

# The DAWN Report

July 26, 2012

## Drug-Related Emergency Department Visits Involving Pharmaceutical Misuse or Abuse by Older Adults: 2009

### In Brief

- In 2004, there were an estimated 115,798 emergency department (ED) visits involving pharmaceutical misuse or abuse by adults aged 50 or older; in 2009, there were 300,082 such visits, representing an increase of 159 percent
- Among older adults, a 45 percent increase occurred between 2008 and 2009 for visits involving misuse or abuse of oxycodone, a narcotic pain reliever
- In 2009, the largest percentage (33 percent) of ED visits involving pharmaceutical misuse or abuse were among adults aged 50 to 54
- Among patients aged 50 or older who visited the ED for pharmaceutical misuse or abuse, half (54 percent) were treated and released, and one third (36 percent) were admitted to the hospital

A previously published *The DAWN Report* showed that emergency department (ED) visits involving pharmaceutical misuse or abuse among adults aged 50 or older (hereafter referred to as “older adults”) increased from 2004 to 2008.<sup>1</sup> As the baby boom generation ages in the United States, the health care and substance abuse treatment systems must prepare for an increase in the number of older adults who have substance use disorders and related health problems.<sup>2</sup> In particular, older patients with chronic health conditions or multiple drug regimens may require urgent care in an ED and further monitoring in a hospital setting if they also misuse or abuse pharmaceuticals. This report highlights new findings and provides updated statistics for ED visits involving pharmaceutical misuse or abuse among older adults.

The Drug Abuse Warning Network (DAWN) is a public health surveillance system that monitors drug-related ED

visits in the United States. To be a DAWN case, an ED visit must have involved a drug, either as the direct cause of the visit or as a contributing factor. This report describes visits involving the misuse or abuse of pharmaceuticals,<sup>3</sup> encompassing prescription drugs, over-the-counter medications, and supplements, by older adults. Trends between 2004 and 2009 are described, as well as selected characteristics of such visits in 2009.

## Overall Trends

The number of ED visits involving pharmaceutical misuse or abuse by older adults has steadily increased since 2004 (Figure 1). Specifically, the number of visits increased 159 percent among this age group between 2004 and 2009 (115,798 vs. 300,082 visits) and 17 percent between 2008 and 2009 (255,953 vs. 300,082 visits). In comparison, visits involving pharmaceutical misuse or abuse by younger patients aged 12 to 49 increased 85 percent

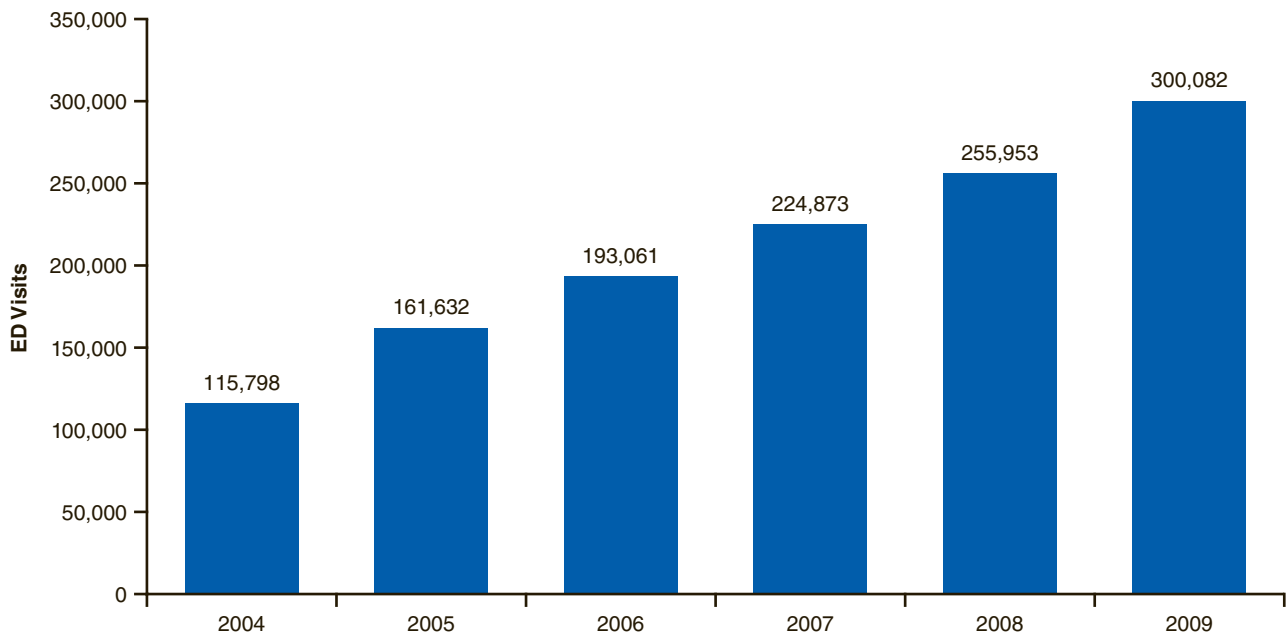
between 2004 and 2009 (502,901 vs. 931,318 visits), and the change from 2008 to 2009 was not statistically significant (860,413 vs. 931,318 visits).

Because the population of older adults has increased over time, an increase in the number of ED visits involving pharmaceutical misuse or abuse among this age group is expected to occur. However, when population growth is taken into account, the increase in ED visits cannot be attributed solely to an increase in the population size. That is, population rates confirm the increase for older adults. Specifically, population rates increased from 2004 to 2009 (135.1 vs. 308.6 visits per 100,000 population) and from 2008 to 2009 (269.6 vs. 308.6 visits per 100,000 population).

## Trends in Drug Involvement

Pain reliever involvement in ED visits for pharmaceutical misuse or abuse by older adults increased 27 percent between 2008 and 2009 (from 111,360 to 141,709 visits); narcotic pain

**Figure 1. Emergency Department (ED) Visits for Pharmaceutical Misuse or Abuse among Adults Aged 50 or Older: 2004 to 2009**



Source: 2004 to 2009 SAMHSA Drug Abuse Warning Network (DAWN).

reliever involvement increased 17 percent (Table 1). The increase in visits involving a specific narcotic pain reliever, oxycodone (45 percent increase), contributed substantially to the overall increase. Although visits involving acetaminophen accounted for a much smaller number of visits, such visits increased 60 percent from 2008 to 2009.

Anti-anxiety and insomnia drug involvement in ED visits for pharmaceutical misuse or abuse by older adults increased 18 percent between 2008 and 2009 (from 81,413 to 96,019 visits). This percent increase was similar to that of all visits between 2008 and 2009 (from 255,953 to 300,082 visits).

### Visits by Gender and Age

Among older adult patients visiting the ED in 2009, about half of visits for pharmaceutical misuse or abuse occurred among females (53 percent). One third (33 percent) of visits for pharmaceutical misuse or abuse were made by those aged 50 to 54 (Table 2). Visits by adults aged 55 to 59 accounted for 23 percent of such

visits, and 20 percent were made by adults aged 70 or older.

Table 2 shows population rates, which take into consideration the population size of each age group. Adults aged 50 to 54 had a higher rate (449.9 visits per 100,000 population) than any other age group. Although adults aged 70 or older had a higher number of visits than adults aged 60 to 64 or adults aged 65 to 69, the population rate was not higher (212.3 vs. 276.9 and 240.1 visits per 100,000 population, respectively).

### Disposition of ED Visits

Among patients aged 50 or older who visited the ED for pharmaceutical misuse or abuse, more than half (54 percent) were treated and released, and more than one third (36 percent) were admitted to the hospital. Of those admitted to the hospital, 71,208 were admitted to an inpatient unit (66 percent), 25,995 (24 percent) were admitted to an intensive care unit, and 10,518 (10 percent) were admitted to a chemical dependency/detoxification or psychiatric unit.

**Table 1. Trends for Drugs Involved in Emergency Department (ED) Visits for Pharmaceutical Misuse or Abuse among Adults Aged 50 or Older: 2008 and 2009**

	Estimated Number of ED Visits, 2008	Percentage of ED Visits, 2008*	Estimated Number of ED Visits, 2009	Percentage of ED Visits, 2009*	Percent Increase in Number of Visits**
<b>Total ED Visits</b>	255,953	100	300,082	100	17
Pain Relievers	111,360	44	141,709	47	27
Narcotic Pain Relievers	86,699	34	101,836	34	17
Oxycodone	27,405	11	39,736	13	45
Acetaminophen Products	5,119	2	8,183	3	60
Anti-anxiety and Insomnia Drugs	81,413	32	96,019	32	18

\* 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.

\*\* Drugs with no statistically significant increase in ED visit involvement between 2008 and 2009 are not listed in the table.

Source: 2008 and 2009 SAMHSA Drug Abuse Warning Network (DAWN).

## Discussion

The recent increase in ED visits for pharmaceutical misuse or abuse by older adults can be used to guide drug use prevention activities among this growing population. Because many substance abuse treatment and prevention programs were designed for adolescents and young adults, new approaches to treating substance abuse in older adults may help address these trends.<sup>4</sup> Specifically, prevention messages that target older adults could warn against the misuse of pain relievers and anti-anxiety and insomnia drugs. With one fifth of ED visits by older adults that involve pharmaceutical misuse or abuse occurring among adults aged 70 or older, caregivers (e.g., adult children of aging parents) may be an appropriate target audience for pharmaceutical misuse prevention messages. Adults aged 50 to 54 may also need targeted messages regarding medications that can potentially lead to dependency because this age group had the highest rate of ED visits for misuse or abuse of pharmaceuticals.

The results in this report suggest that pharmacy and medical personnel, as well as behavioral health specialists (e.g., social workers, psychologists, and psychiatrists), should be mindful of warning signs of prescription drug misuse or abuse by older adults. Also, physicians can be extra vigilant in obtaining information on all pharmaceutical use, especially when new medications are prescribed, and can suggest that older patients bring a list of medications or their medication containers to visits if recall is an issue. These measures can help decrease medical costs associated with drug misuse or abuse in older adults and prevent life-threatening drug interactions and dependency.

### End Notes

- <sup>1</sup> Center for Behavioral Health Statistics and Quality. (November 25, 2010). *The DAWN Report: Drug-related emergency department visits involving pharmaceutical misuse and abuse by older adults*. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- <sup>2</sup> Colliver, J. D., Compton, W. M., Gfroerer, J. C., & Condon, T. (2006). Projecting drug use among aging baby boomers in 2020. *Annals of Epidemiology*, 16(4), 257-265.
- <sup>3</sup> This includes visits in which patients took a higher than prescribed or recommended dose of their own medication, patients took a pharmaceutical prescribed for another person or obtained it illegally, and patients were maliciously poisoned by another individual, as well as those in which the ED record specifically documented substance abuse involving pharmaceuticals. It also includes any instances in which the patient took an illegal drug or alcohol in combination with a pharmaceutical.
- <sup>4</sup> Han, B., Gfroerer, J. C., Colliver, J. D., & Penne, M. A. (2009). Substance use disorder among older adults in the United States in 2020. *Addiction*, 104(1), 88-96.

### Suggested Citation

Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (July 26, 2012). *The DAWN Report: Drug-Related Emergency Department Visits Involving Pharmaceutical Misuse or Abuse by Older Adults: 2009*. Rockville, MD.

**Table 2. Emergency Department (ED) Visits Involving Pharmaceutical Misuse or Abuse among Adults Aged 50 or Older, Number and Rate per 100,000 Population by Age Group: 2009**

	Estimated Number of ED Visits	Percentage of ED Visits	Rate per 100,000 Population*
<b>Total ED Visits</b>	300,082	100	308.6
Aged 50 to 54	99,157	33	449.9**
Aged 55 to 59	68,452	23	354.7
Aged 60 to 64	44,809	15	276.9
Aged 65 to 69	29,139	10	240.1
Aged 70 or Older	58,524	20	212.3

\* Rates take into consideration the population size of each group; therefore, variation in the number of ED visits between groups may be due to differences in population size if groups have similar population rates.

\*\*The rate for visits among patients aged 50 to 54 is statistically significantly higher than any other age group at the .05 level.

Source: 2009 SAMHSA Drug Abuse Warning Network (DAWN).

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Findings from SAMHSA's 2009 Drug Abuse Warning Network (DAWN)

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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 2010 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 the Substance Abuse and Mental Health Services Administration's Center for Behavioral Health Statistics and Quality (SAMHSA/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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