinator will notify the LUS/Caseworker.

4. The MAT Care Coordinator will document referral status and appointment(s) in the EHR using the MAT-Induction Discharge UDR. (Information from this UDR auto-populates into Discharge Summary UDR). As part of the UDR, the MAT Care Coordinator is required to remind the inmate that the HUB requires them to provide a photo ID and insurance information.

5. The MAT Care Coordinator will, as per the ROI, provide the Community based provider with health information necessary to MAT care coordination that will include: overview, medications, last history and physical, last CIC, and labs.

6. The MAT Care Coordinator will continue to provide the facility LUS/Caseworker and field Probation office (if relevant) all MAT care coordination information to ensure a seamless transition to the community.

7. Nursing will print off and provide the inmate and the LUS/Caseworker with a "Discharge Summary." The Discharge Summary will include community referral appointment date/ days/times, MAT community-based resource information, a last dose letter (also completed by nursing), and any additional comments to be relayed to the inmate. If a MAT bridge dose is needed in cases where the last dose provided in facility is not sufficient to dose the inmate up until the date and time of the community-based appointment, it will be called into the Walgreen's/Rite-Aid pharmacy of inmate's choice

by nursing for the number of days needed (days from last dose to day of community based provider appointment).

RAPID RELEASE

1. The MAT Care Coordinator will have daily communication with the facility LUS and caseworker(s) and will be informed by them of a rapid release.
    a. If the inmate is on MAT, the MAT Care Coordinator will follow existing MAT Care Coordination procedure.
    b. If the inmate is not on MAT but the provider determined that they meet medical necessity prior to release, the MAT Care Coordinator will contact medical provider to determine if there is enough time to safely induct the inmate.

2. If the medical provider determines that MAT induction is possible, medically necessary and safe, the inmate will be inducted as per existing policies, protocols and clinical guidelines. The medical provider will inform the MAT Care Coordinator who will then inform the facility LUS and/or caseworker.
    a. The MAT Care Coordinator will schedule an appointment with the community provider named on the ROI to inform them of the inmate's rapid release and send the medically necessary health information.

3. If the medical provider determines that MAT induction is not medically necessary or unsafe to do so, the inmate will be informed by facility level nursing. Nursing will also inform the MAT Care Coordinator and MAT Case Management who will then inform DOC LUS/Caseworker.

4. Once the inmate is released, should they contact Centurion to request that their health information be sent to a provider different than the ROI on record, the Centurion Health Services provider will direct the person to sign a release with the provider of their choice, and fax to Centurion Regional Office (802-224-1935). Once the MAT Care Coordinator as received the new ROI, the health information will be sent by as soon as possible but within two business days.

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Clinical Opiate Withdrawal Scale (COWS)

Flowsheet for measuring symptoms over a period of time during buprenorphine induction.

For each item, write in the number that best describes the patient's signs or symptom. Rate on just the apparent relationship to opiate withdrawal.
For example: If heart rate is increased because the patient was jogging just prior to assessment, the increased pulse rate would not add to the score.

Patient Name: _____ Date: _____

Buprenorphine Induction: _____

Enter scores at time zero, 30 minutes after first dose, 2 hours after first dose, etc.	Times of Observation:			
Resting Pulse Rate: Record Beats per Minute				
Measured after patient is sitting or lying for one minute 0 = pulse rate 80 or below 1 = pulse rate 81-100 • 2 = pulse rate 101-120 • 4 = pulse rate greater than 120				
Sweating: Over Past 1/2 Hour not Accounted for by Room Temperature or Patient Activity				
0 = no report of chills or flushing 1 = subjective report of chills or flushing 2 = flushed or observable moistness on face • 3 = beads of sweat on brow or face • 4 = sweat streaming off face				
Restlessness Observation During Assessment				
0 = able to sit still 1 = reports difficulty sitting still, but is able to do so • 3 = frequent shifting or extraneous movements of legs/arms • 5 = Unable to sit still for more than a few seconds				
Pupil Size				
0 = pupils pinned or normal size for room light 1 = pupils possibly larger than normal for room light • 2 = pupils moderately dilated • 5 = pupils so dilated that only the rim of the iris is visible				
Bone or Joint Aches if Patient was Having Pain Previously, only the Additional Component Attributed to Opiate Withdrawal is Scored				
0 = not present 1 = mild diffuse discomfort • 2 = patient reports severe diffuse aching of joints/muscles • 4 = patient is rubbing joints or muscles and is unable to sit still because of discomfort				
Runny Nose or Tearing Not Accounted for by Cold Symptoms or Allergies				
0 = not present 1 = nasal stuffiness or unusually moist eyes • 2 = nose running or tearing • 4 = nose constantly running or tears streaming down cheeks				
GI Upset: Over Last 1/2 Hour				
0 = no GI symptoms 1 = stomach cramps 2 = nausea or loose stool • 3 = vomiting or diarrhea • 5 = multiple episodes of diarrhea or vomiting				
Tremor Observation of Outstretched Hands				
0 = no tremor 1 = tremor can be felt, but not observed • 2 = slight tremor observable • 4 = gross tremor or muscle twitching				
Yawning Observation During Assessment				
0 = no yawning 1 = yawning once or twice during assessment • 2 = yawning three or more times during assessment • 4 = yawning several times/minute				
Anxiety or Irritability				
0 = none 1 = patient reports increasing irritability or anxiousness • 2 = patient obviously irritable/anxious • 4 = patient so irritable or anxious that participation in the assessment is difficult				
Gooseflesh Skin				
0 = skin is smooth 3 = piloerection of skin can be felt or hairs standing up on arms • 5 = prominent piloerection				
Score: 5-12 = Mild 13-24 = Moderate 25-36 = Moderately Severe More than 36 = Severe Withdrawal	Total score			
	Observer's initials			

The National Alliance of Advocates for Buprenorphine Treatment
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naabt.org

*Source: Wesson et al. 1999.

SM 11/11

MAT Treatment Adjustment Form

Patient Name: _____ Patient DOB: _____
Date: _____
Current Buprenorphine Dose:_____mg

Date of admission to MAT:_____

Why is a MAT Treatment Evaluation requested?

_____

Continued use of illicit drugs?: YES NO

If yes, please describe:

Drug	Amount used and route	Frequency in last week	Date of last use

Any patient/staff reports of sedation or impairment on current dose? YES NO

If yes, describe: _____

Drug Screens:	Side effects/toxicity:
	Sedation: yes / no Description: _____
Date:_____Results:_____	Constipation: yes / no Description:_____
Date:_____Results:_____	Sweating: yes / no Description: _____
Date:_____Results:_____	Other: yes / no Description: _____

Medical/psych history: _____

Any known active patient med/behavioral issues: _____

New stressors: _____

Medications: _____

Allergies: _____

For dose adjustment requests only:

Symptoms 3-4 hrs after medicating:_____

Progression of symptoms and timeline:_____

_____

Sx 24 hrs after medicating (if reporting withdrawal, do pre-dose COW):_____

Adherence with counseling/ check-ins/treatment plan:

_____

MAT Team Member impression: _____

For behavioral concerns only:

Current behavioral interventions on treatment plan: _____

Adherence with behavioral interventions on treatment plan: _____

MAT Team assessment/recommendation:

_____

***For non-adherence with treatment plan*:**

Nature of non-compliance: _____

Nursing impression: _____

Staff filling out form: _____

MAT Provider assessment/plan: _____

Impairment Assessment Tool

Patient Name: _____ PID: _____

Date of assessment: _____

Medication Utilized and current dose: _____ Date dose began:___

Reason for sedation/impairment concerns describe):_____
_____

Reports of any illicit drug use (describe): _____

History of benzodiazepine use: _____

Point of Care Urine Drug Screen Results:

BZD	+	-
MTD	+	-
BUP	+	-
OPI	+	-

OXY	+	-
COC	+	-
AMPH	+	-

Presentation:	_____ _____ _____ ____
Mental Status:	Oriented___ Disoriented___ Time___ Place___ Person___ Alert___ Drowsy___ Lethargic___ Inattentive___ Forgetful___ Stuporous___ Cooperative___ Combative___
Mood / Emotional Status:	Normal ___ Angry ___ Elation___ Calm___ Friendly___ Evasive___ Fearful___ Anxious___ Irritable___ Withdrawn___ Euphoric___ Hostile___
Speech:	Spontaneous___ Sudden Silences___ Slow and deliberate___ Rapid___ Content clear___ Content not clear___ Logical progression___ Slurring___
Eyes:	Nystagmus___ Poor eye contact___ Drooping eyelids___ Pupils constricted/pinpoint___ Dilated___ Equal___ Unequal___
Gait/Coordination:	Heel to toe steady___ Unsteady___ Finger to nose good___ Finger to nose poor___
Vital Signs:	Temperature___ Pulse___ BP___ Respirations___ %O2_____
General Impression:	