

Caring for Hospitalized Adults With Opioid Use Disorder in the Era of Fentanyl

A Review

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IMPORTANCE The rise of fentanyl and other high-potency synthetic opioids across US and Canada has been associated with increasing hospitalizations and unprecedented overdose deaths. Hospitalization is a critical touchpoint to engage patients and offer life-saving opioid use disorder (OUD) care when admitted for OUD or other medical conditions.

OBSERVATIONS Clinical best practices include managing acute withdrawal and pain, initiating medication for OUD, integrating harm reduction principles and practices, addressing in-hospital substance use, and supporting hospital-to-community care transitions. Fentanyl complicates hospital OUD care. Fentanyl's high potency intensifies pain, withdrawal, and cravings and increases the risk for overdose and other harms. Fentanyl's unique pharmacology has rendered traditional techniques for managing opioid withdrawal and initiating buprenorphine and methadone inadequate for some patients, necessitating novel strategies. Further, co-use of opioids with stimulants drugs is common, and the opioid supply is unpredictable and can be contaminated with benzodiazepines, xylazine, and other substances. To address these challenges, clinicians are increasingly relying on emerging practices, such as low-dose buprenorphine initiation with opioid continuation, rapid methadone titration, and the use of alternative opioid agonists. Hospitals must also reconsider conventional approaches to in-hospital substance use and expand clinicians' understanding and embrace of harm reduction, which is a philosophy and set of practical strategies that supports people who use drugs to be safer and healthier without judgment, coercion, or discrimination. Hospital-to-community care transitions should ensure uninterrupted access to OUD care after discharge, which requires special consideration and coordination. Finally, improving hospital-based addiction care requires dedicated infrastructure and expertise. Preparing hospitals across the US and Canada to deliver OUD best practices requires investments in clinical champions, staff education, leadership commitment, community partnerships, quality metrics, and financing.

CONCLUSIONS AND RELEVANCE The findings of this review indicate that fentanyl creates increased urgency and new challenges for hospital OUD care. Hospital clinicians and systems have a central role in addressing the current drug crisis.

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We are amid an unrelenting drug crisis across North America, with the highest number of opioid-related deaths worldwide.¹ While prescription opioids and heroin contributed to earlier waves of morbidity and mortality, illicitly manufactured fentanyl, fentanyl analogs, and other novel synthetic opioids (referred to as *fentanyl*) now dominate the unregulated drug supply.² More than 80% of opioid overdose deaths in the US and Canada involve fentanyl.^{3,4} Fentanyl's high potency and unpredictability, rising co-use of psychostimulants,² and a persistent lack of treatment access⁵ for people with opioid use disorder (OUD) are associated with unprecedented overdose deaths and complicate clinical care. Across the US and Canada, opioid-related hospitalizations continue to rise.⁶ While alarming, these trends un-

derscore the central role that hospitals might play in addressing the current drug crisis.^{7,8}

Hospitalized adults with OUD are at high risk for overdose and death.^{9,10} Hospitalization presents a critical touchpoint^{7,10-12} to engage, assess, and treat OUD and facilitate connection to longitudinal care.¹¹ Hospital addiction care can increase patients' trust in hospital physicians,¹³ increase adoption of life-saving OUD medications,¹⁴ increase posthospital OUD treatment engagement,¹¹ reduce stigma,¹⁵ improve patient and clinician experiences,^{15,16} and reduce mortality.¹⁷ Historically, hospitals have been unprepared to deliver high-quality OUD care.⁷ Patients commonly report negative hospital experiences,^{16,18} which are followed by delayed presentation,¹⁹ conflicts with staff, premature discharges,²⁰ and high morbidity and mortality.⁹ Meanwhile,

hospital staff report moral distress when caring for patients without necessary training or resources.^{15,21} Combined, these challenges can perpetuate harmful stereotypes and contribute to mutual mistrust between patients and staff.^{13,16,22,23} Fentanyl exacerbates these challenges and heightens the urgency that hospital clinicians and systems respond.

Hospital-based OUD care is increasingly complex in the fentanyl era. Fentanyl's high potency (approximately 50-100 times that of morphine) is associated with high opioid tolerance, which intensifies patients' pain, withdrawal, and cravings.^{2,24} Its potency and pharmacology has rendered traditional techniques for managing withdrawal and initiating treatment with buprenorphine and methadone inadequate for some patients, necessitating novel strategies.^{25,26} Moreover, the drug supply is unpredictable² and often contaminated with adulterants, such as benzodiazepines or xylazine, that also complicate management.²⁷ Finally, the COVID-19 pandemic and associated socioeconomic effects have affected patients and hospitals²⁸; community resources are strained and hospital staff are exhausted.²⁸

We present a narrative review that summarizes existing evidence and offers guidance for generalists caring for hospitalized patients with OUD in the fentanyl era. While most existing evidence derives from heroin and other opioids, we highlight evidence and novel approaches specific to fentanyl when possible. We focused on hospital OUD care because it presents unique opportunities for intervention and challenges for clinicians and hospital systems.

Methods

The author team included a peer mentor with lived experience of addiction, addiction medicine physicians, health services researchers, and educators with expertise in OUD and hospital care in US and Canada. We took 3 complementary approaches to reviewing the literature for this review. To review the evidence for pharmacotherapy, the topic with the highest-quality evidence, we surveyed 3 guidelines²⁹⁻³¹ and 1 textbook³² and searched 3 online databases.³³⁻³⁵ To prepare sections on psychosocial interventions and harm reduction, we referenced published expert guidance³⁶⁻³⁸ and available systematic reviews^{36,37,39-41} and augmented that guidance with a targeted literature search focused on acute care environments. To review the evidence for transforming hospital systems, we built on the synthesis from a recent taxonomy and scoping review,⁴² updating the search and expanding scope to include Canada. The eAppendix in the [Supplement](#) details the search strategies. Given the value of a topic overview and the varied level of evidence within subtopics, we present a narrative review, offering a synthesis and focusing on practice-relevant questions. We focused on the care of hospitalized adults, excluding literature focused solely on emergency department (ED) or pediatric populations.

OUD Care as Part of General Hospital Care

People with OUD are commonly admitted for general medical and surgical conditions, including skin and soft tissue infections, serious bacterial infections (eg, endocarditis, osteomyelitis), and physical trauma.⁴³⁻⁴⁵ OUD can complicate general hospital care for many reasons, including harms of mutual mistrust between patients and clinicians; unmet needs associated with pain, withdrawal, and craving;

and premature discharge.^{13,16,20,22,23,46} Effectively addressing OUD is critical to delivering quality hospital care.

Initial Assessment

An initial OUD assessment should include a history and physical examination that prioritizes early identification and treatment of withdrawal and acute pain and builds trust with patients. Eventually, clinicians should diagnose and treat OUD according to patients' goals, preferences, and available community resources.^{29,47}

Figure 1 describes a clinical road map of hospital care for patients with OUD.

Patient-Centered Approach to Care

Clinicians should recognize that patients with OUD may have heightened anxiety and pain, isolation, fear, and prior negative experiences with health care.^{18,19,22} To address these challenges and build trust, clinicians should ask permission when asking about substance use, offer choices, honor patient expertise and preferences, and communicate care plans consistently and reliably.^{13,18} Furthermore, hospital clinicians should recognize that all patients, regardless of their interest in discontinuing use, are worthy of compassionate, high-quality care.⁴⁸ Clinicians should use patient-first, nonstigmatizing language, avoiding terms like *abuse* or *dirty*, which are associated with negative judgment and punishment.⁴⁹

OUD Diagnosis

OUD is a treatable health condition with biological, psychological, and social underpinnings.⁵⁰ A formal diagnosis of mild, moderate, or severe OUD relies on 11 criteria defined by the *Diagnostic and Statistical Manual of Mental Disorders* (Fifth Edition).⁵¹ These criteria group into the "4 Cs:" craving (an intense desire to use opioids), compulsion (using for longer than intended or difficulty cutting back), adverse consequences (eg, continued use despite physical or social harms), and loss of control, plus opioid tolerance and withdrawal. While accurately diagnosing and addressing OUD is critical, evidence does not support screening in asymptomatic hospitalized patients.⁴⁷

Multiple Substance Use

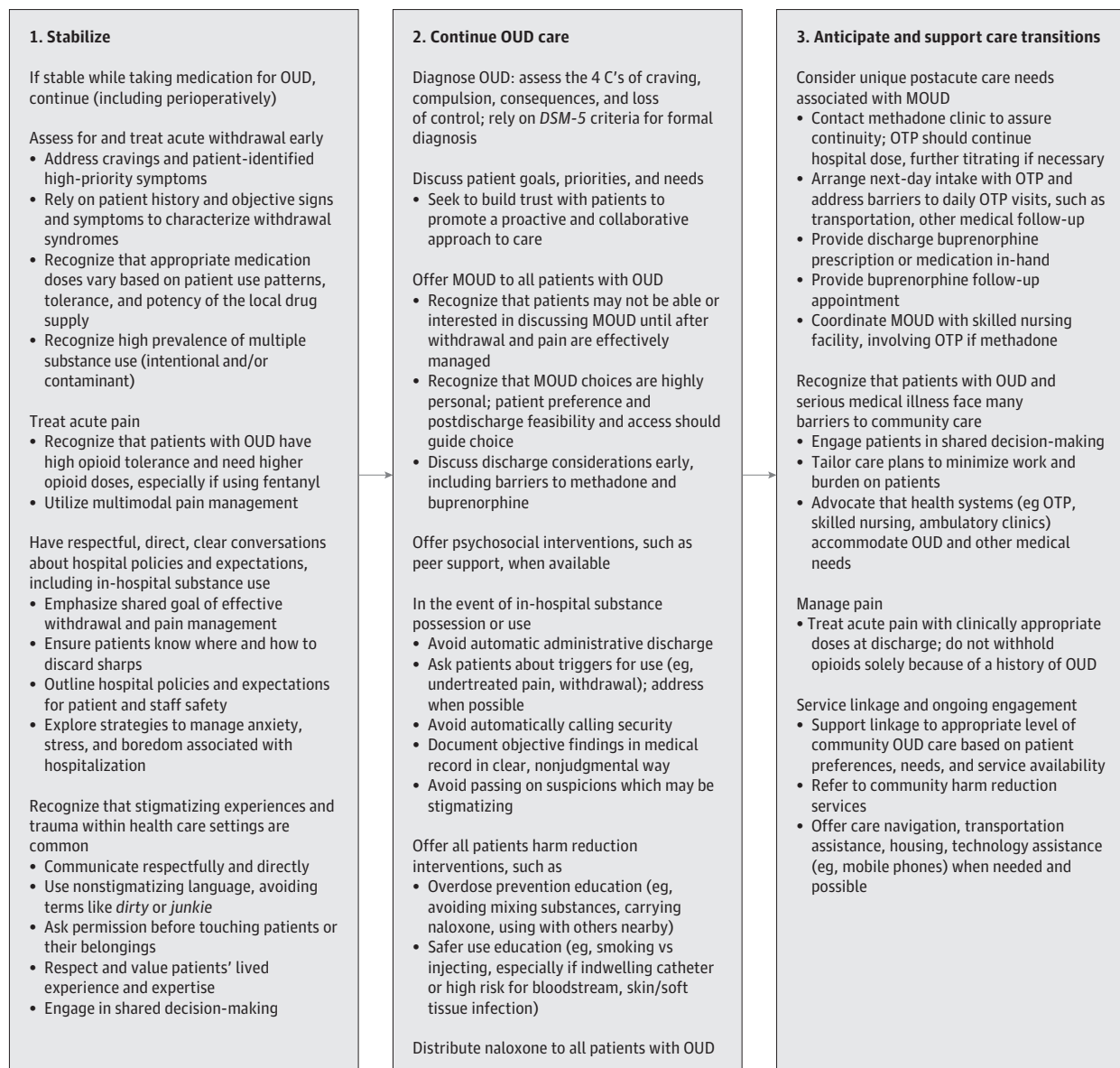
Identifying what substances patients use or are exposed to is more challenging in the fentanyl era. Some people consume fentanyl unintentionally after attempting to purchase heroin or pharmaceuticals. Others have no option but to purchase fentanyl, or they prefer it. People who use opioids commonly report stimulant co-use (ie, using methamphetamine or cocaine to prolong, attenuate, substitute, or enhance the effects of fentanyl).² Further, xylazine, non-pharmaceutical benzodiazepines, and other substances are commonly detected in fentanyl products.⁵² History, physical examination, and toxicology studies can help identify multiple substance use. However, traditional toxicology tests may not detect these synthetic drugs, yielding false-negative results.^{27,53}

Managing Withdrawal and Acute Pain

Opioid Withdrawal

Opioid withdrawal is characterized by physiologic and psychologic symptoms that typically arise 8 to 12 hours after last heroin or oxycodone use and 8 to 24 hours after last fentanyl use (**Figure 2**).⁵⁴ Clinicians should ask about and treat opioid withdrawal aggressively. Compared with other opioid withdrawal, fentanyl with-

Figure 1. Clinical Road Map of Hospital Care for Patients With Opioid Use Disorder (OUD)



DSM indicates *Diagnostic and Statistical Manual of Mental Disorders* (Fifth Edition); MOUD, medication for OUD; OTP, opioid treatment program.

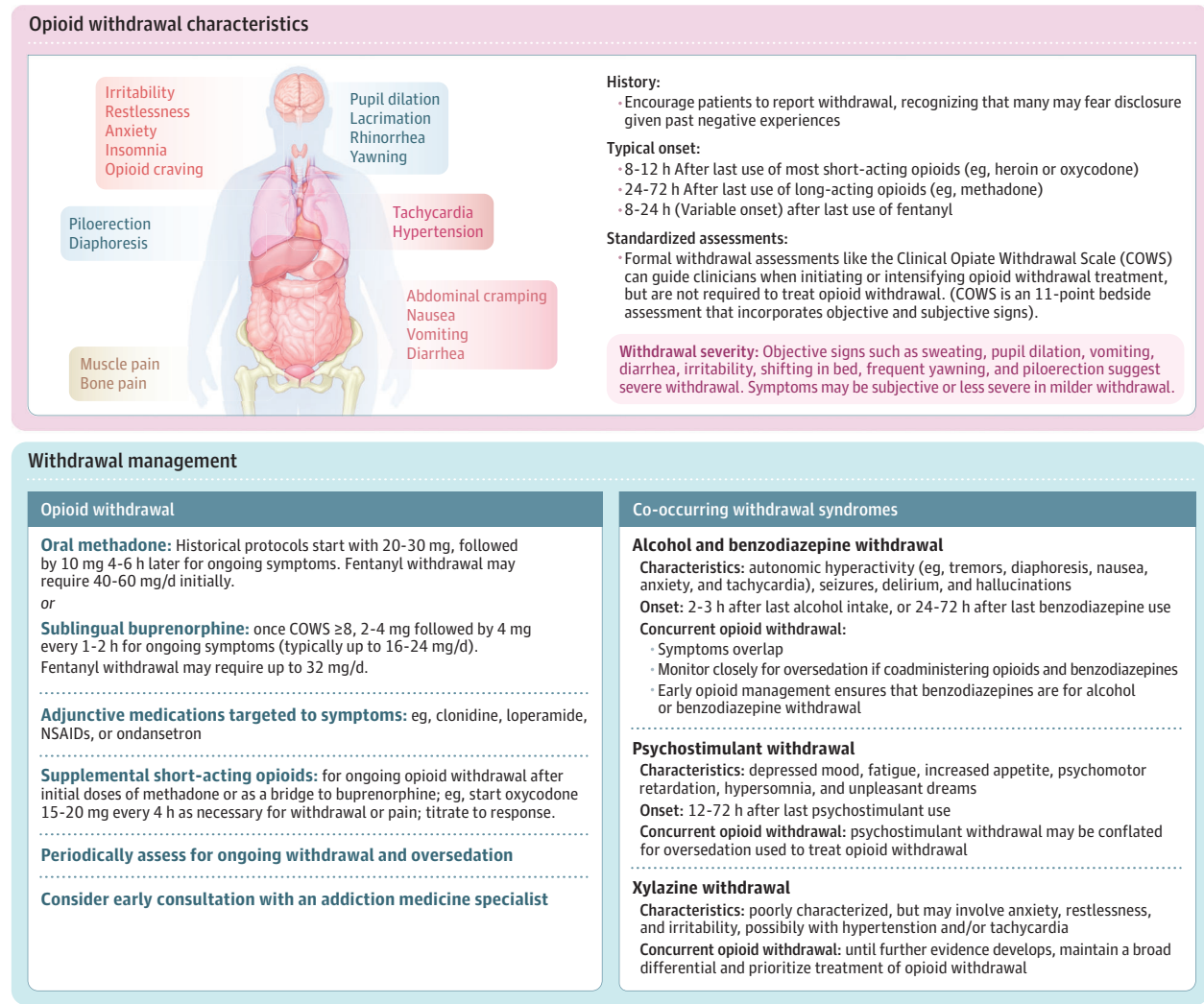
drawal can be more severe, unpredictable, and distressing to patients and staff.

High-quality evidence supports using buprenorphine or methadone as first-line medications to stabilize acute opioid withdrawal, regardless of patients' intention to continue taking them after discharge.⁵⁵ Methadone and buprenorphine have similar efficacy^{29,55}; however, important practical differences guide their use, including patient preference, drug-drug interactions, follow-up considerations, and initiation timing (Figure 2). Patients can initiate treatment with methadone before developing withdrawal, whereas buprenorphine only alleviates withdrawal in patients experiencing at least mild to moderate withdrawal.⁵⁴ This is because buprenorphine, a high-affinity partial-agonist opioid, can displace full-agonist opioids, a phenomenon called *precipitated withdrawal*

that results in severe withdrawal symptoms within 1 hour of buprenorphine administration. In Canada, slow-release oral morphine is another option that is typically initiated in consultation with addiction specialists and reserved for patients for whom methadone and/or buprenorphine are ineffective or contraindicated (eg, prolonged QTc).⁵⁵ α -2 Agonists, such as clonidine, also reduce withdrawal symptoms^{54,56} and may be particularly important for patients with concurrent xylazine withdrawal. Medications such as ondansetron for nausea, loperamide for diarrhea, and nonsteroidal anti-inflammatory drugs for myalgias can be used as adjuvants but should not be used alone unless patients decline opioids agonists (ie, methadone, buprenorphine, slow-release oral morphine).

To our knowledge, to date, no prospective evidence exists to guide opioid withdrawal management specifically from fentanyl.

Figure 2. Opioid Withdrawal



NSAID indicates nonsteroidal anti-inflammatory drug.

Patients have reported increased risk of buprenorphine-induced precipitated withdrawal from fentanyl despite 12 to 48 hours of abstinence²⁵; however, the prevalence remains unclear, and rates in clinical trials are low.⁵⁷ Prior experiences or fear of precipitated withdrawal may lead some patients to delay or decline buprenorphine. Moreover, methadone initiation with traditional outpatient doses is often insufficient.⁵⁸ In these circumstances, clinicians should consider novel dosing approaches (Figure 3) or other opioid agonist medications.⁵⁵ Clinicians can also use short-acting opioids safely, feasibly, and legally to treat withdrawal,⁵⁹ typically while titrating methadone or as a bridge to buprenorphine via low-dose^{60,61} or traditional initiation.⁶²

If precipitated withdrawal occurs, first-line management includes administering additional sublingual buprenorphine doses.⁶² If not responsive to buprenorphine, clinicians can consider limited use of benzodiazepines.⁶²

Withdrawal From Multiple Substances

The limited published evidence that exists⁶³ suggests that opioid withdrawal should still be treated with methadone or buprenorphine,

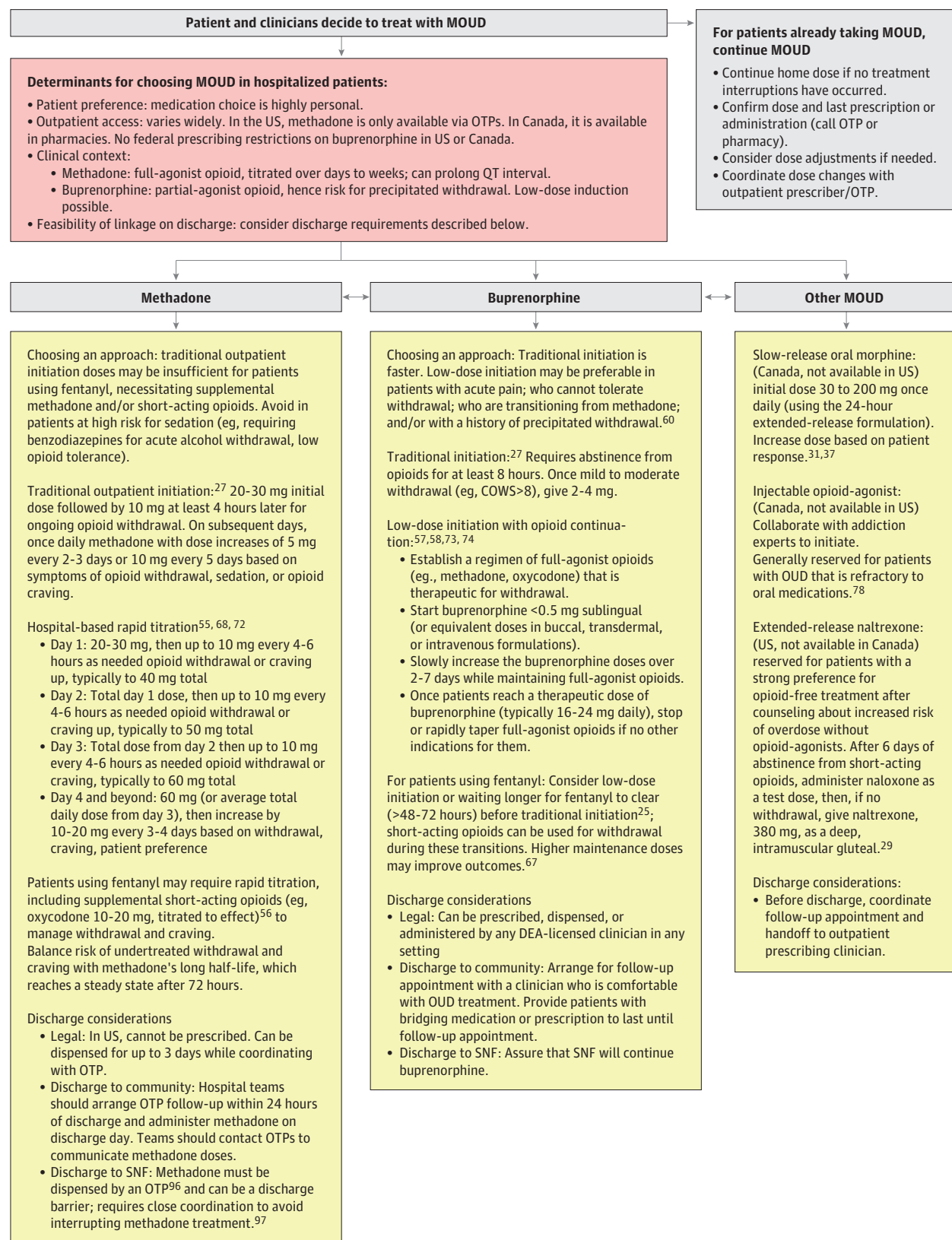
even with concurrent benzodiazepine or alcohol withdrawal. When managing multiple substance withdrawal, clinicians should adopt best practices for monitoring and treating each individual withdrawal syndrome (Figure 2).

Acute Pain Management and Perioperative Care

OD is associated with increased vulnerability to acute pain through multiple mechanisms: untreated withdrawal heightens pain and anxiety; chronic opioid exposure increases opioid tolerance, rendering standard analgesic doses less effective⁶⁴; and patients with OD may have increased pain sensitivity.⁶⁴ Furthermore, clinicians may not believe patients' reports of pain,²³ or they may mistakenly believe that treating pain enables drug use.⁶⁴ In this context, pain is often undertreated, exacerbating mutual mistrust.^{13,23,65}

Effective withdrawal management is necessary, but not sufficient, to control pain. One can conceptualize medications for OD (MOUD) as replenishing patients' "opioid debt" (which is higher in patients who consume fentanyl), a prerequisite to then effectively treating acute pain. Beyond that, clinicians should start by trusting patients' self-report of pain and not assume that patients are "opioid

Figure 3. Initiating Medication for Opioid Use Disorder (MOUD)



COWS indicates clinical opioid withdrawal scale; DEA, US Drug Enforcement Administration; OTP, opioid treatment program; SNF, skilled nursing facility.

seeking.” Clinicians should use a multimodal approach, including using nonsteroidal anti-inflammatory medications and acetaminophen when not contraindicated, and short-acting opioids for moderate to severe acute pain.^{29,64} We recommend initial doses of approximately 15 to 20 mg of oxycodone,⁶⁶ noting that patients with heavy fentanyl use may need substantially higher doses and those with frailty or other sedating medications may need less. Clinicians should monitor all patients for ongoing pain, sedation, delirium, and other adverse effects and can use liquid formulations if concerned about diversion.²⁹

Perioperatively, clinicians should continue administering methadone and buprenorphine.⁶⁷ While to our knowledge prospective trials are lacking, available evidence and multiple expert consensus guidelines suggest that buprenorphine use should be continued, without tapering, and that harms of discontinuation outweigh any theoretical benefit.^{29,68} Perioperative guidelines recommend adding higher-potency full-agonist opioids (eg, hydromorphone) and considering increasing and/or dividing methadone or buprenorphine doses to 3 or 4 doses over the course of the day.^{29,68} For patients who plan to receive methadone at opioid treatment programs (OTPs) after hospitalization, typically clinicians must consolidate divided doses once daily before discharge.

Medications for Opioid Use Disorder

MOUD are standard of care and should be offered to all hospitalized patients with OUD.⁴⁷ MOUD are the most effective OUD treatment.⁶⁹ Decades of evidence in ambulatory settings show that they are safe and highly effective for reducing all-cause and OUD-specific morbidity and mortality.^{29,31} In the US, MOUD include methadone, buprenorphine, and extended-release naltrexone²⁹; in Canada, they include methadone, buprenorphine, slow-release oral morphine, and injectable hydromorphone or diacetylmorphine.^{31,37} MOUD can be titrated more rapidly and in novel ways in the hospital compared with community settings owing to increased safety monitoring and the absence of legal restrictions around administering methadone.

Few data exist about dosing for patients using fentanyl; however, clinical experience and emerging evidence suggests that patients may need higher doses of methadone and buprenorphine.^{58,70,71} The heterogeneous and rapidly changing drug supply² means any specific dosing guidance (including the guidance outlined in this review) will likely change over time and may need to be modified to adapt to the current local drug supply, patient use patterns, and emerging evidence. Nevertheless, innovative approaches to MOUD in hospital are developing and can guide clinical practice.

Initiating MOUD

Methadone and buprenorphine are first-line OUD treatments.²⁹⁻³¹ For patients, medication choice is highly personal and can have profound implications on their experiences^{66,72-74}; thus, patient preferences and community treatment access should guide medication choice. Figure 3 summarizes MOUD initiation in the hospital.

Rapid methadone titration is one MOUD initiation strategy. The traditional methadone initiation approach was developed decades ago in ambulatory settings and is often insufficient to manage severe withdrawal and craving from regular fentanyl use. Clinical experience and early evidence from hospital addiction consultation services has demonstrated that patients, especially those using fen-

tanyl, can undergo more rapid dose titration while hospitalized.^{58,71,75} Clinicians should consider harms of untreated or undertreated OUD with potential harms of rapid methadone titration. Clinicians should monitor patients for symptom relief and may consider reassessing patients 3 to 4 hours after oral methadone administration when methadone has its peak effect. Generally, clinicians do not need to use clinical opiate withdrawal scale (patient reports suffice) or telemetry. Methadone's long half-life means that doses take 72 hours to reach a steady state. Clinicians should use extra caution in higher-risk patients, including those with co-occurring alcohol withdrawal, benzodiazepine use, or advanced age.

Increasing fentanyl prevalence has also prompted new strategies for initiating treatment with buprenorphine. Low-dose buprenorphine initiation with other opioid continuation allows patients to initiate buprenorphine use without a period of opioid abstinence and with minimal risk of precipitating withdrawal.⁷⁶ Using this approach, patients continue taking full-agonist opioids while taking small and gradually increasing buprenorphine doses, typically starting at 0.5 mg or fewer sublingually (or equivalent in transdermal, buccal, or intravenous formulations) administered every 3 to 12 hours, with dose increases every 2 to 6 doses.^{60,61,76,77} Low-dose initiation has advantages for patients who need ongoing opioid analgesia for acute pain, cannot tolerate withdrawal symptoms, are transitioning from methadone use, or have a history of precipitated withdrawal. Low-dose induction is feasible and, with expert guidance, 80% to 92% of hospitalized patients successfully transition to buprenorphine without moderate or severe opioid withdrawal.^{60,61,77} High-dose buprenorphine initiation is another alternative in which patients who reach a clinical opiate withdrawal scale score of 8 or greater after a period of abstinence are given an initial dose of 8 mg or more of sublingual buprenorphine, with up to 16 to 32 mg over 1 to 2 initial doses.⁶² Although not well described among inpatients, it is used in some urgent care and EDs.⁶² In Canada, slow-release oral morphine and injectable opioid agonist treatment are alternatives typically initiated by addiction medicine experts in collaboration with community prescribers who can continue treatment after discharge.⁷⁸

Clinicians should ensure that patients understand the requirements for continuing MOUD in community settings, which may vary widely by region and clinic.⁷⁹ Currently, in US community settings, methadone for OUD must be dispensed from federally licensed OTPs. In Canada, methadone can be dispensed at pharmacies. In both countries, patients must present in-person multiple days per week early in treatment.⁷⁴ In the US, as of December 2022, any clinician with an active US Drug Enforcement Administration license can prescribe buprenorphine. In Canada, buprenorphine prescribing restrictions (if any) are determined by provincial medical regulators.

Psychosocial Interventions

Many psychosocial interventions exist to treat OUD, but to our knowledge, few studies document their delivery to hospitalized patients.³⁹ When psychosocial interventions are used in the hospital, they tend to consist of brief (<1 hour) counseling often delivered as part of screening, brief intervention, and referral to treatment approaches.⁴⁰ However, a 2022 meta-analysis of 116 trials demonstrated that screening, brief intervention, and referral to treatment is likely not associated with reduced drug use in hospitalized adults, suggesting that hospitals should invest in other OUD interventions. Peer ser-

VICES are a promising intervention from ambulatory settings being adopted by hospitals.^{41,80-82} Peers can share their own lived experiences of addiction, provide social and emotional support, and serve as liaisons between patients and health care professionals.^{82,83} In hospitals, peer services may be especially useful for engaging patients and mitigating mutual mistrust between patients with OUD and clinicians.^{41,82,83} Hospitals seeking to implement peer services should recognize that integrating peers within a rigid professional hierarchy of hospitals requires intention, planning, and support to ensure the success of peer programs and peers' wellness.³⁸

Addressing In-Hospital Substance Use

Even in the context of optimal pain and withdrawal management and MOUD initiation, some patients continue to use drugs while hospitalized. Many patients are not ready, able, or wanting to engage in treatment, and even those who are may continue use while initiating MOUD. Research with people who use drugs indicates that anxiety, stress, boredom, and stigma can all be precursors to in-hospital drug use.^{18,84,85} These factors may be particularly salient during prolonged hospitalizations.⁸⁶

Hospitals have traditionally required patients to abstain from in-hospital substance use.⁸⁷ These policies are enacted with the goal of preventing drug use and overdose, protecting staff from needle sticks, and protecting clinicians and hospitals from medical-legal liability. However, despite these policies, many patients report continued use while hospitalized.⁸⁸ Research documents how zero-tolerance policies can be associated with patients using drugs alone in locked washrooms or other unsafe spaces; sharing or reusing syringes and other equipment; injecting in vascular access devices; or leaving the hospital before completing necessary medical care.^{18,89} Formal and informal bans on substance use can also position clinicians and other staff in opposition to patients, forcing them to choose between "turning a blind eye" or actively policing patient activity.^{84,90} Ignoring ongoing use represents a missed opportunity to engage patients in appropriate care, while constant surveillance fuels mutual mistrust and encourages stigma and discrimination.

There is a need to move beyond this impasse. At minimum, clinicians should seek to build trust with patients and promote a proactive and collaborative approach to addressing unmet pain, withdrawal, and cravings. This is especially important in the fentanyl era, in which higher tolerance and unrecognized withdrawal syndromes can contribute to continued discomfort and in-hospital substance use. Further, hospital clinicians and systems should embrace harm reduction as an overarching principle of all hospital-based OUD care.⁴⁸ Within a harm reduction approach, abstinence is not a precondition of care. Harm reduction and treatment are not mutually exclusive; instead, they are complementary approaches in which people are supported to achieve positive change without judgment, coercion, or discrimination.⁹¹ A large international body of research describes harm reduction in community settings. Some hospitals are extrapolating this evidence (Table 1^{37,87,89,91-101}) to implement policies that disallow premature discharge solely on the grounds of suspected or confirmed substance use,^{87,97,101} providing access to sterile syringes and naloxone kits^{44,84,87,95} and giving staff training that engages people with lived experience of OUD in content delivery.⁹⁴

Hospital-based supervised consumption services, which provide patients with a sterile, monitored space to use drugs, are a promising intervention that can improve patient safety and

Table 1. Implementation Principles and Example Practices for Integrating Harm Reduction in Hospital Care

Definition: what is harm reduction?	Harm reduction is a philosophy of care and set of practical strategies that support all people who use drugs to be safer and healthier without judgment coercion or discrimination. ⁹¹
Implementation principles	<p>Abstinence is not a precondition of care. Patients are worthy, regardless of their ability, readiness, or willingness to stop using drugs.³⁷</p> <p>A harm reduction approach may be at odds with hospital norms around substance use, particularly given staff assumptions about patients' best interest and safety, and fears of relinquishing control. Recognizing these sources of difficulty may aid progress.⁹²</p> <p>Provide staff training on harm reduction practices and policies.⁹³</p> <p>Include patients with lived experience in staff education, program, and policy design.⁹⁴</p> <p>Work within applicable drug laws and policies.</p>
Example clinical practices	<p>Acknowledge patients as experts in their own lives. Believe their concerns regarding pain, withdrawal, and drug use.⁹⁵</p> <p>Be familiar with, and provide information on, community-based harm reduction resources, such as syringe service programs and hepatitis C, HIV, and sexual health programs.³⁷</p> <p>Provide naloxone kits and training to all patients with OUD.⁹⁶</p> <p>Ensure patients know where and how to discard sharps (eg, used syringes).³⁷</p> <p>Avoid automatically discharging patients for in-hospital substance use; respond with supportive interventions that preserve dignity and help patients complete their hospitalization.⁹⁷</p> <p>Counsel patients on safer drug use practices, such as sterile injection techniques and smoking to reduce blood borne infection risk, avoiding mixing substances, carrying naloxone, and not using alone to reduce overdose risk.³⁷</p> <p>Distribute harm reduction kits (eg, syringes, pipes, cottons)⁹⁸ in jurisdictions where legal.</p>
Example organizational strategies	<p>Equip security and other staff with trauma-informed care training, naloxone, and overdose response training.⁹⁹</p> <p>Provide staff training that engages people with lived experience of OUD in content delivery.⁹⁴</p> <p>Provide secure storage in hospital rooms so patients can safely store their personal belongings. Offer supervised consumption services for hospital patients^{89,100} in jurisdictions where legal.</p>
Example policies	<p>Ensure standard hospital policies on medication administration, visitors, time off of the hospital ward, and personal belongings that do not single out patients with OUD.^{97,101}</p> <p>Develop organizational substance use policies that do not make admission contingent on abstinence from drugs.^{87,97,101}</p>

Abbreviation: OUD, opioid use disorder.

engagement.^{86,92-94} Early experiences with these interventions are promising, but future work is needed to evaluate their implementation and effectiveness.

Hospital to Community Care Transitions

Hospital care transitions are high-risk periods for overdose and care discontinuity. Care teams should ensure uninterrupted access to MOUD after discharge for patients who want them. Methadone and buprenorphine transitions warrant special consideration (Figure 3). Before discharge, hospital teams should contact a local OTP to arrange a next-day intake appointment and communicate the patient's discharge treatment plan, including current dose and the timing of last methadone administration in the hospital. This information should also be included in discharge paperwork.⁴⁷ Best

Table 2. Organizational Domains for Implementing Hospital-Based Addiction Care

Domain and rationale	Example(s)
Clinical champions: effective, supported clinical champions are critical to driving hospital change.	Clinical champions can conduct formal or informal local needs assessments, engage diverse stakeholders and leaders, and spearhead quality improvement efforts. As early adopters of best practices, they can set an example and serve as a local resource. ⁴² Effective champions have strong communication and organizational skills, and are respected in the organization. Champions provide day-to-day leadership, energy, and enthusiasm. ¹¹¹
Clinical infrastructure: many hospitals lack basic clinical infrastructure to deliver evidence-based OUD care. ¹¹²	All hospitals should stock methadone and buprenorphine. Interprofessional teams can integrate clinical tools within the local clinical infrastructure (eg, buprenorphine initiation order sets).
Staff education and culture: many staff have limited OUD knowledge or training and may not consider addressing OUD part of their job. ^{15,21}	Hospitals should provide training about new OUD-related practices, programs, and policies. Hospitals can leverage staff newsletters, meetings, and events to promote a visible commitment to high-quality OUD care.
Community partnerships and treatment pathways: hospitals should be access points to support patients to meaningfully engage in longer-term OUD care.	Hospitals should offer coordinated, timely referrals to community OUD care. Referrals should account for nuances of community OUD care (eg, that OTPs are closed on Sundays and may have specific days for new-patient intakes). Community partnerships can inform hospital teams' understanding of patient-level and program-level needs. Partners can leverage their relationships to address individual patient needs and inform quality improvement efforts. ¹²
Hospital leaders: leaders can support innovation and help overcome implementation barriers.	Hospital leaders can dedicate resources, including information technology, quality improvement infrastructure, access to population health data, and funding for clinical initiatives. ¹¹³ Leaders can incentivize improvement (eg, reporting local quality metrics), engage nonclinical leaders (eg, legal, public safety officers), and help develop relationships with community partners, including OUD treatment and harm reduction organizations.
Policies: hospital policies inform access to care, staff practices, and hospital culture.	Policies meant to prevent people from accessing or using substances are common. While intended to promote patient and staff safety, they should be balanced with potential unintended harms for patients, staff, and the patient-staff relationship. ⁸⁷ Examples of harmful policies include forcing nonconsensual searches of patients' belongings, visitors, or bodies; disallowing patients from leaving the unit because of their OUD; or discharging patients for drug possession. Such policies can place patients and staff in untenable positions in which patients feel discriminated against and staff feel required to police patients or withhold life-saving medical care. ^{97,101} Instead, hospitals can implement harm-reduction oriented policies (Table 1).
Incentives and metrics: incentives and metrics can promote and sustain adoption of OUD best practices.	Aligning quality metrics and financial incentives with OUD best practices promotes and sustains best practice and communicates organizational priority of delivering high-quality care for patients with OUD. ⁷ Examples of quality metrics include rates of medication for OUD and naloxone prescribing (during admission or at discharge) and rates of patient-directed discharge within 48 h of admission. Examples of process metrics include rates of order sets use or staff participation in OUD continuing education.

Abbreviations: OUD, opioid use disorder; OTP, opioid treatment program.

practice is that OTPs continue administering hospital methadone doses, further titrating as needed. Hospitalists should be aware that currently, US skilled nursing facilities can only administer methadone for OUD that has been dispensed from an OTP.¹⁰² While chal-

lenging, hospitals can develop relationships with OTPs and skilled nursing facilities to support posthospital methadone access^{103,104} and develop processes to dispense up to 72 hours of methadone at discharge as a bridge to community treatment.¹⁰⁵ In contrast to methadone, buprenorphine is more widely available in community settings; however, not all US pharmacies stock buprenorphine, and patients may struggle to access prescribers.¹⁰⁶ Patients in rural areas¹⁰⁶ or carceral settings¹⁰⁷ have added challenges. Hospital care teams should identify ambulatory buprenorphine prescribers, arrange follow-up, and discharge patients with enough medication to last at least until their first posthospital follow-up visit.

Beyond MOUD, hospital clinicians can refer patients to many OUD treatment services, including outpatient, intensive outpatient, residential, and withdrawal management.¹⁰⁸ These settings differ widely, and not all offer or allow patients to continue using methadone or buprenorphine.¹⁰⁹ Patients may also benefit from other supports, such as peers,⁸² mutual aid groups (eg, Narcotics Anonymous, SMART Recovery), and harm reduction services. Ultimately, clinicians should tailor referrals to patients' preferences, needs, and local service availability.⁴⁷

Finally, hospital clinicians should recognize that patients with OUD and serious medical illness face many barriers to accessing community care, including limited OTP availability, transportation challenges, and difficulty coordinating daily OTP visits with personal obligations and other medical care.⁷⁴ Patients may be denied access to residential addiction treatment because of medical needs, such as wound care or oxygen, or, despite being a violation of the Americans with Disabilities Act, patients may be denied skilled nursing facility care because they take MOUD.^{74,110} While individual clinicians may not be able to dismantle such entrenched system-level challenges, clinicians should engage patients in shared decision-making, address barriers like transportation and insurance during hospitalization, tailor care plans to minimize the burden on patients, and advocate for nondiscriminatory, equitable care.^{74,110} Clinicians can also be drivers for change.^{8,42}

Transforming Hospital Systems

Implementing OUD best practices relies on prepared hospital environments. Improvement efforts often include educating staff, engaging diverse leaders, revising hospital policies, developing community partnerships, and building responsive interprofessional teams (Table 2^{12,15,21,29,42,87,97,101,111-113}).⁴² These efforts require implementation expertise and infrastructure and often rely on strong clinical champions.⁴²

Multiple approaches to delivering hospital-based OUD care exist, including consultation models led by addiction specialists who are often working as part of interprofessional teams; practice-based models, in which generalists deliver OUD care as part of usual practice; and in-reach models, in which community clinicians offer guidance and posthospital follow-up.⁴² Of these, interprofessional addiction medicine consultation services are the most rigorously studied and comprehensive. They promote change through clinical innovation, education, research, and quality improvement.⁴²

However, widespread adoption of hospital-based OUD improvements are stymied without a prepared workforce, quality metrics, dedicated funding, and supportive payment models.^{7,8,42} To advance practice, hospital clinicians can participate in addiction

mentoring or training programs and serve as local champions and advocates.⁸ Hospital leaders and policymakers can advocate for payment and policy reforms to drive education, research, innovation, and widespread change across all US and Canadian hospitals.⁷

Conclusions

Hospital clinicians and systems have a critical role in treating OUD and reducing morbidity and mortality in the fentanyl era.

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