

The DAWN Report

November 25, 2010

Drug-Related Emergency Department Visits Involving Pharmaceutical Misuse and Abuse by Older Adults

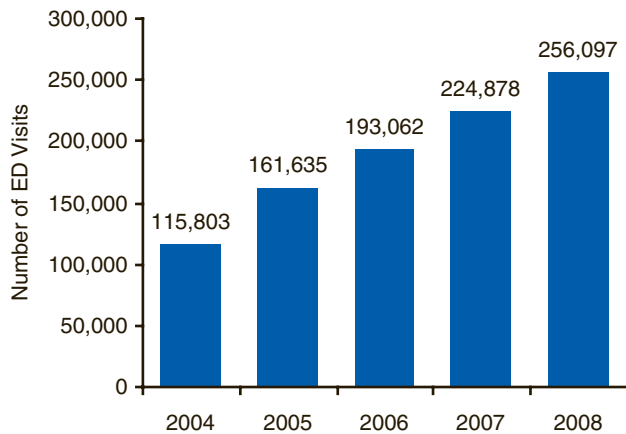
In Brief

- In 2004, there were an estimated 115,803 emergency department (ED) visits involving pharmaceutical misuse and abuse by adults aged 50 or older; in 2008, there were 256,097 such visits, representing an increase of 121.1 percent
- One fifth (19.7 percent) of ED visits involving pharmaceutical misuse and abuse among older adults were made by persons aged 70 or older
- Among ED visits made by older adults, pain relievers were the type of pharmaceutical most commonly involved (43.5 percent), followed by drugs used to treat anxiety or insomnia (31.8 percent) and antidepressants (8.6 percent)
- Among patients aged 50 or older who visited the ED for pharmaceutical misuse or abuse, more than half (52.3 percent) were treated and released, and more than one third (37.5 percent) were admitted to the hospital

As the baby boom generation ages, a large cohort of older adults with a history of moderate to high rates of drug use may levy a costly burden on the American health care and substance abuse treatment systems. In fact, researchers have predicted that both the number of adults aged 50 or older with a substance use disorder and the rate of pharmaceutical misuse or abuse in this age group will double by 2020.^{1,2} Data from the National Survey on Drug Use and Health (NSDUH) confirm that the rates of nonmedical pharmaceutical use among adults aged 50 to 59 increased from 2.2 percent in 2002 to 3.9 percent in 2009.³

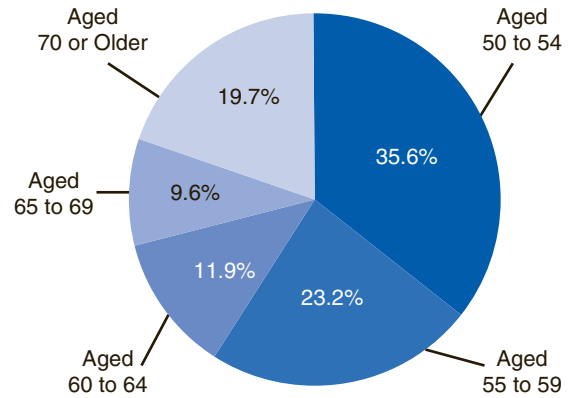
The Drug Abuse Warning Network (DAWN) is a public health surveillance system that monitors drug-related emergency department (ED) visits in the United States.⁴ To be a DAWN case, an ED visit must have involved a drug, either as the direct cause of the visit or as a contributing factor. This issue of *The DAWN Report* provides trend statistics from 2004 through 2008 with a focus on 2008 findings concerning ED visits involving pharmaceutical misuse or abuse by adults aged 50 or older (hereafter referred to as “older adults”).

Figure 1. Emergency Department (ED) Visits for Pharmaceutical Misuse or Abuse among Adults Aged 50 or Older: 2004 to 2008



Source: 2004 to 2008 SAMHSA Drug Abuse Warning Network (DAWN).

Figure 2. Emergency Department (ED) Visits Involving Pharmaceutical Misuse or Abuse among Adults Aged 50 or Older, by Age Group: 2008



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

Overview

In 2004, there were an estimated 115,803 ED visits involving pharmaceutical misuse and abuse by older adults (Figure 1). In 2008, there were 256,097 such visits, representing an increase of 121.1 percent.

Age, Gender, and Race/Ethnicity

Of ED visits involving pharmaceutical misuse or abuse by older adults, more than one third (35.6 percent) were made by those aged 50 to 54 (Figure 2). Visits by adults aged 55 to 59 accounted for 23.2 percent of such visits, and 19.7 percent were made by adults aged 70 or older.

Slightly more of these ED visits were made by females (53.6 percent) than by males. The majority of such visits were made by older non-Hispanic white adults (78.1 percent), 15.2 percent were made by older non-Hispanic black adults, and 5.2 percent were made by older Hispanic adults.

Drugs Involved in ED Visits by Age Group

Pain relievers were the type of pharmaceutical most commonly involved (43.5 percent) in ED visits by older adults; the majority of these visits involved narcotic pain relievers (33.9 percent) (Table 1). After pain relievers, drugs used to treat anxiety or insomnia (31.8 percent) and antidepressants (8.6 percent) were the most commonly reported for such visits.

Pain relievers were involved in 45.4 percent of visits by those aged 50 to 64 and 38.8 percent of visits by those aged 65 or older. Drugs used to treat anxiety or insomnia were involved more commonly in visits made by patients aged 50 to 64 than those made by patients aged 65 or older (35.6 vs. 22.5 percent). Antidepressants were involved in 10.1 percent of drug-related ED visits made by those aged 50 to 64 and 5.0 percent of visits by those aged 65 or older.

Alcohol in Combination with Pharmaceuticals

One in five (20.4 percent) ED visits related to pharmaceutical misuse or abuse by older adults also involved alcohol (Table 1). Visits involving alcohol in combination with pharmaceuticals were more likely to be made by adults aged 50 to 64 than by adults aged 65 or older (24.9 vs. 9.5 percent). Specifically, in comparison with patients aged 65 or older, patients aged 50 to 64 had a higher proportion of ED visits involving alcohol in combination with drugs used to treat anxiety and insomnia (47.3 vs. 32.1 percent) and alcohol in combination with antidepressants (13.2 vs. 5.0 percent).

Disposition of ED Visits

Among older adults who visited the ED for pharmaceutical misuse or abuse, more than half (52.3 percent) were treated and released, and more than one third (37.5 percent) were

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

Drug Category	Estimated Number of ED Visits, Aged 50 or Older*	Percentage of ED Visits, Aged 50 or Older*	Estimated Number of ED Visits, Aged 50 to 64*	Percentage of ED Visits, Aged 50 to 64*	Estimated Number of ED Visits, Aged 65 or Older*	Percentage of ED Visits, Aged 65 or Older*
Total ED Visits	256,097	100.0	181,146	100.0	74,951	100.0
Alcohol	52,160	20.4	45,058	24.9	7,102	9.5
Pain Relievers	111,360	43.5	82,280	45.4	29,080	38.8
Narcotic Pain Relievers	86,699	33.9	63,136	34.9	23,563	31.4
Drugs for Anxiety or Insomnia	81,413	31.8	64,575	35.6	16,838	22.5
Benzodiazepines	65,133	25.4	51,884	28.6	13,249	17.7
Antidepressants	22,049	8.6	18,289	10.1	3,760	5.0
Anticonvulsants	13,952	5.4	10,135	5.6	3,817	5.1
Antipsychotics	13,437	5.2	11,196	6.2	2,240	3.0
Muscle Relaxants	13,159	5.1	10,133	5.6	3,026	4.0

* 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.

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

admitted to the hospital. Of those admitted to the hospital, 60,378 were admitted to an inpatient unit (62.9 percent), 23,120 (24.1 percent) were admitted to an intensive care unit (ICU), and 11,695 (12.2 percent) were admitted to chemical dependency/detoxification or psychiatric unit.

Discussion

Recent increases in the rate of pharmaceutical misuse and abuse among the baby boom generation, coupled with the anticipated growth in the number of older adults, will increase the demand for health care generally and for substance abuse treatment specifically. Health care costs for pharmaceutical misuse or abuse presenting to the ED can be great, especially if these cases result in hospital stays that require intensive care. The findings in this report show that more than one third of ED visits made by older adults misusing or abusing pharmaceuticals resulted in a hospital admission; of these, nearly a quarter of visits resulted in an admission to the ICU.

Because many substance abuse treatment and prevention programs were designed for adolescents and young adults, new approaches to addressing substance abuse in older adults may be necessary. Specifically, prevention messages that target older adults could warn against the dangerous combination of alcohol and pharmaceuticals. With one fifth of ED visits by older adults involving pharmaceutical misuse or abuse occurring among adults aged 70 or older, caregivers (e.g., adult children of aging parents) may be able to help prevent abuse by being alert to the symptoms and dangers. Education for caregivers about the abuse potential of certain medications and the early warning signs of abuse may be needed.

Moreover, the administration of pharmaceuticals requires oversight by medical professionals to guard against life-threatening interactions and dependency. Thus, it is important that physicians know about all pharmaceuticals (prescription and over-the-counter) a patient is taking before prescribing additional medications. Educating pharmacy and medical personnel as well as behavioral health

specialists such as social workers and psychologists about substance abuse trends in older adults may help them to be more vigilant about the serious public health problem of pharmaceutical misuse and abuse by older adults.

End Notes

- 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.
- 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.
- Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (2010). [Rates of nonmedical pharmaceutical use among adults aged 50 to 59, 2002 to 2009]. Unpublished raw data from the National Survey on Drug Use and Health.
- To learn about DAWN and other SAMHSA surveillance systems, please go to <http://oas.samhsa.gov/>.

Suggested Citation

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Findings from SAMHSA's 2004 to 2008 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 is included for adults when it occurs with another drug. Alcohol always is reported for minors even if no other drug is present. The classification of drugs used in DAWN is derived from the Multum *Lexicon*, copyright 2009, Multum Information Services, Inc. The Multum Licensing Agreement governing use of the *Lexicon* can be found at http://dawninfo.samhsa.gov/drug_vocab.

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://oas.samhsa.gov>. 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://DAWNinfo.samhsa.gov/>.



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