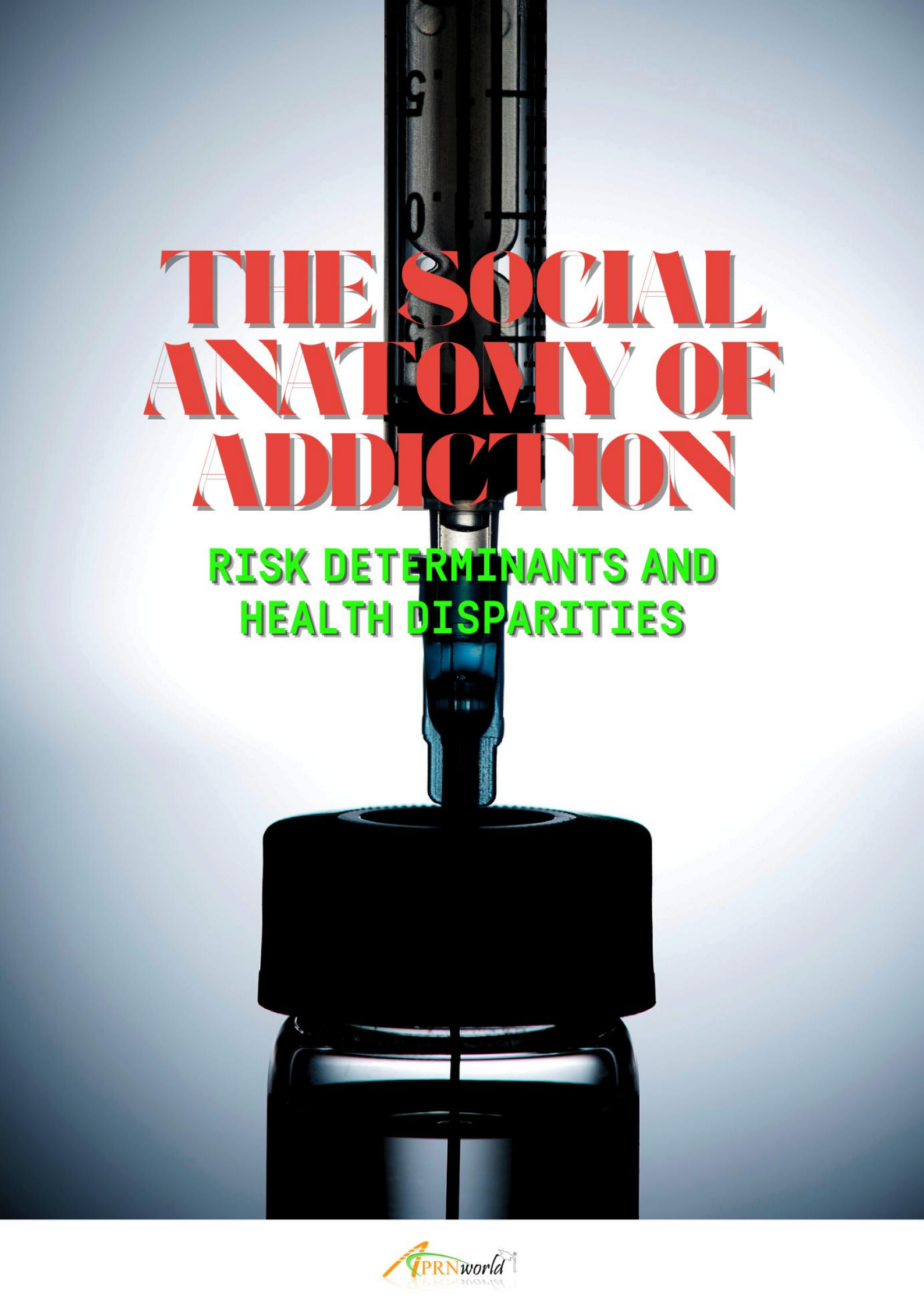




THE SOCIAL ANATOMY OF ADDICTION

RISK DETERMINANTS AND
HEALTH DISPARITIES

THE SOCIAL ANATOMY OF ADDICTION: RISK DETERMINANTS AND HEALTH DISPARITIES

ANCC Accredited NCPD Hours: 1 hr

Target Audience: RN/APRN

NEEDS ASSESSMENT

Substance Use Disorders (SUDs) represent a pervasive and evolving public health crisis, rooted in a complex interplay of genetic, psychological, environmental, and social determinants. While SUDs can affect individuals across all demographics, certain populations, such as adolescents, LGBTQ+ individuals, racial and ethnic minorities, and those involved in the criminal justice system, are disproportionately impacted. These groups not only face heightened exposure to risk factors such as trauma, discrimination, and socioeconomic disadvantage but also encounter significant systemic barriers to accessing timely, culturally competent, and trauma-informed care.

Despite increasing societal awareness and policy-level initiatives aimed at addressing the opioid epidemic and broader substance use

challenges, many healthcare professionals remain underprepared to recognise and respond to the unique needs of these vulnerable populations. A lack of comprehensive training in risk assessment, cultural responsiveness, and structural determinants of health impedes clinicians' ability to deliver equitable and person-centred interventions.

There is a critical and urgent need for targeted continuing education that goes beyond the biomedical model of addiction. Clinicians must be equipped with an intersectional understanding of SUD risk determinants and disparities, enabling them to identify high-risk individuals early, tailor interventions effectively, and advocate for systemic changes that close the equity gap in prevention, treatment, and recovery outcomes.

OBJECTIVES

Upon completion of this module, participants will be able to:

- **Examine** the biological, psychological, and social determinants contributing to the initiation and progression of substance use disorders (SUDs).
- **Identify** high-risk personality traits and early developmental factors (e.g., trauma, ACEs) that predispose individuals to SUDs.
- **Analyse** disparities in substance use patterns and outcomes among vulnerable groups, including LGBTQ+ individuals, adolescents, racial/ethnic minorities, and incarcerated populations.
- **Apply** trauma-informed and culturally responsive approaches to support prevention, engagement, and treatment in high-risk populations.
- **Evaluate** recent epidemiological trends and systemic barriers affecting access to equitable SUD care.

GOAL

To equip healthcare providers with a deep understanding of the multifaceted risk factors for SUDs and the unique vulnerabilities of marginalised populations, thereby promoting the delivery of culturally responsive, trauma-informed, and evidence-based care across diverse clinical settings.

INTRODUCTION

Substance Use Disorders (SUDs) are chronic, relapsing conditions shaped by the intricate interplay of biological predispositions, psychological vulnerabilities, adverse life experiences, and broader sociocultural dynamics. While anyone may develop an SUD, extensive evidence indicates that certain populations, such as adolescents, LGBTQ+ individuals, racial and ethnic minorities, and justice-involved individuals, face a disproportionate burden of risk and harm. These groups are more likely to experience cumulative exposures to early trauma, adverse childhood experiences (ACEs), social isolation, discrimination, and structural inequities that exacerbate both the onset and progression of substance use.

According to the **2023 National Survey on Drug Use and Health (NSDUH)**, approximately **48.7 million people** aged 12 and older in the U.S. met criteria for an SUD, with **15% of high school students** reporting illicit drug use and **4.3 million individuals** misusing prescription opioids. Among these, vulnerable populations continue to report higher prevalence rates and worse treatment outcomes. For example, nearly **50% of individuals with SUDs** have co-occurring mental health conditions, and **LGBTQ+ individuals** are **twice as likely** to suffer from substance misuse compared to their

heterosexual peers. Furthermore, incarcerated individuals with untreated SUDs face a **dramatically increased risk of overdose** post-release due to loss of tolerance and limited care continuity.

This module provides an in-depth, evidence-based exploration of the diverse risk determinants and population-level disparities driving the SUD crisis. By synthesising findings from 2020–2024, it guides clinicians in understanding how individual traits (e.g., impulsivity, trauma exposure), family dynamics, environmental stressors, and systemic injustices converge to shape vulnerability.

Emphasis is placed on equipping healthcare providers with the skills to deliver trauma-informed, culturally responsive, and equity-driven care. In doing so, clinicians will be better positioned to implement targeted prevention strategies, reduce barriers to treatment engagement, and improve outcomes among those most impacted by substance use disorders.

RISK FACTORS FOR SUBSTANCE USE DISORDERS (SUDS): AN INTEGRATIVE REVIEW OF RECENT EVIDENCE (2020–2024)

Substance Use Disorders (SUDs) are complex, multifactorial conditions shaped by the interplay of genetic, individual, familial, social, and environmental factors. While

anyone can develop a SUD, some individuals are more at risk due to their life experiences, mental health conditions, or the environments in which they live.

This module looks at the key factors that increase the risk of developing a SUD, including trauma, peer pressure, family history, and social isolation. It also focuses on vulnerable groups such as LGBTQ+ individuals, adolescents, racial and ethnic minorities, and those who are incarcerated, who often face more challenges when it comes to prevention, treatment, and recovery.

Understanding these risks helps healthcare providers identify those most in need, offer early support, and deliver care that is respectful, inclusive, and effective.

The following is a comprehensive synthesis of contemporary research and data (2020–2024), with a structured focus on key risk domains.

I. INDIVIDUAL RISK FACTORS

1. Genetic Predisposition

A strong family history of addiction significantly increases an individual's risk. Studies, including twin and family studies, consistently show that genetics accounts for approximately 40-60% of the vulnerability to SUDs. If a blood relative, such as a parent or sibling, has an SUD, the risk is higher. (Mayo Clinic, American Addiction Centres, DrugFree.org, Cleveland Clinic)

Evidence: Twin and family studies consistently estimate the heritability of SUDs at ~50%. Genome-wide association studies (GWAS) have identified specific polymorphisms in genes such as **ADH1B**, **ADH1C**, and **DRD2** associated with heightened risk for Alcohol Use Disorder (AUD) and Opioid Use Disorder (OUD). **2024 Data:** A recent meta-analysis identified 29 genetic risk variants for problematic alcohol use, 19 of which were novel, mapping to 66 genes. SNP-based heritability of AUD was estimated between 5.6% and 10%, with shared genetic risk among smoking initiation, ADHD, and major depressive disorder (MDD).

2. Mental Health Disorders

Evidence: Mental illnesses such as depression, anxiety, ADHD, conduct disorder, and PTSD significantly increase SUD risk.

Data Highlights:

- Nearly **50%** of individuals with SUD have co-occurring mental illnesses (NSDUH 2022).
- Depression is the most prevalent comorbidity, noted in 33.8% of dual-diagnosed cases (Spanish study).
- Adolescents with conduct disorder or MDD are at significantly elevated risk for drug dependence.

3. Personality and Behavioural Traits

Adolescents with traits such as **impulsivity**, **sensation-seeking**, **emotional dysregulation**, and **rebelliousness** are at higher risk for substance use disorders (SUDs). A 2021 systematic review identified these traits as strong predictors of adolescent SUDs. Clinically, those diagnosed with **antisocial personality disorder (ASPD)**, **oppositional defiant disorder (ODD)**, or **conduct disorder** tend to begin substance use at an earlier age and exhibit more severe patterns of use.

4. Early Onset of Substance Use

Beginning substance use **before age 18** significantly increases the risk of developing a substance use disorder (SUD) in adulthood. **2023 data** show that **15% of high school students** used illicit or injection drugs, and **14% misused prescription opioids**. The **peak initiation age** for substance use is between **18 and 25 years**, highlighting the importance of early prevention and intervention.

5. Trauma and Adverse Childhood

Experiences (ACEs)

Evidence: The original ACE study and subsequent findings show a dose-response relationship between early trauma and later substance use.

2021 Review: More ACEs predict increased

addiction risk. Youths exposed to maltreatment are especially vulnerable.

II. FAMILIAL RISK FACTORS

1. Family History of Substance Use

A family history of substance use significantly elevates an individual's risk of developing SUDs. This increased risk arises from a combination of genetic predispositions and environmental influences. Notably, even high-functioning individuals, such as medical students, are not exempt from this heightened vulnerability.

2022 Review Citation: A systematic review and meta-analysis published in 2022 reported that the overall prevalence of substance use among medical students in India is approximately 40%, with alcohol being the most commonly used substance. The study identified several associated factors, including male gender, peer pressure, and progression in medical education.

2. Parental Behaviours and Family Environment

Risk Factors:

- Poor supervision
- Permissive attitudes
- Low parental education
- Family conflict and discord

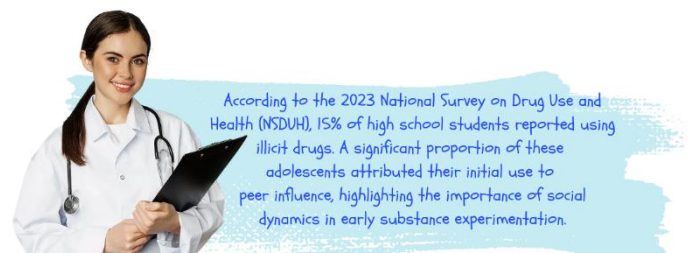
2021 Study: Single-parent households (especially mother-only) showed 1.9× higher

relapse rates among recovering individuals in Rwanda.

III. SOCIAL AND ENVIRONMENTAL RISK FACTORS

1. Peer Influence

During adolescence, peer groups become a critical source of social identity and acceptance. This stage of development is marked by a heightened need for belonging, which can lead teens to engage in risky behaviours, including substance use, to fit in or gain approval. Peer pressure, both direct (encouragement to use substances) and indirect (modelling behaviour), plays a powerful role in initiating and maintaining drug use.



2. Socioeconomic and Environmental Stressors

Adolescents facing **poverty**, **rural isolation**, or **discrimination** often experience chronic stress and limited coping resources. These “**socially toxic environments**,” as described in a **2021 review**, increase vulnerability to substance use as a maladaptive coping strategy.



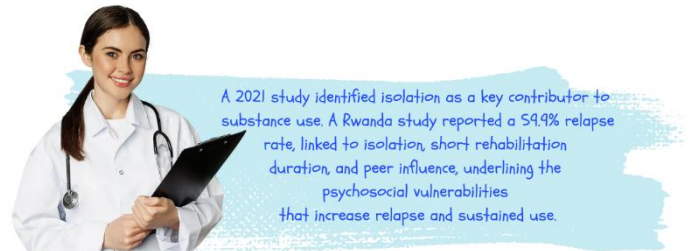
2. Accessibility and Perceived Risk

When substances are **easily available** and the perceived harm is **low**, adolescents are more likely to initiate use. Factors such as lax regulation, normalisation in media, and family or peer use reduce the perceived risk. Low perceived danger of harm is consistently associated with higher substance use rates, especially with substances like cannabis and prescription medications.

3. Social Isolation and Psychological Stress

Social isolation, especially heightened during and after the COVID-19 pandemic, has emerged as a major risk factor for adolescent substance use. Feelings of **loneliness**, **anxiety**, and **emotional distress** often lead young

people to use substances as a coping mechanism.



IV. SPECIFIC POPULATIONS AND HIGH-RISK CONTEXTS

SUBSTANCE ABUSE IN LGBTQ+ COMMUNITY



1. Gender Differences

Men are more likely to develop early-onset and chronic substance use disorders (SUDs),

often linked to externalising behaviours and peer influences. In contrast, women with SUDs frequently have histories of **trauma**, **anxiety**, or **depression**, and may progress more rapidly to dependency (telescoping effect).

COVID-19 Data (2020): Men with SUDs, especially **opioid use disorder (OUD)**, had significantly higher COVID-19 infection risks (AOR = 10.244), indicating greater medical vulnerability.

2. Racial and Ethnic Disparities

While **Whites and Hispanics** have higher reported rates of substance use, **African Americans** often face **more severe health outcomes**, such as worse COVID-19 complications linked to SUD. These disparities reflect systemic issues like healthcare access, socioeconomic disadvantage, and structural racism.

NSDUH (2021–2023): Recent data now breaks down Hispanic/Latino subgroups, allowing for more targeted analysis and interventions.

3. Other Vulnerable Groups

- **LGBTQ+ Individuals:**

Disproportionately affected by stigma and discrimination, contributing to higher rates of co-occurring substance use and mental health disorders.

- **Incarcerated Individuals:**

Around **75%** of inmates with mental illness also struggle with SUD, often untreated due to limited prison healthcare.

- **Foster Care Alumni:**

Experience higher SUD risk due to early trauma, instability, and lack of consistent mental health support during formative years.

PUBLIC HEALTH BURDEN OF OPIOID AND OTHER SUBSTANCE USE DISORDERS: TRENDS, DISPARITIES, AND EMERGING CHALLENGES

The public health burden of opioid use disorder (OUD) and other substance use disorders (SUDs) remains significant in the United States, with recent data highlighting both encouraging trends and persistent challenges.

Decline in Overdose Deaths (2024)

In a significant shift, the United States recorded a **24% decrease in overall drug overdose deaths** from October 2023 to September 2024, totalling approximately **87,000 fatalities** (CDC, 2024).

- **Opioid-specific deaths** also declined markedly from **83,140 in 2023 to 54,743 in 2024** (CDC).

- This improvement is linked to **increased availability of naloxone (Narcan)**, broader **harm reduction programs**, and **enhanced access to evidence-based treatment**.

These trends indicate progress but underscore the need for sustained public health efforts to address remaining disparities and evolving challenges.

Ongoing Challenges and Disparities

While overall overdose deaths have declined, **critical disparities and emerging risks persist**:

- **Emerging Threats:** Deaths involving **carfentanil**, a synthetic opioid far more potent than fentanyl, **rose by over 700%** from early 2023 to mid-2024 (CDC).
- **Racial and Ethnic Disparities:** Although rates fell among White individuals, **overdose deaths increased among Black non-Hispanic and Native Hawaiian or Other Pacific Islander populations** from 2022 to 2023 (CDC).
- **Access to Care:** Underserved communities still encounter **barriers to treatment**, including:
 - Limited access to culturally competent providers
 - Economic constraints
 - Geographic shortages of mental health and addiction services (SAMHSA)

These ongoing inequities highlight the urgent need for targeted interventions and health equity initiatives.

Efforts to Improve Access and Equity

To address disparities in care, the **Substance Abuse and Mental Health Services Administration (SAMHSA)** has launched several key initiatives:

- **Low-Barrier Treatment Models:** Designed to **reduce entry obstacles** and provide **flexible, person-centred care**, these models support individuals with varying needs, improving retention and engagement in treatment (SAMHSA Library).
- **Behavioural Health Equity Initiatives:** Focused on **reducing disparities**, these efforts promote culturally responsive and **evidence-based practices** tailored to underserved and marginalised communities (SAMHSA).

These strategies aim to make substance use disorder (SUD) care more inclusive, accessible, and equitable nationwide.

While the decline in overdose deaths is a positive development, the emergence of potent synthetic opioids and persistent disparities underscore the need for sustained, equitable public health interventions. Continued investment in harm reduction, culturally competent care, and targeted outreach is

essential to address the evolving landscape of substance use disorders.

CONCLUSION

Understanding the multifactorial risk determinants and vulnerable populations affected by substance use disorders (SUDs) is essential for delivering equitable, evidence-based, and person-centred care. As demonstrated in this module, SUDs emerge from a complex interplay of biological, psychological, and social factors, including genetic predisposition, co-occurring mental health disorders, adverse childhood experiences, and social determinants such as poverty, stigma, and systemic discrimination. Clinicians must recognise that certain populations, including LGBTQ+ individuals, adolescents, racial and ethnic minorities, and those involved in the criminal justice system, bear a disproportionate burden of substance-related harms. These disparities are often compounded by barriers to access, marginalisation, and trauma histories that directly influence both substance use patterns and treatment outcomes.

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