Drug Abuse Warning Network

The DAWN Report

JULY 2004

Amphetamine and Methamphetamine Emergency Department Visits, 1995-2002

Although much attention has been placed on methamphetamine abuse on the west coast of the United States, recent data suggest that the problem may be spreading eastward.[1] The Drug Abuse Warning Network (DAWN) collects data on drug abuse-related emergency department (ED) visits throughout the coterminous U.S. and in selected major metropolitan areas in all 4 regions of the U.S. Therefore, DAWN may provide some insights into the eastward diffusion of methamphetamine abuse between 1995 and 2002.[2]

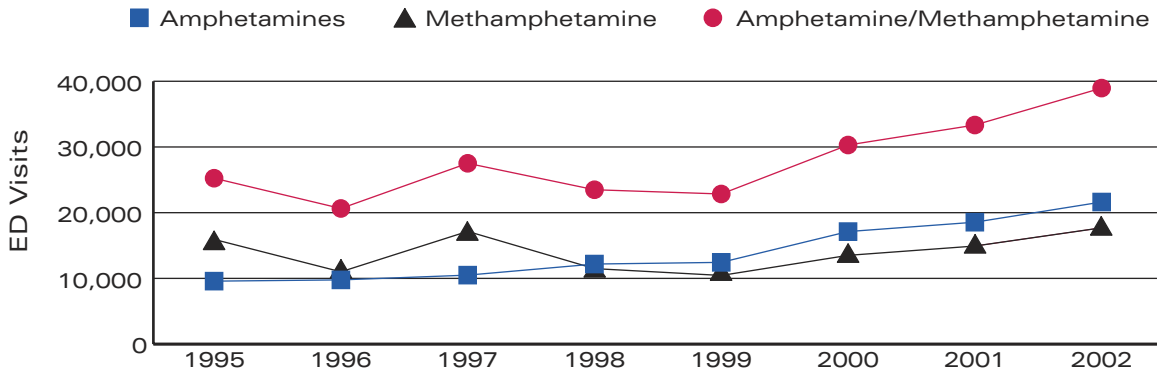
Some standard drug screens used in EDs do not differentiate between amphetamines and methamphetamine; therefore, ED visits involving either substance are included in this analysis. In DAWN, the category of amphetamines includes dextroamphetamine, methcathinone, and methyldioxyamphetamine. However, the most predominant term reported to DAWN is simply "amphetamine," which accounts for well over 90 percent of the amphetamines category.

In Brief

- According to 2002 estimates from DAWN, there were almost 39,000 drug abuse-related ED visits involving amphetamines or methamphetamine (Figure 1).
- Drug abuse-related ED visits involving amphetamines/methamphetamine increased 54 percent between 1995 and 2002 (from 25,245 to 38,961 ED visits).
- DAWN estimates show increases in amphetamine/methamphetamine-related ED visits in several metropolitan areas in the Midwest, South, and Northeast between 1995 and 2002.
- In 2002, the majority of amphetamine/methamphetamine-related ED visits involved white patients (65% of amphetamine/methamphetamine visits in 2002) and male patients (58%). More than half of ED visits involving amphetamines/methamphetamine involved patients age 18 to 34.
- More than 60 percent of ED visits involving amphetamines/methamphetamine also involved other drugs in 2002. Marijuana, alcohol, and cocaine were the most frequent substances reported in combination with amphetamines/methamphetamine.

FIGURE 1

Amphetamines, methamphetamine, and amphetamine/methamphetamine (combined) ED visits for the coterminous U.S., 1995-2002



SOURCE: Office of Applied Studies, SAMHSA, Drug Abuse Warning Network, 2002 (03/2003 update). Individual estimates for amphetamines and methamphetamine are available on the DAWN website, at http://DAWNinfo.samhsa.gov/.

TABLE 1

Rates per 100,000 population of amphetamine/methamphetamine ED visits by metropolitan area, 1995-2002

	1995	1996	1997	1998	1999	2000	2001	2002	% change 1995-2002*
TOTAL COTERMINOUS U.S.	11	9	12	10	9	12	13	15	39.9
NORTHEAST									
Boston	…	4	…	5	6	10	11	15	†
Buffalo	3	3	2	2	4	3	2	4	†
New York	1	1	1	1	1	1	1	2	81.8
Newark	1	1	1	2	2	4	6	9	573.8
Philadelphia	7	7	11	9	10	11	10	8	†
SOUTH **									
Atlanta	8	10	17	16	13	15	14	23	170.0
Baltimore	2	2	4	5	7	8	12	10	500.4
Dallas	14	10	17	21	16	19	16	12	†
Miami	1	…	2	4	3	5	4	4	232.9
New Orleans	3	4	6	6	5	10	11	16	506.9
MIDWEST									
Chicago	3	4	4	4	4	6	7	8	143.8
Detroit	7	11	9	8	4	…	11	11	†
Minneapolis	5	6	12	6	9	14	21	19	270.1
St. Louis	6	5	6	7	12	11	12	24	282.6
WEST									
Denver	30	13	32	15	21	27	26	29	†
Los Angeles	23	23	23	15	21	28	32	39	71.2
Phoenix	60	51	60	39	41	60	52	65	8.9
San Diego	47	49	78	62	62	67	62	68	43.4
San Francisco	93	75	81	49	50	59	88	91	†
Seattle	26	20	49	29	36	59	51	46	77.1

* This column denotes statistically significant ($p < 0.05$) increases and decreases between estimates for the periods noted.
** Rates for Washington, DC, were not included as 7 of the 8 years had RSEs greater than 50%.
† No statistically significant change was found between rates in 1995 and 2002.
NOTE: These estimates are based on a representative sample of non-Federal, short-stay hospitals with 24-hour EDs in the coterminous U.S. Dots (…) indicate than an estimate with an RSE greater than 50% has been suppressed.
SOURCE: Office of Applied Studies, SAMHSA, Drug Abuse Warning Network, 2002 (03/2003 update).

Geographic distribution

While DAWN does not monitor drug use per se,[3] it does measure the consequences of drug use that result in an ED visit. Among the 21 metropolitan areas monitored by DAWN, the 5 areas with the highest amphetamine/methamphetamine rates (visits per 100,000 population) were San Francisco (91), San Diego (68), Phoenix (65), Seattle (46), and Los Angeles (39).

Recent substance abuse treatment data (1992-2000) suggest that amphetamine/methamphetamine use/abuse may be spreading beyond the west coast. Specifically, the rate of treatment admissions for amphetamines/methamphetamine has increased substantially in the Midwest and, to a lesser extent, in the South.[1] DAWN estimates from 2002 support these findings, showing increases in amphetamine/methamphetamine-related ED visits in several metropolitan areas in the Midwest, South, and Northeast. However, the overall numbers in these areas remain low.

Between 1995 and 2002, 8 metropolitan areas not on the west coast have more than doubled their rates of amphetamine/methamphetamine visits: Atlanta, Baltimore, Chicago, Miami, Minneapolis, New Orleans, Newark, and St. Louis (Table 1). In most of these metropolitan areas, however, the rate in 1995 was 5 visits or less per 100,000 population. Metropolitan areas in the West—Los Angeles, San Diego, and Seattle—have

also continued to experience increases in their rates of amphetamine/methamphetamine ED visits (Table 1).

Demographic characteristics

From 1995 to 2002, amphetamine/methamphetamine-related ED visits involving patients age 6 to 17 increased 88 percent (from 2,338 to 4,394). At the same time, amphetamine/methamphetamine visits involving patients 35 and older more than doubled (from 6,199 to 12,746). Patients 35 and older made up 25 percent of visits in 1995, but increased to 33 percent of visits in 2002. The remaining 56 percent of amphetamine/methamphetamine-related ED visits in 2002 were among patients age 18 to 34.

In 2002, the majority of amphetamine/methamphetamine ED patients were male (58%). However, ED visits involving females have been rising. Females accounted for 40 percent of visits in 2002, an increase from 37 percent in 1995 (from 9,434 to 15,482 visits).

In 2002, ED visits involving amphetamine/methamphetamine most frequently involved white patients (65% of amphetamine/methamphetamine visits). These visits increased 57 percent since 1995 (from 15,987 to 25,149 visits). Hispanic patients made up the second most prevalent racial/ethnic group with 11 percent of amphetamine/methamphetamine-related visits, while black patients made up 6 percent. The estimated numbers of amphetamine/methamphetamine ED visits involving black and Hispanic patients were stable during this time period.

Characteristics of ED visits

The drug use motive in amphetamine/methamphetamine-related visits was most frequently dependence (39%), followed by psychic effects (24%).

Almost one-third of ED visits involving amphetamines/methamphetamine were attributed to an overdose (30%); one-quarter were the result of an unexpected reaction (24%). Between 1995 and 2002, patients involved in amphetamine/methamphetamine-related ED visits were most commonly treated and released (59% in 2002).

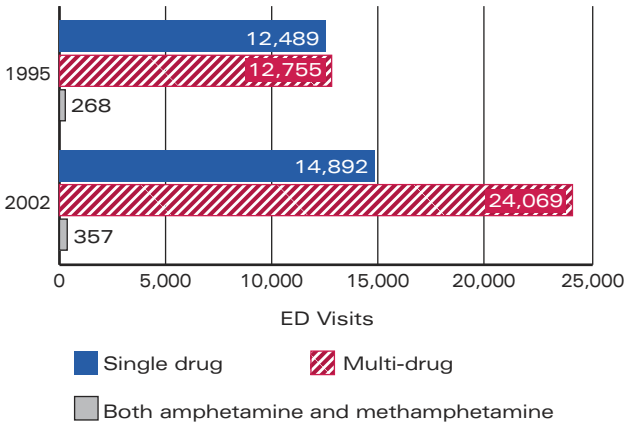
Polydrug use

In 1995, the drug-related ED visits involving amphetamines/methamphetamine were evenly split between those involving only one drug (amphetamines or methamphetamine only) and those involving multiple drugs (amphetamines and/or methamphetamine with other drugs). By 2002, 62 percent of amphetamine/methamphetamine-related visits also involved other drugs. These polydrug visits increased 89 percent since 1995 (from 12,755 to 24,069) (Figure 2).

In these ED visits, amphetamines/methamphetamine was most frequently combined with marijuana, alcohol, cocaine, benzodiazepines, opioid pain relievers, and heroin (Table 2).

FIGURE 2

Polydrug use among amphetamine/methamphetamine ED visits, 1995 and 2002



SOURCE: Office of Applied Studies, SAMHSA, Drug Abuse Warning Network, 2002 (03/2003 update).

TABLE 2

Top 10 drugs reported with amphetamines/methamphetamine in ED visits, 2002

Substances reported with amphetamines/methamphetamine	2002
Marijuana	9,351
Alcohol-in-combination	8,995
Cocaine	6,755
Benzodiazepines-NOS	3,141
Narcotic analgesics-NOS	2,957
Heroin	1,147
Barbiturates-NOS	908
Alprazolam	744
PCP	704
Acetaminophen	574

SOURCE: Office of Applied Studies, SAMHSA, Drug Abuse Warning Network, 2002 (03/2003 update).

References:

1 Substance Abuse and Mental Health Services Administration, Office of Applied Studies, (2002). Treatment Episode Data Set (TEDS): 1992-2000. *National Admissions to Substance Abuse Treatment Services* (DHHS Publication No. SMA 02-3727, DASIS Series S-17). Rockville, MD.

2 This report is based on data from Substance Abuse and Mental Health Services Administration, Office of Applied Studies. (2003). *Emergency Department Trends From Drug Abuse Warning Network, Final Estimates 1995-2002* (DHHS Publication No. SMA 03-3780, DAWN Series D-24). Rockville, MD.

3 For further information on the prevalence of methamphetamine use, please refer to the National Survey on Drug Use and Health's detailed tables. http://www.oas.samhsa.gov/nhsda/2k2nsduh/html/toc.htm

The DAWN Report is published periodically by the Office of Applied studies, Substance Abuse and Mental Health Services Administration (SAMHSA). This issue was written by Dana Lehder Roberts (OAS/SAMHSA). Other significant contributors included Dr. Judy Ball (OAS/SAMHSA).

About DAWN

The **Drug Abuse Warning Network (DAWN)** is a national public health surveillance system that collects data on drug abuse-related visits to emergency departments (EDs) and drug abuse-related deaths reviewed by medical examiners and coroners. Data on ED visits are collected from a national probability sample of non-Federal, short-stay hospitals, with oversampling in 21 major metropolitan areas. Data from the sample are used to generate estimates for the coterminous U.S. and the 21 metropolitan areas.

ED visits are reportable to DAWN if a patient between the ages of 6 and 97 was treated for a condition associated with intentional drug abuse, including recreational use, dependence, or suicide attempt. Visits involving chronic health conditions resulting from drug abuse are reportable. Abuse of prescription and over-the-counter medications is reportable. Adverse reactions associated with appropriate use of these drugs and accidental ingestion or inhalation of any drug are not reportable.

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