Caring for Patients with Substance Use Disorders in Acute Care Hospitals:

A Paper from the Colorado Hospital Association's Center for Clinical Leadership and Excellence

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Colorado Hospital Association
Center for Clinical Leadership and Excellence

Authored by:

Richard Bottner, DHA, PA-C, *Vice President, Clinical Excellence, Colorado Hospital Association*
Katie Breen, MPH, *Vice President of Programs, Colorado Perinatal Care Quality Collaborative*
Robert Valuck, *Director, Center for Prescription Drug Abuse Prevention, University of Colorado, Skaggs School of Pharmacy and Pharmaceutical Sciences*
Jose Esquibel, *Associate Director, Center for Prescription Drug Abuse Prevention, University of Colorado, Skaggs School of Pharmacy and Pharmaceutical Sciences*
Susan L. Calcaterra, MD, MPH, MS, *Associate Professor of Medicine, Department of Medicine, Divisions of General Internal Medicine and Hospital Medicine, University of Colorado, Anschutz Medical Campus*
Jenny Koch-Zapfel, MSW, CHoSEN QIC, *Kempe Center for the Prevention and Treatment of Child Abuse and Neglect*
Joshua A. Barocas, MD, *Associate Professor of Medicine, University of Colorado School of Medicine, Divisions of General Internal Medicine and Infectious Diseases*
Don Stader, MD, FACEP, FASAM, *Executive Director, The Naloxone Project*
JK Costello, MD, MPH, *Director of Behavioral Health Consulting, Steadman Group*

Endorsed by the Colorado Hospital Association's Clinical Leadership and Excellence Council:

Brian Murphy, MD *(chair), Chief Executive Officer, Valley View Hospital*
Jackie Attlesey-Pries, MSN, RN, CENP, *Chief Nursing Officer, Boulder Community Health*
Jeff Bacon, DO, *Chief Medical Officer, Banner Health - Western Region*
Kevin Coleman, MD, *Chief Medical Officer, Grand River Health*
Andy French, MD, MBA, *Vice President, Quality Safety, and Clinical Operations, Centura Health*
Kelly Gallegos, RN BSN, *Chief Nursing Officer, UCHealth, Yampa Valley Medical Center*
Karla Hardesty, MA, *Board President, San Luis Valley Health*
Ian Howells, MHA, RN, *Director, Clinical Performance Improvement, Intermountain Health, Peaks Region*
Amy Lavigne, MSN, RN, *Quality Director, Vail Health*
Read Pierce, MD, *Chief Quality Officer, Denver Health*
Rachel Smith, RN, BSN, *Hospital Director of Nursing, Lincoln Health*
Sandeep Vijan, MD, FACS, CPE, *Chief Medical Officer, Spanish Peaks Regional Health Center*

Executive Summary

Across the United States, including in Colorado, substance use disorders (SUD) continue to represent a major public health challenge. Despite increased attention nationally, mortality related to substance use and drug overdose continues to devastate communities. Importantly, while opioids have garnered much of the national attention, additional substances are also major public health concerns, particularly alcohol and stimulants. Hospitalization represents a reachable moment for people with SUD. A tremendous opportunity exists for hospitals to be engaged in systems improvement and for hospitals to be resourced appropriately to provide this vital care. Hospitals are uniquely positioned to integrate robust prevention, treatment, harm reduction, and recovery strategies driven by multidisciplinary teams.

In December 2022, the Colorado Hospital Association convened a group of Colorado-based clinical experts with experience and expertise in hospital addiction care. With guidance from the Association's Clinical Leadership and Excellence Council (CLEC), the group of SUD advisors collaborated to identify best practices, promote evidence-based clinical care, and spotlight innovations. In the following paper, CLEC shares the Colorado Hospital Addiction Care Framework, which outlines systems and clinically based interventions to expand screening, treatment, and care linkage for hospitalized patients with SUD, including integration across all areas of acute care hospitals.

This paper is designed to provide thought leadership around hospital-based addiction care and elevate best practices based on objective review of the scientific literature. While the authors recognize the tremendous opportunity and need to improve fragmented SUD infrastructure in the outpatient setting, the following focuses exclusively on the SUD care continuum within acute care hospitals. This paper should be used as a catalyst for additional conversations and convenings, and as a foundation to guide technical assistance and other implementation support around the included themes. Hospitals should consider which of the following suggestions, if any, are most appropriate given the unique processes and resources of the hospital, which can be reviewed by legal counsel. In addition, specific clinical guidelines and toolkits are not included here, but may be developed as part of future work products.

Introduction

Acute care hospitals are an essential part of the care continuum for patients with SUD. Opportunity exists for hospitals to be fully integrated as meaningful community partners and in the grantmaking processes for systems and clinical innovations. Current limitations to hospital integration exist largely due to hospitals not being promoted as, positioned for, or appropriately resourced to be part of the solution to the SUD crisis. Given the fact that SUDs are life-threatening medical diseases with significant morbidity, mortality, and social costs, the need for hospitals to be appropriately equipped and resourced is urgent. There is an opportunity for hospitals to be key stakeholders in public health innovations related to SUD and to achieve critical funding through federal, state, and foundation programs to improve care delivery.

There are a multitude of interventions that hospitals could utilize in response to the SUD epidemic including screening, prevention, treatment, harm reduction, and elimination of stigma. Hospitals need dedicated education, training, and resources to foster and grow effective, compassionate, and evidence-based care for people with SUD. While the overall support for hospitals as part of the SUD care continuum has been minimal, significant attention has focused on emergency departments (EDs). EDs are a key access point for patients with SUD, however they are only part of a much larger continuum of hospital-based care that includes inpatient care, labor and delivery units, perioperative services, and pediatric and adolescent services – all of which are uniquely positioned to support patients with SUD and their families. The objective for improving SUD care in these practice settings is similar, but the tactics are different based on the clinical context, structure, resources, and distinct clinical workflows of each.

It is critical to recognize that while much of the attention on the SUD epidemic in the United States and in Colorado over the past decade has focused on opioids, including illicit fentanyl and its analogues, additional substances also contribute significantly to hospitalizations, including alcohol, methamphetamine, cocaine, tobacco, and increasingly, cannabis.

The Opportunity

The impact of SUD on communities and the hospitals serving them is staggering. Even with important and impactful efforts around responsible prescribing, drug overdoses and the consequences of unhealthy substance use significantly impact the health of communities across the United States, including those in Colorado:

- Over 107,000 people died of a drug overdose in the United States in 2021, the **highest number ever** recorded and a 15 percent increase from 2020.[1]
- Per the Commonwealth Fund's 2023 Scorecard on State Health System Performance, Colorado **ranks 25th** for drug overdoses and **46th** for alcohol-related deaths.[2]
- Approximately one in 11 ED visits and one in nine hospitalizations is related to SUD, accounting for up to 33 percent of all admissions in safety net settings.[3] Nationally, **up to 15 percent** of patients who present to the ED after an opioid overdose die within one year, a number that far exceeds the number of patients who die from heart attacks.[4]
- According to claims data between 2017 and 2021 analyzed by the Colorado Hospital Association, **16 percent of all patients admitted to hospitals across the state have a SUD diagnosis documented,** with alcohol use disorder being the most dominant. Given known challenges surrounding accurate SUD diagnoses among hospitalized patients, the prevalence is likely significantly higher.
- One in five cases of maternal mortality is a direct result of mental health conditions, primarily related to substance use disorders and overdoses.[5]
- Hospitalizations related to stimulant use, particularly methamphetamine, have drastically increased due to stimulant-induced cardiomyopathies and acute psychiatric diagnoses.[6]
- Presentations to the ED for adverse events related to cannabis use have also continued to rise.[7]

Moving beyond prevention of opioid use disorder: Major strides have been made on responsible prescribing of opioids. Prior work led by the Colorado Hospital Association, Colorado Medical Society, and Colorado Consortium for Prescription Drug Abuse Prevention included a 2019 initiative designed to improve the safety of opioid prescribing: Colorado's Opioid Solution: Clinicians United to Resolve the Epidemic (CO's CURE). CO's CURE brought together diverse clinical specialties committed to resolving the opioid epidemic in Colorado through the development of opioid prescribing and treatment guidelines. Despite development of evidence-based guidelines and improvement of appropriate prescribing practices specific to opioids, massive opportunity for implementation of holistic and comprehensive best practices surrounding SUD remains.

When it comes to hospitalization, it's about more than overdoses: The impact of SUD on hospitals extends beyond the toll of overdose reversals and management of withdrawal. For patients and hospitals alike, SUD can lead to a variety of other serious health care concerns that require significant resources to address.

- Upwards of 70 percent of patients with SUD who are hospitalized are undiagnosed.[8]
- Hospitalizations related to opioid use disorder with and without serious injection-related infections increased significantly between 2002 and 2012. There were further increases between 2016 and 2018 for heart, bone, and skin infections, and sepsis related to substance use.[9]
- Hospitalizations for SUD-related infections may require weeks of intravenous antibiotic therapy.[10]
- Hepatitis C infection, often associated with injection drug use, continues to account for substantial proportions of both hospitalizations for end-stage liver disease and for liver transplantation.[11]
- Xylazine, a central nervous system depressant, is increasingly contaminating the drug supply and resulting in severe systemic and localized infections.[12]

Hospital-based interventions for improving SUD outcomes are proven, but underutilized: Professional society guidelines exist for addressing opioid and substance use disorders, including among hospitalized patients. Such guidelines have been published by the Society of Hospital Medicine, American College of Emergency Physicians, American College of Obstetrics and Gynecology, and the American Society of Addiction Medicine. Despite several decades of robust scientific research, a lack of translation from science to clinical and system-based practice persists primarily due to inadequate technical assistance and implementation resources specifically for hospitals.

Connection to the Hospital Transformation Program: The Hospital Transformation Program (HTP) aims to improve the quality of hospital care provided to members of Colorado's Medicaid program by tying provider fee-funded hospital payments to quality based initiatives. HTP, which is managed by the Colorado Department of Health Care Policy and Financing, includes several measures related to SUD care. These measures are briefly described in the following table.

Select Measures from the Hospital Transformation Program

MEASURE	RELEVANCE TO THE SUD CARE CONTINUUM
SW-RAH1: 30 Day All Cause Risk Adjusted Hospital Readmission	As stated above, hospitalized patients with SUD who are not provided SUD-specific resources are at high-risk for hospital readmission within 30 days.
SW-CP1: Social Needs Screening and Notification	Health related social needs often present a major barrier for people with SUD to receive necessary care.
SW-BH1: Develop and implement a discharge planning and notification process with the Regional Accountable Entity	Post-discharge care coordination is essential for patients to receive evidence-based care in the community. This includes appropriate and accurate diagnosis of SUDs.
SW-BH3: Using Alternatives to Opioids (ALTO) in Hospital Emergency Departments	Use of ALTO when clinically appropriate is part of a comprehensive public health strategy to prevent SUD.
BH1: Screening, Brief Intervention, and Referral to Treatment (SBIRT) in the ED	SBIRT is one well-established approach for identifying patients in need of SUD care and initiating appropriate clinical interventions.
BH2: Initiation of Medication Assisted Treatment (MAT)	Initiating clinically appropriate MAT is part of a comprehensive public health strategy to increase access to SUD treatment.

The Return on Investing in SUD Care

Caring for SUD in the hospital is expensive: A recent analysis by Premier based on input from over 4,000 hospitals nationwide found that opioid use disorder alone costs hospitals $95 billion per year, nearly 8 percent of all hospital expenditures.[13] Alcohol use disorder represents a significant proportion of all hospital costs related to SUD, underscoring the necessity to focus systems and clinical interventions beyond opioids.[14]

Providing evidence-based care reduces costs and improves outcomes: Building models of SUD care in hospitals has been shown to improve mortality, reduce hospitalizations, decrease overdoses in the community, and is cost effective.[15] Pharmacologic and psychosocial interventions implemented around the time of hospital discharge improve engagement in post-acute addiction care and reduce subsequent health care utilization.[16–19] Navigation services reduce costs and readmission and improve post-discharge engagement.[20] Spreading models of SUD care to rural communities has also been shown to be effective.[21]

In the current environment, up to 17 percent of patients with SUD leave the hospital via patient directed discharges (i.e., "against medical advice").[22–25] However, patient-centered interventions that promote evidence-based practice and shared-decision making between the provider and patient reduce the likelihood of a patient self-discharging from the hospital prior to the conclusion of treatment.[26–28] Such interventions include mitigating and treating withdrawal, using patient-first language, providing appropriate multimodal approaches to pain management, among many others.[29–32] Implementing strategies around addiction care re-establishes trust between patients with SUD and hospitals and health systems while also improving patient and staff/clinician satisfaction.[33–35] Patient and staff-centered policies and interventions for in-hospital substance use may improve upon health and racial/ethnic inequities, and reduce incidents of workplace violence.[29] Providing evidence-based addiction care in hospitals supports destigmatization, models compassionate care, and supports reframing SUDs as chronic medical conditions.[36]

Colorado Hospital Addiction Care Framework

Given the opportunity to improve care for hospitalized patients with SUD, CLEC has endorsed the following hospital addiction care framework. The purpose of the framework is to illuminate key areas of focus for hospital leaders, clinicians and staff, communities, state and federal grantmakers, and philanthropic organizations. The framework promotes widely accepted categories of SUD care in all clinical areas of the hospital, encourages engagement of multidisciplinary teams, and puts forth certain foundational elements for hospital SUD care in acute care settings.

CLEC strongly believes that resourcing hospitals appropriately within this framework will result in reduced morbidity and mortality, improved patient and team member experience, and decreased total costs related to SUD care.

Hospital Addiction Care
FRAMEWORK

ESSENTIAL ELEMENTS:

Staff and provider education, evidence-based measures, trauma-informed care, integration of technology, community engagement, and access to real-time data.

Multidisciplinary Teams

PROVIDERS	NURSES	PHARMACISTS
CASE MANAGERS/ SOCIAL WORKERS	PHYSICAL REHABILITATION SPECIALISTS	ADMINISTRATION

Interventions

PREVENTION	TREATMENT
RECOVERY	HARM REDUCTION

Practice Settings

EMERGENCY DEPARTMENT	INPATIENT	LABOR AND DELIVERY
PERIOPERATIVE	PEDIATRICS	

The following section describes components of the hospital addiction care framework in greater detail. Hospitals should consider these suggestions within the context of their own unique processes and resources.

Interventions[37–40]

- **Prevention**
  - Integrate best practice screening protocols, particularly models that include Screening, Brief Intervention, and Referral to Treatment (SBIRT).
  - Support evidence-based and appropriate multimodal pain management. Recognize that in-hospital ordering of opioids for acute pain management among hospitalized patients with SUD is different from prescribing opioids at discharge and requires unique approaches. Patients with a history of opioid use disorder may have higher opioid tolerance and hypersensitivity to pain.
  - Establish standardized approaches to the use of prescription drug monitoring programs.
  - Promote screening for HIV and hepatitis C among vulnerable hospitalized patients.
- **Treatment**
  - Initiate evidence-based pharmacotherapy for SUD. This includes appropriate and adequate medications to effectively treat withdrawal in addition to starting maintenance medications for continuation at discharge, depending on patient preference.
  - Establish electronic health record-integrated protocols for initiation of medications for SUD. Protocols should be specific to the patient population and clinical scenario (e.g., pregnant patients, patients with acute pain, patients undergoing surgical procedures, intubated patients).
  - For patients with opioid use disorder, partner with opioid treatment programs for increased access to methadone treatment services, including mobile services.
  - Link patients to post-discharge care for continued treatment, including streamlined partnerships with substance use disorder programs able to continue medications started in the hospital, such as buprenorphine, methadone, or naltrexone.
- **Recovery**
  - Grow and integrate a peer recovery specialist workforce with specific competencies around hospital-based clinical care and administrative operations.
  - Link patients to outpatient peer recovery groups.
  - Promote recovery-friendly workplaces.
- **Harm Reduction**
  - Implement best practices for naloxone education and distribution for at-risk patient populations per guidelines, including those established by the Food and Drug Administration and CO's CURE.
  - Distribute alcohol swabs, wound care supplies, and fentanyl test strips, and create safe syringe programs. While these interventions are specific to intravenous drug use, they are essential to decreasing morbidity and mortality related to infections.
  - Note that many of the elements in the following section are also related to harm reduction. The spirit of harm reduction is centered on preserving patient-centered care and respecting patient autonomy in a manner that builds trust and ultimately improves outcomes. Harm reduction is an all-encompassing term which promotes appreciation that recovery is an individualized journey that does not always necessitate total abstinence.

Essential Elements and Foundational Guidance

- Promote staff education and hospital-wide campaigns around evidence-based practice and destigmatization (e.g., appropriate language, guideline-based care).
- Engage community members with lived experience and incorporate lessons learned into strategic planning and day-to-day operations.
- Adopt SUD interventions that are measurable, achievable, and specifically designed for hospital care. Examples can be found in the Stem The Tide program from the American Hospital Association.
- Improve infrastructure for real-time data collection, analysis, and monitoring related to the impact of substance use on hospitals.
- Practice trauma-informed care and promote trauma-informed leadership.
- Review internal policies that may inadvertently limit access to SUD care during hospitalization, including clinical and nursing policies, hospital bylaws, and formularies.
- Design and implement tools within the electronic health record that support SUD care and improve efficiencies for care teams.
- Foster community-based organization partnerships, particularly those which can facilitate support around health related social needs.
- Establish care navigation pathways and/or "SUD coordinator" roles that facilitate transitions of care from the acute hospital setting to the community setting.
- Establish comprehensive approaches to gathering and utilizing population health data, including claims data and screening of drug supply and substance use patterns.

Practice Settings and Functions for Targeted Interventions

- **Emergency Departments** – EDs are the primary access point to acute care hospitals for most patients. Patients with SUD may present to the ED for a variety of reasons and EDs should be well-equipped to respond.
- **Inpatient Medicine (including hospitalist-led services)** – Patients with SUD may be admitted to the hospital for days to weeks. Admission may be directly related to the substance use disorder itself, such as withdrawal or infection, or may be related to another organic diagnosis. In either case, hospitalization is a reachable moment to provide whole-person care which includes addressing SUD.
- **Labor and Delivery** – Mental health and SUDs continue to be a major driver of maternal mortality and morbidity during the perinatal period. Many patients do not receive optimal pre-natal care, especially related to SUD. Labor and delivery units are critical parts of the care continuum.
- **Perioperative Services (including anesthesia)** – Surgical procedures, the discontinuation of medications for addiction treatment, and the introduction of anesthetic medications increase the risk of relapse events.
- **Pediatrics** – As the rates of SUD increase among the adolescent population, the need for improved pediatric SUD care is paramount.

Multidisciplinary Teams and Engagement of Interprofessional Stakeholders

- **Hospital administration**
- **Providers (MD/DO, PA, NP)**
- **Nurses**
- **Pharmacists**
- **Case managers**
- **Social workers**
- **Physical rehabilitation specialists**
- **Behavioral health specialists**

Next Steps

As is the case with most chronic medical conditions, acute care hospitals are not the appropriate practice setting for patients to receive longitudinal, long-term maintenance care. However, hospitals are uniquely positioned to address patients and communities in acute crises and to provide comprehensive interventions that can foster recovery. SUDs are life threatening diseases which benefit from high quality, evidence-based care. Significant opportunities exist for hospitals to optimize, streamline, and standardize SUD care if they are resourced appropriately and engaged in the stakeholder process. Next steps include convening additional stakeholders and experts to perform a thorough needs assessment and identify best practices, developing toolkits and step-by-step resources to support implementation, and creating grant programs to support technical assistance and use of implementation science frameworks.

Additional Reading

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