

Opioid
Response
Network

Society of Hospital Medicine

Improving Care for Hospitalized Patients with Opioid Use Disorder: Implementation Guide



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Table of Contents

Introduction.....	1
How to Use This Guide	1
The Case For Change	1
First Steps	2
Garner Institutional Support.....	3
Review Care Delivery.....	3
Identify Interventions	3
Identify How to Measure Outcomes and Track Performance.....	3
Assemble The Improvement Team.....	4
Develop a Pilot for Initial Implementation.....	4
Opportunities to Enhance Care for Hospitalized Patients with OUD.....	4
Essential Care Sites.....	5
Getting Started	6
How to Implement and Sustain a Program to Improve Treatment for Patients with OUD at Your Hospital	6
Identify Key Partners.....	6
Create an Improvement Plan	6
Obtain Executive and Hospital Leadership Sponsorship and Support	7
Measuring Improvement	7
Best Practices in OUD Management for Hospitalized Patients.....	8
Eliminate Stigma Towards Patients with OUD	8
Trauma-Informed, Patient-Centered Care.....	9
Screen for Unhealthy Opioid Use	10
Diagnose Opioid Use Disorder.....	10
Laboratory Assessments	11
Medication Treatment for OUD	11
Deciding Between Medications for OUD.....	12
Buprenorphine.....	13
1. Initiating Buprenorphine	13
2. Traditional Buprenorphine Initiation	13
3. Low Dose Buprenorphine Initiation.....	13
4. Managing Precipitated Buprenorphine Withdrawal	14
5. Buprenorphine Continuation.....	15
Methadone	15
1. Initiating Methadone.....	15
2. Continuing Methadone.....	16
3. Methadone and QTc Assessment	16
IM Naltrexone	16
Other Full Agonist Opioids	17
Adjunctive Medications for Opioid Withdrawal.....	17
Management of Stable OUD	18
Management of Acute and Perioperative Pain in Patients with OUD.....	18
Methadone	18

Buprenorphine.....	18
IM Naltrexone	18
Short-Acting Opioids.....	19
Other Analgesia.....	19
Short-Acting Opioid Management at Hospital Discharge.....	19
In-Hospital Substance Use	19
Harm Reduction	19
Leadership Buy-In for In-Hospital Harm Reduction	20
Special Populations and OUD Care	21
Pregnant People	21
People Who are Breastfeeding.....	21
People Who are Incarcerated	21
People with Limited English Proficiency	21
Care Transitions: Medications, Behavioral Health Interventions, and Other	22
Medications.....	22
Methadone	22
Buprenorphine.....	22
IM Naltrexone	22
Naloxone.....	22
Psychosocial/Behavioral Treatment	23
Peer-Based Support Groups	23
Contingency Management	23
Post-Acute Care Facilities.....	23
Roles of the Care Team and Essential Partners in Inpatient OUD Care	24
Hospitalists.....	24
Nurses.....	24
Pharmacists	25
Social Workers.....	25
Patient Navigators and Peer Mentors	26
Care Coordinators.....	26
Nurse Care Managers	26
Addiction Specialists.....	26
Information Systems Specialists.....	26
Hospital Leadership, Clinician Leaders, Subject Matter Experts.....	26
Sustaining Improvement	27
Appendices	28
References.....	50



Introduction

How to Use This Guide

This guide supports the implementation of targeted strategies to improve the care of hospitalized patients with opioid use disorder (OUD) in hospital settings without a dedicated addiction consultation service. This guide highlights and includes high-yield, existing tools and resources to support improvement efforts, many of which are included as appendices.

The guide highlights five major areas essential to improving the care of hospitalized patients with OUD. **This includes:**

- Providing stigma-free, trauma informed care
- Screening for unhealthy opioid use
- Diagnosing OUD
- Initiating medications for OUD
- Ensuring high-quality care transitions
- Providing naloxone at discharge

Each section includes a potential strategy your hospital can implement to improve care for hospitalized patients with OUD and ensure sustainable practice change.

The Case For Change

Hospitalists treat patients with OUD who are admitted for common conditions including cellulitis, endocarditis, and osteomyelitis. While the immediate priority is addressing the reason for hospitalization, it is difficult to ignore the larger clinical scenario: **Patients with OUD will be readmitted again and again, and rarely offered life-saving, evidence-based addiction treatment.**

While hospitalists often encounter patients with OUD, they may lack the confidence to communicate with their patients about the availability and benefits of medications for OUD. They may also lack essential knowledge about how to assess patients

with suspected OUD, recognize or manage opioid withdrawal, initiate OUD treatment in the hospital, engage critical hospital partners to support care, and effectively link patients to outpatient treatment. Since hospitalists care for patients with OUD, it is essential to competently treat, fluently facilitate patient-centered conversations about treatment, effectively manage opioid withdrawal, and support care transition plans and safe discharges.

This implementation guide is meant to help you and your inpatient partners and care teams improve the care of hospitalized adults with OUD and provide you with a set of tools and interventions that you can implement locally. This guide is focused on OUD, but many of the topics covered also apply to other substance use disorders (SUD), which can co-occur with OUD. The primary objectives of this implementation guide are to provide hospitalists, hospital leaders, and care team members the tools to:

- Provide non-stigmatizing and trauma-informed care to hospitalized patients with OUD
- Improve screening and diagnosis of OUD
- Facilitate greater access to initiation of evidence-based medication for OUD with care linkage after hospital discharge
- Ensure provision or prescribing of naloxone at hospital discharge for people at risk of an opioid overdose

First Steps

Congratulations on beginning this journey to improve care for patients with OUD within your health system. Your first steps are essential and will involve forming your team, defining your goals, assessing the current state of OUD care in your hospital, and garnering the resources and administrative support to help you achieve your objectives for enhanced patient outcomes. Before

you begin, assess and recognize the opportunities for change. Some preliminary questions include: Why do you want to improve care for patients with OUD? How does this effort align with institutional priorities? Who are key partners? The responses to these questions will inform your approach. Your efforts should stem from recognition of a gap between current conditions and the level of care that is optimal and best supported by the evidence. Each institution is unique, often excelling in some areas and lagging in others. It is imperative that you identify and work on the areas that need improvement within your facility, not just apply best practices. In addition, what has worked at other institutions may not work in yours, as you likely have different processes and a different institutional culture. You should demonstrate a good understanding of how OUD care is delivered in your hospital to facilitate the greatest impact on the care of your patients.

Upon reviewing the guide, you will receive step-by-step guidance regarding how to facilitate initial first steps to support successful planning and implementation.



This includes:

- Gaining institutional support for this OUD improvement effort by securing personnel time, the requisite resources for the effort and commitment from a member of your hospital's executive team
- Creating a multidisciplinary implementation team focused on improving care for patients with OUD that regularly reports to an executive sponsor and other key partners
- Assessing and evaluating the current state of care for patients with OUD in your hospital
- Identifying best practices for the management of patients with OUD in your hospital
- Developing aims, goals, or objectives that are specific, measurable, achievable, relevant, time-bound, inclusive, and equitable
- Choosing metrics, developing a data collection plan, and collecting data

Additional guidance below may assist your team in thinking about how to initiate these first steps.

Garner Institutional Support

Securing support from your administration to implement a program to improve OUD treatment at your institution is essential. Hospital leadership support facilitates buy-in and successful outcomes. Some mechanisms for articulating support include securing a letter signed by a member of the C-Suite acknowledging the improvement effort, committing the requisite resources over the duration of the program, and identifying an executive sponsor who will be the primary conduit to the improvement team. The executive sponsor will regularly review data, participate in improvement team meetings and advocate for resources to support successful outcomes.

Review Care Delivery

Meet with key members to map out the current care of patients with OUD in your institution, from admission to discharge. You can accomplish this with a swim lane diagram (see Appendix 1 for quality improvement tools to support you and your team in facilitating improvement). When engaging in this exercise, you should comprehensively map all the steps of a process executed by key team members involved when assessing a patient for OUD, initiating treatment, bridging to outpatient care, and planning for discharge. Your team should note specific steps representing opportunities for improvement. Additionally, ask yourself and others if there are gaps, steps, or processes that are most at risk for error or poor outcomes for patients with OUD. These steps represent improvement opportunities.

Identify Interventions

The interventions described in this OUD implementation guide may be implemented in your hospital based on local opportunities for improvement. Your team will prioritize and select interventions according to care or process gaps, available resources, and institutional priorities.

Identify How to Measure Outcomes and Track Performance

This OUD implementation guide will describe potential metrics which may be tracked upon program implementation. You and your team will need to identify which data are available, how to obtain data, the cadence for reviewing it, and how it will inform refinement of your interventions and processes. It is ideal to use the frameworks supported by your hospital (e.g., A3 thinking, LEAN principles, Plan, Do, Study, Act (PDSA) cycles). See Appendix 1.

Assemble The Improvement Team

Your preliminary team to support program implementation may include only a few people. The preliminary team may include a hospitalist lead, nurse, social worker, and pharmacist. However, it is important to engage a broader group of partners to facilitate program success. These include additional nursing leaders, educators, pharmacists, other hospitalists, patient safety officers, social workers, regulatory, case managers, frontline staff, and patient and family advisory council members. In addition to identifying these individuals and solidifying their involvement, you should define their role in the project and certify their commitment to participating in that capacity. A team charter is a useful tool for articulating project objectives, team members and roles and responsibilities.

Develop a Pilot for Initial Implementation

When beginning an improvement effort, it is optimal to identify a unit to implement and test the intervention and then scale the intervention more broadly. This will allow you to refine the intervention and then determine opportunities for greater spread of the interventions. Some considerations for selecting the location in your hospital might include the ability to identify available staff willing to implement the project and interventions, logistics, and the flexibility of a location or service.

Opportunities to Enhance Care for Hospitalized Patients with OUD

Our current overdose epidemic is one of the largest recorded in U.S. history. In 2020, over 100,000 people died of drug-related overdoses with highest deaths among people aged 35 to 44 years old. Synthetic opioids, including fentanyl and its analogs, COVID-19, multiple substances that increase the risk of overdose, and stimulants

Table 1: Approaching an OUD Improvement Effort

Step 1

Identify key partners, committees (including your organization's quality improvement committee) and special groups that need to be aware of your efforts to improve hospital-based OUD care.

Step 2

Identify an executive sponsor; discuss the importance of hospital-based OUD care with them; obtain a letter of support.

Step 3

Identify a clinical champion and discuss; discuss the importance of hospital-based OUD care; enlist their participation in your OUD improvement team.

Step 4

Assess the current state of OUD care:

- Identify the annual number of patients with OUD with emergency department encounters and hospitalizations
- Identify the annual number of patients with OUD requiring prolonged hospitalizations to due injection related infections
- Identify the annual number of adverse events related to in-hospital substance use (e.g., in-hospital overdose, in-hospital altercation, floor to ICU transfer)
- Identify the annual number of injection OUD-related heart valve replacements
- Calculate cost data if available

Step 5

Determine gaps in care to inform targeted interventions.

Step 6

Choose from metrics available in this implementation guide that improve evidence-based OUD care and outcomes.

Step 7

Ensure data needed to measure improvements are easily accessible and readily available for data analysis.

Step 8

Create a timeline with prespecified goals (e.g., increase assessment for OUD by 30% over 3 months).

Step 9

Assemble your OUD improvement team:

- Assign a team member to track goals and to support areas that need focused attention if falling behind
- Assign a team member to highlight wins

Step 10

Identify a specific unit in your hospital to pilot your intervention.

- Iteratively refine your intervention based on the successes or challenges experienced during the pilot intervention

have driven the increase in drug overdose deaths. Barring drastic changes in treatment delivery, over 1.2 million fatal overdoses are predicted in the U.S. between 2020 to 2029.

This crisis is also further increasing inequities for a marginalized population. Patients with SUD have higher rates of criminalization than those without SUD for drug-related offenses. This is compounded for minoritized individuals, who face decreased access to addiction care, lower rates of addiction treatment, higher rates of incarceration, and increased overdose deaths. Overdose deaths disproportionately impact Indigenous and Black communities, compared to White communities, with Latinx communities not far behind.

Essential Care Sites

Hospitals are Essential Care Sites for people with OUD and hospitalization is a critical time to offer OUD treatment as most patients with OUD are not engaged in addiction treatment at admission.

Between 2000 and 2016, OUD-related hospitalizations increased threefold; hospitalizations for OUD-related infections are similarly at an all-time high, placing significant burdens on patients, clinicians, staff, and healthcare systems. Hospitalists have an opportunity to reduce the burden of OUD by offering evidence-based OUD treatment.

Treating OUD has benefits for patients and the healthcare system. For patients, it improves care experience, outpatient OUD treatment linkage and reduces self-directed discharges, and reduces stigma, addiction severity, and mortality. For the healthcare system, it can decrease costs and readmissions, catalyze culture change, improve satisfaction, and improve care quality. The annual cost of OUD care to U.S. hospitals is \$13.2 billion dollars. Increasing access to life-saving medications

for OUD would reduce hospitalizations and overdose deaths, yet many people with OUD are unable to access treatment. Without treatment, hospitalized patients experiencing opioid withdrawal leave before completing their medical treatment, i.e. self-directed discharges (“against medical advice”), increasing the risk of a subsequent hospital for readmission and death. Inadequate treatment of opioid withdrawal may amplify the stigma and mistrust already experienced by patients and healthcare workers, and drives further inequities in care.

Creating and securing support for an implementation plan to improve OUD care is critical, as without these, hospitalists and staff are left to independently decide whether they will offer OUD treatment. The reasons for this are multifaceted and include a lack of addiction training and confidence in treating addiction among the hospitalist workforce, stigma, and biases against people with OUD.

Given the care gaps, worse outcomes, financial cost, and inequities in care for people with OUD, it is critical that hospitalists implement programs to improve care for hospitalized patients with OUD through evidence-based initiatives. The following sections will summarize best practices and provide measurable interventions that you can champion at your institution. This guide will assist hospitalists and healthcare systems in bringing evidence-based treatment to the bedside for patients with OUD. For the reasons enumerated above, the Society of Hospital Medicine guidance statement recommends hospitalists offer patients OUD and opioid withdrawal treatment, perioperative pain management, and optimal care transitions.

Getting Started

How to Implement and Sustain a Program to Improve Treatment for Patients with OUD at Your Hospital

Identify Key Partners

When starting, form a team dedicated to improving care for patients with OUD. Ensure you have diverse representation from nursing, pharmacy, social work, hospital leadership (including an executive sponsor), data officers, and clinicians across disciplines (e.g., internal medicine, family medicine, cardiology, obstetrics and gynecology, general surgery, orthopedics). Include patient representatives and people with lived experience in your workgroup, and if it is possible, compensate people with lived experience for their time. You can also invite health plans partners who may be interested in supporting your work. Collaborate on a document detailing the purpose, participants, expectations, and cadence of your meetings. Update the document as you identify next steps and your objectives for the workgroup. Ensure you agree on what the problem that you are trying to address is and why you are focusing on it now.

Create an Improvement Plan

When starting, it is important to understand the current state of OUD care in your hospital both during hospitalization and at care transitions. To facilitate a greater understanding of current care outcomes related to patients with OUD, you may work with your Information Technology (IT) department or an improvement specialist to obtain baseline key data. You may request data on hospitalizations with and without OUD including sociodemographic characteristics (e.g., age, race/ethnicity, language, housing status, mental health diagnosis), hospitalization characteristics (e.g., length of stay, admission diagnose, discharge disposition, readmissions), and current rates of medication for OUD treatment. Also consider

surveying staff and patients with OUD about what they identify as priorities in OUD care. You can adapt your institution's needs assessment tools for OUD or use those in Appendix 1. Also identify existing workflows including order sets, protocols for medications for OUD initiation, clinical opiate withdrawal scale assessments (COWS), partnerships with opioid treatment programs (OTPs), community residential addiction treatment partners, etc. In addition to the data you process, have multiple members of your workgroup independently follow patients' courses from their emergency department visit through their discharge and create process maps or swim lanes (Appendix 1) to categorize current conditions.

After completing this, convene the group and form a problem statement to establish the baseline performance and identify opportunities for improvement. Next, discuss goals and identify a SMARTIE statement (Specific, Measurable, Attainable, Relevant, Time-bound, Inclusive, and Equitable). After, perform a gap analysis (e.g., fishbone, Ishikawa chart, problem definition tree, pareto chart) to discuss the root causes of why these gaps exist using the steps you have completed above. See Appendix 1 for tools.

Identify possible interventions to address these gaps and rate each on impact and feasibility. Select a few interventions with the highest impact and highest feasibility and propose how you will implement them.

Ensure you share the needs assessment using the quality improvement and problem-solving processes endorsed by your hospital (e.g., A3 thinking, LEAN principles, PDSA cycles) to articulate opportunities for improvement. The plan should be collaborative and involve your interprofessional partners. For example, interventions involving medications for OUD should ideally be led by pharmacists, opioid withdrawal assessments should be led by nurses,

order sets should be developed in collaboration with pharmacists, IT, nurses and clinicians, and care transition plans should be developed with social workers and case managers.

Obtain Executive and Hospital Leadership Sponsorship and Support by Building a Business Case

Before you formally implement your OUD improvement plan, ensure you obtain an executive sponsor. The executive sponsor may be a member of the C-Suite and they should be thoroughly engaged during the entirety of the project. Throughout your process, meet with hospital and nursing leadership and present your improvement plan, focusing on aligning gaps and improvement areas with executive leadership priorities. For example, in some settings, hospital leadership may be focused on reducing readmissions, reducing racial/ethnic inequities, developing the workforce, and care experience, which may align with gaps you identified in your needs assessment. In hospitals that predominantly serve populations insured by Medicaid, there may also be opportunities to align with health plans on strategic priorities.

When you initially meet with your executive sponsor, ask them to support you with a small ask (e.g., protected time, funding, administrative support, electronic health record order sets) and later, once you have a more detailed case and plan, propose the set of high impact, high feasibility interventions and how the hospital can further support this work.

Contributors to success will include demonstrating the scope and impact of OUD in your health system, aligning improvement areas with executive leadership priorities, early involvement of executive leadership, and, when possible, testing potential interventions in a small iterative cycles.

In defining your implementation program, select 3-5 interventions that would be feasible and impactful in your hospital. We include examples of interventions in the sections below.

Measuring Improvement

It is essential for your team to identify how to evaluate whether your interventions are improving care for patients with OUD. Your team should determine how to measure outcomes and processes. It is helpful to plan early on how to collect and access data, and whether you will need to enlist your IT department to build reports. After selecting process and outcome measures, you may establish the cadence for data collection as well as the individuals who will be responsible for collecting the data. You will want to collect and review at least three months of baseline data before beginning the implementation process. You should collect data regularly, and meet monthly with the project team to review the data to better understand the impact of process improvement as well as initial outcomes. The process and outcome measures listed below are examples which may inform which metrics you select. You and your team will determine which interventions are most efficacious or which interventions require refinement to enhance clinician and patient uptake and improve outcomes for patients with OUD in your hospital. Examples of potential outcome measures include:

- a. Number of patients screened for unhealthy opioid use**
- b. Number of patients diagnosed with OUD using the DSM-5 diagnostic criteria**
- c. Number of patients initiated on medications for OUD**
- d. Number of patients referred for follow-up OUD care**

Best Practices in OUD Management for Hospitalized Patients

Eliminate Stigma Towards Patients with OUD

Stigma towards people with OUD is pervasive in healthcare. Written and verbal communication and body language can propagate stigma and cause harm. Stigmatizing language like “addict”, “drug abuser”, “injection drug abuser” reinforce negative stereotypes about people who use drugs and can

result in self-discharges and increased mortality for patients. Instead, we should use person-first language, which emphasizes the person and not the condition as shown in Table 2. Person-first language deters the use of stigmatizing language when communicating with and about a patient with OUD, when discussing patients on rounds, and when creating a care plan.

Table 2: Use Person-First, Non-Stigmatizing Language⁴¹

Terms to Avoid	Terms to Use	Why Avoid?
<ul style="list-style-type: none"> Addict, Abuser, Junkie 	<ul style="list-style-type: none"> Person with substance/opioid/alcohol use disorder Person who uses drugs 	<ul style="list-style-type: none"> Always use first person language The change shows that a person “has” the problem rather than “is” the problem The use of person first language avoids eliciting negative associations, punitive attitudes, and individual blame
<ul style="list-style-type: none"> Alcoholic, Drunk 	<ul style="list-style-type: none"> Person with alcohol use disorder 	
<ul style="list-style-type: none"> Former Addict 	<ul style="list-style-type: none"> Person in sustained recovery from a substance use disorder Person in recovery 	
<ul style="list-style-type: none"> Medication assisted treatment 	<ul style="list-style-type: none"> Pharmacotherapy Addiction medication Medication for a substance use disorder Medication for OUD 	<ul style="list-style-type: none"> It is a misconception that medications “substitute” one drug or “one addiction” for another Assisted implies that medication should have a supplemental or temporary role in treatment Using medications for OUD aligns with the way other psychiatric medications are understood (e.g., antidepressants, antipsychotics), as critical tools that are central to a patient’s treatment plan
<ul style="list-style-type: none"> Opioid substitution or replacement therapy 	<ul style="list-style-type: none"> Opioid agonist therapy 	
<ul style="list-style-type: none"> Clean 	<p>For toxicology screen results:</p> <ul style="list-style-type: none"> Testing negative or non-reactive <p>For non-toxicology purposes:</p> <ul style="list-style-type: none"> Being in recovery Abstinent from drugs Not drinking or taking drugs Not currently or actively using drugs 	<ul style="list-style-type: none"> Use clinically accurate, non-stigmatizing terminology the same way it would be used for other medical conditions Set an example with your own language when treating patients who might use stigmatizing slang Use of such terms may evoke negative and punitive implicit cognitions
<ul style="list-style-type: none"> Dirty 	<p>For toxicology screen results:</p> <ul style="list-style-type: none"> Testing positive or showed opioids or cocaine <p>For non-toxicology purposes:</p> <ul style="list-style-type: none"> Person who uses drugs 	

The terminology we use also informs medical decision-making, treatment, specialist consultations, referrals, and clinical reimbursement. We should use the Diagnostic Statistical Manual of Mental Disorders (DSM)-5th Edition criteria to diagnose, document, and discuss OUD to normalize and standardize OUD as essential medical care. We should not use terms like “polysubstance use” because they omit the clinical information required to develop an evidence-based plan as there is no evidence-based treatment for “polysubstance use.” In contrast, a diagnosis of “opioid withdrawal” and “severe OUD” allows for a detailed evidence-based plan.

Your team may prioritize the development and implementation of an intervention to decrease the use of stigmatizing terms when interacting with, discussing, or documenting in the medical record. An intervention focused on reducing the use of stigmatizing terms might include developing and giving a grand rounds presentation regarding the evidence-base for reducing the use of stigmatizing terms towards patients with OUD. You may identify additional educational interventions to better acquaint frontline staff with the associated harm of stigmatizing terms and language as a core intervention at your hospital with the objective of improving care outcomes for patients with OUD. We have created an online module which may be used with the implementation guide to decrease stigma.

Trauma-Informed, Patient-Centered Care

Trauma, including sexual abuse, intimate partner violence, human trafficking, and combat trauma is prevalent among people with OUD. People with OUD commonly report negative healthcare experiences leading to avoidance of healthcare. Hospitalists can improve a patients’ hospital experiences and reduce re-traumatization by

providing trauma-informed care. Hospital-based trauma-informed care includes creating an open and safe space for communication. Hospitalists should inquire about past negative healthcare experiences. Components of a trauma-informed approach include safety, trustworthiness, transparency, peer support, collaboration, mutuality, empowerment, voice, choice, and language- and culturally-informed care.

Hospitalists should clearly communicate the medical plan while soliciting and incorporating the patient’s preferences for care. This includes creating an open and safe space for communication between the patient and the hospital team and obtaining consent before conducting a physical exam. When conducting a physical exam, hospitalists should describe each aspect of the exam while checking in with the patient to ensure they feel safe. Before ordering a urine toxicology test, a pregnancy test, any blood test for infectious diseases, and imaging studies, discuss this with the patient so they can understand the medical decision-making process and offer feedback in their medical care. Whenever possible, avoid medical or physical restraints, allow the patient to have visitors for emotional support, and allow the patient to leave their hospital room when there are no contraindications, such as airborne infections or contact precautions.

Involving patients with OUD in the decision-making process about their medical care will inform the hospitalist’s decision-making. Understanding the patient’s goals for hospitalization will also help to focus the care plan. Importantly, acknowledging that not all people with OUD desire abstinence, and that people use drugs for various reasons, including to cope with trauma, mental illness, and pain are important patient-centered considerations in hospital-based OUD treatment.

Example Intervention to De-stigmatize OUD:

- Decrease stigmatizing terms towards patients with OUD in the morning sign-out
- Reduce stigmatizing language towards patients with OUD in hospitalist documentation

Screen for Unhealthy Opioid Use

Healthcare systems can screen patients for unhealthy opioid use to help identify patients who may be at risk for OUD and benefit from evidenced-based treatment. Without a standardized process to screen hospitalized patients for unhealthy opioid use, patients may be underdiagnosed and undertreated. Unhealthy opioid use includes the nonmedical use of prescription opioids, or the use of heroin, and other synthetic opioid analogues. Patients with unhealthy opioid use may be hospitalized for conditions related to use, including opioid overdose, skin and soft tissue infections, osteomyelitis, and endocarditis.

To screen for unhealthy opioid use, implement a validated tool (e.g., Single-Question Screener, Drug Abuse Screening Test (DAST-10)). You may access these tools in Appendix 2. You can embed screening tools in the electronic health record. Screening for unhealthy opioid use can be performed by nurses, trained clinical assistants, or social workers at hospital admission.

Example Intervention to Screen for Unhealthy Opioid Use:

- Screen for unhealthy opioid use with the single question screener or other validated tool (see Appendix 2)

Diagnose Opioid Use Disorder

When a patient has unhealthy opioid use or has signs and symptoms of opioid withdrawal, the hospitalist should assess the patient for OUD using the DSM-5 diagnostic criteria (Appendix 3). Opioid withdrawal symptoms include tachycardia, diaphoresis, mydriasis, gooseflesh, restlessness, rhinorrhea, anxiety, irritability, nausea, diarrhea, and tremor and can be measured using the clinical opiate withdrawal scale (COWS scoring tool) (see Appendix 4).

A hospitalist can diagnose OUD when a person meets two or more of the 11 criteria in the DSM-5 for OUD in a 12-month period. Severity is defined by the number of DSM-5 criteria met (mild 2-3; moderate 4-5; and severe ≥ 6 criteria). In patients taking opioids as prescribed, opioid tolerance and opioid withdrawal alone, without additional DSM-5 criteria, are insufficient to diagnose OUD. While the gold-standard assessment for diagnosis is the DSM-5, other tools may be considered as proxies and performed by other hospital staff.

When possible, hospitalists can use motivational interviewing which include open-ended questions, affirmations, reflective statements, and summary statements to gather a patient's OUD history, offer treatment, and make a plan in a non-judgmental manner. Components of a substance use history include not only the patient's current goal, but also the risk of use, pattern of use, past treatment, effects of use (likes and dislikes), abstinence episodes, and risk for return to use. Table 3 includes example questions to inquire about your patient's past experiences with OUD treatment and their treatment goals.

Table 3: Example Questions for Hospitalized Patients with OUD to Clarify Treatment Goals

- “What medications have you previously tried for OUD?”
- “Have you ever been, or are you currently enrolled in a methadone program?”
 - If yes: “Would you like to start methadone in the hospital?”
 - If no: “What problems or challenges did you experience with methadone?”
- “What treatment have you taken for your opioid use before?”
- “What is your longest period of sobriety and how did you maintain it?”
- “How many times have you overdosed?”
- “What is your housing situation?”
- “What are your current goals regarding your opioid use?”
- “How can we best support you during this hospitalization?”

Interventions to Diagnose OUD:

- Assess patients with unhealthy opioid use for OUD using the DSM-5 criteria.
- Build a pathway to start buprenorphine with embedded [COWS score calculator](#).

Laboratory Assessments

For patients who meet DSM-5 criteria for OUD, you can offer a pregnancy test, liver function tests, infectious disease screening, and urine toxicology. Hospitalization offers an opportunity to identify pregnancy or infectious diseases and link patients to ongoing care. Ask patients if they agree with the recommended tests.

Confirm pregnancy status as opioids may cause secondary amenorrhea and medication dosing for OUD treatment may differ in pregnancy. The Centers for Disease Control and Prevention (CDC) recommends at least annual HIV screening for people who inject drugs, although the optimal frequency for HIV testing is unknown. Among people who use drugs or engage in transactional

sex work, the CDC also recommends routine periodic testing for hepatitis A, B, C, and syphilis, with administration of the hepatitis A and B vaccination for non-immune people. Toxicology testing is not necessary to initiate OUD treatment. Hospitalists should explain the reason for recommending a toxicology test and the intended use of the results prior to sample collection and patients should be allowed to opt-out as positive tests can have negative impacts, especially among pregnant and postpartum patients.

Urine toxicology may provide helpful data not obtained with the history. For example, a patient may share they primarily use heroin, and their urine toxicology may show both heroin and fentanyl. This is an opportunity to discuss the inconsistent drug supply risk for overdose in the setting of unintentional fentanyl exposure and overdose prevention. Hospital policies should outline procedures for protecting the confidentiality of drug testing and results.

Example interventions to implement laboratory assessments for patients with OUD:

- Screen patients with OUD for HCV.
- Develop an infectious disease order set to offer screening for patients with OUD.

Medication Treatment for OUD

We should offer, initiate, and link patients with OUD to evidence-based, life-saving medication treatment in addition to behavioral health interventions for OUD. There are widespread misconceptions about perceived legal barriers to treating OUD in the hospital, which is both safe and legal. There are three Food and Drug Administration (FDA) approved medications for OUD: methadone, buprenorphine, and IM naltrexone.



Methadone and buprenorphine reduce mortality when compared to no treatment. OUD treatment is based upon the patient's preferences, what they have tried before and are interested in trying now, and availability and accessibility of the treatment.

There are no legal or regulatory restrictions regarding inpatient initiation, continuation, and titration of methadone, buprenorphine, IM naltrexone (only for OUD not opioid withdrawal), and other short-acting opioids for opioid withdrawal in hospitalized patients. Initiating medications for OUD and opioid withdrawal may reduce the risk that the patient leaves prior to treatment completion. If a patient declines medication for OUD, inquire further to address barriers to accepting these medications during hospitalization.

Despite their effectiveness, medications for OUD are underutilized with only 14% of hospitalized patients with OUD receiving treatment and access varying by geography, insurance status, treatment location, and race/ethnicity. Racism, poverty, housing, transportation, insurance status, mistrust in healthcare, stigma and other social determinants and structural inequities contribute to OUD treatment gaps.

Deciding Between Medications for OUD

Patient preference should guide OUD treatment selection. This should be balanced with shared decision making regarding what is available locally and if any contraindications to a medication for OUD exist. For example, in some areas, there is no local OTP and methadone may not be available after discharge. While this does not mean a patient should never be prescribed methadone during hospitalization for OUD and opioid withdrawal, they may be more willing to try buprenorphine if they prefer to continue medication treatment after discharge.

Buprenorphine

Buprenorphine is a partial opioid agonist with high affinity and slow dissociation from the μ opioid receptor. When adequately dosed, buprenorphine suppresses opioid withdrawal symptoms and cravings for 24 to 36 hours. Buprenorphine's partial agonism at the μ opioid receptor results in a ceiling effect on respiratory depression, which means that higher buprenorphine doses, i.e., > 24 to 32mg, may not confer additional benefit, nor will they increase the risk of an opioid overdose. Its partial agonism also contributes to precipitated opioid withdrawal. Precipitated withdrawal occurs when a patient's opioid withdrawal symptoms worsen after they initiate buprenorphine. Clinically, a patient will experience an acute increase in opioid withdrawal symptoms approximately 30 minutes after buprenorphine dosing, which may correlate to an increase in the COWS score of 5 or more points.

There are many buprenorphine formulations available including a sublingual tablet or film formulation, a transdermal formulation, a buccal formulation, an intravenous formulation, and subcutaneous, injectable formulations. Sublingual buprenorphine is most commonly used for OUD treatment. The subcutaneous extended-release monthly formulation more commonly occurs in the outpatient setting but can be given during hospitalization at locations that offer this buprenorphine formulation.

Initiating Buprenorphine

There are various methods of buprenorphine initiation including *traditional* and *low dose or microdosing*. See Appendices 5-7 for buprenorphine initiation workflows. Patient preference, type of opioid used (e.g., pharmaceutical opioids, illicitly manufactured fentanyl, heroin), past experiences with buprenorphine initiation, and the clinical scenario should guide the method pursued. Buprenorphine low dose initiation protocols

are based on case reports, case series, and other observational studies, and have become standard practice in many parts of the U.S.

Traditional Buprenorphine Initiation

A traditional buprenorphine initiation is appropriate when a patient primarily uses heroin or short-acting pharmaceutical opioids (e.g., oxycodone, hydromorphone) and can tolerate mild to moderate opioid withdrawal symptoms. With a traditional buprenorphine initiation, the hospitalist should order a COWS score to assess the patient's severity of opioid withdrawal. A COWS score between 8 to 12 indicates when a patient should initiate buprenorphine. See Appendix 5, 6 for a step-by-step traditional buprenorphine initiation.

Low Dose Buprenorphine Initiation

A low dose buprenorphine initiation may be preferred when a patient is using long-acting opioids, or has experienced precipitated opioid withdrawal. Examples include methadone to buprenorphine transitions, acute pain, or regular use of lipophilic opioids, such as fentanyl. When used regularly, fentanyl behaves similar to long-acting opioids and patients may experience precipitated withdrawal with traditional buprenorphine initiation—though this is based on case reports and case series. Various low dose buprenorphine published protocols use sublingual, intravenous, buccal, and transdermal formulations of buprenorphine with transitions occurring over 24 hours to 7 days. A low dose buprenorphine initiation involves gradual introduction of increasing doses of buprenorphine with continuation of the full opioid agonist during the buprenorphine titration. This slow titration creates a smooth transition from full agonist to partial agonist activity reducing the risk for precipitated opioid withdrawal. Eventually, buprenorphine will occupy more and more

opioid receptors than the full agonist until the μ opioid receptors are saturated with buprenorphine.

Note that COWS scores are not used to direct low dose buprenorphine initiations because a low dose buprenorphine initiation does not require opioid withdrawal to start treatment. If a patient reports feeling anxious or achy, slow down the low dose by repeating a day at the same buprenorphine dose. Examples of low dose buprenorphine initiation protocols are available in Appendix 7.

Managing Precipitated Withdrawal

Precipitated withdrawal is distressing for patients to experience and observers to witness, especially when it is caused by the medical team. Management of precipitated withdrawal is informed by case reports, case series, and other observational studies. Precipitated withdrawal generally occurs within 30 minutes following buprenorphine administration. It is typically more severe than naturally occurring opioid withdrawal. Identify precipitated withdrawal by measuring COWS and documenting a drastic increase in the COWs score (i.e., >5 points) after administering buprenorphine.

Upon recognizing precipitated withdrawal, assess patients and ask them if they would like additional buprenorphine or to switch to a full opioid agonist (e.g., methadone, IV hydromorphone, IV fentanyl, PO oxycodone or hydromorphone). Patients with severe respiratory, cardiac, or liver disease or an unstable medical illness and those with precipitated buprenorphine withdrawal from methadone may not tolerate the adrenergic surge and benefit from temporarily switching to a full opioid agonist before restarting a low dose buprenorphine initiation or switching

to methadone for OUD. An example of a precipitated withdrawal management pathway is below and another included in Appendix 8.

- If your patient proceeds with additional buprenorphine, administer 16 mg of buprenorphine x 1 to maximize opioid agonism and affinity to the opioid receptor. If not contraindicated, administer a single dose of benzodiazepine, 1mg lorazepam for anxiety.
- **Reassess the patient after 30 minutes**
 - i. If the patient is feeling better, re-dose buprenorphine the following day per routine, i.e. 16 or 24 mg total daily dose
 - ii. If the patient is not feeling better after 30 minutes and their primary symptom is agitation, consider a low dose of haloperidol, olanzapine, or ziprasidone
 - iii. If the patient is calm but still complaining of withdrawal, then offer an additional 16mg of buprenorphine
- **If your patient declines additional buprenorphine, use full opioid agonists to manage precipitated withdrawal. If not contraindicated, administer a single dose of benzodiazepine, i.e., 1mg lorazepam for anxiety**
 - i. If using methadone as the full opioid agonist, start with 30 mg x 1, wait 1 hour and give an additional 10 mg if the patient still feels poorly
 - If the patient remains uncomfortable, use additional short acting opioids as indicated next.
 - ii. If using oral or IV hydromorphone as the full opioid agonist, dose every 2-4 hours until the patient's symptoms improve. Be aware that the patient may require very high

doses of full agonist opioids because buprenorphine has high affinity and slow dissociation to the μ opioid receptor and will compete with other opioids to bind to the opioid receptor

- In both scenarios, use continuous pulse oximetry to ensure the patient does not become over sedated with full agonist opioids
- Additional protocols include the use of intravenous or oral ketamine for severe precipitated withdrawal

Buprenorphine Continuation

If a patient is on buprenorphine prior to hospitalization, confirm their last dose by talking to the patient and reviewing the Prescription Drug Monitoring Program (PDMP). Continue this dose during hospitalization. In some cases (e.g., patient receiving buprenorphine in jail or through OTP) the buprenorphine may not be documented in the PDMP as these reports only include information uploaded from pharmacies.

Methadone

Methadone is a full agonist at the μ opioid receptor and has been used to treat OUD for over 50 years. Methadone increases OUD treatment retention and reduces mortality among people with OUD. Methadone treatment reduces violent crime and HIV and hepatitis C transmission. When adequately dosed, methadone prevents opioid withdrawal symptoms and cravings for 24 to 36 hours. It is dosed daily with its peak effect between 2 to 4 hours after administration. Given its long half-life, we need to follow titration recommendations due to the risk of dose stacking, sedation, respiratory depression, and overdose.

Methadone is not detected on a traditional urine drug toxicology. Urine tests for synthetic opioids like methadone and fentanyl require a more extensive panel or a more targeted drug test.

Initiating Methadone

Methadone should be initiated based on patient preference when a patient meets criteria for moderate to severe OUD. Methadone should be started when a patient reports opioid withdrawal symptoms or when they have physical exam findings consistent with opioid withdrawal, i.e., rhinorrhea, agitation, dilated pupils, gooseflesh, irritability. In contrast to buprenorphine, a specific COWS score is not needed prior to starting methadone because methadone administration will not precipitate opioid withdrawal. Most patients can start between 20 milligrams (mg) to 30 mg of methadone. You can prescribe up to 10 mg every 2 to 4 hours for ongoing cravings or opioid withdrawal symptoms with generally no more than 40 mg methadone on day 1. In some cases, i.e., older age, cognitive impairment, liver disease, renal disease, severe lung disease, lower opioid tolerance, consider starting with a lower dose (e.g., 10mg) with ongoing titration based on symptoms of opioid withdrawal and cravings while monitoring for sedation. Methadone should be titrated over the hospitalization to reduce opioid withdrawal symptoms and to improve treatment engagement.

Methadone doses of 60 mg and more are associated with greater treatment retention. Typical methadone doses among patients enrolled in OTPs range between 80mg to 120mg per day though these studies were performed when heroin was the predominant opioid being used. Methadone titration recommendations are rapidly evolving in the setting of potent synthetic opioids such as fentanyl. See Appendix 9 for methadone titration recommendations.

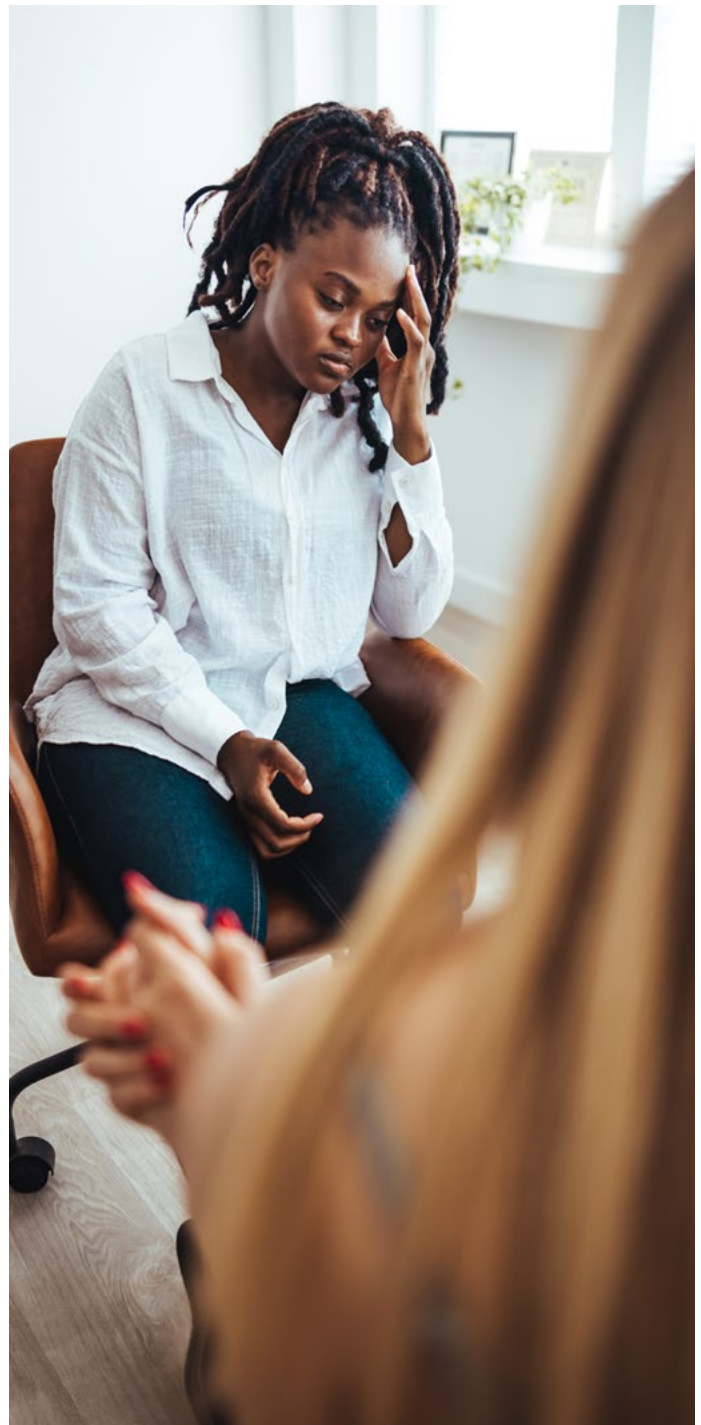
Continuing Methadone

If a patient is on methadone at admission, continue it unless there is a clear contraindication, i.e., acute/toxic encephalopathy, respiratory depression following an overdose, etc. Verify their last methadone dose by calling the OTP to confirm the dose. If unable to confirm the patient's methadone dose, administer up to 40mg of methadone unless there is a contraindication. Follow methadone dose titration during hospitalization as outlined in Appendix 9. Holding methadone will cause opioid withdrawal.

Methadone and QTc Assessment

Whether to check an electrocardiogram (EKG) in patients starting methadone is controversial. Guidelines recommend checking an EKG when the patient has risk factors for QTc prolongation, including electrolyte abnormalities, impaired liver function, structural heart disease, genetic predisposition including congenital prolonged QT syndrome or familial history of prolonged QT syndrome, and use of drugs with QTc-prolonging properties. When a hospitalized patient has had an EKG, review the results to assess if they have a prolonged QTc (i.e., ≥ 500 milliseconds). If the QTc is prolonged, review the medication list to identify any non-essential medications that may prolong QTc and discontinue them and replete electrolytes. Discuss with the patient the risks of methadone with a prolonged QTc as well as alternatives (e.g., buprenorphine with a patient). The risk of a cardiac complication is low and generally associated with high doses of methadone. Address intervenable causes, offer alternatives, and have a risk-benefit discussion. If the patient continues to have a prolonged QTc and wants to continue methadone, consider reducing the methadone by 10-20% and reassessing the EKG in 2 to 4 days. If the

patient prefers to continue their methadone without a dose reduction for fear of opioid withdrawal or return to use, this information should be considered before making a dose adjustment as the risk of overdose death is high with return to use. Ensure the patient understands the risks associated with prolonged QTc and document the risk benefit conversation in the patient's medical chart.



patients who complete an opioid-free period and successfully initiate it. It is a long acting, injectable opioid antagonist with high affinity for the opioid receptor that blocks the effects of opioids. IM naltrexone does not cause opioid dependence or tolerance and cessation does not cause opioid withdrawal. However, if patients return to use after IM naltrexone wears off, typically around 30 days after receiving the injection, their opioid tolerance is low and risk for opioid overdose high. Unlike methadone and buprenorphine, IM naltrexone is not protective against serious opioid-related acute care utilization nor does it demonstrate the mortality benefits noted with methadone or buprenorphine. IM naltrexone may be a good option for patients who prefer opioid antagonism to opioid agonism or for those who may have a primary alcohol use disorder, since IM-naltrexone is also FDA approved to treat severe alcohol use disorder. If your hospital does not offer IM naltrexone, team members should support the patient to identify local clinics that offer IM naltrexone with post hospital discharge treatment linkage. Oral naltrexone is non-inferior to placebo to prevent return to opioid use and should not be used for OUD.

Other Full Agonist Opioids

There are no legal restrictions on the use of any opioid agonists to manage opioid withdrawal among hospitalized patients with OUD. It is legal and appropriate to offer non-FDA approved opioid agonists to manage opioid withdrawal during hospitalization when patient declines buprenorphine or methadone. In addition, patients with high opioid tolerances undergoing low dose buprenorphine initiations and those on subtherapeutic methadone doses may also need additional opioid agonists during hospitalization to prevent withdrawal. Short-acting opioids can legally be used to manage opioid withdrawal symptoms in the hospital, but cannot be prescribed for opioid withdrawal at discharge.

The use of non-FDA approved opioid agonist medications to manage opioid withdrawal can be guided by patient-reported opioid withdrawal symptoms or by the COWS score. Various dosing strategies may be considered including the scheduled use of extended-release oxycodone, sustained-release morphine in combination with as needed short-acting opioid such as oxycodone or hydromorphone, or only scheduled short acting and/or prn opioids such as oxycodone or hydromorphone. Hospitalists may use continuous pulse oximetry to alert the medical team if the patient becomes over-sedated. Again, full agonist opioids cannot be prescribed for OUD at hospital discharge and it is important to set expectations with patients early.

Adjunctive Medications for Opioid Withdrawal

In addition to buprenorphine or methadone, hospitalists should prescribe non-opioid adjunctive medications for opioid withdrawal symptoms as appropriate (e.g., clonidine, loperamide, NSAIDs, acetaminophen, ondansetron, hydroxyzine). These medications are helpful in the early stages of opioid withdrawal treatment, especially when initiating and therapeutically titrating medications for OUD though they do not treat the underlying pathophysiology of opioid withdrawal. Clonidine and lofexidine, both α_2 agonists, are more effective than placebo in reducing opioid withdrawal symptoms. Commonly reported opioid withdrawal symptoms include anxiety, diarrhea, nausea, and muscle aches can be reduced using these adjunctive medications along with uptitration of methadone or buprenorphine and additional opioid agonists if needed during hospitalization.

Example Interventions to increase initiation rates of medication OUD:

- Develop and implement buprenorphine and methadone order sets to increase rates of medication initiation for OUD

Management of Stable OUD

When patients are stable on medications for OUD on admission, continue these medications as described above under “Methadone Continuation” and “Buprenorphine Continuation.” If a patient received IM naltrexone before hospitalization, inquire about the date of the last IM naltrexone injection and document this in the medical record. The timing of the IM naltrexone injection will affect how the hospitalist manages pain and assesses overdose risk. A patient is at high risk of an opioid overdose if it has been greater than 30 days since their last IM naltrexone administration.

Management of Acute Pain and Perioperative Pain in Patients with OUD

Patients with OUD may be hospitalized with acute pain or have scheduled elective surgeries. Elective surgeries in patients with OUD require careful planning and interdisciplinary involvement to coordinate care and OUD treatment management. When patients are on methadone or buprenorphine prior to hospitalization, hospitalists should continue these medications in the setting of acute pain and during the perioperative period. Resources are available to guide acute pain management for hospitalized people with OUD in Appendix 10.

Methadone

When a patient is hospitalized with acute pain and reports they are enrolled in an OTP and receive methadone for OUD, verify their last methadone dose and continue this dose per routine unless

there are contraindications. If unable to confirm their last dose, administer up to 40mg on day one, until you can verify the last methadone dose. To maximize methadone’s analgesic properties, you can divide the dose into three daily doses. There are no restrictions on methadone dose splitting during hospitalization, however the methadone dose should be consolidated to once-daily dosing prior to hospital discharge. Patients may need additional opioids in addition to their methadone dose to manage acute pain.

Buprenorphine

When a patient is hospitalized with acute pain and reports they are prescribed buprenorphine for OUD, review the PDMP to confirm their dose and continue this medication on hospital admission. To maximize the analgesic properties of buprenorphine, divide the dose into three- or four-times daily doses. Again, first discuss this with the patient. Additionally, the buprenorphine dose can be increased above the home dose to provide additional analgesia. This should also be discussed with the patient prior to making any dose changes. Patients may need additional opioids in addition to their buprenorphine dose to manage acute pain.

IM Naltrexone

When a patient is hospitalized with acute pain and reports they are on IM naltrexone, inquire about the timing of their last injection. If the injection was administered in the previous 2-3 weeks prior to hospitalization, the patient will likely require higher doses of opioids with high affinity to the opioid receptor, e.g., hydromorphone and fentanyl, to provide adequate analgesia. High doses of opioids will be required to overcome the blockade of the μ opioid receptor by the IM naltrexone. To improve patient safety, use a pulse oximeter in these scenarios. Concurrently, use of non-opioid analgesia, including regional anesthetic blocks, infusions, and intravenous ketamine, in addition to opioids, is also recommended to manage acute pain.

Short-Acting Opioids

Patients with OUD with acute pain may require higher doses of short-acting opioids, even when receiving their home buprenorphine or methadone dose. Hospitalists should dose short-acting opioids at frequent intervals, i.e., every 4 hours, and start at approximately double the usual dose of opioids typically prescribed for opioid-naïve patients while escalating as necessary to relieve pain unless contraindications exist. Discuss with the patient that acute pain should improve as tissue heals and taper short-acting opioids accordingly.

Other Analgesia

Use non-opioid multimodal analgesia to manage acute pain including scheduled acetaminophen, NSAIDs, and neuropathic agents. When available, offer regional anesthetic blocks, infusions, and intravenous or oral ketamine.

Short-Acting Opioid Management at Hospital Discharge

Hospitalists should make a patient-centered plan to taper short-acting opioids in patients with OUD with acute pain. For some patients, depending on the surgery and expected recovery process, receipt of short-acting opioids at hospital discharge may be necessary. This should be discussed with the surgical team, patient's primary care clinician, and the patient with a plan for opioid days' supply and adequate opioid doses for pain control. The patient should follow up with their treatment team shortly days after hospital discharge.

In-hospital Substance Use

In-hospital substance use is common and often due to uncontrolled pain and withdrawal, cravings, boredom, and stigma. Hospital policies addressing in hospital substance use are uncommon, and when available, often not grounded in evidence (e.g., recommending clonidine for first-line treatment of opioid withdrawal and not buprenorphine or methadone). Policies focused

on controlling visitors and conducting room searches disproportionately burden people with OUD, which may create further harms through reinforcing negative healthcare worker biases about OUD.

A proactive, standardized approach to reduce in-hospital substance use includes offering evidence-based treatment to patients. Hospitalists should inquire about how to best support patients during hospitalization to ensure they remain safe and receive necessary medical care, while addressing the factors that may lead to in-hospital substance use including undertreated pain, undertreated withdrawal, boredom, anxiety, and stigma.

If a patient uses substances during hospitalization, it is important to meet with the patient to understand what triggered their in-hospital substance use, address these triggers when possible, explain the hospital's policy and share measures that may need to be implemented and why. Such plans can be developed in collaboration with the patient, primary team, the behavioral health teams, risk management, the charge and bedside nurse, and, if available, the addiction medicine team. See Appendix 11 for recommendations for in-hospital substance use policies.

Harm Reduction

Harm reduction refers to policies, programs and practices that aim to minimize the negative health, social and legal impacts associated with drug use, drug policies and drug laws. Harm reduction agencies, syringe service programs, and local organizations may provide naloxone, sterile syringes, and other substance use supplies teach naloxone administration and wound care techniques, and advocate for policy reform to increase access to evidence-based harm reduction strategies.

Leadership Buy-In for In-Hospital Harm Reduction

Familiarize yourself with local and state laws regarding distribution of substance use supplies when exploring this in your hospital. Identify a community harm reduction

organization and/or a syringe service program to refer patients to after hospital discharge. Identify a funding source to purchase supplies or discuss a partnership with a community organization. Examples of harm reduction supplies and strategies are in Table 4 and 5 below.

Table 4: Harm Reduction Supplies* and Rationale

Supply	Rationale
Wound Care Supplies	Keeps wounds covered and clean to protect the skin, improve healing, and reduce infections
Naloxone	Reverses opioid overdose
Fentanyl and Xylazine Test Strips	Reduce unintentional ingestion of fentanyl and xylazine and overdose risk
Alcohol Swabs	Clean skin to reduce infections
Foil	Reduces need to reuse materials and can help encourage people to switch from injecting to smoking, which reduces risk of infection and overdose
Needles and Syringes	Reduce sharing and reusing supplies, which reduces risk of infections
Pipe	Reduces risk of using a broken or makeshift pipe which reduces risk of injury. Also reduces risk of sharing supplies and unintentional exposure to a drug or infection
Rubber Mouthpiece	Placed on pipe to protect the lips from burns and cuts
Cooker	Reduces risk of sharing cookers which can increase risk for infection
Sharps Container	Reduces used needs in the community
Lip Balm	Moisturizes lips to reduce skin cracks and bleeding which can increase risk of disease transmission
Cotton Pellets	Reduces need to reuse pellets and filters out particles from drug solution which can reduce risk for infections and health complications from particles
Tourniquets	Makes veins more accessible to avoid multiple injections which preserves vein health and reduces risk for infection
Toothpicks and Gum	Oral fixation to reduce cravings and frequency of use
Condoms	Prevents sexually transmitted infections
List and locations of syringe service programs	Provides information for local syringe service programs and community services to help patients to connect with harm reduction supplies, education, and other resources

*Check local policy regarding harm reduction supplies. This list is not exhaustive, and it is important that harm reduction practices are guided by local practices.

Table 5: Harm Reduction Strategies in Hospital Settings

Prescribe naloxone to all patients who may experience or witness an overdose
Refer patients to local syringe service programs to access harm reduction supplies
Offer infectious disease screening (e.g., HIV, HCV, syphilis) and treatment as needed
Provide overdose prevention education including using test doses of drugs, not using alone, the never use alone prevention hotline, not sharing supplies

Special Populations and OUD Care

Pregnant People

The American College of Obstetricians and Gynecology and the American Society of Addiction Medicine recommend starting or continuing methadone and buprenorphine for OUD during pregnancy. Methadone and buprenorphine are classified as Pregnancy Category C5 drugs by the FDA, meaning that adequate, well-controlled studies of how these drugs affect pregnant people are lacking. Prescribing methadone or buprenorphine during pregnancy is not off-label and studies show many benefits.

People Who are Breastfeeding

Patients with OUD on methadone or buprenorphine can safely breastfeed if they are not living with HIV, are not actively using illicit substances, and do not have a disease or infection in which breastfeeding is otherwise contraindicated.



People Who are Incarcerated

Methadone, buprenorphine, and IM naltrexone reduce illicit opioid use in studies involving jail, prison, probation, and parole populations. Use of methadone and buprenorphine reliably increase OUD treatment entry and retention. In contrast, meta-analyses have reported mixed or non-significant effects of IM naltrexone on treatment entry and retention in this population. Denying medications for OUD to individuals who are incarcerated is discrimination. Title II of the Americans with Disability Act prohibits jails and prisons from discriminating against people with an OUD and they are prohibited from denying health services or OUD treatment. Prior to starting a medication for OUD during hospitalization, inquire about what medications are available in the jail or prison. Whenever possible, start the medication during hospitalization that aligns with the jail or prison to avoid cessation of OUD treatment during incarceration.

People with Limited English Proficiency

In 2019, an estimated 25 million US residents representing 8% of the population had limited English proficiency. Studies that language-concordant healthcare improves medical outcomes across a range of conditions. Rates of addiction treatment and access to addiction care are lower among minoritized populations and associated with worse outcomes including overdose and death. Despite this, only 51% of SUD treatment facilities in the United States offer treatment services in languages other than English. There is also a lack of diversity among the addiction workforce which may impact the ability to provide language and culturally concordant care.

Care Transitions: Medications, Behavioral Health Interventions, and Others

Ensuring seamless transitions to outpatient addiction care is pivotal. Health systems should designate team members, i.e., care coordinators, social workers, clinical nurse specialists, pharmacists, and hospitalists to develop and update resource sheets with local OTPs, buprenorphine prescribers, and locations for additional treatment and behavioral health linkage. Many websites provide resources for addiction treatment services across the United States. Lack of available follow-up or a patient not wanting to continue medications for OUD should not preclude the use of life-saving medication during hospitalization or prescribing buprenorphine at discharge.

Medications

Buprenorphine

When a patient wants to continue buprenorphine after hospitalization, provide a prescription. All clinicians—including hospitalist—with a Drug Enforcement Administration (DEA) schedule II license can prescribe buprenorphine. The X-Waiver is no longer required. Arrange a primary care or specialty follow-up appointment for hospitalized patients with OUD as this is standard in hospital medicine practice. Hospital social workers and care coordinators can arrange for continued buprenorphine via a local primary care clinician or specialty program. Telehealth follow-up is also available for patients with OUD wanting buprenorphine.

Methadone

In the United States, methadone for OUD can only be dispensed from an OTP in the outpatient setting. Ideally, connect patients who want to continue methadone to an OTP that will do an intake within 24 hours of hospital discharge. We cannot prescribe methadone at hospital discharge for OUD treatment.

IM Naltrexone

If the patient received an IM naltrexone injection during hospitalization, the patient should be scheduled for a follow-up appointment to receive the next injection within 24-30 days of injection

administration. If the patient did not receive an IM injection during hospitalization and prefers IM naltrexone over opioid agonist therapy, e.g., buprenorphine or methadone, schedule a post discharge appointment in a clinical setting that offers IM naltrexone.

Naloxone

Every patient at risk for an opioid overdose, including anyone who uses drugs or has an OUD, should be provided naloxone for overdose reversal at hospital discharge. There is also evidence that all patients prescribed opioids at discharge should be offered naloxone. Naloxone can reduce opioid-related overdose and death. The legal risk with prescribing naloxone is no higher than that associated with any other medication.

Example Interventions for Pharmacotherapy Care Transitions:

- Increase linkage to buprenorphine continuation at discharge.
- Partner with local OTPs to seamlessly link patients to methadone treatment.
- Prescribe naloxone to patients at risk of experiencing or witnessing an opioid overdose.

Psychosocial/Behavioral Treatment

For patients with OUD, psychosocial services alone or inpatient withdrawal management alone (i.e., without the provision of medications for OUD) are less effective than medications for OUD alone. Treatment should be based on patient preference, and hospitalists should inform patients of the evidence and offer medication alone, psychosocial treatment alone, and both in combination. Examples of psychosocial addiction treatment includes individual or group therapy, intensive outpatient treatment, residential treatment, structured counseling, and dedicated mental health treatment.

Peer-Based Support Groups

Referrals to peer-based support groups should be offered to patients, in addition to medications for OUD and naloxone for overdose reversal. Peer-based support groups generally involve giving and receiving nonprofessional, nonclinical assistance from individuals with similar conditions or circumstances to achieve long-term recovery from substance use disorder. Peer-based support groups are free, widely available, and are a source of additional guidance and support for people with OUD. Examples of peer-based support groups are 12-step programs, including [Alcoholics Anonymous](#), [Narcotics Anonymous](#); Self-Management and Recovery Training ([SMART](#)) Recovery, and [Recovery Dharma](#).

Contingency Management

Contingency Management is based on operant conditioning and in SUD is an evidence-based treatment that positively reinforces a desired behavior. Most commonly, the treatment provides something of monetary value to patients when they do not use drugs. For instance, upon confirmation of a urine toxicology screen that is negative for non-prescription drug metabolites, patients earn a chance to receive a prize or gift card. Contingency management is associated with abstinence from

stimulants, opioids, and cigarettes, and improves treatment attendance and medication adherence. Some hospitals are adapting contingency management to hospital settings.

Post-Acute Care Facilities

Continuation of medications for OUD at hospital discharge, including for patients discharging to post-acute care facilities is paramount for ongoing treatment of OUD. Care facilities such as skilled nursing facilities that prohibit continuation of medications for OUD are in violation of the Title III of the Americans with Disabilities Act.





Roles of the Care Team and Essential Partners in Inpatient OUD Care

Hospitalists

- Perform a history and physical exam to assess for, and diagnose, an OUD based on the DSM-5 criteria
- Conduct a medical assessment that includes mental health and pain
- Offer screening labs, i.e., HBV, HAV, HCV, HIV, syphilis, pregnancy
- Solicit patient goals for OUD during hospitalization and discharge
- Order COWS if concern for opioid withdrawal and treat opioid withdrawal with methadone or buprenorphine and other adjunctive medications
- Offer adjunctive medications for opioid withdrawal
- Manage acute and chronic pain in the setting of OUD
- Initiate and titrate pharmacotherapy for OUD including methadone, buprenorphine, or IM naltrexone
- Refer patients who want to continue methadone after hospital discharge to an OTP

- Prescribe buprenorphine at hospital discharge to patients who want to continue it
- Ensure naloxone prescription or provision at hospital discharge
- Partner with pharmacy and information systems specialists to build order sets for buprenorphine and methadone initiation and titration

Nurses

- Screen patients for unhealthy substance use during hospitalization
 - Example screening question:
 - i. “How often in the past 12 months have you used an illegal drug or used a prescription medication for non-medical reasons?”
 - ii. “Do you regularly use unprescribed opioids which might include heroin, fentanyl, or pressed pills?”
- Potential follow up: If patients answer “yes”, then place referral to social work to complete full screening and brief intervention with referral to treatment (SBIRT), or physician uses the DSM-5 criteria to assess for OUD

Pharmacists

- Ensure there are no restrictions on the use of methadone or buprenorphine in the hospital
- If medications for OUD are not on the formulary, or needed formulations are missing, add these to the formulary
 - Consider offering both buprenorphine monoproduct, i.e., Subutex, and combined buprenorphine/naloxone, i.e., Suboxone, to formulary
 - i. Consider having the film and tab formulations available
 - ii. Consider offering transdermal buprenorphine, i.e., Butrans, for low dose buprenorphine initiation
 - iii. Consider offering IV buprenorphine, i.e., Buprenex, for low dose buprenorphine initiation
- Ensure IV and oral, liquid methadone are available
- Obtain prior authorization for buprenorphine when required by insurers
- Work with medical team to ensure methadone dose verification if enrolled in an OTP
- Partner with clinician subject matter expert and information systems specialists to build order sets for buprenorphine and methadone initiation
- Educate patients about naloxone

Social Workers

- Use a validated tool to complete full screening, brief intervention for OUD, referral to treatment
 - Validated tools to screen for unhealthy opioid use include the NIDA [single question drug screener](#), DAST-10, and others.
- If screening test is positive, inform the medical team for further assessment and diagnosis of OUD
- Discuss substance use goals and return to use prevention as appropriate
 - Develop guide for conversation with patients that supports understanding of triggers for substance use and patient-identified strategies to address and mitigate substance use
- Provide motivational interviewing, psychoeducation, and cognitive behavioral therapy
- Identify and partner with local buprenorphine prescribers/clinics and OTPs for treatment linkage after discharge
- Identify local intensive outpatient programming, residential treatment programs, one-on-one counseling services, and contingency management programs for treatment linkage post discharge
- Identify resources that accept various insurance, self-pay, and work for treatment programs
- Partner with local syringe service programs and harm reduction services
- Support patients in obtaining resources, i.e., housing, transportation, food

Patient Navigators and Peer Mentors

- Work with other members of the care team to identify treatment resources and keep these updated
- Work with patients and teams on follow-up addiction treatment plans including appointments for buprenorphine continuation, OTP, and other addiction support
- Health system navigation support for the patient, both in hospital and after discharge
- Social services navigation, i.e., criminal-legal system, food insecurity, housing
- Post hospital support, i.e., accompanying to appointment, enroll in college courses
- Patient engagement including self-empowerment and advocacy
- Supports patients during prolonged hospitalizations, may include taking the patient outside for fresh air, contacting the hospital chaplain for support if the patient expresses interest, etc.

Care Coordinators

- Schedule linkage appointments for follow-up post discharge

Nurse Care Managers

- Works with other members of the care team to complete unhealthy opioid use screening
- Ensures nurses use COWS (when applicable) to assess and document opioid withdrawal
- Works with other nurse care managers, clinicians, and social workers to standardize processes around in-hospital substance use (see in-hospital substance use section above)

Addiction Specialists (when available)

- Assist with complicated opioid, alcohol, benzodiazepine withdrawal
- Nuanced methadone dose titration
- Complex buprenorphine initiation
- Precipitated withdrawal management
- OUD diagnoses when less clear

Information Systems Specialists

- Partner with clinician subject matter expert and pharmacy to build order sets for buprenorphine and methadone initiation
- Build pathways in electronic health record, to identify all patients with OUD at hospital discharge and order naloxone

Hospital Leadership, Clinician Leaders, Subject Matter Experts

- Identify and support OUD clinical champions with protected time or other compensation
- Ensure there is a billing mechanism for OUD care provision to insurers
- Integrate patient navigators or peer mentors with lived experience into hospital-based care
- Support a workgroup to coordinate diverse OUD efforts across the hospital
- Review and update hospital guidelines and policies that may be nonexistent, outdated, misinformed, and/or stigmatizing, i.e., methadone access, in-hospital substance use
- Implement universal substance use screening and treatment workflows
- Identify and partner with social work leaders to develop pathways to post hospital addiction treatment, i.e., office-based buprenorphine, telehealth, OTPs, residential treatment, intensive outpatient treatment
- Develop a staff education campaign on evidence-based addiction treatment, trauma-informed care, harm reduction, dismantling stigma



| Sustaining Improvement

While an improvement project may denote a timebound effort or initiative, the intention is to support facilitate culture and practice change that can be sustained to support improved care outcomes in perpetuity. Once your interventions are defined and implementation is well rooted, it is important to articulate how you and your team will support interventions you pursue. This will require training frontline staff, reviewing opportunities to hardwire key processes through tools like order sets and broadly engaging diverse stakeholders to support new and improved practice. It is optimal for the team to continually think about and sustainability planning so that your efforts to improve OUD care are long-lasting. You may consider using tools like the [planning worksheet offered](#) by the Institute for Healthcare Improvement to assist your team in planning.

Appendices

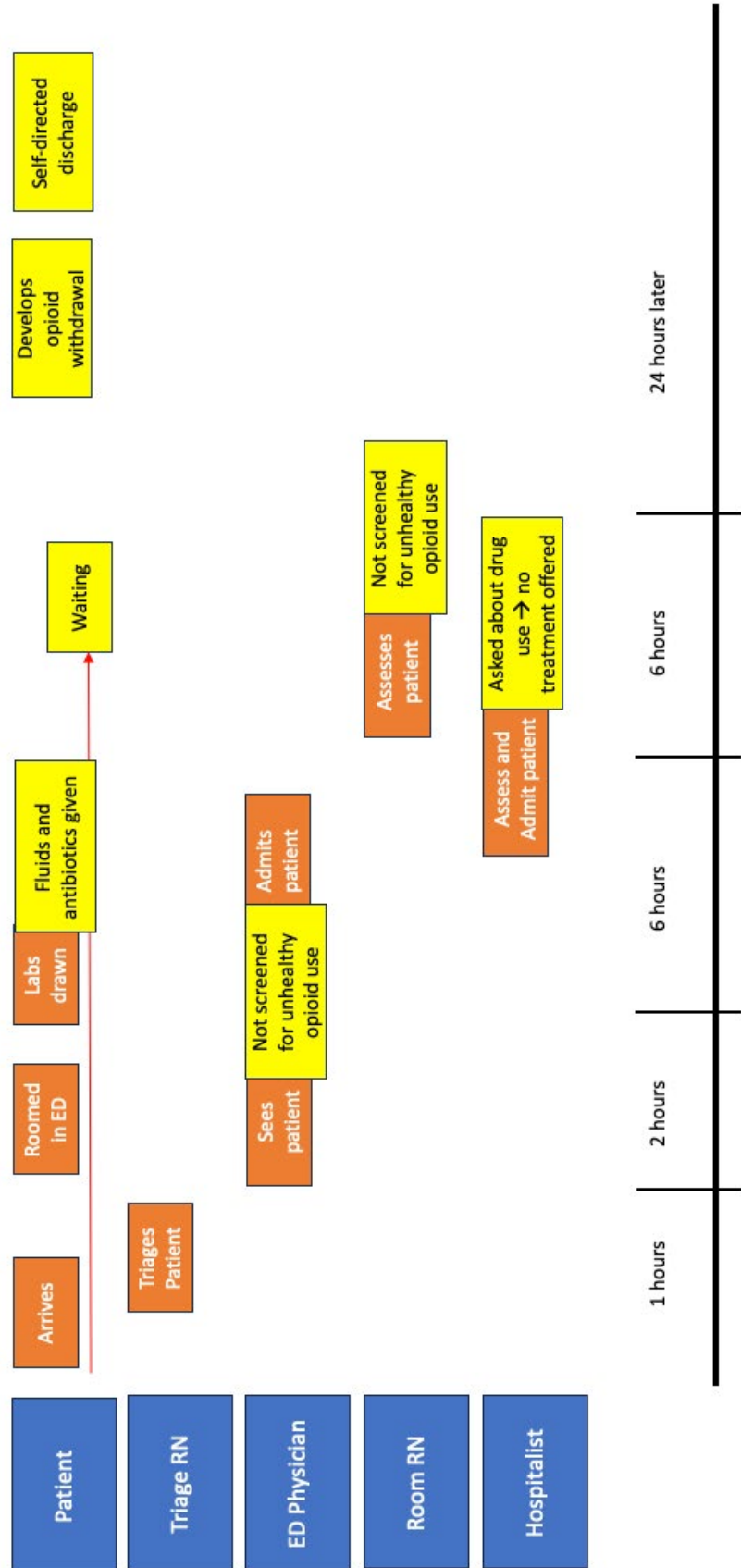
1. Improvement Tools
 - Swim Lane Diagram
 - Instructions for PDSA A3 Template
 - PDSA A3 Template
 - Gap Analysis Tools
2. Validated Screening Tools
 - National Institute of Drug Abuse Single-Question Screening Test
 - Drug Abuse Screening Test, DAST-10
3. DSM-5 Diagnostic Criteria
4. COWS Scoring Tool
5. SAMHSA Traditional Buprenorphine Initiation Protocols
6. California Bridge Buprenorphine ED Quick Start
7. California Bridge Buprenorphine Microdose and Cross Tapering Guidance
8. California Bridge Enhanced Care Practice: Precipitated Withdrawal 90-Minute Bundle
9. California Bridge Methadone Quick Start Guidance
10. Acute Pain and Buprenorphine Guidance
11. Recommendations for In-Hospital Substance Use Policies

Appendix 1: Improvement Tools

Swim Lane Diagram

Process: Patient arrival to recognition of needing opioid use disorder treatment

Common Scenario: Patient with OUD admitted for cellulitis



Appendix 1: Improvement Tools

Instructions for PDSA A3 Template

A3 Purpose: The A3 is a one-page improvement plan using a shared language and approach to support critical thinking, data-driven improvement, communication and engagement around improvement strategies and experiments known as PDSA (Plan-Do-Study-Act). This primer is intended to support completion of your A3

Title:

Owner: [Enter the author-owner of this A3. Additional subtitles may include: sponsor, coach, team members, connected A3s]

Ver:	Date:
------	-------

I. Background: What problem are you talking about and why focus on it now?

What is the high-level summary of the problem and its outcomes on stakeholders/organization?

- What is the problematic outcome and who is affected? How do we know?


Why is this problem a priority you have chosen to focus on now? For our organization, staff and patients?

- Internal Drivers:** Describe alignment with True North goals, mission, vision, strategies, existing A3s, etc.
- External Drivers:** Describe outside factors such as policy, population needs, external organizations, etc.
- Historical context:** Consider a timeline of past efforts and events. |-----|-----|-----|-----|----->
- Stakeholders to engage in this planning and implementation:

II. Current Conditions: What is happening today and what is not working?

Describe what is actually happening today, or current processes, that are getting today's results:

- Consider high-level process map, reflecting observation and understanding from stakeholders



What facts or existing data define the problem in these processes and related outcomes?

- What data or facts demonstrate problems in process or outcomes?
- How does current performance compare to expected performance, benchmarks?

Problem Statement: What specific, measurable problem will serve as your baseline performance?

One summary sentence with specific baseline measurable that will be changed to meet your target. Avoid simply stating lack of a specific solution – E.g. Instead of “We don’t have a medication refill clinic,” use “50% of patients wait >24 hours for a medication refill.”

III. Targets and Goals: What specific measurable outcomes are desired and by when?

Selected Metrics	Baseline	Benchmark	Target by [When]
Describe specific, measurable, attainable, relevant targets with specific target dates.			

IV. Analysis: Why does the problem exist, in terms of causes, constraints, barriers?

Describe likely root causes of this problem, or constraints or barriers to implementing change

- Consider using fishbone diagram and/or 5 Why Problem Tree to visually describe causes, constraints or barriers that should be considered to achieve your results
- Incorporate available or new data to rank top contributors using stratification, pareto diagrams, if possible

V. Possible Countermeasures: What countermeasures do you propose and why?

Cause/Barrier Addressed	Countermeasure/Idea	Description and Expected Results (“If-Then”)	Impact (H/M/L)	Effort (H/M/L)
Link to causes in Analysis	Consider at least two or three alternatives	If you use this table, then you will link specific causes to ideas		

VI. Plan: What, where, how will you implement, and by whom and when?

Countermeasure/Actions	Description and Expected Result	Owner	Date
Title of PDSA/Action	What, Where, how?	Who?	When?
May Consider Gantt chart			

VII. Follow-Up: How will you assure ongoing PDSA?

Describe how you will follow-up to ensure implementation, reflect on impacts, and plan next steps

- What will be your process for follow-up, who will own it, where and when will these steps be completed.
- Consider a “visibility board” to track progress and to confirm milestones in the Gantt chart
- How will you know if you meet targets? Consider a run chart with baseline, current and targets
- How will you analyze why you are not meeting targets? Consider further stratification, pareto charts.
- What processes will you use to enable, assure, and sustain success?
- How will you share your learnings, new problems or unintended consequences with other areas?
- How will you decide on adjustments, next steps?

This resources and others are made available by Zuckerberg San Francisco General Hospital and Trauma Center and can be found at sfghcare.org

Appendix 1: Improvement Tools

PDSA A3 Template

A3 Template

Title:

Date:

Version:

Owners:

Team Members:

Ver:

Date:

I. Background: What problem are you talking about and why focus on it now?

II. Current Conditions: What is happening today and what is not working?

Problem Statement: What specific, measurable problem will serve as your baseline performance?

III. Targets and Goals: What specific measurable outcomes are desired and by when?

Selected Metrics	Baseline	Benchmark	Target by [When]

IV. Analysis: Why does the problem exist, in terms of causes, constraints, barriers?

V. Possible Countermeasures: What countermeasures do you propose and why?

Cause/Barrier Addressed	Countermeasure	Description ("If-Then")	Impact	Effort

VI. Plan: What, where, how will you implement, and by whom and when?

Countermeasure	Description and Expected Result	Owner	Date

VII. Follow-Up: How will you assure ongoing PDSA?

This resource and others are made available by Zuckerberg San Francisco General Hospital and Trauma Center and can be found at sfghcare.org

Appendix 1: Improvement Tools

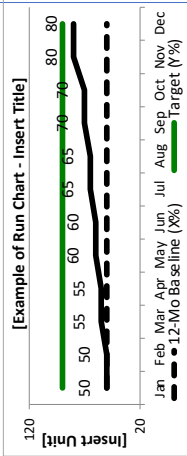
Gap Analysis Tools

These tools can help you describe the root causes, constraints, and barriers to improving OUD care.

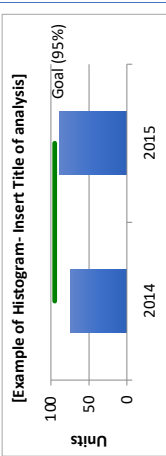
RUN CHART: Line chart over time, often including:

- Baseline: Black dashed line
- Target: Green solid line
- Actual: Black solid line
- Other Options:
 - Year to date is optional: Blue
 - Standard deviation

Purpose: To show how you have impacted progress across time.



HISTOGRAM: (bar charts) are useful for summarizing impact when comparing approaches, periods of time (i.e. baseline vs year-to-date), or categories.



PROCESS MAP: A visual map of current processes

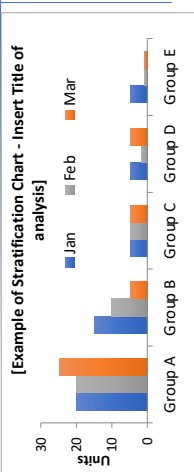


Purpose: To develop understanding of current work processes and opportunities to improve

The swim lane on the previous page is an example of a process map.

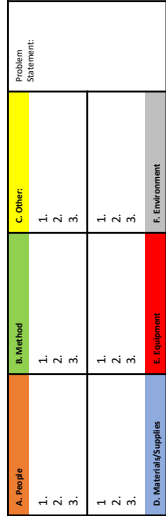
Stratification: To learn more about why you have not achieved your targets, divide your data into relevant groups (strata) based on key characteristics, such as:

- **Who:** patients, staff or departments?
- **Where:** Unit, clinic, setting?
- **What:** machines, equipment, products
- **How:** defect types, cause
- **When:** time of day, day of week, step of process



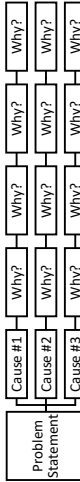
FISHBONE/ISHIKAWA Chart: A cause-effect diagram to study a problem and possible causes by category, such as:

- People
 - Materials
 - Equipment
 - Methods
 - Environment
 - (Patients?)
- Purpose:** To think broadly about possible contributors to a problem



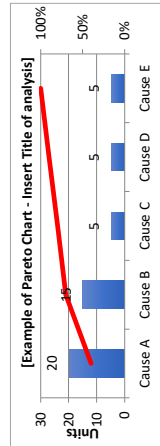
PROBLEM DEFINITION TREE: A diagram to study a problem and its possible causes with focus on following a connected thread of thinking using 5 Whys?

- Document potential root causes
- Identify causes with highest cause-effect (may supplement with data)
- “Drill down” by asking why five times



PARETO CHART: Combination histogram/bar chart

- Bars = frequencies from highest to lowest
 - Line chart = % of total
- Purpose:** To quantify top contributors to a problem



This resources and others are made available by Zuckerberg San Francisco General Hospital and Trauma Center and can be found at zsflearn.org

Appendix 2: Validated Screening Tools

National Institute of Drug Abuse Single-Question Screening Test

General Instructions Single-Question Screening Test for Drug Use - to be completed independently by an individual patient.

- How many times in the past year have you used an illegal opioid or used a prescription opioid medication for non-medical reasons (for example, because of the experience or feeling it caused)?

Interpretation: Any response other than “never” or “0” requires further assessment for an opioid or other drug use disorder depending on what the substance(s) are.

TAPS Tool

The Tobacco, Alcohol, Prescription medication, and other Substance use (TAPS) Tool consists of a combined screening component (TAPS-1) followed by a brief assessment (TAPS-2) for those who screen positive.

This tool:

- Combines screening and brief assessment for commonly used substances, eliminating the need for multiple screening and lengthy assessment tools
- Provides a two stage brief assessment adapted from the NIDA quick screen and brief assessment (adapted ASSIST-lite)
- May be either self-administered directly by the patient or as an interview by a health professional
- Uses an electronic format (available here as an online tool)
- Uses a screening component to ask about frequency of substance use in the past 12 months

- Facilitates a brief assessment of past 3 months problem use to the patient

More Information About This Tool Frequently Asked Questions About Screening

Intended use: This screening tool is meant to be used under a medical provider's supervision and is not intended to guide self-assessment or take the place of a healthcare provider's clinical judgment.

This tool may be administered by either the patient or the clinician. Please indicate the mode of administration.

Appendix 2: Validated Screening Tools

Drug Abuse Screening Test, DAST-10

You can adapt the DAST-10 for opioids by replacing drugs in the text below with opioids.

The following questions concern information about your possible involvement with drugs *not including alcohol* during the past 12 months.

Please answer every question. If you have difficulty with a statement, then choose the response that is mostly right.

In the past 12 months...	Yes / No
1. Have you used drugs other than those required for medical reasons?	
2. Do you use more than one drug at a time?	
3. Are you unable to stop using drugs when you want to?	
4. Have you ever had blackouts or flashbacks as a result of drug use?	
5. Do you ever feel bad or guilty about your drug use?	
6. Does your spouse (or parents) ever complain about your involvement with drugs?	
7. Have you neglected your family because of your use of drugs?	
8. Have you engaged in illegal activities in order to obtain drugs?	
9. Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?	
10. Have you had medical problems as a result of your drug use (e.g. memory loss, hepatitis, convulsions, bleeding)?	

Scoring: Score 1 point for each question answered “Yes,” except for question 3 for which a “No” receives 1 point.

Score: _____

Interpretation of Score:

Score	Degree of Problem related to Drug Use	Suggested Action
0	No problems reported	None at this time
1-2	Low level	Monitor, re-assess at a later date
3-5	Moderate level	Further investigation
6-8	Substantial level	Intensive assessment
9-10	Severe level	Intensive assessment

Appendix 3: DSM-5 Diagnostic Criteria

DSM-5 Criteria for Diagnosis of Opioid Use Disorder

Diagnostic Criteria*

These criteria not considered to be met for those individuals taking opioids solely under appropriate medical supervision.

Check all that apply

	Opioids are often taken in larger amounts or over a longer period of time than intended.
	There is a persistent desire or unsuccessful efforts to cut down or control opioid use.
	A great deal of time is spent in activities necessary to obtain the opioid, use the opioid, or recover from its effects.
	Craving, or a strong desire to use opioids.
	Recurrent opioid use resulting in failure to fulfill major role obligations at work, school or home.
	Continued opioid use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of opioids.
	Important social, occupational or recreational activities are given up or reduced because of opioid use.
	Recurrent opioid use in situations in which it is physically hazardous
	Continued use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by opioids.
	*Tolerance, as defined by either of the following: (a) a need for markedly increased amounts of opioids to achieve intoxication or desired effect (b) markedly diminished effect with continued use of the same amount of an opioid
	*Withdrawal, as manifested by either of the following: (a) the characteristic opioid withdrawal syndrome (b) the same (or a closely related) substance are taken to relieve or avoid withdrawal symptoms

Total Number Boxes Checked: _____

Severity: **Mild:** 2-3 symptoms. **Moderate:** 4-5 symptoms. **Severe:** 6 or more symptoms

*Criteria from American Psychiatric Association (2013). Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition,. Washington, DC, American Psychiatric Association page 541. For use outside of IT MATTTRs Colorado, please contact ITMATTTRsColorado@ucdenver.edu

Appendix 4: COWS Scoring Tool

Clinical Opiate Withdrawal Scale (COWS)

Flow-sheet for measuring symptoms for opiate withdrawals over a period of time.

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 increase pulse rate would not add to the score.

Patient's Name: _____ Date: _____ Enter scores at time zero, 30min after first dose, 2 h after first dose, etc. Times: _____				
Resting Pulse Rate: (record beats per minute) <i>Measured after patient is sitting or lying for one minute</i> 0 pulse rate 80 or below 1 pulse rate 81-100 2 pulse rate 101-120 4 pulse rate greater than 120				
Sweating: <i>over past ½ hour not accounted for by room temperature or patient activity.</i> 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 <i>Observation during assessment</i> 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 <i>If patient was having pain previously, only the additional component attributed to opiates withdrawal is scored</i> 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 <i>Not accounted for by cold symptoms or allergies</i> 0 not present 1 nasal stuffiness or unusually moist eyes 2 nose running or tearing 4 nose constantly running or tears streaming down cheeks				

Appendix 4: COWS Scoring Tool

COWS / Flow-sheet format for measuring symptoms over a period of time

<p>GI Upset: <i>over last ½ hour</i></p> <p>0 no GI symptoms 1 stomach cramps 2 nausea or loose stool 3 vomiting or diarrhea 5 Multiple episodes of diarrhea or vomiting</p>				
<p>Tremor <i>observation of outstretched hands</i></p> <p>0 No tremor 1 tremor can be felt, but not observed 2 slight tremor observable 4 gross tremor or muscle twitching</p>				
<p>Yawning <i>Observation during assessment</i></p> <p>0 no yawning 1 yawning once or twice during assessment 2 yawning three or more times during assessment 4 yawning several times/minute</p>				
<p>Anxiety or Irritability</p> <p>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</p>				
<p>Gooseflesh skin</p> <p>0 skin is smooth 3 piloerection of skin can be felt or hairs standing up on arms 5 prominent piloerection</p>				
<p>Total scores</p> <p>with observer's initials</p>				

Score:

5-12 = mild;

13-24 = moderate;

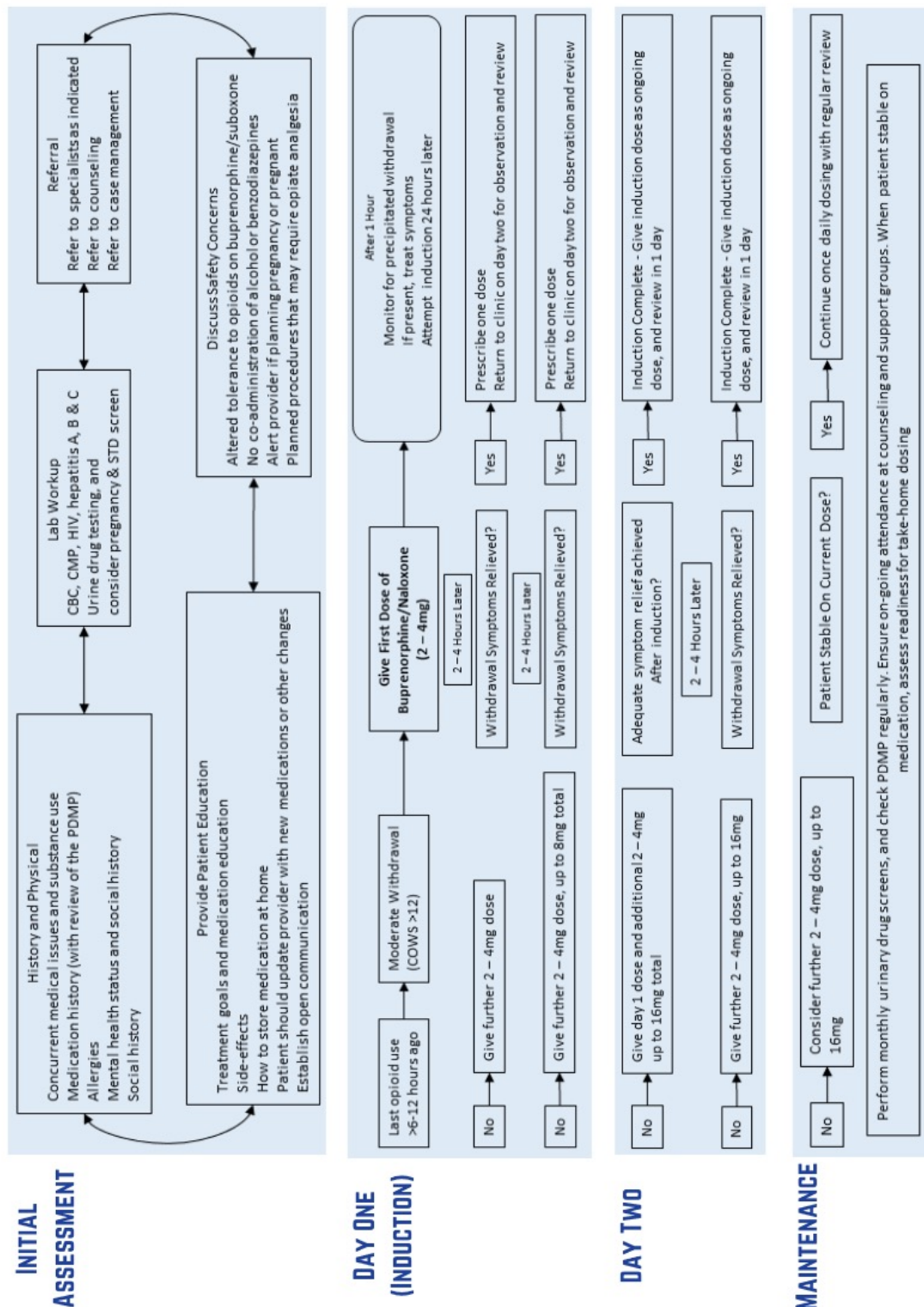
25-36 = moderately severe;

more than 36 = severe withdrawal

Appendix 5: SAMHSA Traditional Buprenorphine Initiation Protocols

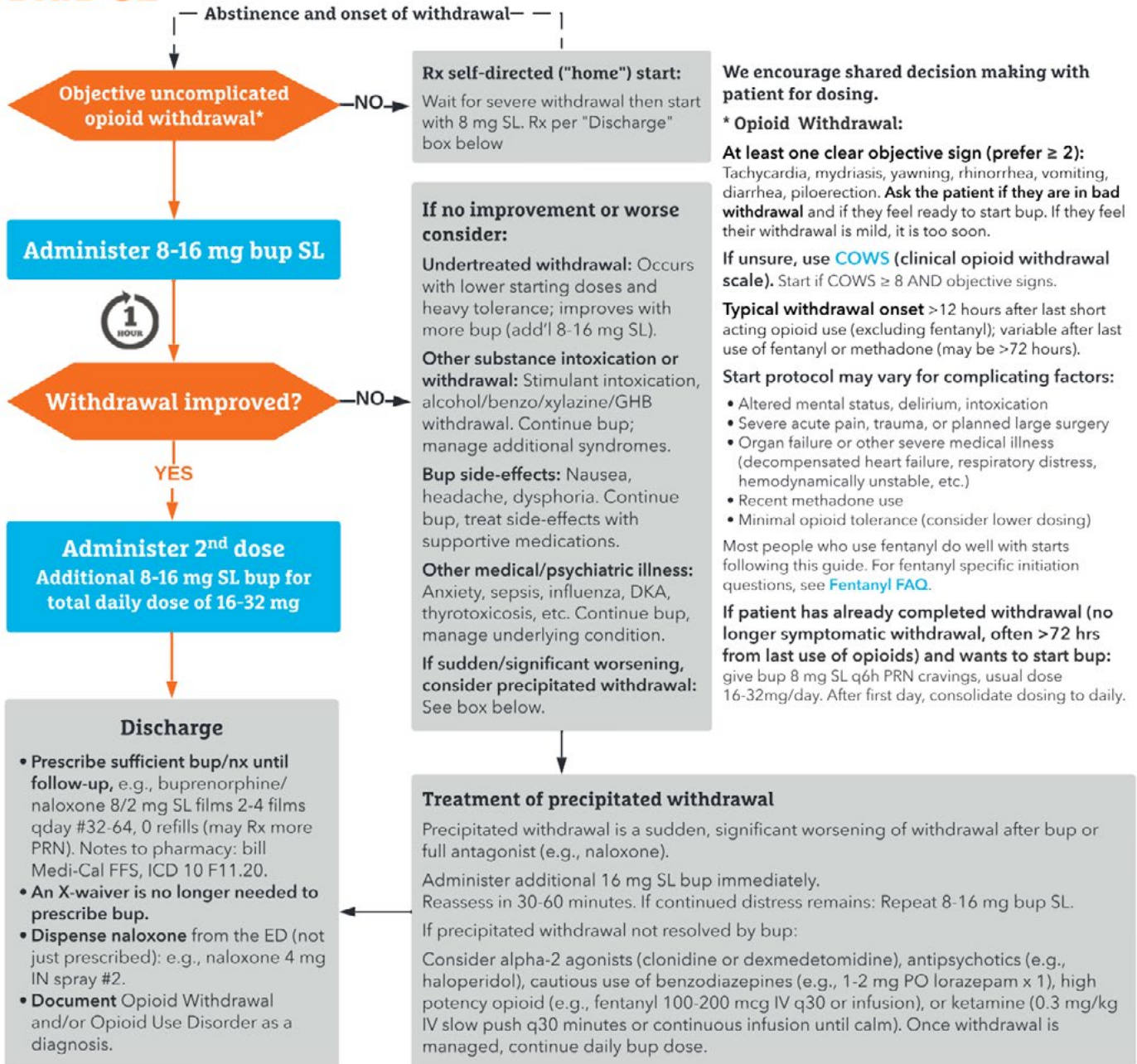
Gap Analysis Tools

Below are examples of two protocols for initiating Buprenorphine. You may start with 4 mg or 8 mg depending on your patient's preference. Traditional Buprenorphine Initiation Protocol Guided by the Clinical Opiate Withdrawal Scale (COWS)



Appendix 6: California Bridge Buprenorphine ED Quick Start

CA BRIDGE Buprenorphine (Bup) Emergency Department Quick Start



Bup dosing notes

This guidance is for the ED. We advocate for continuation & initiation of bup in inpatient and outpatient settings. Algorithms vary based on clinical scenario.

- Any prescriber can order bup in the ED/hospital. It can also be prescribed as medication for opioid use disorder (MOUD) by any prescriber with an active Drug Enforcement Agency (DEA) license that includes schedule III medications.
- Either bup or bup/nx (buprenorphine/naloxone) SL films or tab are OK. If chronic pain, may split dose TID-QID.
- Bup monoproduct or bup/nx OK in pregnancy. See [Buprenorphine Quick Start in Pregnancy](#).
- Pause opioid pain relievers when starting Bup. OK to introduce opioid pain relievers after bup is started if patient has acute pain.

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February 2023

PROVIDER RESOURCES

California Substance Use Line

CA Only (24/7)
1-844-326-2626

UCSF Substance Use Warmline

National (M-F 6am-5pm; Voicemail 24/7)
1-855-300-3595

Appendix 7: California Bridge Buprenorphine Micro-dose and Cross Tapering Guidance

SITE EXAMPLE

Starting Buprenorphine with Microdosing and Cross Tapering

We are sharing independent examples from selected hospital sites for the purpose of providing insight into how different sites treat substance use disorder. Please note CA Bridge is not responsible for the content of any site examples, and we do not formally recommend them as best-practices.

Below are example treatment guidelines for starting buprenorphine with microdosing and cross tapering. These examples are used at Zuckerberg San Francisco General Hospital and Highland General Hospital. This may be a starting point for individual hospitals that choose to build internal guidance for microdosing and cross tapering. This can be done in any setting, including home starts. In most cases, routine higher dosing protocols are preferable as they are more streamlined and faster. Microdosing protocols are helpful in limited circumstances.

When to consider microdosing/cross tapering:

- Patient has been taking methadone
- Patient reports difficulty starting buprenorphine in the past.
- Patient is transitioning from prescribed full agonist opioids for pain to buprenorphine.
- Patient has been intentionally taking fentanyl daily:
 - Note: many patients can start buprenorphine from fentanyl with a routine CA Bridge Quick start protocol, in these cases consider waiting for a COWS >12 before starting buprenorphine
 - We recommend asking patients about their prior experiences starting buprenorphine while on fentanyl and doing what worked in the past for them
 - Patients can be offered both quick start and microdosing start and chose based on their personal preference

When to avoid microdosing:

- Patient doesn't want to continue using full opioid agonists during transition period or at increased risk for sedation/respiratory depression
- Patient is already in significant withdrawal
- Patient prefers rapid start
- Difficulties with health literacy or medication adherence
- Patient unable to self administer doses or unable to dose sufficiently frequently (jail, some sober living homes)
- Most patients would benefit from routine buprenorphine starts, microdosing can delay induction

Microdosing means using very small doses of buprenorphine that are gradually increased while a patient continues to use either prescribed or illicit opioids. There are many different ways to do a microdosing start, this document will list options used at some hospitals and clinics. The key to microdosing protocols is that by starting with small amounts of buprenorphine (maximum 1 mg) you can overlap buprenorphine with other opioids in the system, allowing you to slowly build up buprenorphine levels and prevent patients from experiencing withdrawal. Two key review articles summarize the pharmacology and principles of microdosing^{1,2}.

Choose a protocol based on patient preference, formulary, and pharmacy issues. The protocols below are an aggregation of those in use at CA Bridge site and should serve as examples. In most cases, patients should be able to transition to buprenorphine alone within 7 days, and maintenance doses should be 16 mg or higher. Avoid prolonged microdosing, as this underdoses buprenorphine and exposes patients to risk of treatment failure.

Appendix 7: California Bridge Buprenorphine Micro-dose and Cross Tapering Guidance

- Chose a protocol based on your formulary
- Non-sublingual/subcutaneous buprenorphine can only be prescribed under a pain indication
- Some pharmacies may not allow cutting films—while this has been common practice it has not been well studied.
- Roughly equivalent formulations may be substituted: 0.5 mg SL buprenorphine \approx 225 mcg buccal buprenorphine³
- Sublingual pharmacokinetics: half life 26 hours, reaches steady state at 3 days, duration 7 days. 20 mcg/hr patch is equivalent to less than 1 mg of buprenorphine SL.

3-day Sublingual Cross Taper Start

Prescribe 2 mg buprenorphine films #6, 8 mg buprenorphine films #4 for 3 day supply)⁴

- Day 1: 0.5 mg (1/4 of 2mg strip) SL buprenorphine q3 hours (4 mg total daily dose), continue full opioid agonists
- Day 2: 1 mg (1/2 of 2 mg strip) SL buprenorphine q3 hours (8 mg total daily dose), continue full opioid agonists
- Day 3: 8-16 mg (1-2 8 mg strips) SL buprenorphine once daily and 4 mg SL q6h prn withdrawal (max 32 mg total daily dose), wean or stop full opioid agonists

7-day Sublingual Cross Taper Start

Prescribe 2 mg buprenorphine SL strips # 15, 8 mg buprenorphine SL strips #4 for 7 day supply

- Day 1: 0.5 mg (1/4 of 2 mg strip) buprenorphine SL daily (0.5 mg total daily dose), continue full opioid agonist
- Day 2: 0.5 mg (1/4 of 2 mg strip) buprenorphine SL BID (1 mg total daily dose), continue full opioid agonist
- Day 3: 1 mg (1/2 of 2 mg strip) buprenorphine SL BID (2 mg total daily dose), continue full opioid agonist
- Day 4: 2 mg buprenorphine SL BID (4 mg total daily dose), continue full opioid agonist
- Day 5: 3 mg (1+1/2 of 2 mg strip) buprenorphine SL BID (6 mg total daily dose), continue full opioid agonist
- Day 6: 4 mg (2 of 2 mg strip) buprenorphine SL BID (8 mg total daily dose), continue full opioid agonist
- Day 7: 6 mg (3 of 2 mg strip) buprenorphine SL BID (12 mg total daily dose), continue full opioid agonist
- Day 8: 16 mg (2 of 8 mg strip) buprenorphine qday and 4mg (1/2 of 8 mg strip) q6h prn withdrawal (max 32 mg total daily dose), wean or stop full opioid agonists

1-Day Micro-Macro Start

Administer (2) 20 mcg patch, prescribe buprenorphine 8 mg SL film/tablet as needed

- **Place 2 x 20 mcg transdermal buprenorphine patch**
(do not need to wait for withdrawal)
- If patches are not available:
 - Stop full opioids
 - Do not wait for withdrawal
 - Start very low dose of buprenorphine
 - 0.5 mg (1/4 of 2mg strip) SL buprenorphine q3 hours (4 mg total daily dose)OR
 - Swallow 2mg SL buprenorphine q3 hours (6 mg total daily dose)
- **Wait** until the development of moderate to severe withdrawal. Patients should report feeling sick from

Appendix 7: California Bridge Buprenorphine Micro-dose and Cross Tapering Guidance

- 6-12 hours typically but can be much longer depending on the person and the drugs they have been consuming.
- Some patients may wait 24-72 hours
- Patient should stay abstinent and keep microdosing--keep the patches on or keep swallowing the 2mg tablets q3 hours (6 mg total daily dose) until they feel sick from withdrawal

Once withdrawal has become intolerable, **take 16mg SL bup** in one dose.

7-day Transdermal Cross Taper

Prescribe buprenorphine 20 mcg/hour patch #3, buprenorphine 2 mg SL film/tablet #6, buprenorphine 8 mg SL film/tablet #6 for 7 day supply

- Day 1: Start buprenorphine 20mcg/hour patch, continue full opioid agonists
- Day 2: Add 2nd buprenorphine 20mcg/hour patch for a total of 40mcg/hour, continue full opioid agonists
- Day 3: Add 3rd buprenorphine 20mcg/hour patch for a total of 60mcg/hour, continue full opioid agonists
- Day 4: 2 mg SL BID, continue patches, continue full opioid agonists
- Day 5: 4 mg SL BID, continue patches, continue full opioid agonists
- Day 6: 8 mg SL BID, remove patches, stop full opioid agonists
- Day 7: 16 mg SL qday and 4 mg q6h prn withdrawal (max 32 mg total daily dose)

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Appendix 8: California Bridge Enhanced Care Practice: Precipitated Withdrawal 90-Minute Bundle

SITE EXAMPLE

Enhanced Care Practice: Precipitated Withdrawal 90-Minute Bundle

We are sharing independent examples from selected hospital sites for the purpose of providing insight into how different sites treat substance use disorder. Please note CA Bridge is not responsible for the content of any site examples, and we do not formally recommend them as best-practices.

Below is an example treatment guideline for the initial treatment of precipitated withdrawal. These examples are used at Highland General Hospital. This may be a starting point for individual hospitals that choose to build internal guidance for managing precipitated withdrawal.

Treating Precipitated Withdrawal

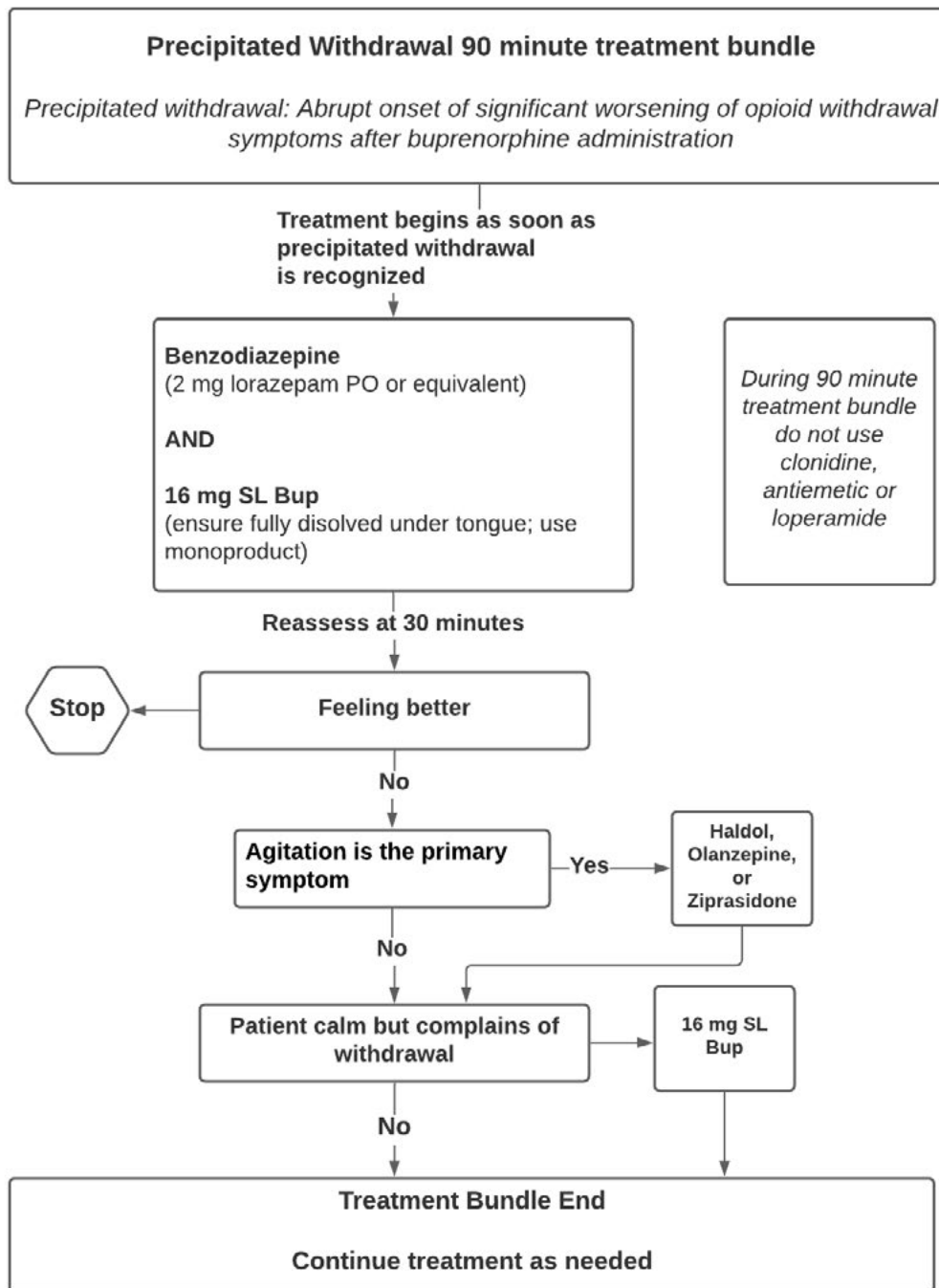
Precipitated withdrawal is the abrupt onset of opioid withdrawal symptoms following the administration of an antagonist like naloxone or a mixed agonist-antagonist like buprenorphine. The incidence, time, course, and severity vary substantially. The aim of the 90-minute treatment bundle is to rapidly and successfully treat precipitated withdrawal as soon as it is clinically recognized.

The principle is simple: provide a high dose of buprenorphine to maximize its agonist effects combined with a single low dose of benzodiazepine to address fear and anxiety. The standardized approach presented here should be applied as quickly as possible. Expert opinion suggests that rapid treatment may help prevent the development of intractable precipitated withdrawal later. After completing the bundle, providers are encouraged to use their best judgment to most appropriately treat the patient.

A few points of caution:

- Precipitated withdrawal can mask underlying illness. Always be vigilant that precipitated withdrawal may be hiding an underlying pathology from appendicitis to diabetic ketoacidosis.
- When using high-dose buprenorphine, appropriate patient selection and monitoring are needed. Patients using benzodiazepines and/or alcohol may experience excessive sedation and respiratory depression.
- In general, avoid stacking multiple doses of benzodiazepines after the initial treatment, instead opting to treat persistent discomfort with additional buprenorphine, ketamine, and finally, a sedating antipsychotic such as haloperidol.
- When using QT-prolonging medications such as ondansetron or haloperidol in the setting of potential dehydration and substance use consider a baseline ECG and cardiac monitoring.
- Patients with additional significant medical conditions such as heart failure or respiratory disease may not tolerate high-dose buprenorphine.
- All patients should be appropriately monitored when combining buprenorphine with sedative medications.

Appendix 8: California Bridge Enhanced Care Practice: Precipitated Withdrawal 90-Minute Bundle

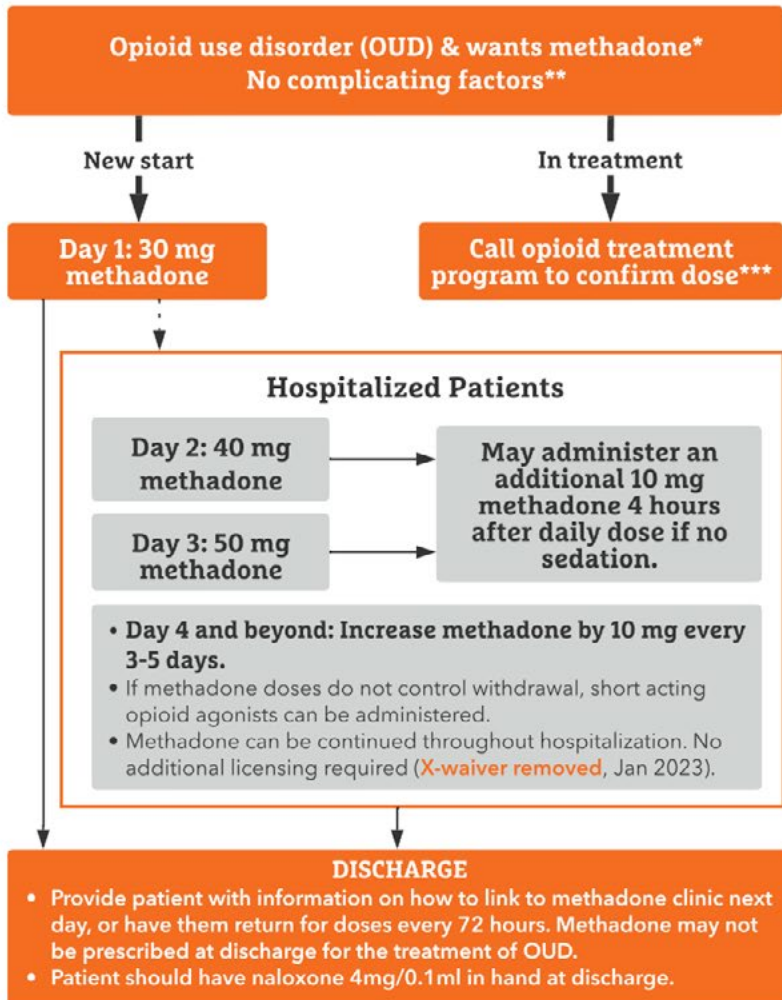


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Appendix 9: California Bridge Methadone Quick Start Guidance



Methadone Quick Start



Follow-up clinic (phone, address, intake hours):

Follow-up clinic (phone, address, intake hours):

Methadone vs buprenorphine (bup) for patients*

- Methadone ED starts are only suggested when patients are able to follow up in a methadone clinic (OTP) within 72 hours. Work with local clinics to expedite follow up.
- Methadone and bup are both great options that decrease all cause mortality and overdose.
- If a patient is struggling to wait for withdrawal to start bup, methadone may be an option.
- You usually must go to an OTP for daily dosing.
- If methadone dose too high or if mixed with other depressants, may cause sedation.

Complicating Factors**

- RR <10 or sedated
- Low opioid tolerance
- Allergy to methadone
- Known QTc ≥500 (do not need to check EKG to start methadone routinely)
- Recent use of benzodiazepines, alcohol, or other sedatives
- Severe liver disease
- Medically unstable
- Methadone safe in pregnancy & breastfeeding

Patients already in methadone treatment***

- Call clinic to confirm dose amount and when it was last administered.
- If unable to confirm dose, treat as a new start until able to confirm.
- Methadone dispensed from a clinic is never listed in CURES, and some hospitals urine toxicology will not show methadone.
- If 1-2 days missed, administer the full dose.
- If additional days missed, ask the clinic for recommended dosing. Ex: 90% if 3 days missed, 80% if 4 days missed, 70% if 5 days missed, 60% if 6 days missed, 50% if 7 days missed, 40% if 8 days missed.

Regulations

- General acute care hospitals may treat addiction with methadone under their existing license.
- ED may administer methadone for 3 days in a row. If a patient is hospitalized, administer throughout their hospitalization.
- Methadone cannot be prescribed for the treatment of OUD.
- Hospitals can apply to the DEA for a waiver to dispense a 72 hour supply of methadone to help patients connect to a clinic.
- OTPs can only provide methadone if patients have been opioid dependent for at least 6 months.

Pharmacologic notes:

- Can use adjunctive medications for withdrawal symptoms.
- In cases of high tolerance, including fentanyl use, may need additional dose of full opioid agonists to control withdrawal; only while patient is in the hospital.
- Sedation from methadone peaks at 3-4 hours after each dose, patients experiencing sedation should not receive additional doses.
- Half-life of methadone is more than 24 hours, so doses can stack and sedation can occur after multiple days at the same dose.
- Bup should not be given to patients who are currently taking methadone, as this would cause withdrawal.
- Methadone has many significant drug-drug interactions. Before starting new medications, always check the effect on methadone levels to avoid over-sedation or withdrawal.

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March 2023

PROVIDER RESOURCES

California Substance Use Hotline
CA Only (24/7)
1-844-326-2626

UCSF Substance Use Warmline
National (M-F 6am-5pm; Voicemail 24/7)
1-855-300-3595

Appendix 9: California Bridge Methadone Quick Start Guidance



REFERENCES

Methadone Quick Start

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MEDICATION INTERACTIONS

Medications that increase methadone metabolism/decrease methadone effect (INCREASED RISK FOR OPIOID WITHDRAWAL)		
<ul style="list-style-type: none">PhenytoinDexamethasoneRitonavir containing drugs incl: nirmatrelevir/ritonavir (Paxlovid)	<ul style="list-style-type: none">PhenobarbitalRifampicin/rifabutinVitamin C (ascorbic acid)	<ul style="list-style-type: none">CarbamazepineNNRTIs (efavirenz, nevirapine)St John's Wort
Medications that decrease methadone metabolism/increase effect (INCREASED SEDATION/CNS DEPRESSION)		
<ul style="list-style-type: none">SSRI AntidepressantsCimetidineChlorpromazineAzoles	<ul style="list-style-type: none">Fluoroquinolones (increased sedation and prolonged QTc time)RisperidoneGrapefruit juice	<ul style="list-style-type: none">DiltiazemDextromethorphanIndinavir

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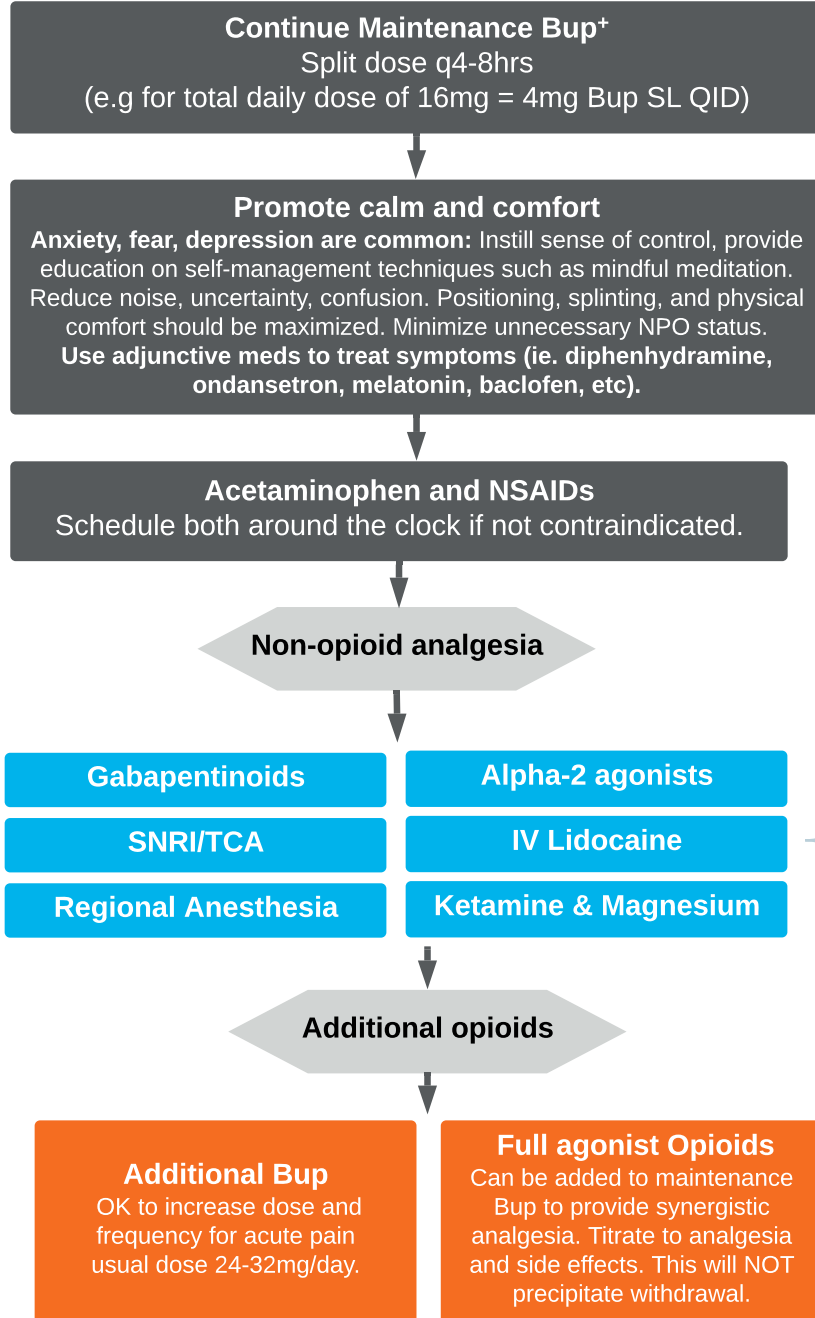
More resources available cabridge.org

Appendix 10: Acute Pain and Buprenorphine Guidance



Acute Pain Management in Patients on Buprenorphine (Bup)* Treatment for Opioid Use Disorder Medical/Surgical Units

James Gasper, PharmD, Andrew Herring, MD, Kyle Harrison, MD, Sky Lee, MD, Hannah Snyder, MD



***Guidelines are for patients on maintenance Bup, however if patient is on maintenance Methadone or Naltrexone:**

- **Methadone:** Confirm maintenance dose. Continue full dose, can split dosing to aid pain control. Use multimodal analgesia. *Do NOT use Bup.*
- **Naltrexone:** If injectable, stop 1 mo prior to elective surgery and switch to PO. Stop PO 72 hours prior to elective surgery for full opioid agonists to be effective.

Gabapentinoids

Calcium channel inhibitors, gabapentin and pregabalin reduce postoperative pain and opioid consumption.

SNRI/TCA

Can help with neuropathic pain as well as anxiety/depression.

Regional Anesthesia

- Peripheral nerve blocks
- Spinal or Epidural anesthesia

Alpha-2 agonists

Clonidine and Dexmedetomidine are anxiolytic and analgesic with significant opioid sparing effects.

IV Lidocaine (Na channel antagonist)

Opioid sparing analgesic.

Ketamine & Magnesium (NMDA antagonists)

Ketamine is a potent non-opioid analgesic for opioid tolerant patients.

Magnesium also has analgesic and opioid sparing effects.

Guidelines are options for multimodal analgesic therapy. Use clinical judgement and avoid use if contraindicated.

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SEPTEMBER 2021

PROVIDER RESOURCES

California Substance Use Line
CA Only (24/7)
1-844-326-2626

UCSF Substance Use Warmline
National (M-F 6am-5pm; Voicemail 24/7)

Appendix 10: Acute Pain and Buprenorphine Guidance

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References: Acute Pain Management in Patients on Buprenorphine (Bup) Treatment for Opioid Use Disorder

More resources available www.cabridge.org

Appendix 11: Recommendations for In-Hospital Substance Use Policies

- To develop or review an in-hospital substance use policy, consider convening an interprofessional group that includes patients to develop a policy regarding in-hospital substance use. Obtain legal, security, regulatory, nursing, and leadership sponsorship of the policy to ensure consistent messaging and support. The policy should set behavioral expectations proactively and transparently for patients and clinicians.
- Ensure the policy is patient-centered and does not include punitive measures, including security as a first responder to substance. If security is included, confirm they are a last resort in cases where safety is at risk.
- Evaluate the policy with an equity lens to determine who might be disproportionately affected and how, based on policy implementation trends across race/ethnicity and substance use.
- Educate health care workers about the policy, evidence-based addiction care, harms of stigma, and SUD-related inequities, especially around race/ethnicity. Provide best-practice scripts of how to respond to in-hospital substance use concerns.
- Involve health care workers in policy implementation and a continual improvement and education process.
- Inform all patients, regardless of substance use history, of the policy on admission.
- Offer patients adequate pain control, evidence-based addiction treatment, and supportive care that helps them tolerate hospitalization.

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