

The DAWN Report

November 12, 2013

Emergency Department Visits Involving Phencyclidine (PCP)

Phencyclidine, commonly known as PCP or “angel dust,” is sold illegally in many forms, including powder, crystal, tablet, capsule, and liquid.¹ Most often, it is smoked in combination with marijuana or tobacco.¹ According to the Drug Enforcement Administration (DEA), the popularity of PCP use has fluctuated since it first emerged as a drug of abuse in the late 1960s: “PCP abuse subsequently waned throughout the 1970s until the early 1980s, when abuse rose again.... It is believed that the widespread abuse and availability of crack cocaine in the late 1980s and early 1990s reduced the demand for PCP.”¹ DEA also noted that the resurgence of PCP in the 1980s was mostly among teenagers and localized in certain metropolitan areas—Baltimore, Chicago, Detroit, Los Angeles, New Orleans, New York City, San Diego, San Francisco, St. Louis, and Washington, DC.¹ Recent Drug Abuse Warning Network (DAWN) estimates for a selection of metropolitan areas indicate that there continues to be geographic variation, with the number of PCP-related emergency department (ED) visits increasing in some areas (New York City, Chicago) and remaining stable in others (Seattle, San Francisco, and Phoenix); estimates in remaining areas were too small or imprecise to report consistently.²

PCP is known to cause hallucinations similar to MDMA (3,4-methylenedioxy-N-methylamphetamine, also known as Ecstasy) and LSD (lysergic acid diethylamide), but unlike those drugs, PCP can lead to hostile behavior that may result in episodes of extreme violence.³ PCP users often feel detached or distant from their environment and can experience distorted sights and sounds.⁴ Severe symptoms of PCP use can include irregular breathing, seizures, and coma.³ Furthermore, users can become addicted to PCP and experience anxiety and suicidal ideation.¹ Individuals experiencing negative health effects after using PCP may seek treatment or be brought by law enforcement to the ED for immediate care.

ED visits associated with PCP use are tracked through DAWN—a public health surveillance system that monitors drug-related ED



IN BRIEF

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The largest increase in PCP-related ED visits was seen among patients aged 25 to 34, an increase of more than 500 percent from 2005 to 2011 (from 5,556 to 34,329 visits)

In 2011, about two thirds (69 percent) of PCP-related ED visits were made by males, and nearly half (45 percent) were made by persons aged 25 to 34

Other illicit drugs, such as marijuana, cocaine, and heroin, were involved in approximately half (48 percent) of PCP-related ED visits in 2011

visits in the United States. To be a DAWN case, the ED visit must have involved a drug, either as the direct cause of the visit or as a contributing factor. Drug involvement must be documented in the ED record, but DAWN does not require that all reported drugs be confirmed by laboratory testing. Data are collected on numerous illicit drugs, including cocaine, marijuana, heroin, and stimulants (e.g., amphetamines and methamphetamines) as well as pharmaceutical products, such as prescribed and over-the-counter medications. Data are also collected for visits involving alcohol combined with other drugs. For patients aged 20 or younger, data are collected on alcohol when it is the only substance involved in the visit. This issue of *The DAWN Report* examines recent trends in PCP-related ED visits and highlights characteristics of such visits in 2011.

Trends in PCP-Related ED Visits

Overall, the estimated number of PCP-related ED visits increased more than 400 percent between 2005 and 2011 (from 14,825 to 75,538 visits); more recently, the number of these visits doubled between 2009 and 2011 (from 36,719 to 75,538; Figure 1). In comparison, ED visits involving other hallucinogens—specifically MDMA (Ecstasy) and LSD—increased to a lesser extent between 2005 and 2011. MDMA-related ED visits increased 100 percent (from 11,287 to 22,498 visits), and LSD-related ED visits increased 141 percent (from 2,001 to 4,819 visits).

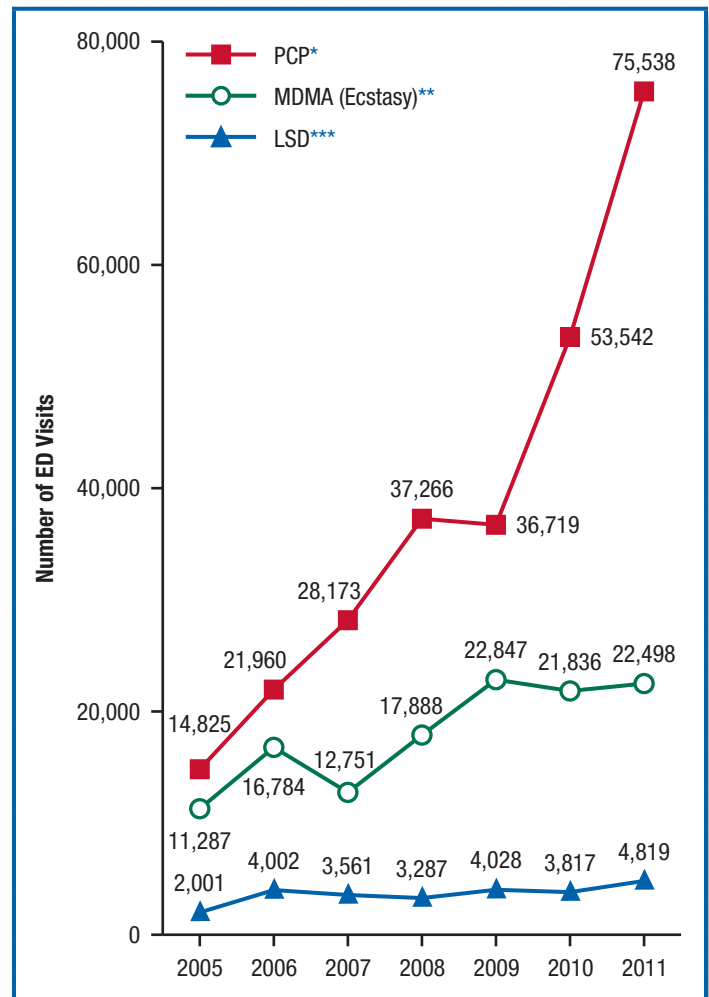
Increases in PCP-related ED visits were seen among people of both genders. The sharpest increase occurred between 2009 and 2011, with ED visits by males nearly doubling and visits by females more than doubling. Between 2005 and 2011, PCP-related ED visits by males increased nearly fivefold (from 10,721 to 51,906 visits), and visits by females increased nearly sixfold (from 4,007 to 23,598 visits; Figure 2).

Increases were also observed for young adults. The largest increase by age group was seen among patients aged 25 to 34; in this age group, the number of PCP-related visits increased 518 percent (from 5,556 visits to 34,329) (Table 1). Also, visits by adults aged 18 to 24 increased 289 percent (from 3,643 visits to 14,175).

There were no statistically significant increases for the other age groups.

Increases in PCP-related visits involving young adults were also observed for male patients aged 18 to 24 and 25 to 34. For females, the increase only occurred among patients aged 25 to 34, although it was substantial (from 1,189 visits in 2005 to 12,570 in 2011) (Figure 3). Because of low statistical precision, trends for males and females in other age groups could not be evaluated.

Figure 1. Emergency Department (ED) Visits Involving Phencyclidine (PCP), MDMA (Ecstasy), and LSD, by Year: 2005 to 2011



* The number of visits involving PCP in 2005, 2006, 2007, 2008, 2009, and 2010 is significantly different from 2011 at the .05 level.

** The number of visits involving MDMA (Ecstasy) in 2005 and 2007 is significantly different from 2011 at the .05 level.

*** The number of visits involving LSD in 2005 is significantly different from 2011 at the .05 level.

Source: 2005 to 2011 SAMHSA Drug Abuse Warning Network (DAWN).

PCP-Related ED Visits in 2011

In 2011, about two thirds (69 percent) of the 75,538 ED visits involving PCP were made by males. Visits made by patients aged 25 to 34 accounted for nearly half (45 percent) of PCP-related ED visits; visits made by those aged 18 to 24 and those aged 35 to 44 each accounted for 19 percent of visits.

Approximately 7 out of 10 (72 percent) PCP-related visits involved other drugs combined with PCP (Figure 4). PCP was combined with one other substance in 37 percent of visits, with two other substances in 18 percent of visits, and with three or

Table 1. Emergency Department (ED) Visits Involving Phencyclidine (PCP), by Age* and Year: 2005 vs. 2011

Age Group	Number of ED Visits, 2005	Number of ED Visits, 2011	Percent Change, 2005 to 2011
Total ED Visits	14,825	75,538	410%
Aged 12 to 17	691	1,965	184%
Aged 18 to 24**	3,643	14,175	289%
Aged 25 to 34**	5,556	34,329	518%
Aged 35 to 44	3,651	14,606	300%
Aged 45 or Older	***	***	***

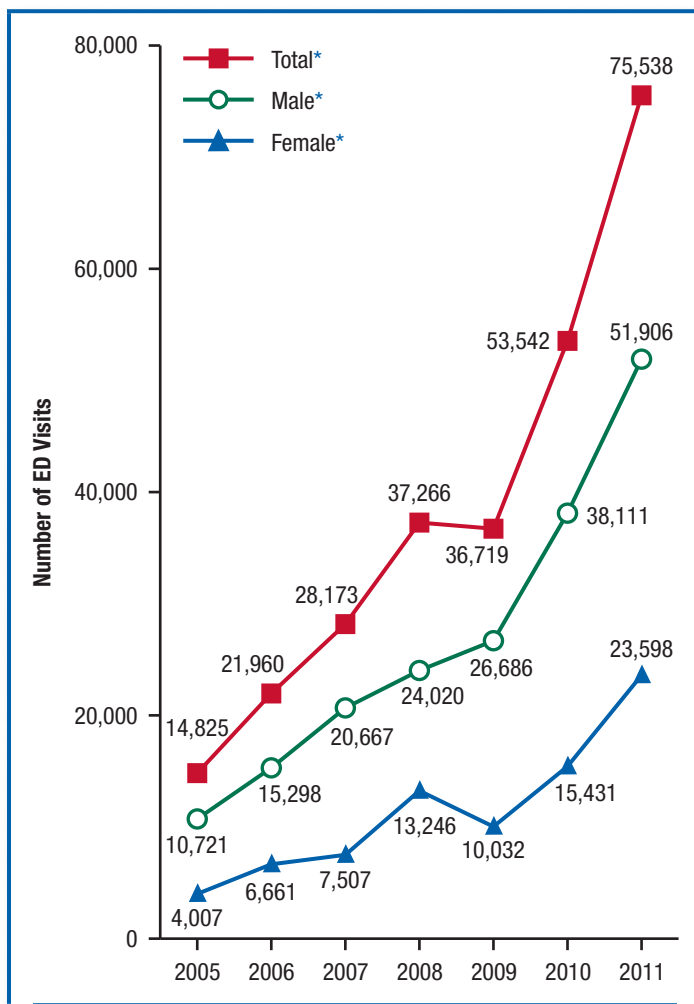
* ED visits for which age is unknown have been excluded.

** The difference between 2005 and 2011 is statistically significant at the .05 level.

*** Low precision; no estimate reported.

Source: 2005 to 2011 SAMHSA Drug Abuse Warning Network (DAWN).

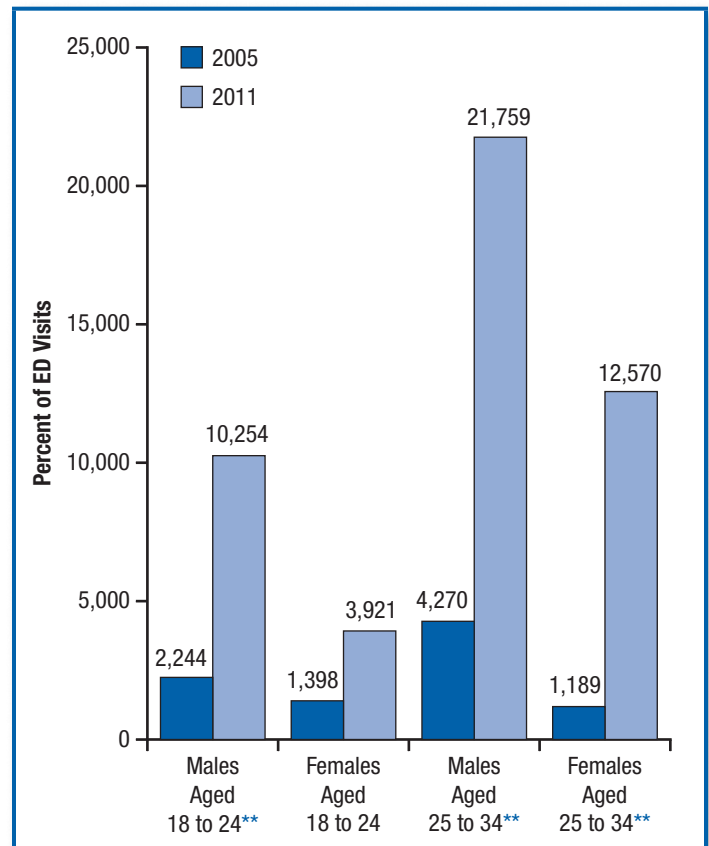
Figure 2. Emergency Department (ED) Visits Involving Phencyclidine (PCP), by Gender and Year: 2005 to 2011



* The difference between 2005 and 2011 is statistically significant at the .05 level.

Source: 2005 to 2011 SAMHSA Drug Abuse Warning Network (DAWN).

Figure 3. Emergency Department (ED) Visits Involving Phencyclidine (PCP), by Gender, Age Group*, and Year: 2005 vs. 2011



* ED visits for which age and gender are unknown have been excluded.

** The difference between 2005 and 2011 is statistically significant at the .05 level.

Source: 2005 to 2011 SAMHSA Drug Abuse Warning Network (DAWN).

more other substances in 18 percent of visits. About one quarter of the PCP-related visits in 2011 involved PCP only (28 percent).

About half of the PCP-related visits in 2011 involved PCP combined with other illicit drugs (48 percent); one third involved marijuana (32 percent), and one fifth involved cocaine (20 percent) (Table 2). About 27 percent involved PCP and pharmaceuticals such as pain relievers (16 percent) and anti-anxiety and insomnia medications (13 percent). These pharmaceuticals, which have a sedative effect on the body, can interact dangerously with PCP.⁵

Discussion

The recent increase in ED visits involving PCP is of particular concern because within the class of illicit drugs that cause hallucinations, PCP is reputed to be the most dangerous and is especially known for causing violent behavior.¹ Although PCP may have once been recognized in the general population as a dangerous

drug, potential users today may be less likely to know of these risks because of “generational forgetting.”⁶ Findings from the National Forensic Laboratory Information System (NFLIS), which collects data from Federal, State, and local forensic laboratories, support the DAWN finding that PCP abuse is reemerging. In 2011, PCP was ranked 19th on the NFLIS list of the 25 most frequently reported drugs, with an estimated 6,151 total reports.⁷ Although DAWN is not capable of producing valid regional estimates, metropolitan area estimates suggest that the distribution of ED visits involving PCP and patterns of PCP use are not geographically uniform.²

Based on the DAWN findings, prevention efforts could include warnings about the use of PCP and additional efforts to target adults aged 25 to 34. Increased efficiency might result from geographic targeting of prevention and treatment efforts based on additional studies. Describing common drug combinations with PCP in prevention campaigns may also help to raise

Figure 4. Number of Substances in Emergency Department (ED) Visits Involving Phencyclidine (PCP): 2011

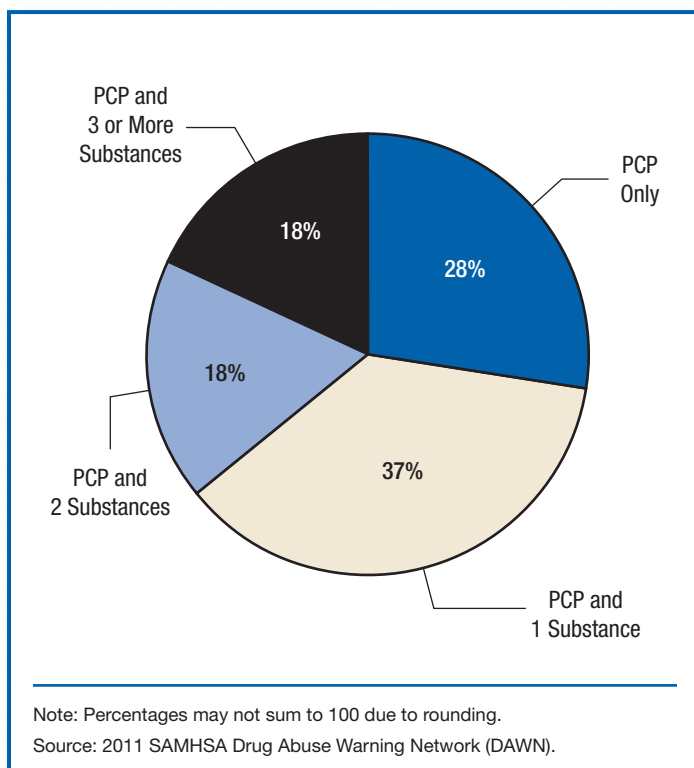


Table 2. Selected Drug Combinations among Emergency Department (ED) Visits Involving Phencyclidine (PCP): 2011

Drug Category	Number of ED Visits	Percentage of Visits*
Total ED Visits	75,538	100
In Combination with Alcohol	**	**
In Combination with Other Illicit Drugs	36,053	48
Marijuana	23,965	32
Cocaine	14,964	20
Heroin	3,795	5
In Combination with Pharmaceuticals	20,486	27
Pain Relievers	12,089	16
Narcotic Pain Relievers***	4,038	5
Anti-anxiety and Insomnia Medications	9,806	13
Benzodiazepines	9,530	13

* Because multiple drugs may be involved in each visit, estimates of visits by drug may add to more than the total, and percentages may add to more than 100 percent.

** Low precision; no estimate reported

*** Narcotic pain relievers include common brand names such as Vicodin®, Percocet®, OxyContin®, and Darvon®.

Source: 2011 SAMHSA Drug Abuse Warning Network (DAWN).

awareness that tobacco or marijuana can be laced with PCP; DAWN data show that one third of PCP-related ED visits in 2011 involved marijuana.

By recognizing the signs and symptoms of PCP intoxication, health care providers—especially those on the front lines of emergency care—can help to ensure that patients who come into medical facilities receive immediate and appropriate care. For ED personnel in metropolitan areas with high rates of illicit drug use, heightened awareness of the reemergence of PCP may be especially useful for assessing patients who present with violent or suicidal behavior.

End Notes

1. U.S. Department of Justice, Drug Enforcement Administration. (2003). PCP: The threat remains. *Microgram Bulletin*, 36(8), 181-190.
2. Substance Abuse and Mental Health Services Administration. (2013). *DAWN 2011 emergency department Excel files—Metro tables*. Retrieved from <http://www.samhsa.gov/data/DAWN.aspx#DAWN2011EDExcelFiles-MetroTables>
3. Bey, T., & Patel, A. (2007). Phencyclidine intoxication and adverse effects: A clinical and pharmacological review of an illicit drug. *California Journal of Emergency Medicine*, 8(1), 9-14.
4. National Institute on Drug Abuse. (2009, June). *DrugFacts: Hallucinogens—LSD, peyote, psilocybin, and PCP*. Retrieved from <http://www.drugabuse.gov/publications/drugfacts/hallucinogens-ld-psy-pte-psylo-eybin-pcp>
5. The Partnership at Drugfree.org. (2013). *Drug guide: PCP*. Retrieved from <http://www.drugfree.org/drug-guide/pcp>
6. Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2011). *Monitoring the Future national results on adolescent drug use: Overview of key findings, 2010*. Retrieved from <http://monitoringthefuture.org/pubs/monographs/mtf-overview2010.pdf>
7. U.S. Department of Justice, Drug Enforcement Administration, Office of Diversion Control. (2012, September). *National Forensic Laboratory Information System: 2011 annual NFLIS report*. Retrieved from http://www.deadiversion.usdoj.gov/nflis/2011annual_rpt.pdf

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The Substance Abuse and Mental Health Services Administration (SAMHSA) is the agency within the U.S. Department of Health and Human Services that leads public health efforts to advance the behavioral health of the nation. SAMHSA's mission is to reduce the impact of substance abuse and mental illness on America's communities.

The Drug Abuse Warning Network (DAWN) is a public health surveillance system that monitors drug-related morbidity and mortality. DAWN uses a probability sample of hospitals to produce estimates of drug-related emergency department (ED) visits for the United States and selected metropolitan areas annually. DAWN also produces annual profiles of drug-related deaths reviewed by medical examiners or coroners in selected metropolitan areas and States.

Any ED visit related to recent drug use is included in DAWN. All types of drugs—licit and illicit—are covered. Alcohol involvement is documented for patients of all ages if it occurs with another drug. Alcohol is considered an illicit drug for minors and is documented even if no other drug is involved. The classification of drugs used in DAWN is derived from the Multum *Lexicon*, copyright 2012 Lexi-Comp, Inc., and/or Cerner Multum, Inc. The Multum Licensing Agreement governing use of the *Lexicon* can be found at <http://www.samhsa.gov/data/DAWN.aspx>.

DAWN is one of three major surveys conducted by SAMHSA's Center for Behavioral Health Statistics and Quality (CBHSQ). For more information on other CBHSQ surveys, go to <http://www.samhsa.gov/data/>. SAMHSA has contracts with Westat (Rockville, MD) and RTI International (Research Triangle Park, NC) to operate the DAWN system and produce publications.

For publications and additional information about DAWN, go to <http://www.samhsa.gov/data/DAWN.aspx>.



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