Maryland
DEPARTMENT OF HEALTH

– OD2A DOSE Data Brief ▪ No. 1 ▪ May 2025 –

KEY FINDINGS

2023 ED syndromic surveillance data on suspected non-fatal drug overdose

There were 25,529 ED visits for suspected non-fatal drug overdose, the highest since 2019.

There was a slight increase in opioid-involved (+0.3%) and stimulant-involved (+1.0%) ED visits for suspected non-fatal drug overdose since 2022.

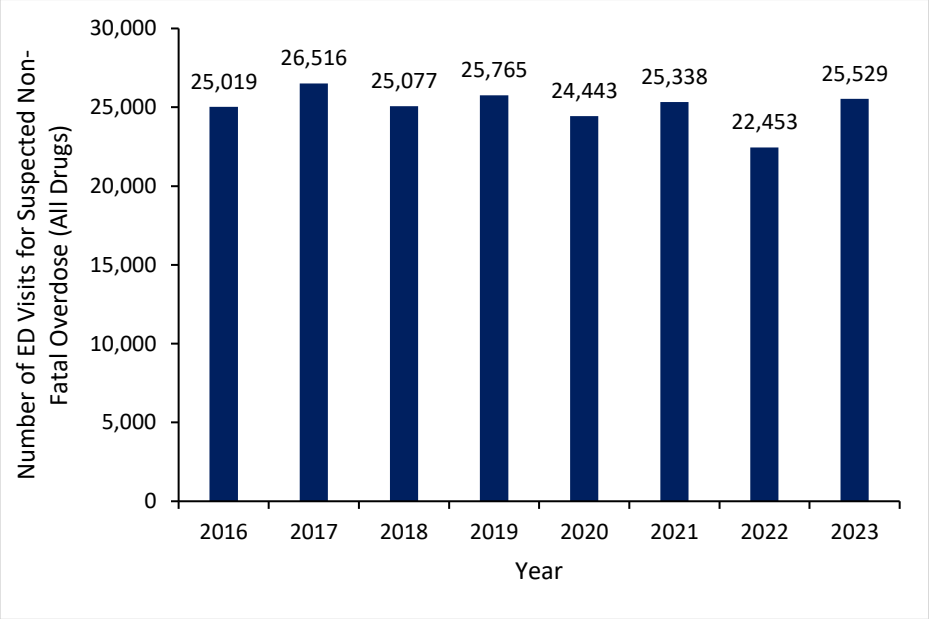
Over one-third (36.2%) of ED visits for suspected non-fatal drug overdose were opioid-involved.

ED visits for suspected non-fatal opioid overdose were highest among older NH Black adults (50-69 years), and young and middle-aged NH White adults (30-49 years).

Trends and Disparities in Suspected Non-Fatal Overdoses in Maryland – 2023

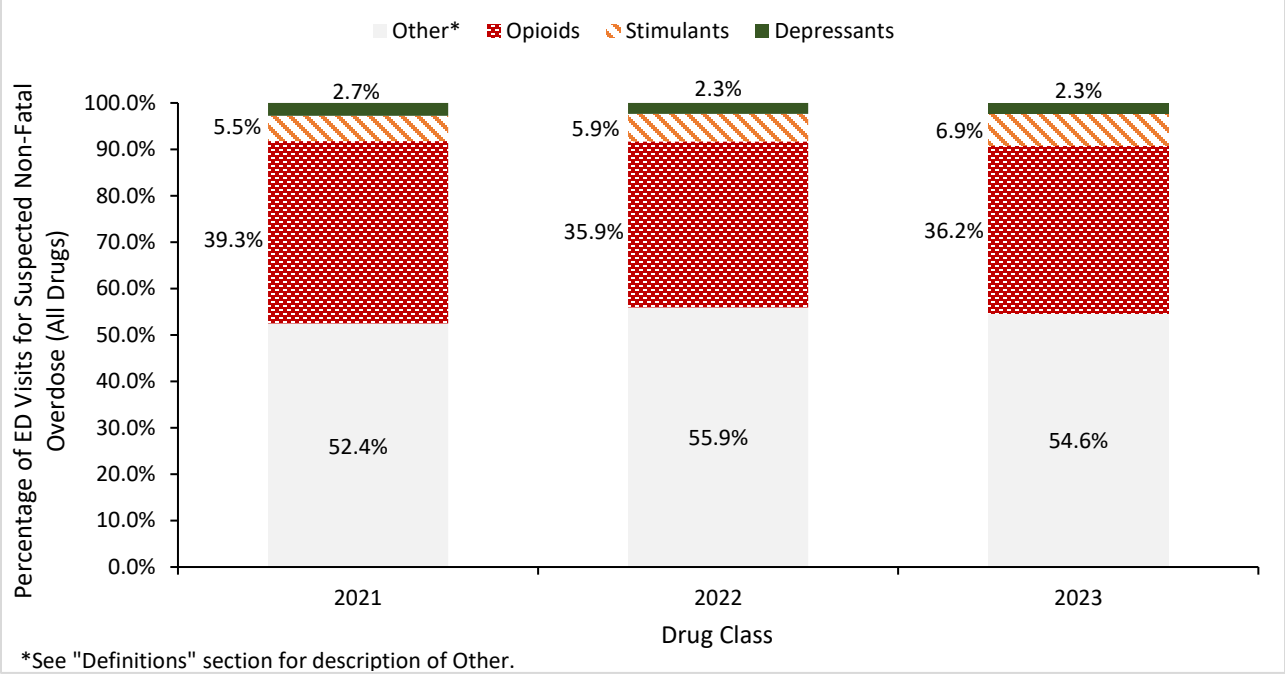
In 2023, there were 2,513 unintentional deaths due to drug and alcohol intoxication in Maryland.[1] Data on non-fatal drug overdoses can be used to reduce overdose-related morbidity and mortality. Under the Overdose Data to Action in States (OD2A-S) program's Drug Overdose Surveillance and Epidemiology (DOSE) system, Maryland collects Emergency Department (ED) syndromic surveillance data on suspected non-fatal drug overdoses, which can be used to help understand trends in overdose and emerging substances and inform interventions and prevention strategies. This brief covers findings on trends and disparities in suspected non-fatal drug overdoses across 24 jurisdictions in Maryland.

Figure 1. ED Visits for Suspected Non-Fatal Overdose (All Drugs) - Maryland, 2016-2023



In 2023, 25,529 ED visits were made for suspected non-fatal drug overdose, up 13.7% from 2022 (22,453) and 0.8% from 2021 (25,338).

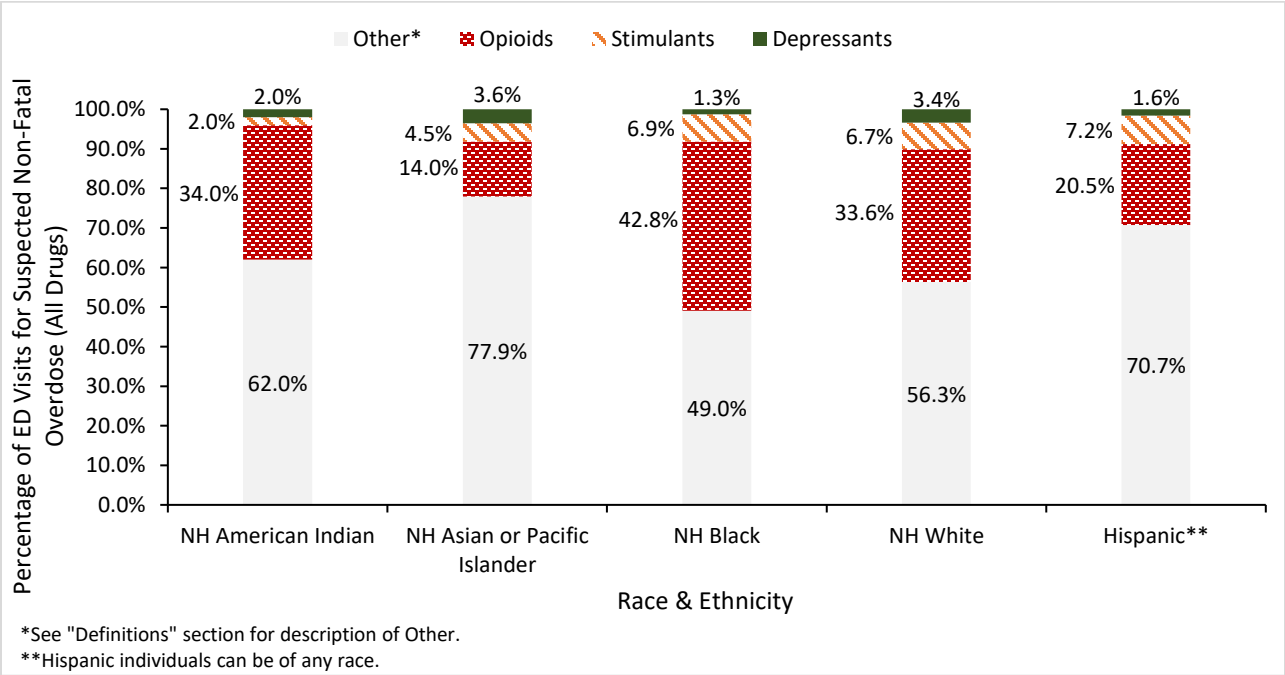
Figure 2. ED Visits for Suspected Non-Fatal Overdose by Drug Class - Maryland, 2021-2023



Out of 25,529 ED visits for suspected non-fatal drug overdose:

- 36.2% (9,245 visits) involved opioids, up 0.3% from 2022 and down 3.1% from 2021.
- 6.9% (1,753 visits) involved stimulants, up 1.0% from 2022 and up 1.4% from 2021.
- 2.3% (581 visits) involved depressants, no change from 2022 and down 0.4% from 2021.
- 54.6% (13,950 visits) involved other drugs not classified as opioids, stimulants, or depressants, down 1.3% from 2022 and up 2.2% from 2021.

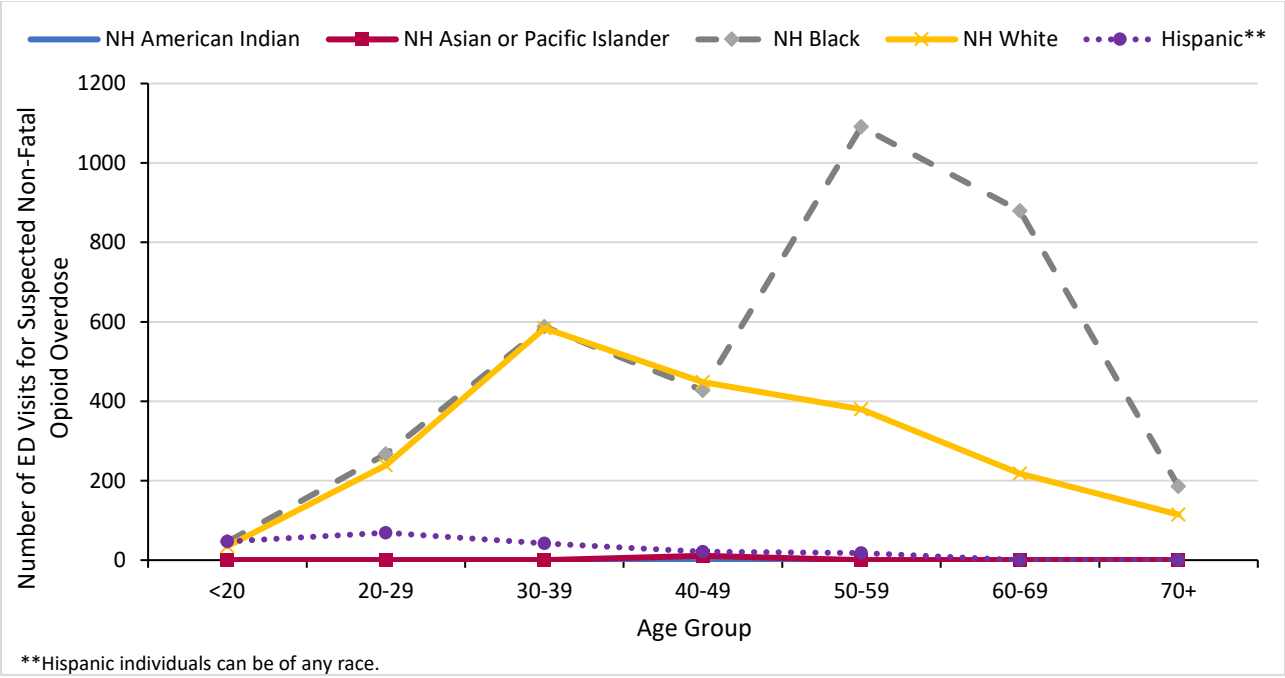
Figure 3. ED Visits for Suspected Non-Fatal Overdose by Drug Type, Race & Ethnicity – Maryland, 2023



Out of 25,529 ED visits for suspected non-fatal drug overdose:

- Among NH American Indian individuals, 34.0% of ED visits were opioid-involved, 2.0% were stimulant-involved, and 2.0% were depressant-involved.
- Among NH Asian or Pacific Islander individuals, 14.0% of ED visits were opioid-involved, 4.5% were stimulant-involved, and 3.6% were depressant involved.
- Among NH Black individuals, 42.8% of ED visits were opioid-involved, 6.9% were stimulant-involved, and 1.3% were depressant involved.
- Among NH White individuals, 33.6% of ED visits were opioid-involved, 6.7% were stimulant-involved, and 3.4% were depressant involved.
- Among Hispanic individuals, 20.5% of ED visits were opioid-involved, 7.2% were stimulant-involved and 1.6% were depressant-involved.

Figure 4. ED Visits for Suspected Non-Fatal Opioid Overdose Among Males by Race, Ethnicity and Age Group – Maryland, 2023

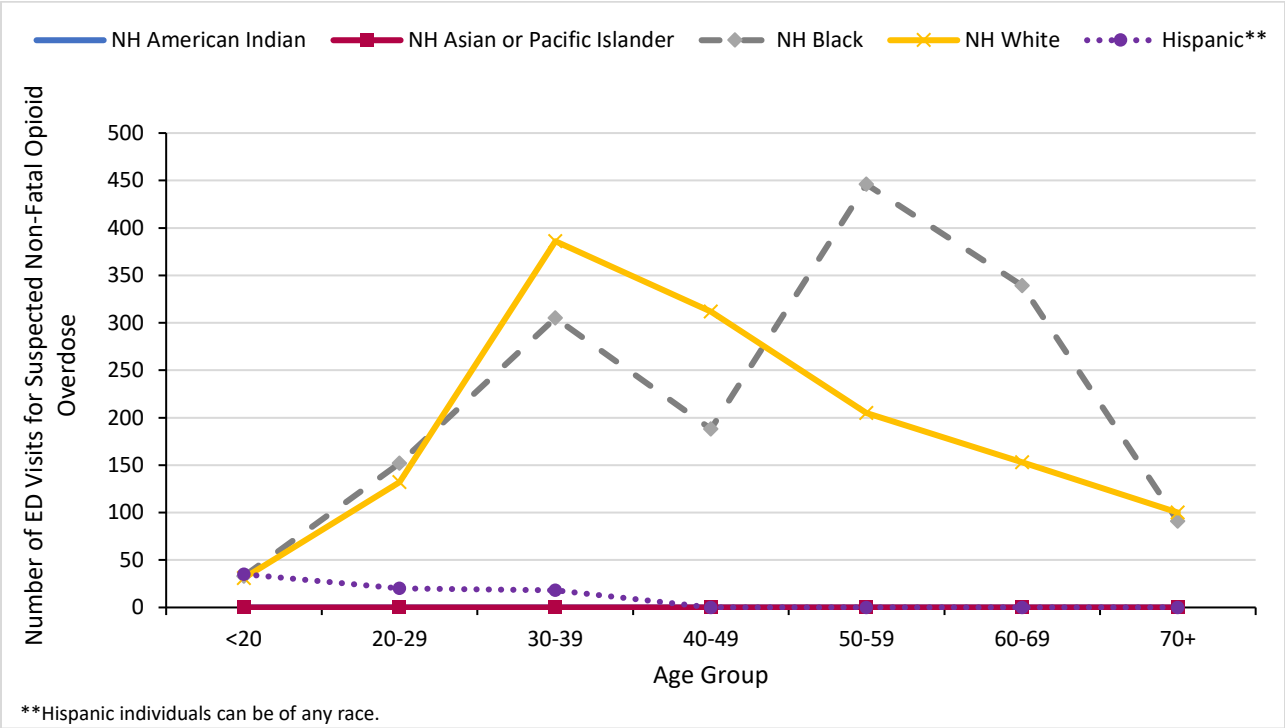


**Hispanic individuals can be of any race.

Out of 9,245 ED visits for suspected non-fatal opioid overdose, there were 5,751 ED visits among males for which race and ethnicity information was reported.

- Among males, ED visit counts were highest in the NH Black (3,484) and NH White groups (2,019).
  - Among NH Black males, visit counts peaked in the 50-59 and 60-69 age groups.
  - Among NH White males, visits were highest in the 30-39 and 40-49 age groups.
  - Among Hispanic males, visits were highest in the <20 and 20-29 age groups.

Figure 5. ED Visits for Suspected Non-Fatal Opioid Overdose Among Females by Race, Ethnicity and Age Group – Maryland, 2023



**Hispanic individuals can be of any race.

Out of 9,245 ED visits for suspected non-fatal opioid overdose, there were 2,986 ED visits among females for which race and ethnicity information was reported.

- Among females, ED visit counts were highest in the NH Black (1,554) and NH White (1,319) groups.
  - Among NH Black females, visit counts peaked in the 50-59 and 60-69 age groups.
  - Among NH White females, visits were highest in the 30-39 and 40-49 age groups.
  - Among Hispanic females, visit counts were highest in the <20 and 20-29 age groups.

SUMMARY

- In 2023, there were 25,529 ED visits for suspected non-fatal drug overdose in Maryland. ED visit counts in 2023 were at their highest since 2019 (Figure 1).
- Between 2021 and 2023, there was limited change in the percentage of ED visits for opioid-, stimulant-, and depressant-involved non-fatal drug overdose. The percentage of ED visits for stimulant-involved non-fatal overdose visits consistently increased over time, whereas the percentages of visits for opioid- and depressant-involved visits fluctuated (Figure 2).
- Opioid-involved visits constitute a significant proportion of visits for suspected non-fatal drug overdose across all racial/ethnic groups, with 42.8% of ED visits being opioid-involved among NH Black individuals, followed by 34.0% among NH American Indian individuals and 33.6% among NH White individuals (Figure 3).
- Among Hispanic individuals, the percentage of ED visits for suspected non-fatal stimulant overdose was highest compared to other races (7.2%), followed by 6.9% among NH Black individuals and 6.7% among NH Whites individuals (Figure 3).

- Among NH Asian or Pacific Islander individuals, the percentage of ED visits for suspected non-fatal depressant overdose was highest compared to other races (3.6%), followed by 3.4% among NH White individuals and 2.0% among NH American Indians (Figure 3).
- There were more ED visits for suspected non-fatal opioid overdose among males than females (Figures 4 and 5). However, comparing across race and age groups, the trends were the same for both males and females: ED visit counts were highest among older Black adults (50-69 years of age) compared to their white counterparts for whom ED visit counts were highest among young and middle-aged adults (30-49 years of age).

ABOUT OD2A-S

Overdose Data to Action in States (OD2A-S) is a multi-year cooperative agreement between the Centers for Disease Control and Prevention (CDC) and states/local jurisdictions that aims to provide a comprehensive and cohesive public health approach to the drug overdose epidemic in the U.S.[2] The goals of OD2A-S are to: enhance the ability of state health departments to track and prevent non-fatal and fatal overdoses; identify emerging drug threats, and promote evidence-based and evidence-informed interventions that have an immediate impact on reducing overdose morbidity and mortality through the collection and use of high-quality, thorough, and timely overdose morbidity and mortality surveillance data. The data collected is then used to inform policies and prevention efforts, especially those geared towards addressing health disparities and promoting health equity.[3]

OD2A-S's morbidity surveillance strategies support the collection of non-fatal overdose data through its Drug Overdose Surveillance and Epidemiology (DOSE) system.[4] The DOSE system collects emergency department (ED) syndromic surveillance data and ED and hospitalization discharge data from jurisdictions across the U.S. The DOSE system: provides timelier data on non-fatal overdoses treated in emergency departments that can be integrated into local surveillance systems, published on dashboards and in reports; identifies changes in overdose trends and emerging substances, and promotes situational awareness and readiness for a coordinated public health response at the local, state and national level.

ABOUT DOSE IN MARYLAND

At the Maryland Department of Health, the Office of Preparedness and Response (OP&R) has a dedicated DOSE team which conducts non-fatal drug overdose surveillance using a web-based syndromic surveillance system called ESSENCE.

ABOUT MD ESSENCE

MD ESSENCE (Electronic Surveillance of the Early Notification of Community-based Epidemics) is Maryland's statewide web-based syndromic surveillance platform that is utilized by the Maryland Department of Health's Office of Preparedness and Response (OP&R) and is available to local health departments (LHDs). ESSENCE receives near real-time syndromic data from traditional and non-traditional sources. This data can be queried for symptoms and syndromes and is used to detect, analyze and monitor potential events of public health interest sooner than traditional surveillance.

MD ESSENCE receives emergency department (ED) data from 49 acute care hospitals and free-standing ERs across Maryland. Syndromic classifications rely on visit information, which includes the chief

complaint (CC) and discharge diagnosis (DD). ESSENCE allows the DOSE team to collect and analyze trends in suspected non-fatal overdoses across the state of Maryland using overdose syndrome definitions provided by the CDC which are integrated into ESSENCE. These syndrome definitions query the CCDD field (a combination of the CC and DD) for terms and diagnosis codes indicating an overdose or poisoning of undetermined or unintentional intent. More information about ESSENCE and the strengths and limitations of syndromic surveillance is available at the OP&R website.

ABOUT ED DATA IN MD ESSENCE

- The original source of ED data is CRISP (Chesapeake Regional Information System for our Patients); ED records from CRISP are integrated into ESSENCE.
- MD ESSENCE captures ED data from 49 acute care hospitals and free-standing ERs in Maryland.
- ED data received includes race and ethnicity information. Race groups included are White, Black or African American, Asian, Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, Other Race and Not Reported. Ethnicities included are Hispanic or Latino, Not Hispanic or Latino and Not Reported. Hispanic individuals can be of any race.
- ED data received only includes sex as recorded by ED providers, which may or may not reflect the patient's assigned sex at birth and/or gender identity. Sex identities included in data received are male, female, and unknown.
- Jurisdictional ED data in this report is grouped by county of patient residence.
- ED data in this report is pulled from MD ESSENCE using the following CDC queries: All Drug Overdose v3 Parsed, All Opioid Overdose v4 Parsed, All Stimulant Overdose v4 Parsed, and Benzodiazepine Overdose v2 Parsed

LIMITATIONS & DISCLAIMERS

- The syndromic classification of a suspected non-fatal overdose is based on information included in the chief complaint and discharge diagnosis fields. These fields reflect reported information (e.g. substances a patient thinks they used) and provider impressions. Discharge diagnosis codes are preliminary and may not reflect the final diagnosis of a patient which would instead be reflected in hospital billing data.
- The overdose data presented in this report does not reflect overdoses confirmed through laboratory/toxicological testing.
- The queries are built using syndrome definitions, which contain key words/phrases (spelled correctly and misspelled) that ESSENCE searches for in chief complaint and discharge diagnosis data. Syndrome definitions are comprehensive and regularly revised but may not capture 100% of all overdose-related calls/visits.
- A single overdose event may involve multiple substances (e.g. opioids and stimulants), therefore, the corresponding ED visit(s) may be captured by more than one query. Counts presented in this report are not de-duplicated.
- Syndromic data is dynamic: counts/percentages/rates presented in this report reflect those available at the time of publication and may not be identical to those published prior.

DEFINITIONS

- Syndromic surveillance: monitoring and interpretation of real-time or near real-time, pre-confirmed individual and population health data for indications of disease outbreaks, illness clusters and other potential events of public health interest sooner than traditional surveillance which may rely on laboratory-confirmed diagnoses.
- Opioids: includes prescribed and illicit opioids. Overdose syndrome definition terms include opioid, heroin, dope, methadone, suboxone, oxycodone, fentanyl, hydrocodone, morphine, codeine, buprenorphine, and other common street, brand, and generic names.
- Stimulants: includes prescribed and illicit stimulants. Overdose syndrome definition terms include stimulant, cocaine, amphetamine, methamphetamine, bath salt and other common street, brand, and generic names.
- Depressants: includes prescribed and illicit benzodiazepines. Overdose syndrome definition terms include benzodiazepine, lorazepam, alprazolam, clonazepam, diazepam and other common street, brand, and generic names.
- Other: includes drugs not classified as opioids, stimulants or depressants (per above definitions), such as over-the-counter products, psychedelics, cannabinoids, dissociatives, etc.

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