SCHEDULE

1:00 – 1:05 pm
Announcements
ASAM STAFF

1:05 – 1:45 pm
Presentation
DR. TIMOTHY J. WIEGAND

1:45 – 2:00 pm
Questions & Answers
DR. TIMOTHY J. WIEGAND

2:00 pm
Concluding Remarks
ASAM STAFF
ANNOUNCEMENTS

1. Information on obtaining your CME will be provided at the end of the webinar.
2. Attendee Audio: Mics are automatically set to mute.
3. Questions? Type questions into the Q&A box.
4. Technical Issues? Use the chat box feature to submit questions to your hosts.
How to Obtain CME

2. Go to Contents tab.
3. Complete:
   - CME Quiz
   - Evaluation
   - Credit and Certificate
THE ASAM NATIONAL PRACTICE GUIDELINE FOR THE TREATMENT OF OPIOID USE DISORDER: OUD AND PAIN
Tim Wiegand MD, DABAM, FACMT, FAACT was trained in internal medicine and completed his fellowship training in Medical Toxicology at the University of California, San Francisco in 2006. He was the Medical Director of the Rochester Poison Center until 2010.

In addition to his primary appointment as Associate Professor of Emergency Medicine at the University of Rochester School of Medicine & Dentistry in Rochester, NY, Dr. Wiegand serves as Medical Director for Huther Doyle Chemical Dependency Treatment Program in Rochester, NY and as a detoxification specialist for Syracuse Behavioral Health in Rochester, NY.

Dr. Wiegand is the Committee Chair for the New York Society of Addiction Medicine (NYSAM) Board of Directors and the chair of the Addiction Medicine Section for the American College of Medical Toxicology.
FINANCIAL DISCLOSURES

No Financial Disclosures
OBJECTIVES OF THE WEBINAR

- Summarize the guideline’s **treatment recommendations** for individuals with pain and OUD and how they should be used in practice.
- Identify the fundamental components of an OUD patient assessment and diagnosis for individuals with pain.
- Recognize the **unique needs and treatment recommendations** for individuals with pain.
Keep The Buprenorphine in Place! Treating Severe Pain in a Hospitalized Patient with Opioid Dependence

Timothy J. Wiegand, MD
Department of Emergency Medicine, University of Rochester Medical Center, Rochester, NY, USA

Optimal Dose and Frequency with Multimodal Analgesia—Acute Pain Management During Buprenorphine Treatment

Bryan Ross, MD, Nicholas Nacca, MD & Timothy Wiegand, MD
Department of Emergency Medicine at Strong Memorial Hospital and the University of Rochester Medical Center, Rochester, NY, USA
NEW AND MAJOR REVISIONS

OVERVIEW OF RECOMMENDATIONS

The 13 recommendations in Part 9 provide guidance on pain management and surgery among individuals with opioid use disorder.
Pain
(different types of pain & patient interpretation of pain)

Opioid Dependence, Craving, and Withdrawal

To appropriately treat pain, continue to treat dependence.
Types of Pain

- Acute pain
- Chronic Pain
- Degree of pain (mild/moderate/severe)
- Can you plan ahead?/Planned surgery?
- Comorbidities (anxiety/depression/obesity)
- Patient fitness and motivation

Other Variables

- Patient expectations and planning
- Neuropathic pain
- Traumatic Pain
- Duration of pain (shoulder dislocation/reduction)
- Site of pain
- Hyperalgesia
- Other substance use
Example: Frida Kahlo

Significant Physical Trauma in Childhood

- Chronic Pain
- 30 Operations
- Frequent Depression
- Drugs, Painkillers, Alcohol
Return to Basic Principles of Pharmacology and Opioid Dependence

• Discuss the changes to the guidelines.
• Provide basis for the updates.
• Review buprenorphine, methadone, and naltrexone pharmacology.
• Via case discussion, demonstrate techniques that providers can use to best treat different types of pain and manage patients perioperatively as they are also treated for opioid use disorder.
Discontinuation of methadone or buprenorphine before surgery is not required. Higher-potency intravenous full agonist opioids may be used perioperatively for analgesia in addition to the patient’s regular (pre-surgery) dose of methadone or buprenorphine.

Rationale:
Research has demonstrated that the addition of full-opioid agonists can be effective for the treatment of pain in these patients. Pain treatment should be coordinated with the opioid use disorder treating clinician to help optimize pain care and reduce the potential for relapse.
NEW AND MAJOR REVISIONS

NEW RECOMMENDATION

Patients receiving buprenorphine for opioid use disorder who have moderate to severe acute pain refractory to other treatments and require additional opioid-based analgesia may benefit from the addition of as-needed doses of buprenorphine.
Buprenorphine Pharmacology

- Potent Partial* mu agonist.
- High affinity, slow dissociation.
- Kappa receptor antagonist.
- Variable duration of effects craving and withdrawal analgesia.
  *peak analgesic effect 4-6 hours.
Educate or remind the patient that buprenorphine is a potent opioid that has analgesic effects in and of itself (to start).

35 chronic pain patients (age 24-66) converted from high-dose opioid agonists (mean MME 550 mg range 200-1,370 mg) to SL buprenorphine.

Buprenorphine continued 2 months, mean pain score decreased from 7.2 to 3.5 (P < 0.001), with 34/35 patients reporting decreases in pain.

Quality of life scores improved from 6.7 to 7.1 (P = 0.005).
Study outcomes of chronic pain patients treated with buprenorphine in an outpatient psychiatry consult clinic.

• METHODS:
  • 43 chronic pain patients with a DSM-IV dx of opioid dependence treated with bup (3 years)
  • All dependent on drugs Rx’d for pain 2 groups: alcohol/drug depend vs no substance use disorder

• RESULTS:
  • Most patients are male, currently unemployed, and between 45-60 years.
  • Treatment with buprenorphine was effective. Most patients had improved pain with treatment of the opioid dependence.
  • There were no differences between those with or without a history of substance abuse.

• DISCUSSION
  • Patients with much less preoccupation with pain and great satisfaction with buprenorphine treatment.
Maximizing the Potential of Buprenorphine: A Case

• A 42 year-old M XR technician for a local hospital has been treated for opioid use disorder with buprenorphine/naloxone for several years.

• He works shifts and struggled staying on track with dosing at times. He says his back bothers him most if he goes more than 8 hours between buprenorphine doses.

• He had been on 2/0.5 mg SL TID for about a year (occasionally needing early fill for having taken 2/0.5 mg SL QID) as he had been transitioned to buprenorphine for mild prescription opioid use disorder.

• He has increased to 4/1 mg SL TID and has improvements in his pain, sleep and mood.

• After about 2 months of the 4/1 mg SL TID he is exercising, losing weight, and being more active; he is increased to 4/1 mg SL QID
  • He maintains that his pain is better and that he is more functional than he’s been in years.
Naltrexone’s blockade of the mu opioid receptor can often be overcome when necessary with high potency full agonist opioids. In these instances, patients should be closely monitored in an emergency department or hospital setting.

**Rationale:**
- Patients on naltrexone may not respond to opioid analgesics in the usual manner.
- Higher doses are typically needed to override the opioid receptor blockade.
Naltrexone Concentrations: Monthly Injection vs. Daily PO
Naltrexone Emergency Pain Management

A. Severe trauma & multiple fractures:
   • High dose parenteral full agonist to clinical effect 2 → 4 → 8 → mg hydromorphone
   • Spinal block, local, and general anesthesia
   • Ketamine
   • Oral naltrexone at end of day (or prior to dose) is easier to overcome – time of month important if XR

B. Abscess from injection attempt that needs incision and drainage?
   • NSAIDS
   • Local Anesthesia

C. A dislocated shoulder in an alcohol-intoxicated patient
   • Ketamine
   • Propofol

D. Back pain in patient maintained on naltrexone seen in ED after fall on ice:
   • NSAID, lidocaine patch, apap
NEW AND MAJOR REVISIONS

MAJOR REVISION

For patients taking **methadone or buprenorphine** for the treatment of opioid use disorder, temporarily increasing the dose or dosing frequency (i.e., **split dosing** to maximize the analgesic properties of these medications) may be effective for managing pain.
NEW AND MAJOR REVISIONS

MAJOR REVISION

For patients taking **methadone** for the treatment of opioid use disorder who have acute pain refractory to other treatments and require additional opioid-based analgesia, **adding a short acting full agonist opioid to their regular dose of methadone can be considered** to manage moderate to severe acute pain.
Levomethadone (R enantiomer)
- mu-opioid agonist, delta agonist
  - Higher activity than morphine
  - Lower mu affinity than morphine

Dextromethadone (S enantiomer)
- NMDA receptor antagonist & SNRI effects
- Modulates tolerance
- Enhanced effect on neuropathic pain

**Alpha-curve** 8-12 hours = rapid redistribution
  - = analgesia
  - 4-6 hours initially
  - With repeat dosing 8-12 hours

**Beta-curve** 30-60 hours
  - = withdrawal prevention
  - Tmax 2.5-4 hours
  - Variable elimination half life
  - 100-fold variability (4-130 hours+)
Dosing and Risk of Accumulation with Methadone

Lipman AG. Oncology. 1999;13(9):1275-82
When a full opioid agonist is needed for pain management, discontinuation of buprenorphine is not required.

The addition of a short-acting, full agonist opioid to the patient’s regular dose of buprenorphine can be effective for the management of severe acute pain in supervised settings, such as during hospitalization.

It is not known whether this adjunct treatment can be safely prescribed in ambulatory care settings.
NEW AND MAJOR REVISIONS

Discontinuation of methadone or buprenorphine before surgery is not required. Higher-potency intravenous full agonists opioids can be used perioperatively for analgesia.

Rationale:
- Research has demonstrated that the addition of full-opioid agonists can be effective for the treatment of pain in these patients.
- Pain treatment should be coordinated with the opioid use disorder treating clinician to help optimize pain care and reduce the potential for relapse.
Maximizing Analgesia—A Case:

The buprenorphine is kept in place and split (e.g. 4/1 mg SL q 6 hours –even if intubated).

- **A 44-year-old male** with IVDU daily heroin and cocaine use hospitalized for LE cellulitis, abscess and septic arthritis.
- Shortly after admission he was **started on buprenorphine** (2/0.5 mg SL x 1) for withdrawal → 8/2 mg SL TID.
- The patient underwent a **complicated incision and drainage procedure for a large abscess and septic joint** with full opioid receptor agonists added to bup + adjunctive medications; acetaminophen, a TCA and toradol (NSAID).
- After the debridement he was left with a **large, complex wound requiring daily dressing changes** and cleaning causing “severe pain.”
- **The patient was titrated from 2 to 4 mg and ultimately 6 mg hydromorphone dose and** administered IV immediately prior to wound care with good analgesic effect without sedation or respiratory depression with 8/2 mg SL TID bup.
- Adjunctive agents were continued along with a sedative (oral lorazepam 0.5 mg) given one hour prior to the hydromorphone as an anxiolytic and opioid potentiator (*gabapentin alternative option)*.
Buprenorphine and Pain Treatment Algorithm

Buprenorphine Pain Tx Algorithm

1. Divide bup* (e.g. maint. on 16 mg/day → 4 mg SL QID).
2. Increase AND split dose (e.g. if 16 mg/day increase to 8 mg SL TID)
3. Add supplemental dose of bup (e.g. if 16 mg/day add 4 mg SL BID PRN to 8 mg SL BID or TID)
4. Add IV bup for acute pain/procedure 150-300 micrograms IV over 30 min pre/post procedure or q 6 hours PRN.
5. Add full agonist on top of bup at 2-3 x standard dose & continue bup (e.g. 20-30 mg oxycodone PO q 4 hours (moderate/severe pain) + bup.
6. Add full agonists IV on top of background bup at 2-3 x standard dosing & continue bup (e.g. hydromorphone 4-6 mg IV).
- Ketamine analgesia
- Consider regional anesthesia or spinal/epidural if appropriate
- Maximize non-opioid agents (NSAID, apap, lidocaine, TCA)

* Bup can be dosed as mono or dual product where bup dosing above could replace with bup/naloxone 4/1 ratio the naloxone does not effect analgesia.

- For **mild to moderate pain**, usually the buprenorphine dose can simply be split or give an extra dose --make sure patient hasn’t missed or had delay to dose (e.g. in ED).
- If splitting increases and **adding PRN bup is not enough** (with maximizing non opioid agents (apap, NSAID, lidocaine…)), add full agonists.

- For **moderate pain not controlled with above**, if at reasonable buprenorphine dose (e.g. 16-24 mg/day split dosing) then add oxycodone 10-15 mg PO q 4 hours PRN pain.
- For **more severe pain**, use 20-30 mg PO x 4 hours.
- For parenteral opioids, start 2-4 mg hydromorphone → 6 mg q 2-4 hours or PCA 0.5 mg/15 min demand dose (buprenorphine in place reduced risk of respiratory depression). In essence, a unique ‘opioid-sandwich’ is created doing this.
If it is decided that buprenorphine or methadone should be discontinued before a planned surgery, this may occur the day before or the day of surgery.

Methadone or buprenorphine can be resumed postoperatively. In general, pre-surgery daily doses of these medications can be resumed if they were withheld for less than 2 to 3 days.
Acute Pain in Opioid Dependent Patients

Buprenorphine vs. Methadone

Published in final edited form as:

Acute Pain Management for Patients Receiving Maintenance Methadone or Buprenorphine Therapy

Daniel P. Alford, MD, MPH, Peggy Compton, RN, PhD, and Jeffrey H. Samet, MD, MA, MPH
From Boston University Medical Center, Boston, Massachusetts, and University of California, Los Angeles, School of Nursing, Los Angeles, California.
Acute Pain in Opioid Dependent Patients: Buprenorphine

*(Make sure they have not missed dose first.)*

1. Divide buprenorphine dose *(e.g. maintained on 16 mg/day → 4 mg SL QID).*
2. Increase AND split dose *(e.g. instead of 16 mg/day increase to 8 mg SL TID).*
3. Add supplemental dose of buprenorphine *(e.g. maintained on 16 mg/day add 4 mg SL BID PRN).*
4. Add dose IV buprenorphine for acute pain/procedure 150-300 micrograms IV over 30 minutes before/during procedure or q 6 hours PRN*.
5. Add full agonist on top of background buprenorphine dose at 1.5 to 2.0 x standard dosing – **but continue buprenorphine.**
6. Ketamine, additional non-opioid analgesics, regional/multi modal analgesia.
7. Discontinue buprenorphine and use other full-agonist opioid analgesics*.
   - Convert back to buprenorphine when pain is resolved; re-induction needed *(higher doses full agonists for first 48 hours off buprenorphine).*
   - *inpatient only*
Acute Pain in Opioid Dependent Patients:

**Methadone**

- Continue maintenance dose.
- Consider splitting maintenance (TID) dose full agonist.
- If parenteral, 50% of oral dose = IV equivalent.
- Use short acting opioid analgesics on top of methadone.
CASE DISCUSSION & CLINICAL QUESTIONS
Case 1: Maximizing the Potential of Buprenorphine

- A 36-year-old male with history of IVDU has had progressive lumbar back pain that has been worsening over two weeks.
- The patient reports being sober since post-incarceration two and a half years ago.
- The patient lives with his two kids, ages 5 and 8, and his significant other.
- He works as a roofing contractor and is limited on his ability to work due to his pain.
- He was started on buprenorphine/naloxone post-incarceration as he had been on it prior to incarceration and had severe opioid use disorder prior to his incarceration.
- He was incarcerated 11-months.
- He takes 12/3 mg once/day and is not on other meds.
Case 1 – Question:
As his PCP (prescribing MOUD), what would the best dosing regimen be for him in this situation (after adding acetaminophen and suggesting an ibuprofen trial)?

(a) Add oxycodone at 2-3 x the standard dose to his buprenorphine/naloxone 12/3 mg taken in the AM.

(b) Give him an extra PRN dose to take if he has particularly severe pain (e.g. one extra 4/1 mg daily).

(c) Change his dosing to 4/1 mg SL TID instead of the 12/3 mg SL once/day.

(d) Refer patient to an Opiate Treatment Program because methadone is better for pain.
Case 1 Cont’d: Maximizing the Potential of Buprenorphine

• He has several ED visits during these two weeks. He is told he either has muscle spasms or he is ‘drug seeking’ (if he relates that he has had history of substance use disorder or is, taking Suboxone®).

• He reports, however, that the same type of pain persisted 2 ½ years prior while he was incarcerated:
  • “It was there for about 2 months then went away but it’s back again.”

• The patient is adamant that he has not gone back to injecting drugs.

• UDS at recent ED visit was negative for standard analytes (though no fentanyl or buprenorphine in panel).

• His PCP refers him to a spine clinic after pain increases and is spreading down the lateral sides of both lower legs.
After developing a fever and weakness in his legs, feeling like they, “were giving out,” he is admitted to a hospital from Spine Clinic after an MRI indicates L4-5 discitis and osteomyelitis at associated vertebral level.

His WBC, CRP and ESR are quite high and blood cultures are pending (then positive for MRSA).

The patient has been taking 12/3 mg/day buprenorphine (split at 4/1 mg SL TID since the week prior).

In the ED, he is given a shot of toradol and acetaminophen, but it’s been about 10 hours since he last took 4/1 mg buprenorphine/naloxone.
Case 1 – Question:
What is the best option for treatment of the patient’s pain now?

(a) Give him a 5 mg IV dose of morphine to get him comfortable.

(b) Restart his scheduled buprenorphine right away and increase the dose and add PRN along with the adjunctive meds (NSAID and APAP) and reassess.

(c) Stop the buprenorphine/naloxone and change to buprenorphine alone (the naloxone is ‘blocking’ the analgesic effect of buprenorphine).

(d) Stop the buprenorphine and switch to methadone 20 mg/day.
Case 1 Cont’d: Maximizing the Potential of Buprenorphine

• The patient ultimately **requires a biopsy** and some **debridement** which is quite painful. Because of this, the neurosurgery team requests input on post-procedure pain control.

• The patient is **receiving IV antibiotics** and his pain is controlled pre-procedure, but he’s **concerned about surgery**.

• He asks about switching to buprenorphine alone when he hears that he can receive other opioids on top of his buprenorphine if needed:
  
  • “**Doesn’t the naloxone block the other opioid effects?**”

  • He is educated about the naloxone not having any ‘blocking effect’ when taking SL and appreciates the clarification.
Case 1 – Question:
What is an appropriate perioperative/post-operative plan for this patient if severe pain anticipated?

(a) Increase the patient’s buprenorphine/naloxone to 8/2 mg SL TID and keep the PRN doses (with apap, NSAID).

(b) Hold the buprenorphine pre-operatively and use full opioid agonists after.

(c) Continue the same buprenorphine regimen of 4/1 mg SL QID add a hydromorphone PCA at 0.5 mg/15 min patient demand and nurse triggered dose of 2-4 mg q 2 hours PRN if pain not controlled with the PCA and buprenorphine (continuing apap and NSAID as able).

(d) Add parenteral buprenorphine 300 mcg IV q 6 hours to his SL regimen and adjunctive agents.
Case 1 Cont’d: Maximizing the Potential of Buprenorphine

- The patient does well during surgery. He is placed on a PCA post-operatively while continuing buprenorphine/naloxone 4/1 mg SL QID (with lidocaine patches, apap and ibuprofen; an NSAID briefly held per neurosurgery).

- Gabapentin is added at 300 mg PO TID (plan for 7 days then d/c).

- The patient transitions from the PCA after 48 hours to oxycodone 20-30 mg PO q 4 hours PRN for moderate/severe pain. This is tapered to 15-20 mg PO q 4 hours after 2 days then d/c’d and the 2/0.5 mg bup/naloxone restarted with the NSAID.

- The patient ultimately increases to 8/2 mg SL TID for one week before backing down to 4/1 mg SL QID for the duration of his hospital stay.

- “That went much better than I ever anticipated it would.”

- Agrees to f/u with SC buprenorphine injection which has been arranged and ordered prior to d/c from the hospital. He admitted to ‘slipping up’ with the injection of his buprenorphine/naloxone. “Just once and I didn’t think this would happen. I used to do it all the time before I was incarcerated.”
Case 2: Methadone

- A 65-year-old male with opioid use disorder receiving 80 mg/day of methadone from a local Opiate Treatment Program is hit by a car while shopping. He suffers bruising and abrasions along with fracture of his left arm (humerous) and right hip.

- The ED contacts the Addiction Medicine CL service for recommendations regarding his methadone dose and pain management in the ED and during his stay.
Case 2 – Question:
How should this patient’s methadone be managed during his stay?

(a) The methadone should be dc’d and he should be treated appropriately with full agonists (e.g. morphine or hydromorphone acutely and perioperatively) followed by oxycodone orally when pain is less severe.

(b) The methadone should be given as it was outpatient prior to his hospitalization. 80 mg/day should be sufficient to control his pain.

(c) The methadone should be continued as it was outpatient prior to hospitalization, but split dosing to maximize analgesic effects (e.g. 30 mg PO in AM and 25 mg afternoon and night)

(d) The methadone should be continued but split to maximize analgesia (e.g. 30 mg PO q AM and 25 mg afternoon and night). Full agonists can be given on top as well (e.g. hydromorphone 2-4 mg IV q 4 hours PRN until pain under control) as the methadone is primarily for his dependence and w/d.
Case 3: Methadone

- A **51-year-old male** takes 120 mg of methadone daily for opioid dependence.
- **Presents to the ED with fever, chills and back pain/neck stiffness.**
- **Last dose of methadone** was the day prior to ED presentation (>24 hours).
- **Workup:** The patient has meningitis and possible lumbar abscess.
- He has received **hydromorphone 0.4 mg q4 hr** for acute pain that remains uncontrolled.
- **Methadone was held** due to altered mental status and concern for aspiration.
- **Physical Exam**
  - 105 bpm, 145/90 mmHg, rr 22 -> 26 breaths/minute, 38.2 C
  - Alert, oriented to name and place, date slightly off, states methadone dose is 200mg,
  - Pupils 3 mm
  - Resp: on bipap, keeps attempting to pull mask off
  - Skin clammy
  - Abdomen: generalized mild discomfort
  - Decreased strength lower extremities
Case 3 – Question:
Which of the following issues related to treatment of pain and dependence need to occur?

(a) The methadone dose needs to be continued (patient needs this just to stay ‘normal’ and out of withdrawal).

(b) For the acute pain continue methadone and provide analgesia.
   • If not able to take PO, give IV (or IM/SQ) methadone (1/2 of oral dose)
   • Analgesia may need to be in higher and dosed more frequently.

(c) Discharge planning with Opioid Treatment Program

(d) May need to adjust maintenance dose.

(e) All of the above are correct items requiring attention.
Additional References/Related Literature

Resources/References:


• Herring AA, Perrone J, Nelson LS. Managing Opioid Withdrawal in the Emergency Department with Buprenorphine. Annals of Emergency Medicine, 2019; online publication. PMID: 30616926


UPCOMING EVENTS

THE ASAM NATIONAL PRACTICE GUIDELINE SERIES

- The ASAM National Practice Guideline 2020 Focused Update Webinar: Individuals in the Criminal Justice System
  - Sandra Springer, MD, FASAM
  - Thursday, Sept. 10 @ 12:00 p.m. EST

- The ASAM National Practice Guideline 2020 Focused Update Webinar: Adolescents and Young Adults
  - Marc Fishman, MD, DFASAM
  - Tuesday, Sept. 24 @ 1:00 p.m. EST

For past on-demand recordings from the ASAM National Practice Guideline 2020 Focused Update series on Fundamentals and Pregnancy, visit:

https://elearning.asam.org/p/NPG2020_WebinarSeries
CONTACT:

ASAM EMAIL: EDUCATION@ASAM.ORG
ASAM TELEPHONE: 301.656.3920
THANK YOU.