

Drug-Related Hospital Emergency Room Visits

National estimates on drug-related visits to hospital emergency departments (ED) are obtained from the Drug Abuse Warning Network (DAWN),^{1,2} a public health surveillance system managed by the Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Department of Health and Human Services (HHS). DAWN data* are based on a national sample of general, non-Federal hospitals operating 24-hour Emergency Departments (EDs). Information is collected for all types of drugs—including illegal drugs, inhalants, alcohol—and abuse** of prescription and over-the-counter (OTC) medications and dietary supplements.

Highlights from the 2009 Drug Abuse Warning Network

In 2009, there were nearly 4.6 million drug-related ED visits nationwide. These visits included reports of drug abuse, adverse reactions to drugs, or other drug-related consequences. Almost 50 percent were attributed to adverse reactions to

pharmaceuticals taken as prescribed, and 45 percent involved drug abuse. DAWN estimates that of the 2.1 million drug abuse visits—

- 27.1 percent involved nonmedical use of pharmaceuticals (i.e., prescription or OTC medications, dietary supplements)
- 21.2 percent involved illicit drugs
- 14.3 percent involved alcohol, in combination with other drugs.

ED visits involving nonmedical use of pharmaceuticals (either alone or in combination with another drug) increased 98.4 percent between 2004 and 2009, from 627,291 visits to 1,244,679, respectively. ED visits involving adverse reactions to pharmaceuticals increased 82.9 percent between 2005 and 2009, from 1,250,377 to 2,287,273 visits, respectively.

The majority of drug-related ED visits were made by patients 21 or older (80.9 percent, or 3,717,030 visits). Of these, slightly less than half involved drug abuse. Patients aged 20 or younger accounted for 19.1 percent (877,802 visits) of all drug-related visits in 2009; about half of these visits involved drug abuse.

Illicit Drugs

In 2009, almost one million visits involved an illicit drug, either alone or in combination with other types of drugs. DAWN estimates that—

- cocaine was involved in 422,896 ED visits
- marijuana was involved in 376,467 ED visits
- heroin was involved in 213,118 ED visits
- stimulants, including amphetamines and methamphetamine, were involved in 93,562 ED visits
- other illicit drugs—such as PCP, ecstasy, and GHB—were involved much less frequently than any of the drug types mentioned above.

The rates of ED visits involving cocaine, marijuana, and heroin were higher for males than for females. Rates for cocaine were highest among individuals aged 35–44, rates for heroin were highest among individuals aged 21–24, stimulant use was highest among those 25–29, and marijuana use was highest for those aged 18–20.

Alcohol and Other Drugs

Approximately 32 percent (658,263) of all drug abuse ED visits in 2009 involved the use of alcohol, either alone or in combination with another drug. DAWN reports alcohol-related data when it is used alone among individuals

under the age of 21 or in combination with other drugs among all groups, regardless of age. Because DAWN does not account for ED visits involving alcohol use alone in adults, the actual number of ED visits involving alcohol among the general population is thought to be significantly higher than what is reported in DAWN.

In 2009, DAWN estimated 519,650 ED visits related to the use of alcohol in combination with other drugs. Alcohol was most frequently combined with—

- central nervous system agents (e.g., analgesics, stimulants, sedatives) (229,230 visits)
- cocaine (152,631 visits)
- marijuana (125,438 visits)
- psychotherapeutic agents (e.g., antidepressants and antipsychotics) (44,217 visits)
- heroin (43,110 visits).

While alcohol use is illegal for individuals under age 21, DAWN estimates that in 2009 there were 199,429 alcohol-related ED visits among individuals under age 21; 76,918 ED visits were reported among those aged 12 to 17, and 120,853 alcohol-related ED visits were reported among those aged 18 to 20.

Nonmedical Use of Pharmaceuticals

In 2009, 1.2 million ED visits involved the nonmedical use of pharmaceuticals or dietary supplements. The most frequently reported drugs in the nonmedical use category of ED visits were opiate/opioid analgesics, present in 50 percent of nonmedical-use ED visits; and psychotherapeutic agents, (commonly used to treat anxiety and sleep disorders), present in more than one-third of nonmedical ED visits. Included among the most frequently reported opioids were single-ingredient formulations (e.g., oxycodone) and combination forms (e.g., hydrocodone with acetaminophen). Methadone, together with single-ingredient and combination forms of oxycodone and hydrocodone, was also included under the most frequently reported opioids classification—

- hydrocodone (alone or in combination) in 104,490 ED visits
- oxycodone (alone or in combination) in 175,949 ED visits
- methadone in 70,637 ED visits.

Increases in drug-related ED visits over time.

The total number of drug-related ED visits increased 81 percent from 2004 (2.5 million) to 2009 (4.6 million). ED visits involving

nonmedical use of pharmaceuticals increased 98.4 percent over the same period, from 627,291 visits to 1,244,679.

The largest pharmaceutical increases were observed for oxycodone products (242.2 percent increase), alprazolam (148.3 percent increase), and hydrocodone products (124.5 percent). Among ED visits involving illicit drugs, only those involving ecstasy increased more than 100 percent from 2004 to 2009 (123.2 percent increase).

For patients aged 20 or younger, ED visits resulting from nonmedical use of pharmaceuticals increased 45.4 percent between 2004 and 2009 (116,644 and 169,589 visits, respectively). Among patients aged 21 or older, there was an increase of 111.0 percent.

ED visits involving adverse reactions to pharmaceuticals increased 82.9 percent between 2005 and 2009, from 1,250,377 visits to 2,287,273. The majority of adverse reaction visits were made by patients 21 or older, particularly among patients 65 or older; the rate increased 89.2 percent from 2005 to 2009 among this age group.

Data Sources

¹ Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality (formerly the Office of Applied Studies). *The DAWN Report: Highlights of the 2009 Drug Abuse Warning Network (DAWN) Findings on Drug-Related Emergency Department Visits*. Rockville, MD, December 28, 2010. Available at: <http://www.oas.samhsa.gov/2k10/DAWN034/EDHighlights.htm>.

² Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. *Drug Abuse Warning Network: Detailed Tables: National Estimates, Drug-Related Emergency Department Visits for 2004–2009*. Rockville, MD, December 28, 2010. Available at: <https://dawninfo.samhsa.gov/data/default.asp?met=All>.

Notes

* DAWN relies on longitudinal data collected from selected hospitals across the United States. Beginning in 2004, DAWN adjusted its sampling and weighting methodologies in order to improve the quality, reliability, and generalizability of its estimates. Thus, trends reported earlier than 2004 cannot be compared to more current estimates due to changes in the DAWN data collection reporting system.

** The abuse of pharmaceuticals (prescription and over-the-counter medications) is also referred to as “nonmedical use.”