

ColoradoMAT

Business Considerations for Induction of Medication for Addiction Treatment in Hospital Settings

Providing evidence-based care to patients with untreated opioid use disorder (OUD) presents an opportunity to simultaneously improve the quality of care and reduce overall health care expenditures. Implementing a hospital-based medication for addiction treatment (MAT) program requires a modest investment in comparison to the enormous potential benefit to patients, communities and clinicians, and presents a significant opportunity to reduce costs in the entire health care continuum.

The financial impact of the opioid epidemic on hospital systems has been considerable; opioid-related hospital admissions are estimated to cost \$15 billion annually.¹ A 2014 study found that the average excess health care expenditure for an individual with untreated OUD may be as high as \$20,000 annually.² For hospitals in communities hard-hit by the opioid epidemic, providing definitive care to patients with OUD is good medicine and good business.

Individuals with untreated OUD are likely to seek care at multiple organizations and locations within a single region, making the availability of consistent and widespread MAT a benefit to patients, communities and hospitals. Initiating a patient on MAT at one Colorado hospital has the potential to avoid a costly hospitalization at another institution.

The Opioid Epidemic, Hospital Systems and Clinicians

Compared to the general population, people with untreated OUD have more outpatient visits, more emergency department (ED) visits, more hospital admissions, longer lengths of stay and more readmissions. They are more likely to die of all causes, have higher instances of behavioral health comorbidities and suffer disproportionate rates from other chronic diseases.

The opioid epidemic is the major contributor to dramatically increased rates of ED utilization and hospitalization for overdose, and the many comorbidities associated with OUD. In Colorado, the rate of opioid-related hospital admissions increased by more than 50% between 2010 and 2019.³ Nationally, rates of ED visits for opioid-related presentations have more than doubled since 2010.³ In communities hard-hit by the opioid

epidemic, hospitals shoulder significant financial burden. Given the disproportionate number of patients with OUD who are uninsured or underinsured, patients and hospitals alike benefit when patients receive evidence-based care.

OUD-Related Disease

Untreated OUD is associated with a wide range of comorbidities. People with OUD who inject drugs are, in particular, more likely to present with endocarditis, osteomyelitis, epidural abscess, joint infections, cellulitis, necrotizing fasciitis, wound botulism, hepatitis B and C and HIV/AIDS when compared to those who do not inject drugs.⁴ Whether they inject drugs or not, patients with untreated OUD are more likely to experience trauma related to intoxication or criminal activity and to suffer from chronic obstructive pulmonary disease (COPD), coronary artery disease (CAD) and hypertension.⁴

Cost of Treatment for Common Infections Associated with OUD

- The costs of a course of treatment for hepatitis C can be as much as \$94,000.⁵
- The estimated average lifetime cost of care for patients infected with HIV at age 35 is \$326,500.⁶
- One study of patients admitted for infectious complications of IV drug use found that the average total cost of a single hospitalization for osteomyelitis exceeded \$200,000.⁷
- For endocarditis, the average cost exceeded \$180,000.⁷
- For bacteremia or sepsis, the average cost was \$275,000.⁷

Nonfatal Opioid Overdose

Opioid overdoses, both fatal and nonfatal, pose an extraordinary cost burden to health care systems.⁸ While 50,042 people died in the United States in 2019 of opioid overdose, many more are hospitalized with the sequelae of

nonfatal overdose.⁹ By one 2019 analysis total costs for ED, inpatient and ICU care for opioid overdose alone exceeded \$11.3 billion, a figure that represents 1% of total annual hospital expenditures in the United States.¹⁰

Cost of Hospital Care for Nonfatal Opioid Overdose

In a large national study of patients who presented to the ED with nonfatal opioid overdose:¹⁰

- Half were treated and released and half were admitted.
- Of those admitted, close to 40% experienced organ failure.
- The average cost of caring for a patient admitted for opioid overdose was \$11,731 for non-ICU care and \$20,500 for patients requiring ICU care.
- Of patients presenting with overdose in this analysis, 14% were uninsured, one third were insured by Medicaid, one third by Medicare and 16% by a commercial insurer.
- Twenty four percent of patients who were discharged from the ED after an overdose were seen again within the following month for emergency care.
- Another study of nonfatal opioid overdose found that one in 20 patients treated in an ED for a nonfatal opioid overdose died within one year of their visit, many within two days and two-thirds of those deaths were from subsequent opioid overdose.¹¹

Treating OUD Improves Outcomes

OUD is a chronic, relapsing brain disease whose pathophysiology and management—like that of most chronic diseases—is heavily influenced by genetic and environmental factors. As for many chronic diseases, pharmacotherapy plays a central role in treatment. The evidence supporting pharmacologic treatment for OUD is conclusive: treatment with methadone or buprenorphine saves lives and alleviates suffering.

Patients receiving MAT have lower morbidity and mortality, higher treatment retention rates, lower rates of all-cause ED visits and hospital admissions and lower rates of readmission.¹²⁻¹⁵ Rates of overdose and overdose death are far lower in patients whose OUD is treated. As important, patients who receive evidence-based care for OUD no longer experience the cravings, compulsions or harmful behaviors associated with addiction.

Abstinence-Oriented Approaches Are Ineffective

In stark contrast, relapse rates for patients offered abstinence-based therapies are higher than 80%.¹⁵ “Detox” approaches have been demonstrated to increase morbidity and mortality.¹⁶ Whether or not they wish to begin pharmacotherapy for OUD, hospitalized patients whose withdrawal is managed with an opioid agonist are less likely to leave against medical advice (AMA). A systematic review found that as many as 30% of hospitalized patients who inject drugs leave AMA.¹⁷ Patients who receive methadone or buprenorphine are also less likely to experience opioid overdose if they resume use of opioids after discharge.^{18,19} Finally, patients who initially refuse MAT may reconsider this choice when their withdrawal symptoms are managed.

Treating OUD Decreases Length of Stay

Research demonstrates that patients who receive MAT have shorter, less complicated admissions than those whose OUD is not addressed.^{20,21} Untreated opioid withdrawal can cause physiological decompensation in medically fragile patients, increasing complexity and length of stay.²²⁻²⁴ Withdrawal symptoms may produce agitation that requires additional nursing attention, sitters or security presence, further adding to cost of admission. For hospitals reimbursed by diagnostic-related groups, managing length of stay is, of course, essential to cost containment.

Treating OUD Improves the Health of Patients, Families and Communities

Health care systems absorb additional costs when family members of patients with untreated OUD present with medical and behavioral health conditions caused or exacerbated by their family member’s disease. Forty-four percent of family members of people with untreated OUD report moderate to severe physical health problems, and 85% report behavioral health conditions that they attribute to the strain of coping with their family member’s OUD.²⁵

In 2017, an estimated 2.2 million children or adolescents had a parent with OUD or had OUD themselves. This number represents 2.8% of all U.S. children and adolescents. The children of parents with untreated OUD have higher rates of neglect and abuse and of behavioral and medical health care needs. Children impacted by a parent with OUD who are the subject of a child protective services investigation incur on average \$37,000 in higher overall health care expenditures.²⁶

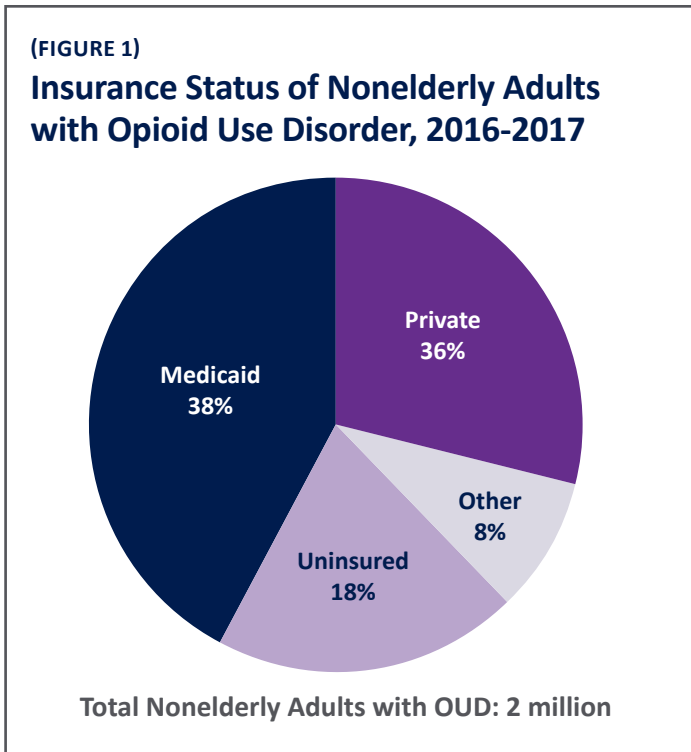
Clinician Engagement

Clinicians are more satisfied with their work when they provide effective care. When patients receive resource-intensive treatment for OUD-related disease only to resume using drugs hours after discharge, clinicians may feel that their care for patients with OUD is futile. Repeated admissions for treatment of OUD-related conditions contributes to a sense of powerlessness on the part of clinicians, eroding their sense of efficacy and—sometimes—their empathy. Frustration breeds resentment and hostility, and unproductive relationships with patients leave all parties dissatisfied. Health systems that support clinicians in providing evidence-based care for patients with OUD create a new treatment paradigm that benefits clinicians almost as much as it does patients.

Patients with OUD Are Disproportionately Under or Uninsured

The disruptions to employment, health and housing associated with OUD contribute to disproportionately high rates of underinsurance in patients with untreated OUD. For hospitals serving populations with low rates of insurance, preventing complications of IV drug users (IVDU) and treating underlying OUD is critical.

Hospital systems may consider performing an internal audit to determine what percentage of patients they serve have untreated OUD and calculate the costs associated with care of patients with complications of OUD. Institutions in communities hard-hit by the opioid epidemic may particularly benefit from establishment of MAT induction programs.



SOURCE: The Opioid Epidemic and Medicaid's Role in Facilitating Access to Treatment KFF.org²⁷

While passage of the Affordable Care Act (ACA) resulted in a dramatic decrease in the number of uninsured patients with OUD largely as a result of increased availability of Medicaid coverage, the overall number of patients accessing treatment for OUD has not substantially increased.²⁸ Notably, patients with Medicaid are more likely to receive treatment for OUD than patients with private insurance.²⁷ The persistent treatment gap for all patients poses an enormous threat to the health and well-being of patients with OUD and to the delivery of cost-effective treatment by health systems.

Template: Making the Case for Establishing a Hospital-Based MAT Induction Program		
<p>The Population Health Problem <i>Increased Utilization of Hospital Resources for OUD-related Presentations</i></p>	<p>The Financial Problem <i>Increased Costs for Care of OUD-related or Exacerbated Conditions</i></p>	<p>The Care Quality Problem <i>Suboptimal and Inappropriate Care Delivery</i></p>
<p>Describe the prevalence of patients with OUD in your hospital:</p> <ul style="list-style-type: none"> • Number of ED, inpatient and ICU admissions for opioid-related diagnoses 	<p>Describe the financial impact within your hospital of care for patients with untreated OUD:</p> <ul style="list-style-type: none"> • Number of readmissions • Length of stay • Cost of care for uninsured and underinsured patients with OUD-associated diagnoses 	<p>Describe suboptimal and inappropriate care within your hospital:</p> <ul style="list-style-type: none"> • Rates of leaving AMA • Rates of patients with OUD not receiving opioid agonist treatment while hospitalized • Rates of patients with OUD not offered MAT • Rates of warm handoff to MAT care upon discharge • Rates of long-term adherence to outpatient OUD treatment

SOURCE: Adapted from Addiction Medicine Consult Service Business Case Template²⁹

Costs and Funding for MAT Induction Programs

The three broad areas of payment for services provided in a hospital MAT program are professional services, hospital costs and pharmacy costs. For most institutions, existing staff are capable of implementing and sustaining a hospital- or ED-based MAT induction program after initial training. MAT medications, professional and hospital services may be billed as described below.

The Pharmacy Costs of Medications for Addiction Treatment

Most medications for addiction treatment are reasonably priced. Hospital formulary will often dictate which buprenorphine-containing product is primarily used for induction. Costs listed below represent average wholesale prices (AWPs) per each dosage unit and may vary significantly on the inpatient side due to hospital-specific medication distribution contracts.

(TABLE X)

Medication Cost (AWP) Per Dosage Unit

Buprenorphine products		Methadone products	
Sublingual tablets (Subutex) • 2 mg • 8 mg	\$4.14-4.53 \$7.74-8.48	Liquid concentrate (generic) • 10 mg/mL	\$0.10-0.13/mL
Subcutaneous implant (Probuphine) • 74.2 mg	\$1,485	Liquid solution (generic) • 5 mg/5 mL	\$0.08-0.32/mL
Subcutaneous prefilled syringe (Sublocade) • 100 mg/0.5 mL • 300 mg/1.5 mL	\$1,990.80 \$1,990.80	Tablet (generic) • 40 mg • 10 mg • 5 mg	\$0.03-0.33 \$0.15-0.74 \$0.27-0.46

continued

(TABLE X)

Medication Cost (AWP) Per Dosage Unit *continued*

Buprenorphine-naloxone products		Naltrexone products	
Sublingual tablets (generic) • 2-0.5 mg • 8-2 mg	\$4.75-5.83 \$8.46-10.43	Tablets (generic) • 50 mg	\$2.14-4.28
Sublingual tablets (Zubsolv) • 0.7-0.18 mg • 1.4-0.36 mg • 2.9-0.71 mg • 5.7-1.4 mg • 8.6-2.1 mg • 11.4-2.9 mg	\$5.33 \$5.33 \$10.67 \$10.67 \$16.01 \$21.35	Intramuscular suspension for injection (Vivitrol) • 380 mg	\$1,665.05
Film (generic) • 2-0.5 mg • 4-1 mg • 8-2 mg • 12-3 mg	\$4.91-5.15 \$8.79-9.23 \$8.79-9.23 \$17.58-18.46		
Film (Suboxone) • 2-0.5 mg • 4-1 mg • 8-2 mg • 12-3 mg	\$6.01 \$10.78 \$10.78 \$21.55		
Buccal film (Bunavail) • 2.1-0.3 mg • 4.2-0.7 mg • 6.3-1 mg	\$10.37 \$10.37 \$20.72		

Billing for MAT-related Professional Services

The following is based on information provided by Reventics, a Colorado based medical coding, billing and documentation education company. On Aug. 3, 2020, CMS issued a draft of billing changes for the 2021 Physician Fee Schedule (PFS) and Quality Payment Program (QPP). This will likely not be finalized until December 2020. The following is subject to change after publication of this document.

Payment for emergency and inpatient services is billed under Current Procedural Terminology (CPT) codes, as of the publication of this document there are no special codes used for MAT or addiction services. The two most significant services CPT codes include professional services and Screening and Brief Intervention (SBI). SBI can be billed by a provider (physician, physician assistant [PA], nurse practitioner [NP]), a licensed clinical social worker (LCSW) or psychologist at varying rates. In 2021, there will be a proposed code for induction of MAT in the ED. Telemedicine represents a rapidly growing aspect of OUD care and hospital payment is also evolving. Considerations for 2020 services and proposed changes for 2021 are listed below in **TABLE 1**.

(TABLE 1)

Billing for MAT Services

Physician Services | 2020 Billing Details

Listed payment is Medicare allowable. Medicaid approximately 20% less and insured 1.25-10x more. A different specialty than hospitalist (addiction medicine, emergency) could bill for the initial visit and induction of buprenorphine using inpatient visit or office visit.

New or established patient initial hospital inpatient care services

99221 | \$103.94 | 30 minutes
99222 | \$140.39 | 50 minutes
99223 | \$206.07 | 70 minutes

Follow-up hospital visits

99231 | \$40.06 | 15 minutes
99232 | \$73.62 | 25 minutes
99233 | \$106.10 | 35 minutes

Prolonged consultation, inpatient setting

99356 | \$94.19 | First hour
99357 | \$94.92 | Each additional 30 minutes

Hospital discharge day management

(can only be billed by the primary attending during a patient's admission)

99238 | \$74.34 | 30 minutes or less
99239 | \$108.99 | More than 30 minutes

New or established patient initial inpatient consultation service

99251-99255

NOTE: Medicare, Medicaid and most private payers don't reimburse consultation services codes. But the first hospital visit (inpatient or observation) could be billed using a consult code if desired. This is most beneficial for observation visits as consults reimburse at initial visit rates rather than follow up visit rates.

Office Visit Codes are able to be utilized for patients in OBS status.

Office visits – new patient

(if patient not seen by same specialty same group in last three years)

99202 | \$51.61 | 20 minutes
99203 | \$77.23 | 30 minutes
99204 | \$132.09 | 45 minutes
99205 | \$172.51 | 60 minutes

Office visits – established patient

99212 | \$26.35 | 10 minutes
99213 | \$52.33 | 15 minutes
99214 | \$80.48 | 25 minutes
99215 | \$113.68 | 40 minutes

continued

(TABLE 1)

Billing for MAT Services *continued*

Physician Services | Proposed Changes 2021 Details

MAT Induction in the ED—CMS is proposing a new code for emergency department induction of MAT and care coordination.

Code GMAT1 | \$41.60 | 1.3 RVUs (pending approval or modification)

Professional services have a proposed 10% decrease. There will be codes for extra time and complexity when an outpatient has a single serious or complex condition (OUD could be considered a complex condition) that can make up for some of the cuts to physician services.

Billing of Screening and Brief Intervention | 2020 Billing Details

Physician

99408 | \$34.29 | SBI-15-30 minutes

99409 | \$68.93 | SBI >30 minutes

OR

99356 | \$94.19 | Prolonged services 30-74 minutes

Can be billed in addition to initial hospital day services if physician spends at least 30 minutes more time.

LCSW or psychologist

G2011 | \$17.32 | 5-14 minutes

G0396 | \$33.92 | 15-30 minutes

G0397 | \$66.04 | >30 minutes

Typically covered by the hospital payment and cost reporting. If LCSW or psychologist employed by the physician caring for the patient, can bill SBIRT codes.

Telehealth | 2020 Billing Details

Medicare and Colorado Medicaid allow use of all of the above codes using telehealth during a public health emergency, though private insurers vary. Some allow use of inpatient codes, all allow office codes for telehealth visits. Use place of service where the visit would have occurred inpatient(21), outpatient(22), office(11), emergency department(23), add modifier 95.

Telehealth | Proposed Changes 2021

Inpatient visits are limited to the first day and every three days after that, observation/outpatient visits can be daily for the consultant. Only level one through three ED visits will be allowed by telehealth in 2021.

Billing for Hospital Services

The California Health Care Foundation provides a concise summary of reimbursement for hospitals, which also applies to Colorado: “Hospitals are reimbursed for facility costs. These costs are typically reimbursed on a per diem basis or through a diagnosis-related group (DRG) methodology. MAT-related services—such as counseling provided by a social worker—would be included in the DRG payment. As with professional services, adding OUD as a diagnosis may increase the patient’s acuity and, as a result, the case mix index (CMI). A higher CMI indicates a more complex and resource-intensive caseload and may increase reimbursement accordingly. As with professional services, the potential for increased reimbursement would depend on the patient’s medical condition and insurance coverage.”³⁰

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