Expanding Harm Reduction: Exploring Barriers and Facilitators in Hospital Settings

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Abstract

Opioid overdose deaths are preventable. Every preventable death, regardless of the number, is one too many. Harm reduction is an approach to care that is inclusive and free from stigma and discrimination, which serves to connect individuals with supplies and care and decreases risks associated with drug use. Integrating harm reduction principles and strategies into hospital settings represents a significant public health advancement in addressing the essential needs of an underserved population. This literature review examines the current practice of harm reduction in hospital settings as well as barriers to implementation and proposes strategies to support the expansion of HR in hospital settings. A search of the literature was conducted using PubMed and Ovid, employing a combination of keywords related to "harm reduction interventions," "inpatient," "hospitalization," "medication-assisted treatment," "stigma," and "infectious disease rates." The lack of literature on harm reduction in hospitals demonstrates the need for research to understand further barriers and facilitators to care in the healthcare system. Harm reduction interventions experience challenges when introducing new approaches to care, but with proper education and engagement, many hospitals shift the culture within the hospital environment. Sustaining a culture change in attitudes, beliefs, and biases within healthcare and research professionals is vital to increasing access to care and reducing the stigma associated with PWUD. Future research should center around rural and urban hospitals, the resources available, and local policies to understand the feasibility of introducing harm reduction into hospital settings.

Expanding harm reduction practice in healthcare settings has great potential to improve the healthcare experience of PWUD and reduce substance use-related stigma, reduce infectious disease rates, improve health outcomes, and increase access to care.

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Preface

My sincere thanks to my academic advisor and committee chair, Dr. Sarah Krier. Your guidance, support, and time have been invaluable in pursuing my MPH and developing this essay. Your encouragement has provided the motivation needed to persevere through challenges. I hope one day to have the resilience and adaptability of a palm tree, swaying gracefully in the face of any difficulties.

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1.0 Introduction

1.1 Public Health Significance and Impact of Substance Use

Every day in the United States, 91 individuals die from an overdose-related death (Schiller et al., 2021). Opioid overdose deaths are preventable. Every preventable death, regardless of the number, is one too many. The opioid epidemic is a pressing public health crisis, with devastating effects felt across the United States and the world. Each year, the number of deaths continues to rise; in 2021, there were about 107,000 opioid-related deaths in the United States, a substantial difference from the 91,000 deaths in 2020 and the 70,000 deaths in 2019(NIH,2023). Drug use does not discriminate by age, race, ethnicity, or socioeconomic status. It has a long-lasting impact on the individual, communities, and the nation. People who use drugs (PWUD) are an underserved population of individuals who live in a world where drug use becomes more dangerous every day. Drugs such as fentanyl, xylazine, and other novel adulterants are highly potent, causing higher rates of drug poisoning (DEA, 2022). Additionally, naloxone, the overdose reversal drug, will not be effective if an individual is overdosing from xylazine as this drug is not an opioid, which places PWUD at higher risk. Xylazine as is already found in 48 states (DEA, 2022). Understanding the dangers of drug use is imperative to understand the needs of this population.

Substance users are a community that faces many challenges and barriers in healthcare settings and beyond. Individuals in this community have high death rates, a large portion of individuals are unhoused, and there are high rates of hospitalization accompanied by poor health outcomes and very high rates of experiences with stigma and discrimination (Jenkins et al., 2022). Marginalized communities are often impacted by poverty, systemic racism, and lack of access to

health and social needs; going beyond systemic barriers, communities also face stigma, discrimination, limited access to resources, and inadequate support systems.

Throughout the history of the United States, many social movements and campaigns have worked to stop, and eventually slow substance use in the population. Two of the most well-known movements are Richard Nixon's push to End the War on Drugs and Nancy Reagan's "Just Say No" campaign (Des Jarlais, 2017). The narrative of these campaigns created a lot of movement and action toward preventing drug use because they targeted people who used drugs rather than harmful policies related to drug use, leading to many negative impacts on society. These campaigns led to the criminalization of drugs and the development of negative and derogatory stereotypes based on racial and economic factors, which do not promote inclusive or equitable environments for individuals of any background. These programs only promoted traditional routes of treatment, such as abstinence and drug or alcohol rehabilitation, and sought to establish the notion of the eradication of all drug use and the need to criminalize the individual who uses drugs as the only acceptable solution to the problem of illicit drug use (Des Jarlais, 2017). These attitudes and beliefs continue to persist to this day and create barriers for people who use drugs (PWUD) from receiving treatment, education, and access to resources that would decrease their risk of preventable disease and death.

1.2 What is Harm Reduction?

In response to traditional routes of care, such as abstinence and rehabilitation, the approach known as harm reduction emerged. Harm reduction was developed by the community of people who use drugs and is an approach to care that is inclusive and free from stigma and discrimination

that connects individuals with supplies and care to decrease risks associated with drug use. Harm reduction offers practical and compassionate programs and initiatives to reduce the harmful consequences of drug use for the individual (Marlatt, 1996). Beyond substance use, harm reduction strategies are seen in many other spaces. Some examples include sunscreen, seat belts, and condoms, all strategies to reduce the risk associated with different behaviors (Recovery Research Institute, 2017). Examining the core of harm reduction demonstrates that there are tools to reduce risk, adverse health effects, and disease associated with life experiences.

Harm reduction strategies include syringe exchange programs, safe injection sites, overdose prevention programs, naloxone availability and education, and medication-assisted treatment (Marlatt., 1996). The goals and aims of harm reduction go beyond the PWUD population. The individual, their choices, and life experiences are at the forefront of meeting people where they are regardless of their continued drug use and behaviors. There continue to be challenges to the widespread implementation of harm reduction services due to various reasons such as policy restrictions, funding, public opinion, stigma, or lack of accessible resources (Des Jarlais, 2017). However, harm reduction challenges those beliefs through the continued success and connection within the PWUD population and increased access to many lifesaving tools.

Harm reduction is guided by six main principles which engage the population realistically and practically. Humanism emphasizes respecting and valuing the individual (Hawk et al., 2017). This principle should be a characteristic within all healthcare spaces; however, it must be improved in many hospital settings. Pragmatism ensures that practical approaches are created to fit the needs of the individual (Hawk et al., 2017). Interventions that are culturally aware and appropriate are essential to secure interest from members of a population. Individualism demonstrates that the individual's life experiences guide their health choices (Hawk et al., 2017). Family history, health

literacy, and experiences in healthcare and life will determine how individuals interact and engage in hospitals and other healthcare settings.

Autonomy recognizes that individuals can choose the treatment and care that will work best for them (Hawk et al., 2017). Harm reduction programs transition autonomy back to the individual through the comprehension that addiction is a disease and not a choice, which is not experienced by traditional programs that actively remove autonomy from the individual (Vearrier, 2019). Incrementalism celebrates any positive change, whether major or minor, that an individual determines as a positive change (Hawk et al., 2017). Positive change could range from the individual choosing to only use three times a week instead of six times or the individual using sterile syringes before they inject or making sure to take a prescribed medication regularly. However, individuals in care must determine the correct change to align with their health goals. Lastly, accountability without termination focuses on patient retention and sustaining change in their choices (Hawk et al., 2017). The individualistic nature of the harm reduction principles demonstrates the importance of putting the patient first in care. Additionally, these principles focus the work of harm reduction to go beyond traditional approaches to bridge the gap between PWUD and healthcare in general.

1.3 Harm Reduction Strategies to Improve Health Outcomes and Infectious Disease Rates

Throughout the last four decades, harm reduction techniques and methods have continued to decrease infectious disease rates and create an inclusive environment for marginalized populations. The beginning of the HIV/AIDS epidemic recognized the need for new approaches to lowering viral transmission rates. There was a need to reevaluate and redefine current practices,

education, and perspectives on disease. The techniques developed in response, such as syringe service programs and patient-centered care approaches, are vital in decreasing transmission rates of HIV as harm reduction practices have continued to expand as necessary.

Early research in HIV treatment demonstrates how the patient-centered approach established an inclusive healthcare environment for all, making it possible for many to be included throughout the entire healthcare process (Beach et al., 2006). A patient-centered approach was vital in the healthcare process of many living with HIV, leading to a significant association between receiving ART, adhering to ART, an undetectable HIV viral load, and overall better health outcomes (Beach et al., 2006). A patient-centered approach displays the importance of a patient-centered approach, quality patient-provider relationships, and more individualized care for the benefit of the patient and provider.

The notion of a patient-centered approach and relationship-building with patients and healthcare providers has transitioned into what is now known as relational harm reduction. This approach focuses on blending structural and relational harm reduction approaches to focus on building rapport with the patient (Hawk et al., 2024). The focus is on overdose prevention, patient education, and healthcare free from stigma, ultimately leading to better health outcomes and retention in care (Hawk et al., 2024). In addition, a background in relational and structural approaches is essential to have a relationship to educate the patient and provide resources if they are available to put the education into practice.

In practice, syringe service programs provide PWUD with sterile materials and other supplies needed when using drugs. In addition to needle and syringe exchanges, these programs offer other services such as naloxone kits, education, vaccination, infectious disease screening, wound care, and access to community resources for PWUD (Thakarar et al., 2020). In community

settings, including infectious disease screening and education, it is vital to educate people about the risks of infectious diseases and act as a source of connection to care. Infectious diseases such as HIV, hepatitis B, and C can linger on drug equipment for an extended period, meaning they could remain during multiple uses, increasing the risk of transmission and adverse health effects (Thakarar et al., 2020). However successful and educational these services are, there is a slight expansion of syringe service programs.

These programs need help to expand because the United States has heavily regulated the implementation of syringe service programs, leading to less funding, and limiting the necessary expansion of syringe service programs (Thakarar et al., 2020). The United States banned funding for syringe service programs in 1988 until the outcomes of syringe service programs were effective (Thakarar et al., 2020). In 2015, many states allowed licensed syringe service programs to exist. However, many states needed to allow for growth in areas that need it most, resulting in slow or, in some cases, nonexistent growth (Thakarar et al., 2020), and in fact, syringe services are still illegal in many states (Fernández-Viña et al., 2020) Therefore, in many rural areas where substance use is high, there are higher rates of infectious disease and lower rates of hospital access with little to no change in access to sterile supplies or any form of affordable healthcare services. Syringe service programs are crucial in connecting PWUD with care and supplies to decrease infection rates in community settings.

Harm reduction strategies, whether in community or hospital settings, are essential to decrease the rate of infectious disease and overall health outcomes. Many solutions exist to close the gap between hospital care and PWUD, but the syringe service programs can mediate. Syringe service programs in the community can connect individuals to care and the hospital. Syringe service programs continue to effectively mitigate infectious disease rates despite government

regulations and lack of funding. Once the patient is at the hospital, harm reduction interventions are necessary to keep them in care and educate them on health choices to meet their healthcare goals. Hospital systems should consider structural barriers such as insurance, cost, and policies, which are challenging to navigate with various plans, companies, and coverage. Navigating the barriers to care within this population is crucial to reducing high infectious disease rates and improving linkage to care among PWUD.

1.4 Gaps in Efforts to Expand Harm Reduction in Hospital Settings

The evidence supporting harm reduction shows that this approach can save numerous lives by promoting healthy behaviors and focusing on a population's needs. Integrating harm reduction principles and strategies into hospital settings has great potential to improve the healthcare experience of PWUD and reduce substance use-related stigma, reduce infectious disease rates, improve health outcomes, and increase access to care. This literature review examines the current practice of harm reduction in hospital settings, barriers to implementation and proposes strategies to support the expansion of HR in hospital settings.

2.0 Methods

This literature review describes the current practice of harm reduction and barriers and facilitators associated with integrating harm reduction services into healthcare settings, specifically focusing on hospitals and inpatient healthcare settings. A search of the literature was conducted using PubMed and Ovid, employing a combination of keywords related to "harm reduction interventions," "inpatient," "hospitalization," "medication-assisted treatment," "stigma," "PWUD," and "infectious disease rates." The different arrangements of the terms provided many articles that needed analysis. Table 1 in the appendix demonstrates a short overview of the Ovid search strategy. Literature was excluded if it did not relate to an inpatient setting, a harm reduction approach, or if the intervention occurred outside the United States. After the initial screening, twenty-three articles were included this in this review. Table 2 demonstrates a brief summary of the articles include in the review

3.0 Literature Review

As shown through the search methods, literature pertaining to practice of harm reduction in hospital settings is limited. Most of the literature focused on outpatient healthcare settings, emergency rooms, drug and alcohol detox centers, safe consumption sites and rehabilitation services. Additionally, literature focused on the distribution and prescription of naloxone, therefore not expanding harm reduction services, and addressing culture, and education. While literature on the practice of harm reduction in community settings is common, there is a need for more research highlighting the implementation challenges and successes of expanding harm reduction in hospital settings.

3.1 Current Applications of Harm Reduction in Hospitals

Even though PWUD have high rates of hospitalization and emergency room visits, there has not been a widespread effort to include harm reduction techniques in hospital systems (Sharma et al., 2017). There is a significant gap in research and practice in implementing harm reduction in hospital settings for many reasons. These reasons include the complexity of the patient population, comorbidities, patient mistrust, ongoing drug use, and other social determinants of health that play a role in health and healthcare (Jawa et al., 2021). Many harm reduction programs are more cost-effective when compared to the cost of hospital admission (Drucker et al., 2016). Education is needed to train providers with the proper skills to effectively work with PWUD to

teach harm reduction techniques and develop trusting and lasting relationships between providers and patients to improve health outcomes (Jawa et al., 2021).

In hospitals that work with higher rates of PWUD, there are services called addiction counseling services included in the care team (Sharma et al., 2017). These services focus on withdrawal, pain management, medication-assisted treatment, and some overdose prevention (Sharma et al., 2017). However, these services are not practical for all PWUDs, which removes a layer of individualism in care, furthering the gap in care for substance use disorders. Thus, there are higher rates of poor health outcomes, decreased patient retention rates, deviations from care, and continued negative healthcare experiences (Sharma et al., 2017).

3.1.1 Barriers to Harm Reduction Initiatives in Hospitals

Introducing harm reduction into inpatient care is significant for PWUD and other marginalized populations. Beyond these communities, the goals and aims of harm reduction add a layer of humanity to care. The patient-centered approach will benefit the care of all patients who enter the space. The continued negative experiences of PWUD demonstrate that providers continue to perpetuate discriminatory and harmful practices for individuals who want to receive care. This will be a holistic approach to care and shift the current medical systems into a more inclusive and welcoming place for people who need healthcare. Beyond the patient experience, there are numerous reasons why this issue is vital to public health. Harm reduction practices in HIV clinics and community organizations have been successful in connecting people to care, increasing infectious disease screening and awareness, and decreasing the stigma associated with substance use. Amid an opioid epidemic, there is a need to serve a vulnerable population that is often excluded in the health and social realm.

Hospitals primarily implement harm reduction approaches in emergency room spaces or short-stay units. The expansion into hospital and acute care is minimal as many barriers exist. Barriers to implementing harm reduction are due to various factors, such as perceived stereotypes of PWUD, risk compensation, legal regulations, and policies (Okoro et al., 2018). Negative stereotypes and stigma continue to act as a barrier for PWUD. Moreover, PWUD face specific barriers to care, such as lack of housing after discharge, limitations to care due to insurance or lack of insurance, and the complexity of the patient's comorbidities (Serota et al., 2021). Stigma in hospitals continues with providers due to a lack of education, discomfort, and frustration when working with this patient population (Carlberg-Racich, 2016). The feelings of discomfort arise due to the potential of being uncomfortable when discussing an individual's continued drug use. Additionally, feelings of frustration can arise because providers may not understand why drug use will continue even if the provider advises against it. In a hospital, educating staff members on harm reduction, many providers were still uncomfortable when asked to provide harm-reduction materials (Perera et al., 2024)

Harm reduction continues to be controversial within communities because there is an idea that this approach only enables PWUD to keep using drugs or seeking drugs. This idea is known as risk compensation, which believes that if harm reduction is implemented, PWUD will have a protection barrier, leading to riskier health behaviors (Okoro et al., 2018). Early demonstrations of harm reduction effectiveness are seen as early as the 1980s, with syringe service programs, which had a major impact in reducing HIV transmission among PWUD (Des Jarlais, 2017). Evidence continues to demonstrate the effectiveness of harm reduction interventions such as increasing access to sterile needles and overdose prevention. Therefore, it demonstrates the importance of education about substance use disorders, harm reduction goals, and techniques and

methods of retention of care among the PWUD population. Harm reduction at its center adds individualism and autonomy to healthcare so patients feel welcomed and respected for their healthcare choices.

3.1.2 Current Treatments and Approaches to Substance Use Disorders

Medication for opioid treatment (MOUD) is often the only form of harm reduction care for PWUD in hospital systems. There are many limitations to administering and prescribing this treatment in hospitals. Regulations such that one must be a certified opioid treatment center to have the ability to administer the medication; a consideration of the patient's comorbidities must occur to see if the patient is even allowed to receive this medication (Carl et al., 2023). Not only are there regulations in place with this treatment, but patients receiving MOUD continue to encounter stigma, misconceptions, and negative experiences while receiving care during their hospital stay (Carl et al., 2023). There is a shift in research in hospitals to introduce MOUD in ICU patients when MOUD is usually administered in outpatient settings (Feeney et al., 2024). However, there is much variation in the prescription of MOUD in hospitals and little guidance on addressing MOUD and other comorbidities (Feeney et al., 2024).

In most healthcare settings, inpatient addiction consult services are the main form of care for substance use disorders, which centers around behavior changes, pharmacologic treatment, and acute withdrawal. At the same time, community harm reduction approaches shift the mechanisms and reasoning associated with inpatient care (Khan et al., 2022). Therefore, education material focuses on more traditional means of substance use, such as medication as a form of treatment. Addiction consult services are usually a physician-led team that works with patients to navigate the medical management of substance use disorder, acute withdrawal, and connection to an

outpatient substance use disorder treatment, with the possibility of including a peer recovery specialist and social worker support (Khan et al., 2022). Additionally, the effort of standardizing treatment plans and guidelines is one-way hospitals could work to decrease barriers to ensure consistent treatment for PWUD (Williams et al., 2022). At that point of contact with PWUD in the hospital, it is a moment for healthcare professionals to provide education on injection practices, such as using sterile materials. However, this does not occur without harm reduction education and counseling (Applewhite et al., 2023).

3.1.3 Integration of Harm Reduction Specialists in Hospitals

Currently, in hospitals, there are only so many interventions that go beyond MOUD and addiction counseling services. Research focuses on emergency room visits, detox environments, care after discharge, and naloxone prescriptions, which are vital to understanding. However, their harm reduction is slowly starting to expand into hospital settings. Current interventions include harm reduction specialists, prescribing harm reduction kits, and a harm reduction nursing model. The different harm reduction initiatives are the start of implementing harm reduction, and this approach aims to connect people to care genuinely. Furthermore, as more interventions occur in different locations, more research is needed to understand the intricacies of the barriers and facilitators to implementation.

A hospital in Boston partnered with a community harm reduction organization to introduce harm reduction specialists into a short-stay observation unit (Khan et al., 2022). Harm reduction specialists worked with addiction counseling services and physicians to consult on PWUD in the unit. From the provider's perspective, harm reduction specialists positively impacted the care team, creating an environment eager to initiate other harm reduction services and learn about other harm

reduction practices. Additionally, harm reduction specialists created rapport and mediated trusting relationships between patients and medical teams, developing trusting patient-provider relationships.

Although there was an overall positive impact on this hospital and its staff, both the harm reduction specialists and the other care teams experienced challenges during the intervention. Many found that when coming from a community organization, the hospital systems remove a layer of humanity because the focus is on the monetary amount of each test, treatment, and cost of hospital stay and the health outcomes. The experience of stigma associated with the job of a harm reduction specialist created feelings of isolation, leading to a deficit in navigating the social order within the hospital. This idea also ties into understanding the power dynamics of a hospital setting.

In addition, harm reduction specialists only document some conversations with patients, which is very different from the operations of physicians and other care teams. There was overlap in conversations because providers from various disciplines would have similar interactions with the patients, discussing the same education, tests, and available treatments. Overall, there were barriers and challenges throughout this intervention; it is essential to note the shift in mindset within providers. Many stakeholders in various hospital disciplines developed an open mind and eagerness to initiate more harm-reduction approaches (Khan et al., 2022).

3.1.4 Take Home Harm Reduction Kits

Hospitals are limited in the capabilities of harm reduction approaches, and access to naloxone is a significant part of care. Initiatives beyond naloxone prescription include a take-home harm reduction kit intervention with sterile supplies for patients, which partnered with bedside

education on the dangers of sharing injection supplies (Perera et al., 2022). Many individuals do not have access to sterile equipment and are not thinking about sterilization when injecting due to a feeling of being in a rush, cravings, or withdrawal (Applewhite et al., 2023). Throughout this intervention, many patients were unaware of the risk of sharing supplies and were grateful to learn about harm reduction and receive equipment (Perera et al., 2022). Perception of harm reduction is critical to consider as many patients were not interested when offered addiction counseling services but were open to harm reduction services (Perera et al., 2022). This intervention created sustainable differences among patients, educate patients and the care team about the potential long-term impacts on patient experiences, and mitigated bias and stigma from providers.

3.1.5 Integration of Harm Reduction in the Treatment of Infectious Disease

Skin and soft tissue infections are very prevalent within PWUD. Staphylococcus aureus causes skin and soft tissue infections, resulting from risky behaviors such as reusing needles or not cleansing the injection site before use. (Figgatt et al., 2021). Skin and soft tissue infections can be minor but, if left untreated, can develop into infective endocarditis and, in very severe cases, cause death (Figgatt et al., 2021). A study in NC investigated the rate of SSTIs and the decision-making and healthcare treatment experiences of PWUD who attended a syringe service program. In total, 105 syringe service program participants completed a survey documenting patient experience. Of the 105 participants, 65% had a lifetime history of infection (Figgatt et al., 2021). Almost half of the participants had an infection within the last 12 months (Figgatt et al., 2021).

Additionally, 98% of participants delayed receiving any form of healthcare treatment due to experiences of discrimination, self-medication, time commitments, fear of facing legal repercussions, and previous poor experiences (Figgatt et al., 2021). However, eventually, some

individuals sought treatment. Treatment was in the form of an antibiotic and usually provided through a personal relationship and, in some cases, a physician. Treatment and access to a physician differed based on insurance, location in a hospital setting, and treatment costs (Figgatt et al., 2021). The complexities of navigating hospital systems can further act as a barrier to individuals attempting to receive care, causing many to turn to their own sources for medication. Therefore, participants who had a relationship with their provider were more likely to engage with the healthcare system to receive medication, potentially increasing access to care.

An association was observed between a decrease in skin and soft tissue infections when an individual had a trusted doctor for substance use-related health concerns (Figgatt et al., 2021). In hospitals, the combination of care targeting both infectious disease and substance use disorder is not typically seen (Serota et al., 2021). A dual approach to care has the potential to improve health outcomes and provide educational opportunities relating to harm reduction for patients and providers. This specific approach had three aspects to care for: treating acute infection, treating substance use disorder, and educating all disciplines on harm reduction goals (Serota et al., 2021). Furthermore, this approach went beyond the hospital because many patients are unhoused to ensure that patients left supplies and resources (Serota et al., 2021). As this approach focuses on the inpatient experience and beyond, the goal is to retain patients in care regardless of insurance, economic, and housing factors. Another main factor of this initiative is that patients were not terminated from care if they decided to be discharged from the hospital early; allowing this flexibility and autonomy to make crucial decisions for their health provides a basis for trust-building with providers.

Harm reduction was at the forefront of this initiative to bridge the gap between treatments, in-patient experiences, and post-hospital because care followed the individual's health journey

(Serota et al., 2021). This initiative retained 70% of people in MOUD at 90 days post-hospitalization (Serota et al., 2021). The addition of MOUD during hospitalization aids in minimizing cravings and withdrawal among patients with substance use disorders, which acts as a supportive factor to motivate individuals to remain in care. In order to retain patients in care, providers continued outreach efforts to stay connected with patients and even visit the patients where they are to make accessing care easier (Serota et al., 2021). Overall, this intervention aided in retaining individuals in care and adherence to medications to reduce the severity of infection. This intervention also demonstrates the complexities of care experienced when introducing harm reduction and the needs of the PWUD patient population.

3.1.6 Nurse-Led Harm Reduction Approach

The nursing staff is instrumental to a hospital's overall organization and operations; therefore, interventions must be practical for the patient, and providers must have a stake in any intervention. One harm reduction intervention is a nurse-led harm reduction intervention that includes distributing safe supplies for injection (Goff et al., 2024). The nurse in this intervention has lived experiences of substance use and worked in this particular hospital for a substantial amount of time (Goff et al., 2024). Therefore, this employee can tailor the intervention to fit the culture and needs of the accustomed staff, resulting in increased engagement with staff. Hospital leadership, lawyers, nurses, and local harm reduction experts collaborated to develop this intervention, guiding it to fit the shared interest in the hospital’s policies, mission, and harm reduction aims (Goff et al., 2024). Overall, this intervention took a different approach to center hospital staff with rigorous education materials to instill a more profound comprehension of harm reduction alongside patient care and kits (Goff et al., 2024).

Harm reduction interventions experience challenges when introducing new approaches to care, but with proper education and engagement, many hospitals shift the culture within the hospital environment. Partnerships between hospital disciplines are crucial in consulting on patient cases and pursuing a patient-centered approach to care. As harm reduction interventions become more prevalent across the United States, researchers should consider hospital resources, culture, and location to understand the best method to meet the needs of the patients and the providers. In conclusion, harm reduction interventions positively impacted hospitals, opening the door for expanding harm reduction services and making them willing to learn more.

4.0 Strategies to Reduce Substance Use-Related Stigma in Healthcare Spaces

Harm reduction programs and interventions have been controversial in society and politics. Since the aim of harm reduction is not necessarily to completely stop or even reduce drug use, many believe that harm reduction programs will continue to enable PWUD. The population that harm reduction focuses on is one that continually faces stigma and discrimination because of life choices. Substance use stigma is seen all around in community, healthcare, and professional settings. For example, terms used to describe PWUD are "dirty," "clean," and "substance abuser," and even the word "addict" continues to perpetuate negative attitudes and beliefs toward PWUD (Kelly et al., 2015). These labels that individuals hear remove any other factor that could lead one to engage in risky behaviors.

Societal norms produce an ideal picture of how someone should act and speak and the "right path" one should take. However, society's standards are rooted in systems with a long history of privilege, racism, and scrutinizing those who do not follow suit. These standards act as barriers in healthcare, social, and professional environments.

Stigma is a social process that characterizes groups of individuals through labeling, stereotyping, and isolation, leading to status loss and discrimination based on differences in appearance, economic status, and identity (Nyblade et al., 2019). Beyond social stigma, health-related stigma is stereotyping and labeling based on a disease or health condition (Nyblade et al., 2019). Stigma in healthcare spaces negatively impacts the individual, establishing many barriers to receiving any form of healthcare. Stigma in healthcare stems from negative attitudes, fear, lack of education surrounding the illness, lack of ability to treat, and institutionalized practices; more

specifically, with substance use, healthcare workers fear infection, erratic behaviors of the stigmatized group, morality, and moral distress (Nyblade et al., 2019).

In their review of interventions striving to reduce experiences of stigma associated with substance use, mental health, and HIV, six main types of intervention approaches were identified. The provision of information includes educating healthcare workers about illnesses, stigma, and their impact on health. Skill-building activities include hands-on learning for healthcare workers. The participatory learning approach includes active participation with community members and healthcare workers in developing the intervention. Contact with marginalized populations includes working with the population to have an informed research process. The Empowerment approach focuses on the marginalized communities to work on navigating feelings and experiences of stigma. Lastly, policy changes involve changing hospital policy to be more inclusive, providing clinical materials and resources, and restructuring operations. Interventions that focused on many levels of change within the institution and the individual and community levels within the hospital had a higher impact on mitigating stigma (Nyblade et al., 2019).

The application of these interventions could help decrease the use of stigmatizing language in healthcare settings. The use of stigmatizing language continues to perpetuate negative stereotypes and biases in patients. People's first language is crucial in changing the culture and using derogatory language to put the patient before their diagnosis (Broyles et al., 20143). Instead of subscribing the individual to one particular characteristic, people-first language demonstrates that the individual is worth more than what affects their health. With substance use, this would shift away from terms such as "addict," "substance abuser," and "alcoholic" and focus on phrases such as "person who uses substances," "people who use drugs," or "person with a substance use

disorder (Broyles et al., 2014)." The people-first language emphasizes the individual experiences of one's health instead of encapsulating PWUD into one population with one shared experience.

The use of medical terms to reflect substance use disorders and treatment is vital to addressing stigma and the individual experience of substance use (Broyles et al., 2014). Reflecting on the medical nature of substance use removes ideas of the individual's behavior or choice as the driving force of substance use. Redirecting the narrative to describe substance use establishes an enriched understanding of substance use embedded in research. Therefore, research will influence treatment and services towards an environment ingrained in accessibility and inclusion. Additionally, with the use of recovery-orientated language, it is essential to disclose that this approach includes all individuals on the path to improving their health status, focused on improving health outcomes.

Again, there should be a shift in the use of terms such as "non-compliant" or "unmotivated" to describe the patient and the inclusion of phrases such as "not in agreement with the treatment plan," "opted not to," or "experiencing ambivalence about change" in the chart which demonstrates an understanding of the individual's choice in their healthcare plans (Broyles et al., 2014). These terms eliminate autonomy and respect for the individual, almost casting their care and experiences aside. Colloquial language and slang continue to perpetuate negative stereotypes and biases towards marginalized groups of people (Broyles et al., 2014). There is a higher rate of slang terms in community settings. However, many professionals use words that still support negative implications, such as "dirty" when referring to urine screens or when a provider praises a patient for staying "clean" (Kelly et al., 2015).

Changing and sustaining a culture change in attitudes, beliefs, and biases within healthcare and research professionals is essential to increasing access to care and reducing the stigma

associated with PWUD in hospital settings. Nevertheless, the individuals identified within this population should guide the language and terminology used, but leaders in academic and healthcare spaces should educate and implement these language changes (Broyles et al., 2014). Including PWUD in the decision of inclusive terms removes the notion of one shared experience to ensure that people feel comfortable and respected in whatever room they enter. Along with PWUD, many other professionals, such as clinicians, researchers, policymakers, and community members, must adopt these crucial strategies when caring for PWUD and other marginalized groups. Changing the vocabulary that individuals use daily is one of the most inexpensive ways to create change on an individual, community, and structural level to establish respect and autonomy for the patient (Kelly et al., 2015).

Although the suggestions and approaches to mitigating stigma in healthcare spaces are from about ten years ago, more current research discusses that there still needs to be a gap in addressing the language used and its implications for individuals in marginalized populations. In hospitals, four areas still need to be addressed: stigma and language used by healthcare professionals, the general public, and PWUD (Werder et al., 2021). The continued use of stigmatizing language causes harm that is invisible to the eye and is quite dehumanizing for any patient who enters any clinical space. To lessen the stigma and divide between PWUD and healthcare environments, institutions must evaluate methods to include evidence-based practices that widen the aim of current addiction medicine practices to include a full scope of care (Werder et al., 2021). Cultural and behavioral change takes a long time to observe; however, shifting language and education to minimize stigma and perceptions is essential in many settings to break down biases, hopefully leading to sustainable change.

The continued use of harmful and stigmatizing language isolates the individual, placing blame and guilt onto them regardless of whether they are PWUD or someone with chronic illness. A layer of respect is removed from care, only furthering the divide between individuals and healthcare providers. Specifically, in hospitals, there must be engagement from many disciples and stakeholders to observe changes in behaviors and language to create a positive patient experience. Hanging and sustaining a culture change in attitudes, beliefs, and biases within healthcare and research professionals is vital to increasing access to care and reducing the stigma associated with PWUD.

5.0 Discussion

Substance use disorders, overdose deaths, and the divide between PWUD and healthcare settings are significant public health concern. The impacts of substance extend beyond the individual, affecting families, communities, and the world. Harm reduction approaches work to mitigate the gap in care and connect people with care. Harm reduction initiatives in hospital settings outside the emergency room are limited despite the numerous successes observed in harm reduction within community settings throughout the literature. This literature review aims to describe the current contexts of the barriers and facilitators to harm reduction services in hospitals.

Over time, biases continue to perpetuate negative experiences and stereotypical ideas in patients with substance use that prevent individuals from receiving care. In hospitals, stigmatizing language and negative behaviors continue to persist among providers, the population, and the patients. Harm reduction interventions and education can reduce stigma and discrimination within many healthcare settings. Interventions should be implemented at many levels within the hospital to decrease stigma and enact widespread, systematic change. This approach ensures that every staff member, such as nurses, physicians, and hospital management, supports this education and holds coworkers accountable to address biases that continue to exist. Interventions focusing on decreasing the use of stigmatizing language are a low-cost method of introducing harm reduction practices into hospitals. People-first language connects to a patient-centered approach in healthcare since it focuses on putting the person before the condition to show value and respect, recognizing the individual's autonomy in care.

Experiences of stigma and discrimination act as a barrier for individuals in many marginalized populations, preventing individuals from receiving healthcare. This stigma exists due

to implicit biases and a lack of education surrounding these topics. Therefore, many seek other resources of care that can offer a safer and more welcoming environment for stigmatized conditions. Other harm reduction strategies continue decreasing infectious disease rates and improving health outcomes and educational resources. Syringe service programs act as a crucial mediator between PWUD and healthcare providers. However, this only sometimes connects people with a direct line of care but with resources to navigate healthcare spaces.

Barriers prevent harm reduction strategies from entering more inpatient settings in healthcare systems. These challenges exist due to stigma, implicit biases, and negative attitudes toward harm reduction as a whole. The initiation of harm reduction strategies in hospitals is happening slowly, with more awareness in units beyond emergency rooms and short-stay units. As harm reduction approaches become more widespread, healthcare professionals will engage more. Expanding harm reduction into healthcare settings is slowly being implemented. Still, research will continue to be needed to find the best method to address the population's needs while meeting realistic provider expectations.

5.1 Implications and Future Directions

Reflecting on the current research regarding harm reduction interventions in healthcare, little research fully immerses this approach into practice. However, in hospitals with higher rates of PWUD, addiction counseling services tend to be the main initiative. This approach focuses on medication for opioid use disorder for patients admitted into the hospital or naloxone kits. These interventions do not connect the harm reduction principles to care for the individual. However, interventions such as introducing harm reduction specialists, a harm reduction nursing model, and

harm reduction education and take-home kits start to close the divide between principles of harm reduction, care, and the hospital. Interventions should have a multidisciplinary and institutional approach to implement and decrease barriers successfully. Greater stakeholder engagement among doctors, nurses, leadership, infection prevention teams, and other healthcare professionals in the goals and mission of the intervention will have a more significant impact. Patient perceptions of an addiction counseling service compared to harm reduction are essential in the uptake and retention of PWUD. Educational and informational resources are another vital aspect of future harm reduction interventions in hospitals. To understand harm reduction, one must know the guiding principles, the aims, and the practical nature of this approach to meeting the needs of underserved populations.

This literature review has several limitations. As a literature review, its scope is more general than a systematic review or meta-analysis. Therefore, the review provides a general overview instead of a specific analysis. The literature in this review may not include all relevant studies, meaning that any connections made are subjective. The research included in this review was found at specific time points, providing ideas and context for a particular time that may not be relevant as publications of harm reduction research emerge.

The lack of literature on harm reduction in hospitals demonstrates the need for research to understand further barriers and facilitators to care in the healthcare system. Future research should center around rural and urban hospitals, the resources available, and a deeper dive into policies to understand limitations and possibilities for interventions. A vital aspect of introducing harm reduction into hospitals is working with the PWUD population to understand attitudes, beliefs, and expectations when implementing harm reduction interventions in a hospital setting. PWUD should partner with researchers to ensure that material and research meet PWUD's needs and expectations

practically. Harm reduction researchers should develop interventions to educate healthcare professionals on the principles and goals of harm reduction. Educating healthcare professionals would overcome the divide between stigma, stereotypes, and evidence-based approaches to care to promote holistic healthcare practices. As the scope of harm reduction expands, the potential to establish a low-cost clinic in partnership between hospital systems and harm reduction organizations would be an innovative development to see in the future. However, realizing the full potential of harm reduction and its health implications requires conducting many steps and extensive research, as well as meaningful involvement of people with lived experiences.

5.2 Conclusion

Overall, harm reduction services continue to gain traction and support through an evidence-based approach in research and interventions in many settings. As drug use only continues to become more dangerous for PWUD due to perpetuating harmful policy and an unsafe drug supply, there is a need to address the gap that exists in care for PWUD in hospital settings. The lack of harm reduction approaches in hospital and inpatient settings is vital to understanding the current climate of this approach among healthcare professionals. Simple initiatives such as introducing more inclusive language and education surrounding harm reduction and substance use or introducing harm reduction specialists into an inpatient setting are low-cost and effective methods to begin to serve communities in need. Harm reduction aims to meet individuals wherever they are, closing the divide between health, autonomy, and the needs of an underserved population to improve health outcomes.

Appendix A

Appendix A.1 Tables

Table 1: Medline Search Terms

1.	Harm Reduction/
2.	(harm adj (reduction* or minimization or prevention)). ti, ab, kf.
3.	(addiction adj2 (counsel* or therapy or treatment*)). ti, ab, kf.
4.	((drug or drugs) adj2 counsel*). ti, ab, kf.
5.	Naloxone/ or Narcotic Antagonists/tu
6.	(Narcan or naloxone). ti, ab, kf, rn.
7.	(methadone adj maintenance adj2 (program* or therap* or treatment)). ti, ab, kf.
8.	(Overdose* adj1 (prevent* or response or training)). ti, ab, kf.
9.	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8
10.	hospitalization/ or hospitals/ or hospitals, community/ or hospitals, general/ or hospitals, high-volume/ or hospitals, low volume/ kellr hospitals, private/ or hospitals, public/ or hospitals, county/ or hospitals, rural/ or exp hospitals, special/ or hospitals, teaching/ or hospitals, university/ or hospitals, urban/ or secondary care centers/ or tertiary care centers/
11.	inpatients/
12.	(hospital or hospitals or hospitalization or inpatient*). ti, ab, kf.
13.	10 or 11 or 12
14.	9 and 13
15.	limit 14 to (English language and yr="2019 - 2026")

16.	15 not ((exp Africa/ or exp Asia/ or exp Australia/ or exp Canada/ or exp central America/ or exp Europe/ or exp south America/) not (north America/ or exp united states/))
17.	(case reports or comment or congress or editorial or "expression of concern" or historical article or interactive tutorial or lecture or letter or news or newspaper article or patient education handout or periodical index or video audio media or webcast). pt.
18.	StatPearls.bt.
19.	17 or 18
20.	16 not 19
21.	(AL or AK or AZ or AR or AS or CA or CO or CT or DE or DC or FL or GA or GU or HI or ID or IL or IN or IA or KS or KY or LA or ME or MD or MA or MI or MN or MS or MO or MT or NE or NV or NH or NJ or NM or NY or NC or ND or MP or OH or OK or Portland or PA or PR or RI or SC or SD or TN or TX or TT or UT or VT or VA or VI or WA or WV or WI or WY).in.
22.	20 and 21

Table 2: Summary of Literature

Author	Date	Title	Summary
Applewhite, D., Regan, S., Donelan, K., Macias-Konstantopoulos, W. L., Kehoe, L. G., Williamson, D., & Wakeman, S. E	2023	Attitudes Toward Injection Practices Among People Who Inject Drugs Utilizing Medical Services: Opportunities for Harm Reduction Counseling in Health Care Settings	Researchers aimed to characterize PWUD injection practices, risk and benefits of those practices and experiences when receiving care. Many participants stated reusing syringe and not conducting hand hygiene before injection. Therefore, harm reduction counseling should be included in medical care to educate, reduce risk, and increase access to supplies
Broyles, L. M., Binswanger, I. A., Jenkins, J. A., Finnell, D. S., Faseru, B., Cavaiola, A., Pugatch, M., & Gordon, A. J	2014	Confronting Inadvertent Stigma and Pejorative Language in Addiction Scholarship: A Recognition and Response	Substance use related stigma continues to impact how PWUD are perceived affecting many aspects of an individual's life. This article explores different strategies to minimizing negative language, and the barriers, and challenges that arise with this topic.
Carl, A., Pasman, E., Broman, M. J., Lister, J. J., Agius, E., & Resko, S. M.	2023	Experiences of healthcare and substance use treatment provider-based	This study examines provider-based stigma towards MOUD, focusing on identifying factors associated with experiencing stigma from substance use

		stigma among patients receiving methadone	treatment and providers. Age and treatment associated with stigma saw higher rates of negative comments. Understanding impacts of stigma is important to shifting culture to advocate for PWUD and educate providers.
Carlberg-Racich, S	2016	Harm reduction interventions in HIV care: a qualitative exploration of patient and provider perspectives	The aim of this research is to understand perceptions of harm reduction and its ability to address gaps in HIV care. Through interviews, patients were more receptive ham reduction approaches from providers while providers had mixed feelings. There is a need to address critical implications for integration of harm reduction into HIV care.
Des Jarlais, D. C.	2017	Harm reduction in the USA: the research perspective and an archive to David Purchase	Through an exploration of the history of harm reduction, there is a better understanding of the principles and aims of harm reduction. As the past impacts current regulations, policies, and the need for to increase harm reduction research and strategies to address the current opioid epidemic.
Drucker, E., Anderson, K., Haemmig, R., Heimer, R., Small, D., Walley, A., Wood, E., & van Beek,	2016	Treating Addictions: Harm Reduction in Clinical Care and Prevention	This research examines the role of clinical providers and researchers in establishing the efficacy of harm reduction approaches to substance use. In order to expand harm reduction, there must be a shift to include these principles through evidence, and innovative programs.
Feeney, M. E., Law, A. C., Walkey, A. J., & Bosch, N. A	2024	Variation in Use of Medications for Opioid Use Disorder in Critically Ill Patients Across the United States	Practice patterns are described to display the use of MOUD in critically ill patients. In a large population, only about 19% received MOUD. There was a wide variation in the use of MOUD among ICU patients.
Figgatt, M. C., Salazar, Z. R., Vincent, L., Carden-Glenn, D., Link, K., Kestner, L., Yates, T., Schranz, A., Joniak-Grant, E., & Dasgupta, N	2021	Treatment experiences for skin and soft tissue infections among participants of syringe service programs in North Carolina	Examining the patient experiences of skin and soft tissue infections among PWUD who utilizing syringe service programs. Many participants with a long history of infection, delayed or did not receive care due to poor health experiences. However, having a trusted doctor was associated with fewer infections. Syringe service programs connected participants to care,

			demonstrating evidence for a need to expand these programs.
Goff, A., Lujan-Bear, S., Titus, H., & Englander, H	2023	Integrating Hospital-Based Harm Reduction Care—Harnessing the Nursing Model	A led harm reduction approach was developed and introduced into the hospital. Throughout the development process many disciplines were consulted to ensure the intervention had the proper support. Overall, patients and staff were receptive to the harm reduction nurse.
Hawk, M., Emma Sophia Kay, & Raagini Jawa	2024	Relational Harm Reduction for Internists: A Call to Action	The purpose of this paper is to demonstrate relational harm reduction's potential to improve patient care and reduce overdose likelihood. The combination of structural and relational harm reduction approaches can decrease risk of overdose and substance use related harms through in the moment education and access to resources.
Jawa, R., Laks, J., Saravanan, N., Demers, L., & Wishik-Miller, G	2021	Physician trainees' compassion satisfaction, burnout, and self-efficacy when caring for people who inject drugs	Internal medicine trainees, self-efficacy was measure in harm reduction counseling, burnout, and compassion satisfaction. Training surrounding harm reduction improved compassion care satisfaction when treating patients with PWUD, with the potential to improve health outcomes.
Kelly, J. F., Wakeman, S. E., & Saitz, R	2015	Stop Talking "Dirty": Clinicians, Language, and Quality of Care for the Leading Cause of Preventable Death in the United States	Language used by healthcare professionals continue to perpetuate negative stereotypes acting as a barrier to care for many. There is a need to shift language use to focus on person first language.
Khan, G. K., Harvey, L., Johnson, S., Long, P., Kimmel, S., Pierre, C., & Drainoni, M.-L	2022	Integration of a community-based harm reduction program into a safety net hospital: a qualitative study	Upon introducing harm reduction specialists into a unit, a qualitative study was conducted to describe provider perspectives of experiences during this intervention. Interviews found seven major themes, barriers, and facilitators to care. Overall, the harm reduction program served as bridge to building relationships with providers and PWUD.
Nyblade, L., Stockton, M. A., Giger, K., Bond, V., Ekstrand, M. L., Lean, R. M.,	2019	Stigma in health facilities: Why it matters and how we can change it	Addressing stigma in healthcare settings is important to break down barriers with many marginalized communities to receive care. This research assessed interventions to decrease stigma among

Mitchell, E. M. H., Nelson, L. R. E., Sapag, J. C., Siraprapasiri, T., Turan, J., & Wouters, E			many health conditions in healthcare settings. Seven main intervention approaches emerged to address stigma. This research provides foundation for other interventions and more research to find the best methods.
Okoro, O. N., Bastianelli, K. M., Wen, Y.-F., Bilden, E. F., Konowalchuk, B. K., & Schneiderhan, M. E	2018	Awareness of state legislation on naloxone accessibility associated with willingness to prescribe naloxone	A measurement of the impact of naloxone legislation, and other predictive factors on the willingness to prescribe naloxone to individuals at risk. Awareness of laws, knowledge of dosing, and prescribing protocols could lead to more prescriptions of naloxone.
Perera, R., Stephan, L., Appa, A., Giuliano, R., Hoffman, R., Lum, P., & Martin, M	2022	Meeting people where they are: implementing hospital-based substance use harm reduction	A hospital intervention focusing on harm reduction education and equipment was implemented into an urban safety-net hospital. This led to an advancement in hospital-based addiction care, education, and engagement among many disciplines in the hospital.
Serota, D. P., Tookes, H. E., Hervera, B., Gayle, B. M., Roeck, C. R., Suarez, E., Forrest, D. W., Kolber, M. A., Bartholomew, T. S., Rodriguez, A. E., & Doblecki-Lewis, S	2021	Harm reduction for the treatment of patients with severe injection-related infections: description of the Jackson SIRI Team	The purpose of this study was to implement an integrated severe-injection related infection team and its barriers and facilitators to success in the hospital. The combination of infectious disease and addiction care is a new approach to injection related infections.
Sharma, M., Lamba, W., Cauderella, A., Guimond, T. H., & Bayoumi, A. M	2017	Harm reduction in hospitals	Harm reduction in hospitals can ranges from decreasing stigma, language, partnering with people who have lived experience. However, there continues to be gaps in care and implementation that should be addressed with future research.
Thakarar, K., Nenninger, K., & Agmas, W	2020	Harm Reduction Services to Prevent and Treat Infectious Diseases in People Who Use Drugs	Syringe service programs are inclusive programs that provide PWUD with care and sterile supplies. This paper explores harm reduction services to prevent and treat disease in PWUD. Harm reduction approaches in practice can decrease the infectious aspects of drug use.

Vearrier, L	2019	The value of harm reduction for injection drug use: A clinical and public health ethics analysis	Analysis of harm reduction approaches to understand the core principles of autonomy, benefice, and justice from clinical and public health ethics perspectives. Harm reduction is ethically sound and should be a major aspect to combating the opioid crisis.
Werder, K., Curtis, A., Reynolds, S., & Satterfield, J	2021	Addressing Bias and Stigma in the Language We Use with Persons with Opioid Use Disorder: A Narrative Review	A narrative review examines how MOUD treatment outcomes are affected and present strategies to reduce bias and promote MOUD treatment. Four themes of stigma and language emerge to show areas that need to be addressed.
Williams, K. D., Wilson, B. L., Jurkovitz, C. T., Melson, J. A., Reitz, J. A., Pal, C. K., Hausman, S. P., Booker, E., Lang, L. J., & Horton, T. L.	2022	Implementation of a clinical pathway to screen and treat medical inpatients for opioid withdrawal	A clinical pathway to screen and treat medical service inpatients for opioid withdrawal was implemented. This process found success in implementation and sustaining treatment for medical services during hospital admission.

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