Addressing Substance Abuse and Overdose Cases in Emergency Departments: A Nursing Perspective

Nawal Mohammed AlBallafr[1], Amal Mohammed Alsaqer[2], Mohannad Mastour Alnofie[3], Nail Turki Alotaibi[4], Hashim Ahmed Alsulaimani[5], Abdulrahman hammad Allehyani[6], Jawharah Saleh Aljuaid[7], Ebtesam Musleh Althubaiti[7], Abdullah Saeed Al-Ghamdi[8], Fahad Sultan Ali Alzhrani[9], Fahad Abdulali Alkharmani[9], Hamed Ahmad Al Zahrani[6], Mutaz Abdullah Alotaibi[10], Huda Menahi Shahal Alenazi[11]

[1]Nurse specialist, Armed forces hospital- Armed forces Rehabilitation Center, Taif, Saudi Arabia

[2]Emergency Medical Service Specialist, Ambulance Department, King Salman Armed Forces Hospital, Tabuk, Saudi Arabia

[3]Clinical resource Nurse, Nursing Department, Armed forces hospital- Armed forces Rehabilitation Center, Taif, Saudi Arabia

[4]Staff nurse II, Nursing Department, Armed forces hospital- Armed forces Rehabilitation Center, Taif, Saudi Arabia

[5]Staff nurse II, Nursing Department, Al-hada Armed Forces Hospital, Taif, Saudi Arabia

[6]Pharmacy technician, Pharmacy Department, Al-hada Armed Forces Hospital, Taif, Saudi Arabia

[7] Nurse Manger, Nursing Department, Al-hada Armed Forces Hospital, Taif, Saudi Arabia

[8] Nuring, Emergency Medkal service Department, Al-hada Armed Forces Hospital, Taif, Saudi Arabia

[9]Pharmacy Technician, pharmacy Department, Prince Mansour Military Hospital, Taif, Saudi Arabia

[10]Emergency Medical Specialist, Ambulance Department, Makkah Armed Forces Medical Center, Makkah, Saudi Arabia

[11] Nursing Technician, Endoscopy Department, North Medical Tower, Arar, Saudi Arabia

***Abstract*:**

Addressing substance abuse and overdose cases in emergency departments (EDs) requires a comprehensive and empathetic approach from nursing staff. Nurses play a crucial role in the initial assessment and management of patients presenting with substance-related issues. This includes performing thorough assessments to identify the type and extent of substance use, potential co-occurring mental health disorders, and related medical complications. By utilizing evidence-based practices, such as motivational interviewing and harm reduction strategies, nurses can effectively engage patients in discussions about their substance use. This not only aids in the immediate management of their condition but also lays the groundwork for effective follow-up care and referrals to treatment services once the patient is stabilized. Furthermore, ongoing education and training for nurses regarding the latest trends in substance abuse and overdose management are essential for improving patient outcomes. Emergency departments serve as critical touchpoints in the healthcare system, often acting as the first line of support for individuals struggling with addiction. By implementing standardized protocols for screening, intervention, and post-discharge support, nursing staff can play an instrumental role in reducing the stigma associated with substance use disorders. Collaborative efforts with multidisciplinary teams, including social workers and addiction specialists, can enhance the continuum of care, ensuring that patients receive the necessary resources and support to reduce the risk of recurrence and promote recovery.

***Keywords*:** Substance Abuse, Overdose Management, Emergency Departments, Nursing Role, Patient Assessment, Motivational Interviewing, Harm Reduction, Education and Training, Standardized Protocols, Multidisciplinary Care.

Introduction:

The issue of substance abuse and overdose has become a pressing public health concern, with far-reaching implications for healthcare systems, communities, and individuals worldwide. In the United States, the opioid epidemic has garnered significant media attention and policy responses, but it is only one part of a broader spectrum of substance use disorders that affect diverse populations. Emergency departments (EDs) serve as critical access points for individuals experiencing acute episodes related to substance abuse, making them vital arenas for intervention and management. Nurses, who represent the frontline of patient care in EDs, play a pivotal role in addressing these complex health challenges through their clinical expertise, empathetic patient interactions, and advocacy for comprehensive treatment [1].

Substance use disorders encompass a range of conditions characterized by the compulsive consumption of drugs, alcohol, or other substances, leading to detrimental impacts on health, functioning, and social relationships. According to the National Institute on Drug Abuse (NIDA), an estimated 20.3 million people aged 12 and older had a substance use disorder in 2018, encompassing both illicit drug use and alcohol dependence. Overdose deaths have surged, particularly in the case of synthetic opioids, such as fentanyl, which accounted for nearly 67,000 of the approximate 70,000 drug overdose deaths reported in 2021. These staggering statistics underscore the urgent need for effective interventions within the healthcare system, particularly in emergency departments, where individuals often present after life-threatening incidents related to substance use [2].

Emergency departments are uniquely positioned to address substance abuse and overdose due to their accessibility and the acute nature of the cases they manage. Patients in this setting are often experiencing crises, which can include overdose, withdrawal, or exacerbation of mental health issues related to substance use. The chaotic and often high-stress environment of the ED necessitates a strategic and compassionate approach to care. Emergency nurses must navigate the complexities of assessing and managing patients who may present with altered mental status, respiratory depression, or other critical conditions arising from substance use [3].

In addition to immediate medical treatment, the emergency department can serve as a gateway to longer-term interventions. This brief but intense period of contact with healthcare professionals provides a pivotal opportunity for education, assessment, and connection to addiction services. Research indicates that patients who receive interventions in the ED, such as substance use screening and motivational interviewing, are more likely to engage with treatment programs thereafter. Nurses, due to their ongoing patient interaction and rapport-building capabilities, are crucial to facilitating this transition from acute care to long-term management [4].

Nurses in the emergency department assume multi-faceted roles that are integral to effectively addressing the challenges posed by substance abuse and overdose cases. Their responsibilities encompass a range of evidence-based practices, including thorough assessment and triage, provision of emergency medical care, and the initiation of treatment protocols such as naloxone administration during opioid overdose incidents. However, beyond these immediate interventions, nurses can leverage their unique position to conduct comprehensive psychosocial assessments, educate patients about harm reduction strategies, and advocate for follow-up care [5].

Another critical aspect of nursing care involves fostering a non-judgmental environment. Substance abuse carries a significant stigma, and individuals may present with feelings of shame or fear. By approaching patients with empathy and understanding, nurses can build trust and facilitate open communication about their substance use history and needs. This therapeutic relationship is essential for promoting patient engagement in further treatment options, whether it be outpatient counseling, rehabilitation services, or medication-assisted treatment [6].

To adequately meet the needs of patients experiencing substance abuse and overdose, it is essential that nursing education and continuing professional development programs incorporate training on addiction, mental health issues, and harm reduction techniques. The diverse and evolving nature of substance use requires nurses to possess a robust understanding of these topics, allowing them to provide informed and competent care. Additionally, EDs must foster an interdisciplinary

approach, involving collaboration with social workers, addiction specialists, and mental health professionals to create a holistic treatment plan for affected individuals [7].

Healthcare systems should also consider the implementation of standardized protocols for managing substance abuse cases, including refined screening tools and clinical guidelines that reflect the best practices in addiction care. Such measures can optimize the delivery of care in the fast-paced ED environment, ensuring that all staff, including nurses, are equipped to respond effectively to these complex cases [8].

The Role of Nursing in Emergency Department Settings:

Drug abuse and overdose are critical public health issues that pose significant challenges to healthcare systems worldwide. Emergency departments (EDs) play a vital role in the immediate management and care of patients affected by these substances, providing life-saving interventions and initiating pathways to recovery. The multifaceted nature of drug abuse and overdose cases requires a comprehensive approach to patient care, with implications for clinical practice, public health policy, and community support systems [9].

Drug abuse refers to the use of substances—both illicit and prescription—beyond their intended purpose, often leading to addiction, physical harm, and significant psychological effects. Overdose occurs when a person consumes a toxic amount of a substance, resulting in severe physiological reactions that can lead to death if not promptly addressed. The substances involved can vary widely, including opioids, stimulants, alcohol, and sedatives, each presenting unique challenges upon presentation to the emergency department [10].

Recognizing the statistics associated with drug-related emergencies is essential for understanding the burden placed on EDs. According to the Centers for Disease Control and Prevention (CDC), over 100,000 drug overdose deaths occurred in the United States alone in 2021, a staggering increase attributed mainly to the opioid crisis. As the frequency and complexity of drug abuse cases rise, so too does the necessity for effective patient care protocols in emergency settings [10].

When a patient presents to the emergency department with suspected drug abuse or overdose, the primary objective is to assess and stabilize the patient's condition. The initial response typically follows the ABCs of emergency medicine: airway, breathing, and circulation. Medical staff must quickly evaluate the patient's vital signs and perform a rapid clinical assessment to determine the severity of the overdose and identify any co-occurring medical issues [10].

Airway management is crucial, particularly for patients who have overdosed on depressants such as opioids or benzodiazepines. These substances can lead to respiratory depression, necessitating interventions such as supplemental oxygen or advanced airway placement. The administration of naloxone, an opioid antagonist, is a standard practice in cases of suspected opioid overdose, capable of rapidly reversing the effects of opioids and restoring respiratory function [11].

In addition to acute interventions, rapid diagnostic testing is essential. Blood tests, urine drug screens, and imaging studies may be employed to determine the substance involved, assess metabolic status, and identify potential complications. This diagnostic information aids healthcare providers in formulating an effective treatment plan tailored to the individual patient's needs [12].

Comprehensive Patient Care and Management Strategies

Once stabilized, ongoing patient care in the emergency department involves an array of interventions designed to address both the immediate health concerns and the underlying issues related to substance use. Some of the key components include:

1. **Psychiatric Evaluation**: Many patients with substance abuse issues have co-occurring mental health disorders, which can complicate treatment. Psychiatric evaluations provide insights into the patient's mental health status and guide referral to appropriate counseling and psychiatric resources [13].

2. **Substance Use Disorder Treatment**: Following stabilization, patients may benefit from medications that alleviate withdrawal symptoms and reduce cravings, such as buprenorphine or methadone for opioid use disorder. Emergency

departments are increasingly adopting protocols for initiating these treatments, which can enhance long-term outcomes [13].

3. **Referral to Treatment Services**: Effective management of drug abuse and overdose involves a continuum of care. Emergency department staff should create connections to community resources, including outpatient substance use treatment programs, support groups, and social services. Warm handoffs and linkage to care are critical to ensuring that patients do not fall through the cracks following discharge [14].

4. **Education and Harm Reduction**: Educating patients and their families about the dangers of drug use, overdose prevention strategies, and available resources is a pivotal component of recovery. Harm reduction strategies, such as providing access to naloxone and overdose education, empower patients and loved ones to take proactive steps in preventing drug-related emergencies [15].

5. **Follow-Up and Long-Term Support**: Arranging follow-up visits post-ED discharge is essential for supporting recovery. Integrating primary care and addiction specialists can facilitate ongoing monitoring and management of substance use disorder, ensuring that patients receive comprehensive care that addresses both physical and mental health needs [15].

Challenges in Patient Care for Drug Abuse and Overdose

Emergency departments face numerous challenges in providing patient care for drug abuse and overdose cases. Stigma surrounding substance abuse can deter individuals from seeking help and make them hesitant to engage with healthcare providers. Additionally, the chaotic environment of the ED, marked by high patient volume and time constraints, can limit the effectiveness of interventions and continuity of care [16].

Moreover, the evolving landscape of drug abuse trends, including the rise of synthetic opioids and new psychoactive substances, demands that healthcare providers remain knowledgeable and adaptable. Training and continuous education for ED staff on the latest evidence-based practices are essential in managing these complex cases effectively [16].

Assessment and Identification of Substance Abuse Cases:

Drug abuse represents a significant and growing public health issue worldwide, with profound implications for individuals and society. In the context of healthcare, emergency departments (EDs) play a crucial role in identifying and managing the consequences of drug abuse. These acute care settings are often the first point of medical contact for individuals experiencing drug-related problems, whether due to overdose, withdrawal, or complications arising from chronic substance use [17].

Drug abuse encompasses a range of behaviors involving the inappropriate use of substances, whether legal or illegal, which result in adverse behavioral, psychological, or physical consequences. Commonly abused substances include opioids, cocaine, alcohol, benzodiazepines, and stimulants. With the rise of synthetic drugs and the increasing prescription of medications, the landscape of drug abuse continues to evolve, complicating identification and management efforts in emergency settings [17].

Evidence suggests that drug abuse cases in emergency departments are on the rise. Reports indicate that a significant percentage of ED visits are related to substance use disorders (SUDs). For instance, a study published in the *Journal of Emergency Medicine* found that approximately 10% of all ED visits in the United States were related to drug abuse. These visits range from acute overdoses to acute exacerbations of chronic conditions resulting from long-term substance misuse [18].

Several patterns can be discerned from the data. Opioid-related visits, for instance, have surged dramatically in recent years, reflecting the ongoing opioid epidemic. Conversely, alcohol-related incidents, while historically more common, have also seen an increase in cases of acute alcohol intoxication, especially among younger populations. Emerging substances, such as synthetic cannabinoids and stimulants like methamphetamine, have also contributed to a dynamic composite of drug-related cases faced by healthcare professionals in emergency settings [18].

Identifying Drug Abuse Cases

Identifying cases of drug abuse in emergency departments presents unique challenges. Emergency physicians and staff are tasked with quickly triaging patients, often in high-pressure environments. As a result, clear indicators of drug abuse must be rigorously studied, encompassing both behavioral cues and physiological signs [19].

1. **Behavioral Indicators:** Patients exhibiting certain behaviors can signal potential drug abuse. These may include agitation, altered mental status, aggression, or withdrawal symptoms. Behavioral assessments such as the screening and brief intervention (SBI) tool can be beneficial in identifying at-risk patients during their ED encounters [20].

2. **Physical Symptoms:** Clinicians often rely on a combination of clinical history-taking and physical assessments to identify substance-related issues. Symptoms of opioid overdose, such as respiratory depression, pinpoint pupils, and altered consciousness, are immediate indicators requiring prompt intervention. In contrast, stimulant use may present with tachycardia, hyperthermia, and elevated blood pressure [20].

3. **Laboratory Testing:** Urine drug screens (UDS) are commonly employed in emergency departments to identify the presence of drugs in patients' systems. While not exhaustive in detecting all abused substances (e.g., synthetic drugs or alcohol), UDS can help establish a preliminary diagnosis and guide treatment decisions [21].

4. **Patient History:** A comprehensive patient history, including inquiry about recent substance use, past addiction, and the context of use, is vital. However, patients may under-report or conceal their substance use due to fear of stigma or legal repercussions, which complicates the identification process [21].

Impact on Emergency Departments

The consequences of drug abuse cases in emergency departments are multifaceted. First and foremost, they pose a considerable burden on healthcare resources. High-volume ED visits from this population often lead to decreased access to care for other patients and straining of personnel and physical resources. As reported by the *American Journal of Public Health*, the average cost of opioid overdose cases significantly surpasses care for other conditions, adding economic strain to already overburdened healthcare systems [22].

Additionally, frequent ED visits related to drug abuse can indicate the need for comprehensive management and referral pathways. It highlights the necessity for emergency departments to collaborate with addiction services, mental health professionals, and community resources to ensure that patients receive follow-up care and support after their emergency treatment [22].

Preventative Strategies and Interventions

Addressing drug abuse in emergency departments requires systemic strategies both to identify and treat affected individuals effectively. One promising approach is the integration of substance use screenings into routine ED assessments, ensuring that all patients are screened for potential drug use. Coupled with clinician training on the recognition of drug abuse signs, this comprehensive approach can facilitate early intervention [23].

Moreover, providing immediate access to addiction treatment and counseling services within the emergency department can dramatically improve patient outcomes. Implementing programs such as medication-assisted treatment (MAT) for opioid use disorder can reduce relapses and encourage patients to engage in long-term recovery solutions. Additionally, educational initiatives aimed at patients and communities regarding the dangers of substance abuse can help mitigate the increasing rates of drug misuse [23].

Evidence-Based Interventions for Overdose Management:

The escalating opioid crisis has made overdose management a critical component of emergency medicine. As the rates of overdose deaths have surged, healthcare professionals in emergency departments (EDs) are at the frontline, tasked with providing immediate and effective care to patients presenting with drug overdoses. Utilizing evidence-based interventions has become essential in enhancing the quality of care, minimizing morbidity and mortality, and improving patient outcomes [24].

An overdose occurs when an individual consumes a substance—legal or illegal—in amounts that exceed their body's capacity to handle. Drug overdoses can involve a variety of substances including opioids,

stimulants, sedatives, and others. The ramifications of an overdose can be severe, leading to respiratory depression, coma, and even death. The rise of opioid-related overdoses in recent years necessitates a thorough understanding of the pharmacology of these substances and their effects on the body. Particularly, opioids depress the central nervous system, leading to potentially life-threatening complications. Consequently, timely recognition and intervention in the ED are critical [24].

Upon arrival at the emergency department, the first step in overdose management involves thorough assessment and stabilization of the patient. A systematic approach such as the ABC (Airway, Breathing, Circulation) protocol should guide initial evaluations. This is crucial for identifying life-threatening conditions that require immediate attention. Advanced airway management may be necessary for patients exhibiting altered mental status or respiratory distress [25].

Vital signs should be continuously monitored, and intravenous access should be established as soon as possible. Two important interventions that can be quickly implemented include the administration of oxygen and intravenous fluids, which can help to stabilize the patient's condition. Evidence indicates that early intervention in respiratory distress can significantly improve patient outcomes [26].

One of the most significant advancements in overdose management, particularly for opioid overdoses, is the use of naloxone, an opioid antagonist that can rapidly reverse the effects of opioid toxicity. Naloxone can be administered intranasally or intravenously, and its efficacy in restoring respiratory function has been well documented. Research shows that timely administration of naloxone can significantly reduce mortality rates among opioid overdose victims [26].

Several studies support the widespread adoption of naloxone in emergency settings, encouraging its availability in EDs. The national consensus among healthcare experts endorses the implementation of standing orders that allow any trained staff member in the ED to administer naloxone based on clinical signs of opioid overdose. Moreover, EDs are increasingly adopting protocols that include post-reversal observations to monitor for potential re-narcotization, as naloxone’s effects can be shorter than those of the opioid [27].

An evidence-based approach to overdose management should not end with acute care in the emergency department. Comprehensive discharge planning is vital to reduce the risk of future overdose events. Naloxone education should be an integral component of discharge planning. Providing patients and their families with information about how to use naloxone, recognizing the signs of an overdose, and the importance of accessing additional medical care are essential elements of this education [27].

Furthermore, establishing connections to substance use treatment programs prior to discharge is critical. Research demonstrates that patients are more likely to engage in long-term treatment when they are provided with a concrete plan during their ED visit. Integrating behavioral health specialists into the ED setting can facilitate a smoother transition to outpatient services, enhance family support networks, and address barriers to treatment such as mental health or social issues [28].

Incorporating harm reduction strategies into overdose management is another evidence-based intervention that addresses the complex needs of individuals experiencing substance use disorders. Harm reduction includes a range of strategies aimed at minimizing the negative consequences associated with drug use, rather than solely focusing on abstinence [29].

For example, some EDs have begun offering syringe exchange programs and education on safe drug use practices. The incorporation of these measures can serve to empower patients, reduce stigma, and facilitate pathways to treatment. Evidence suggests that such programs not only improve individual outcomes but can also contribute to broader public health benefits by reducing the transmission of infectious diseases [29].

Incorporating evidence-based interventions into overdose management protocols demands ongoing education for healthcare providers within emergency departments. Continuous training and simulation exercises can help staff remain proficient in recognizing, treating, and providing aftercare for patients experiencing overdoses. Additionally, all levels of healthcare staff must understand the importance of a multidisciplinary approach that includes addiction specialists, social workers, and

case managers who can reinforce care coordination [30].

Quality improvement initiatives that gather data on overdose cases can also help refine treatment protocols and identify patterns that require intervention. Learning from real-world cases can guide revisions in practice and policy, ultimately leading to improved patient outcomes [30].

Effective Communication Strategies with Patients:

Effective communication is paramount in healthcare, particularly when dealing with sensitive issues like drug abuse and overdose. Patients struggling with substance use disorders often face stigmatization, guilt, and anxiety, which can hinder their willingness to communicate openly about their situations. Consequently, healthcare providers must develop and implement strategies to foster an environment conducive to open dialogue. Understanding the dynamics of effective communication in these scenarios can improve patient outcomes and help in delivering care that is compassionate and respectful [31].

Building Rapport and Creating a Safe Environment

The foundation of effective communication is the establishment of trust. Healthcare providers should prioritize building rapport with patients by creating a safe and supportive environment. This can be achieved by:

1. **Patient-Centered Approach**: Adopting a patient-centered approach involves recognizing the patient's unique experiences and challenges. Listening actively, demonstrating empathy, and validating the patient's feelings can help establish a strong therapeutic relationship. It is essential to approach conversations with sensitivity and an open mind, avoiding judgmental tones or assumptions [31].

2. **Confidentiality Assurance**: Patients are more likely to open up about their drug use and overdose experiences if they believe their privacy will be protected. Healthcare providers must clearly communicate that the information shared during consultations is confidential, except in circumstances where there is a need for mandatory reporting due to law or the potential for harm [32].

3. **Nonverbal Communication**: Body language, eye contact, and facial expressions play crucial roles in how patients perceive messages. Healthcare providers should maintain an open posture, provide appropriate eye contact, and use a calm tone to convey warmth and support. Nonverbal cues should consistently align with verbal messages to avoid confusion and foster trust [32].

Employing Effective Communication Techniques

Once a trusting environment is in place, healthcare professionals can utilize various communication techniques to enhance the quality of interactions with patients experiencing drug abuse and overdose situations:

1. **Open-Ended Questions**: Utilizing open-ended questions encourages patients to share more about their experiences and feelings. Questions such as “Can you tell me more about your drug use?” or “How are you feeling about your current situation?” promote dialogue rather than simple yes or no responses. This technique allows healthcare providers to gather comprehensive information while helping patients reflect on their circumstances [33].

2. **Reflective Listening**: This involves paraphrasing or summarizing what the patient has said to demonstrate understanding and validation. Techniques like, “It sounds like you’re feeling overwhelmed by your situation,” not only clarify the message but show that the provider is engaged and attentive. Reflective listening helps to foster a supportive atmosphere where patients feel heard [34].

3. **Utilizing Motivational Interviewing**: Motivational interviewing (MI) is a patient-centered counseling style that aims to enhance intrinsic motivation for change. By focusing on the patient’s ambivalence and exploring their reasons for drug use or resistance to treatment, healthcare professionals can guide discussions that strengthen the patient's resolve to change. This approach can be particularly beneficial in cases of overdose, where patients may feel trapped between their substance use and their health [35].

4. **Clear and Simple Language**: When discussing health-related topics, especially concerning drug abuse and treatment options, it is

essential to avoid medical jargon. Using clear, simple language encourages understanding and ensures that patients are empowered to make informed decisions about their health [36].

Addressing Emotional Responses and Stigmatization

Patients coping with drug abuse often deal with emotional turmoil, and healthcare providers must be prepared to address these feelings delicately:

1. **Acknowledge Emotions**: Validating a patient's feelings of fear, shame, or guilt is critical during discussions about drug abuse and overdose. Acknowledging these emotions can demonstrate compassion and understanding, which can help build trust and facilitate open communication [37].

2. **Combatting Stigma**: Healthcare professionals must be aware of the stigma surrounding drug addiction and strive to combat it during their interactions. Using person-first language (e.g., "a person with substance use disorder" instead of "a junkie") reflects respect and can significantly affect the patient's feelings about seeking help. Being conscious of language choices can help reduce feelings of shame and encourage patients to open up about their struggles [37].

3. **Encouraging Self-Disclosure**: Providing reassurance that drug abuse can affect anyone may help patients feel less isolated in their experiences. Educating patients on the prevalence of substance use disorders can create an atmosphere of shared experience rather than alienation, which is crucial for facilitating self-disclosure [38].

Collaborating with Multidisciplinary Teams

In cases of drug abuse and overdose, a collaborative approach involving various health professionals can enhance communication and patient care:

1. **Involving Social Workers and Counselors**: Social workers and addiction counselors can provide additional support to patients, helping them navigate the complexities of recovery. Effective communication within a multidisciplinary team ensures that patients receive cohesive care tailored to their multifaceted needs [39].

2. **Family Involvement**: Engaging family members in the communication process, when appropriate, can provide additional support for the patient. Family therapy can serve as a platform for open discussions about drug use, addiction, and recovery, facilitating a supportive environment for the patient [39].

3. **Follow-Up Communication**: Continuity of care is vital for patients dealing with drug abuse. Establishing a follow-up communication strategy ensures ongoing support and reinforces the message that healthcare providers are invested in the patient's long-term well-being [39].

Collaboration with Multidisciplinary Teams:

The rising complexity of health challenges in contemporary society necessitates a collaborative approach to patient care, especially within emergency and overdose departments. These settings often deal with acute, multilayered health crises that require immediate responses from a diverse range of healthcare professionals [40].

Multidisciplinary teams (MDTs) consist of healthcare professionals from varied disciplines, pooling their expertise to provide comprehensive care. In emergency and overdose departments, the collaborative model typically includes emergency medicine physicians, nurses, pharmacists, social workers, mental health professionals, addiction specialists, and even law enforcement officials. Each member brings a unique perspective, contributing to a holistic understanding of the patient's medical and psychosocial needs [40].

The Role of Each Team Member

1. **Emergency Medicine Physicians**: As leaders within the emergency department (ED), physicians are responsible for clinical assessments and initiating treatment protocols, particularly in crisis situations. Their training equips them to stabilize patients quickly and manage life-threatening conditions [41].

2. **Nurses**: Emergency nurses possess advanced skills in triage, direct patient care, and the management of life-support systems. They are often the first point of contact for patients and play a critical role in monitoring and documenting changes in patient conditions [41].

3. **Pharmacists**: In overdose cases, pharmacists provide essential medication management, including dosage calculations and reconciling adverse drug interactions. Their

expertise can guide treatment decisions and ensure appropriate use of antidotes, such as naloxone for opioid overdoses [42].

4. **Social Workers**: These professionals address the social determinants of health by linking patients to community resources, conducting psychosocial assessments, and providing counseling. They are vital in fostering continuity of care beyond the hospital setting, which is particularly important in cases involving substance use [42].

5. **Mental Health Professionals**: Given the high prevalence of co-occurring mental health disorders and substance use issues, mental health experts are integral to developing comprehensive treatment plans. Their assessments contribute to understanding the psychological context of the overdose, enabling tailored interventions [43].

6. **Addiction Specialists**: These professionals focus specifically on substance use disorders, offering insight into the treatment options available for recovery. They often help to devise harm reduction strategies and educational interventions aimed at preventing future overdoses [44].

7. **Law Enforcement Officers**: In the context of overdose incidents, collaboration with law enforcement can be crucial, particularly in addressing the legal ramifications of substance use and promoting community safety [44].

Benefits of Multidisciplinary Collaboration

The collaborative models in emergency departments offer numerous benefits that enhance the quality of care:

1. **Comprehensive Patient Care**: Multidisciplinary collaboration addresses the physical, emotional, and social aspects of health, ensuring that all patient needs are considered. This holistic approach is particularly vital in overdose cases, where underlying social and psychological issues often contribute to substance use disorders [45].

2. **Improved Decision-Making**: Drawing from diverse expertise fosters better clinical decision-making. Each team member can provide unique insights, enabling a broader range of options for immediate treatment and longer-term care strategies [45].

3. **Increased Efficiency**: Clear communication and defined roles within multidisciplinary teams can enhance workflow efficiency. Teams can work simultaneously on different aspects of patient care, accelerating the assessment, treatment, and disposition processes in the ED [46].

4. **Enhanced Patient Satisfaction**: When patients perceive that their health is being managed by a cohesive team, satisfaction can improve significantly. Positive experiences in the ED can lead to better compliance with follow-up care, critical in cases of overdose and chronic substance use disorders [46].

Challenges in Multidisciplinary Collaboration

Despite the advantages, creating effective MDTs in emergency and overdose departments is fraught with challenges:

1. **Communication Barriers**: Rapid communication is crucial in emergency settings, but differences in professional language, priorities, and approaches can hinder effective teamwork. Information may be lost or miscommunicated, which can jeopardize patient safety [47].

2. **Role Confusion**: Clear delineation of responsibilities within a team is essential. When roles overlap or are unclear, it can lead to confusion, duplication of efforts, or, conversely, critical gaps in care [47].

3. **Time Constraints**: The fast-paced nature of emergency departments often limits the time available for team collaboration. High patient volumes can lead to rushed interactions, impacting the depth of communication and connection [48].

4. **Interprofessional Conflict**: Differences in training backgrounds, professional cultures, and power dynamics can create conflicts within MDTs. These interpersonal issues, if not addressed, can undermine collaboration and affect team cohesion [48].

Strategies to Enhance Multidisciplinary Collaboration

To overcome these challenges and foster effective collaboration, several strategies can be implemented:

1. **Regular Team Meetings**: Holding regular debriefing sessions can encourage open communication among team members. These meetings allow for sharing insights, discussing complexities, and evaluating protocols collaboratively [49].

2. **Interprofessional Education**: Training that promotes understanding between different professional roles can enhance collaboration. Workshops and scenario-based learning experiences can improve team dynamics and establish common ground [49].

3. **Defined Protocols and Roles**: Establishing clear guidelines outlining the roles of each team member can enhance clarity and efficiency. Using standardized treatment protocols can also minimize redundancy and streamline intervention processes [50].

4. **Utilizing Technology**: Implementing electronic health records (EHR) and real-time communication tools can facilitate better information sharing and coordination among team members. These technologies help synthesize patient data and ensure all team members have access to the latest information [50].

5. **Fostering a Collaborative Culture**: Organizational leadership plays a vital role in promoting a culture of collaboration. Leadership support in nurturing interprofessional collaboration can lead to a more engaged and motivated team [50].

Emergency Department Protocols for Substance Abuse Cases:

Substance abuse is a multifaceted public health challenge that poses severe implications for both individuals and healthcare systems. The chaotic landscape of substance-related emergencies necessitates well-structured protocols in Emergency Departments (EDs) to ensure effective management, patient safety, and optimal resource allocation [50].

Understanding Substance Abuse in the Emergency Department

Substance abuse can encompass a myriad of drugs and behaviors, each presenting unique challenges and necessitating distinct intervention strategies. From illicit drugs and alcohol to prescription medications, the patterns of abuse are increasingly complex, reflecting broader societal issues such as mental health disorders, socioeconomic factors, and legislative changes. In the ED, healthcare providers often witness the acute consequences of these behaviors, including overdose, withdrawal, and aggression, alongside chronic health problems such as liver disease, infectious diseases, and mental health crises [51].

The role of EDs extends beyond the immediate treatment of physical symptoms; they also serve as critical touchpoints for identifying patients at risk and initiating interventions aimed at promoting long-term recovery. Nonetheless, providers face multiple challenges, including the need for rapid assessment, the high variability in patient behavior, and the logistical constraints of ED settings. As such, comprehensive, evidence-based protocols are essential in shaping the response to these complex cases [51].

Initial Assessment and Triage

The first step in managing a substance abuse case in the ED is the initial assessment and triage of the patient. This process begins with a quick clinical evaluation to determine the severity of the presentation—critical in cases of overdose or serious withdrawal symptoms. Standard protocols typically include checking vital signs, mental status examination, and a focused physical examination. Utilization of validated screening tools like the CAGE questionnaire or the Alcohol Use Disorders Identification Test (AUDIT) can assist in identifying substance use disorders during this initial assessment [52].

Additionally, obtaining a detailed drug history is vital. Healthcare providers must inquire about the types of substances used, frequency of use, routes of administration, and any co-occurring medical or psychiatric conditions. The integration of toxicology screens can also provide immediate insights into the substances involved, guiding further treatment decisions [52].

Given the potential for high-risk behaviors, such as aggression or self-harm, immediate threats to safety must be addressed. The use of verbal de-escalation techniques, assessment for suicidality, and, when necessary, secure placement in a monitored area are critical components of the triage process [53].

Medical Management of Substance Abuse Cases

Following the initial assessment, the medical management of substance abuse cases involves tailored interventions based on the specific substance involved. For instance:

1. **Opioid Overdose**: The administration of naloxone, an opioid antagonist, is critical in reversing the effects of opioid overdose. Following stabilization, consults with addiction services for longer-term management, including medications for opioid use disorder (MOUD) such as buprenorphine or methadone, should be initiated [53].

2. **Alcohol Withdrawal**: Patients presenting with alcohol withdrawal symptoms may require benzodiazepine therapy, guided by established scales like the Clinical Institute Withdrawal Assessment (CIWA-Ar) to measure withdrawal severity. The importance of thiamine supplementation cannot be overlooked, as it prevents Wernicke's encephalopathy, a dangerous neurological condition [54].

3. **Stimulant Use**: For patients presenting with acute agitation or psychosis related to stimulant use, conservative measures such as sedation with benzodiazepines may be necessary. Further engagement with psychiatric services can facilitate ongoing assessment and intervention [54].

4. **Polysubstance Use**: With the rising trend of polysubstance use, it is crucial for the ED team to remain vigilant and adaptable in their approach. This may involve not only managing the acute medical concerns but also recognizing co-occurring mental health issues [54].

Bridging the Gap to Long-Term Care

A critical component of ED protocols for substance abuse cases is ensuring an effective transition to long-term care. Emergency departments are often the first point of contact for individuals grappling with addiction, and thus they have a unique opportunity to connect patients with treatment options before they leave [55].

Protocols in many EDs now include the integration of addiction counselors and social workers who can provide immediate follow-up appointments, referrals to outpatient treatment programs, or consultation with detoxification services. The implementation of warm handoff practices, where healthcare providers connect patients directly with treatment resources before dispersal from the ED, has shown promise in increasing follow-through on care [55].

While there are still barriers, including stigma and access to treatment programs, many professionals advocate for the establishment of strategic partnerships with local rehabilitation facilities and community organizations to streamline the path to recovery for patients [55].

Training and Continuous Improvement of ED Staff

In order to effectively implement and adapt these protocols, ongoing education and training for ED staff are essential. As patterns of substance abuse evolve—shaped by socio-economic changes, availability of new substances, and shifts in legislation—healthcare providers must stay abreast of these developments to refine their practices and ensure evidence-based care [56].

Regular training sessions focused on recognizing and managing substance use disorders, updates on relevant pharmacological treatments, and destigmatization practices can significantly improve staff readiness and patient outcomes. Simulation-based training may also be employed to enhance the skills necessary for effectively managing crises related to substance abuse [56].

Challenges and Future Directions in Nursing Care for Substance Abuse:

Substance abuse remains one of the most persistent challenges in healthcare, posing significant risks not only to individuals but also to families, communities, and society as a whole. The complexities associated with substance use disorders (SUDs) require a holistic and multifaceted approach to treatment, and nursing care has a crucial role in addressing these challenges. As frontline providers of healthcare, nurses are positioned uniquely to provide comprehensive care for individuals grappling with substance abuse.

However, existing barriers often hinder their ability to deliver optimal care [57].

Challenges in Nursing Care for Substance Abuse

1. **Stigma and Discrimination:** One of the primary barriers in providing effective nursing care for individuals with substance use disorders is the stigma that surrounds addiction. Many healthcare providers, including nurses, may hold biases that lead to discriminatory practices. Such attitudes can discourage patients from seeking help, hinder communication, and reduce the efficacy of care. Stigma can manifest in various forms, including labeling patients as "addicts" rather than viewing them as individuals facing a chronic health issue. Educational initiatives aimed at reducing stigma within the nursing profession are essential to encourage a more empathetic approach to care [57].

2. **Lack of Training and Education:** The nursing workforce is often inadequately trained to identify, assess, and manage substance use disorders. Although the prevalence of SUDs is increasing, educational programs may not cover this topic comprehensively. This gap leaves nurses ill-prepared to address the unique needs of patients with substance abuse issues. Continuing education and specialized training programs can enhance nurses' competence in dealing with SUDs, from understanding the pharmacology of substances to learning effective communication strategies for building trust with patients [58].

3. **High Patient Complexity:** Patients with substance use disorders often present with co-occurring mental health conditions, chronic illnesses, and social issues such as homelessness or unemployment. This complexity presents a significant challenge for nurses who must navigate a fragmented healthcare system. Integrated care models, where mental health, substance abuse, and physical health services are coordinated, are essential in addressing the comprehensive needs of these patients. Nurses must be adept at collaborating with various healthcare providers to design and implement multidisciplinary treatment plans [58].

4. **Inadequate Resources:** Many healthcare facilities lack sufficient resources to provide adequate care for patients with substance use disorders. This includes not only financial resources but also staffing and supportive services. Insufficient access to treatment programs and rehabilitation facilities limits the options available for patients. Nurses frequently face constraints in time and tools, making it difficult to provide thorough assessments or continuity of care. Advocacy for additional funding and resource allocation is crucial to support nursing care in this area [58].

5. **Regulatory Barriers:** Various regulations can impede nurses from providing the best care possible to individuals with SUDs. For example, restrictions on prescribing certain medications used in addiction treatment, such as buprenorphine, can limit the effectiveness of nursing interventions. Additionally, strict confidentiality laws surrounding substance use treatment can create barriers to collaborative care. Efforts to streamline regulations while assuring patient privacy and safety must be prioritized [58].

Future Directions in Nursing Care for Substance Abuse

1. **Emphasis on Trauma-Informed Care:** Recognizing the role of trauma in addiction is imperative in contemporary nursing practice. Incorporating trauma-informed care (TIC) principles can change the dynamic of care delivery. TIC focuses on understanding, recognizing, and responding to the effects of all types of trauma, fostering a supportive environment that empowers patients. Nurses trained in TIC practices can establish trust and make patients feel safe, which is crucial for engagement in treatment [59].

2. **Expansion of Nurse Practitioner Roles:** Nurse practitioners (NPs) are increasingly becoming critical players in the management of SUDs. By leveraging their advanced training and independence, NPs can provide comprehensive assessments, prescribe medications, and initiate treatment protocols that address both physical and psychological components of substance abuse. Expanding the role of NPs can improve access to care and provide timely intervention for patients in need [59].

3. **Integration of Technology:** The advent of telehealth has transformed healthcare delivery, offering an innovative solution to address barriers to treatment for substance abuse. Telemedicine can facilitate remote assessments, counseling, and follow-ups, making care more accessible for individuals who may be reluctant to

seek in-person treatment. Mobile health applications can also support recovery by providing resources, monitoring tools, and peer support networks. Nurses should be trained to utilize these technologies effectively as part of their practice [59].

4. **Advanced Research and Evidence-Based Practices:** Ongoing research is vital in understanding the complex interactions between various factors contributing to substance use disorders. By fostering partnerships between nurses, academic institutions, and research organizations, evidence-based practices can be developed and disseminated effectively. Continued evaluation of care models—particularly those incorporating social determinants of health—will also provide insight into effective interventions [60].

5. **Collaboration and Advocacy:** Nurses must advocate for policies that enhance care delivery for individuals with SUDs. By collaborating with community organizations, healthcare teams, and policymakers, nurses can influence systemic changes that break down barriers to treatment. Advocacy for comprehensive insurance coverage for addiction treatment, increased government funding for rehabilitation facilities, and public health initiatives to manage substance abuse at the community level are all vital areas for nursing involvement [60].

Conclusion:

In summary, addressing substance abuse and overdose cases in emergency departments is critical not only for immediate patient care but also for long-term health outcomes. Nurses are at the forefront of this effort, employing comprehensive assessment techniques, evidence-based interventions, and compassionate communication strategies to manage these complex cases effectively. The collaborative approach involving multidisciplinary teams is essential in creating a continuum of care that extends beyond the emergency setting, providing patients with the resources and support they need for recovery.

As the prevalence of substance abuse continues to rise, it is imperative that nursing education includes updated training on addiction, harm reduction strategies, and overdose management. By fostering an environment of empathy and reducing stigma, nursing professionals can significantly influence patient engagement and encourage individuals to seek help. Ultimately, a focused commitment to enhancing nursing practices in emergency departments will not only improve patient outcomes but also contribute to the broader public health efforts aimed at addressing the substance abuse crisis.

References:

1. Brady JE, DiMaggio CJ, Keyes KM, Doyle JJ, Richardson LD, Li G. Emergency department utilization and subsequent prescription drug overdose death. Ann Epidemiol. 2015;25(8):613–619.
2. Kakko J, Svanborg KD, Kreek MJ, Heilig M. 1-year retention and social function after buprenorphine-assisted relapse prevention treatment for heroin dependence in Sweden: A randomised, placebo-controlled trial. Lancet. 2003;361(9358):662–668.
3. Larochelle MR, Bernson D, Land T, et al. Medication for opioid use disorder after nonfatal opioid overdose and association with mortality. Ann Intern Med. 2018;169(3):137.
4. Ahmadi F, Rossen L, Sutton P. Provisional drug overdose death counts. National Center for Health Statistics.
5. Thomas CP, Fullerton CA, Kim M, et al. Medication-assisted treatment with buprenorphine: assessing the evidence. Psychiatr Serv. 2014;65(2):158–170.
6. Woody GE, Bruce D, Korthuis PT, et al. HIV risk reduction with buprenorphine-naloxone or methadone: findings from a randomized trial. J Acquir Immune Defic Syndr. 2014;66(3):288–293.
7. Jones HE, O'Grady KE, Malfi D, Tuten M. Methadone maintenance vs. methadone taper during pregnancy: maternal and neonatal outcomes. Am J Addict. 2008;17(5):372–386.
8. Metzger DS, Woody GE, McLellan AT, et al. Human immunodeficiency virus seroconversion among intravenous drug users in- and out-of-treatment: an 18-month prospective follow-up. J Acquir Immune Defic Syndr. 1993;6(9):1049–1056.

9. Vivolo-Kantor AM, Seth P, Gladden RM, et al. Vital signs: Trends in emergency department visits for suspected opioid overdoses — United States, July 2016–September 2017. MMWR Morb Mortal Wkly Rep. 2018;67(9):279–285.
10. Ma J, Bao YP, Wang RJ, et al. Effects of medication-assisted treatment on mortality among opioids users: a systematic review and meta-analysis. Mol Psychiatry. 2019;24(12):1868–1883.
11. Gibson A, Degenhardt L, Mattick RP, Ali R, White J, O'Brien S. Exposure to opioid maintenance treatment reduces long-term mortality. Addiction. 2008;103(3):462–468.
12. Weiner SG, Baker O, Bernson D, Schuur JD. One-year mortality of patients after emergency department treatment for nonfatal opioid overdose. Ann Emerg Med. 2020;75(1):13–17.
13. Molero Y, Zetterqvist J, Binswanger IA, Hellner C, Larsson H, Fazel S. Medications for alcohol and opioid use disorders and risk of suicidal behavior, accidental overdoses, and crime. Am J Psychiatry. 2018;175(10):970–978.
14. US Department of Health and Human Services. CDC WONDER. 2018.
15. Bruce RD. Methadone as HIV prevention: high volume methadone sites to decrease HIV incidence rates in resource limited settings. Int J Drug Policy. 2010;21(2):122–124.
16. Schwartz RP, Jaffe JH, O'Grady KE, et al. Interim methadone treatment: Impact on arrests. Drug Alcohol Depend. 2009;103(3):148–154.
17. King NB, Fraser V, Boikos C, Richardson R, Harper S. Determinants of increased opioid-related mortality in the United States and Canada, 1990–2013: A systematic review. Am J Public Health 2014;104(8):e32–42.
18. Evans EA, Zhu Y, Yoo C, Huang D, Hser Y. Criminal justice outcomes over 5 years after randomization to buprenorphine-naloxone or methadone treatment for opioid use disorder. Addiction. 2019;114(8):1396–1404.
19. Burns L, Mattick RP, Lim K, Wallace C. Methadone in pregnancy: Treatment retention and neonatal outcomes. Addiction. 2007;102(2):264–270.
20. Mattick RP, Breen C, Kimber J, Davoli M. Methadone maintenance therapy versus no opioid replacement therapy for opioid dependence. Cochrane Database Syst Rev. 2009;(3):CD002209.
21. Mullennix SC, Iseler J, Kwiatkowski GM, et al. A clinical nurse specialist-led emergency department naloxone distribution program. Clin Nurse Spec. 2020;34(3):116–23.
22. Duber HC, Barata IA, Cioè-Peña E, et al. Identification, management, and transition of care for patients with opioid use disorder in the emergency department. Ann Emerg Med. 2018;72(4):420–31.
23. Lane BH, Lyons MS, Stolz U, et al. Naloxone provision to emergency department patients recognized as high-risk for opioid use disorder. Am J Emerg Med. 2021;40:173–6.
24. Office of the Surgeon General. U.S Surgeon General's Advisory on Naloxone and Opioid Overdose. 2022.
25. Eswaran V, Allen KC, Cruz DC, et al. Development of a take-home naloxone program at an urban academic emergency department. J AM Pharm Assoc. 2020;60(6):324–31.
26. Weiner SG, Baker O, Bernson D, et al. One-year mortality of patients after emergency department treatment for nonfatal opioid overdose. Ann Emerg Med. 2020;75(1):13–7.
27. Kelly T, Hawk K, Samuels E, et al. Improving uptake of emergency department-initiated buprenorphine: barriers and solutions. West J Emerg Med. 2022;23(4):461–7.
28. Substance Abuse and Mental Health Services Administration. Key Substance Use and Mental Health Indicators in the United States: Results from the 2020 National Survey on Drug Use and Health. 2022.
29. Dwyer K, Walley A, Langlois B, et al. Opioid education and nasal naloxone rescue kits in the emergency department. West J Emerg Med. 2015;16(3):381–4.
30. Walley AY, Xuan Z, Hackman HH, et al. Opioid overdose rates and implementation of overdose education and nasal naloxone distribution in

Massachusetts: interrupted time series analysis. BMJ. 2013;346:f174.

31. Ezell JM, Walters S, Friedman SR, et al. Stigmatize the use, not the user? Attitudes on opioid use, drug injection, treatment, and overdose prevention in rural communities. Soc Sci Med. 2021;268:113470.
32. Eswaran V, Allen KC, Bottari DC, et al. Take-home naloxone program implementation: lessons learned from seven Chicago-area hospitals. Ann Emerg Med. 2020;76(3):318–27.
33. Hawk KF, D'Onofrio G, Chawarski MC, et al. Barriers and facilitators to clinician readiness to provide emergency department-initiated buprenorphine. JAMA Netw Open. 2020;3(5):e204561.
34. Lowenstein M, Kilaru A, Perrone J, et al. Barriers and facilitators for emergency department initiation of buprenorphine: a physician survey. Am J Emerg Med. 2019;37(9):1787–90.
35. Kassam A, Papish A, Modgill G, et al. The development and psychometric properties of a new scale to measure mental illness related stigma by health care providers: the Opening Minds Scale for Health Care Providers (OMS-HC). BMC Psychiatry. 2012;12:62.
36. National Academies of Sciences, Engineering, and Medicine. Medications for Opioid Use Disorder Save Lives. Washington DC: The National Academies Press, 2019.
37. Barbour K, McQuade M, Somasundaram S, et al. Emergency physician resistance to a take-home naloxone program led by community harm reductionists. Am J Emerg Med. 2018;36(11):2110–2.
38. Lacroix L, Thurgur L, Orkin AM, et al. Emergency physicians' attitudes and perceived barriers to the implementation of take-home naloxone programs in Canadian emergency departments. CJEM. 2018;20(1):46–52.
39. Penm J, MacKinnon NJ, Lyons MS, et al. Combatting opioid overdoses in Ohio: emergency department physicians' prescribing patterns and perceptions of naloxone. J Gen Intern Med. 2018;33(5):608–9.
40. Ellis K, Walters S, Friedman SR, et al. Breaching trust: a qualitative study of healthcare experiences of people who use drugs in a rural setting. Front Sociol. 2020;5:593925.
41. Mullennix SC, Iseler J, Kwiatkowski GM, et al. A clinical nurse specialist-led emergency department naloxone distribution program. Clin Nurse Spec. 2020;34(3):116–23.
42. Duber HC, Barata IA, Cioè-Peña E, et al. Identification, management, and transition of care for patients with opioid use disorder in the emergency department. Ann Emerg Med. 2018;72(4):420–31.
43. Lane BH, Lyons MS, Stolz U, et al. Naloxone provision to emergency department patients recognized as high-risk for opioid use disorder. Am J Emerg Med. 2021;40:173–6.
44. Office of the Surgeon General. U.S Surgeon General's Advisory on Naloxone and Opioid Overdose. 2022.
45. Eswaran V, Allen KC, Cruz DC, et al. Development of a take-home naloxone program at an urban academic emergency department. J AM Pharm Assoc. 2020;60(6):324–31.
46. Weiner SG, Baker O, Bernson D, et al. One-year mortality of patients after emergency department treatment for nonfatal opioid overdose. Ann Emerg Med. 2020;75(1):13–7.
47. Kelly T, Hawk K, Samuels E, et al. Improving uptake of emergency department-initiated buprenorphine: barriers and solutions. West J Emerg Med. 2022;23(4):461–7.
48. Substance Abuse and Mental Health Services Administration. Key Substance Use and Mental Health Indicators in the United States: Results from the 2020 National Survey on Drug Use and Health. 2022.
49. Dwyer K, Walley A, Langlois B, et al. Opioid education and nasal naloxone rescue kits in the emergency department. West J Emerg Med. 2015;16(3):381–4.
50. Walley AY, Xuan Z, Hackman HH, et al. Opioid overdose rates and implementation of overdose education and nasal naloxone distribution in Massachusetts: interrupted time series analysis. BMJ. 2013;346:f174.

51. Ezell JM, Walters S, Friedman SR, et al. Stigmatize the use, not the user? Attitudes on opioid use, drug injection, treatment, and overdose prevention in rural communities. Soc Sci Med. 2021;268:113470.

52. Eswaran V, Allen KC, Bottari DC, et al. Take-home naloxone program implementation: lessons learned from seven Chicago-area hospitals. Ann Emerg Med. 2020;76(3):318–27.

53. Hawk KF, D'Onofrio G, Chawarski MC, et al. Barriers and facilitators to clinician readiness to provide emergency department-initiated buprenorphine. JAMA Netw Open. 2020;3(5):e204561.

54. Lowenstein M, Kilaru A, Perrone J, et al. Barriers and facilitators for emergency department initiation of buprenorphine: a physician survey. Am J Emerg Med. 2019;37(9):1787–90.

55. Kassam A, Papish A, Modgill G, et al. The development and psychometric properties of a new scale to measure mental illness related stigma by health care providers: the Opening Minds Scale for Health Care Providers (OMS-HC). BMC Psychiatry. 2012;12:62.

56. National Academies of Sciences, Engineering, and Medicine. Medications for Opioid Use Disorder Save Lives. Washington DC: The National Academies Press, 2019.

57. Barbour K, McQuade M, Somasundaram S, et al. Emergency physician resistance to a take-home naloxone program led by community harm reductionists. Am J Emerg Med. 2018;36(11):2110–2.

58. Lacroix L, Thurgur L, Orkin AM, et al. Emergency physicians' attitudes and perceived barriers to the implementation of take-home naloxone programs in Canadian emergency departments. CJEM. 2018;20(1):46–52.

59. Penm J, MacKinnon NJ, Lyons MS, et al. Combatting opioid overdoses in Ohio: emergency department physicians' prescribing patterns and perceptions of naloxone. J Gen Intern Med. 2018;33(5):608–9.

60. Ellis K, Walters S, Friedman SR, et al. Breaching trust: a qualitative study of healthcare experiences of people who use drugs in a rural setting. Front Sociol. 2020;5:593925.