

# The DAWN Report

June 18, 2010

## Trends in Emergency Department Visits Involving Nonmedical Use of Narcotic Pain Relievers

Nonmedical use of prescription pain relievers continues to be a public health issue in the United States that merits serious concern. During 2008, nonmedical use of pain relievers among persons aged 12 or older in the United States was a leading form of drug abuse, second only to marijuana.<sup>1</sup> While prescription pain relievers offer important medical benefits when used appropriately,

these drugs can have serious health consequences when taken without medical supervision, in larger amounts than prescribed, or in combination with alcohol or other prescription or over-the-counter (OTC) drugs.<sup>2</sup> The nonmedical use of pharmaceuticals and resultant medical emergencies tax the resources, including emergency care, of the Nation's already burdened health care systems.

### In Brief

- The estimated number of emergency department (ED) visits involving nonmedical use of narcotic pain relievers rose from 144,644 in 2004 to 305,885 in 2008, an increase of 111 percent
- ED visits involving oxycodone products, hydrocodone products, and methadone—the three most frequently listed narcotic pain relievers in each year—increased 152, 123, and 73 percent, respectively, between 2004 and 2008
- While ED visits involving hydromorphone products showed the largest increase between 2004 and 2008 (259 percent), far fewer visits involved these products

The Drug Abuse Warning Network (DAWN) is a public health surveillance system that monitors drug-related emergency department (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 issue of *The DAWN Report* focuses on recent trends in ED visits involving the nonmedical use of narcotic pain relievers. These drugs (also called opioids) are powerful pain relievers that are chemically related to opium. In DAWN, nonmedical use includes taking more than the prescribed dose of a prescription medication or more than the recommended dose of an OTC medication or supplement; taking more than the prescribed dose of a prescription medication or more than the recommended dose of an OTC medication or supplement; taking a prescription medication prescribed for another individual; being deliberately poisoned with a pharmaceutical by another person; and misusing or abusing a prescription medication, an OTC medication, or a dietary supplement.

## Overall Trends

The estimated number of ED visits involving nonmedical use of narcotic pain relievers rose from 144,644 in 2004 to 305,885 in 2008, an increase of 111 percent (Figure 1). Visits more than doubled for both male and female patients (increasing 110 and 113 percent, respectively), and among both patients younger than 21 and those aged 21 or older (increasing 113 and 112 percent, respectively) (Figure 2).

## Trends by Type of Narcotic Pain Relievers

Between 2004 and 2008, ED visits involving nonmedical use of six types of narcotic pain relievers increased; specifically, these include oxycodone products, hydrocodone products, methadone, morphine products, fentanyl products, and hydromorphone products (Figure 3).<sup>3,4</sup> ED visits involving oxycodone products, hydrocodone products, and methadone—the three most frequently reported narcotic pain relievers in each year—increased 152, 123, and 73 percent, respectively. While ED visits involving hydromorphone products showed the largest increase (259 percent), far fewer visits involved these products.

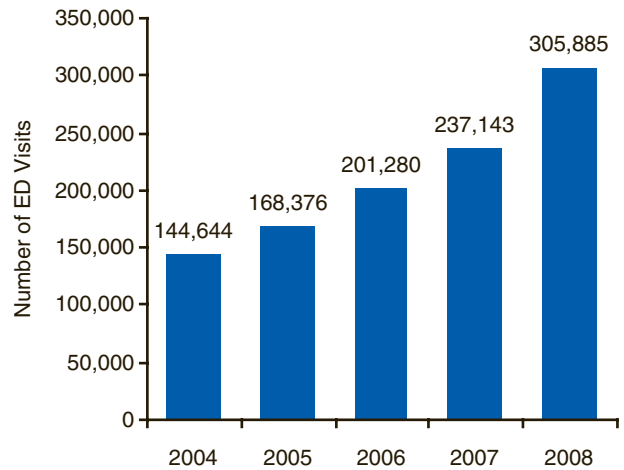
The number of ED visits in the United States involving nonmedical use of these six types of narcotic pain relievers increased for both male and female patients (Table 1). Increases in visits for each of these drugs were also seen for persons aged 21 or older. Among patients aged 21 or older, increases were seen for oxycodone (154 percent), hydrocodone (119 percent), fentanyl products (111 percent), morphine products (96 percent), and methadone (70 percent). Involvement of hydromorphone had the highest increase (259 percent) among patients aged 21 or older, but far fewer visits involved these products.

Among patients younger than 21, the overall increase in ED visits involving the nonmedical use of narcotic pain relievers was driven by increases in visits involving hydrocodone and oxycodone products. Similar to the patterns in ED visits made by patients aged 21 or older, visits by patients younger than 21 that involved hydrocodone products increased 157 percent and those that involved oxycodone products increased 147 percent. Data for visits involving fentanyl products, hydromorphone products, morphine products, and methadone for the younger than 21 age group were either suppressed because of low precision or had percent changes that were not statistically significant (data for drug involvement by age group are not shown).

## Discussion

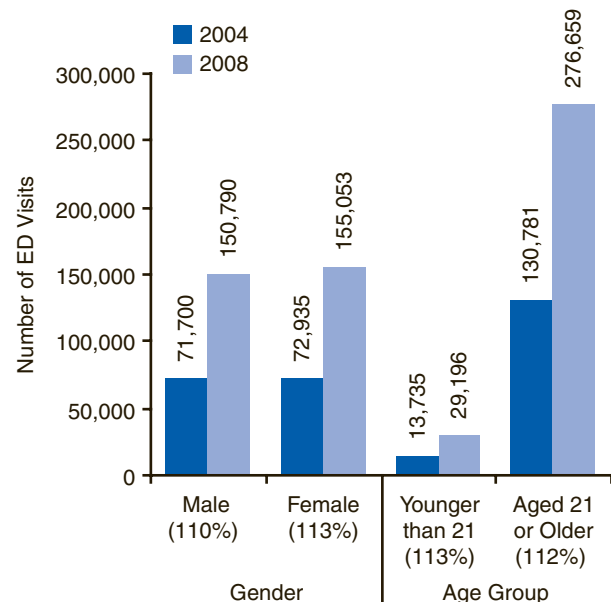
Over the 5-year period from 2004 to 2008, there were marked increases in the number of medical emergencies that involved the nonmedical use of narcotic pain relievers and resulted in ED visits. Additionally, visits involving certain types of narcotic pain relievers—such as hydromorphone products—increased more than others. Continued monitoring of these trends is vital

**Figure 1. Trends in Emergency Department (ED) Visits Involving the Nonmedical Use of Narcotic Pain Relievers: 2004 to 2008**



Source: 2008 (08/2009 update) SAMHSA Drug Abuse Warning Network (DAWN).

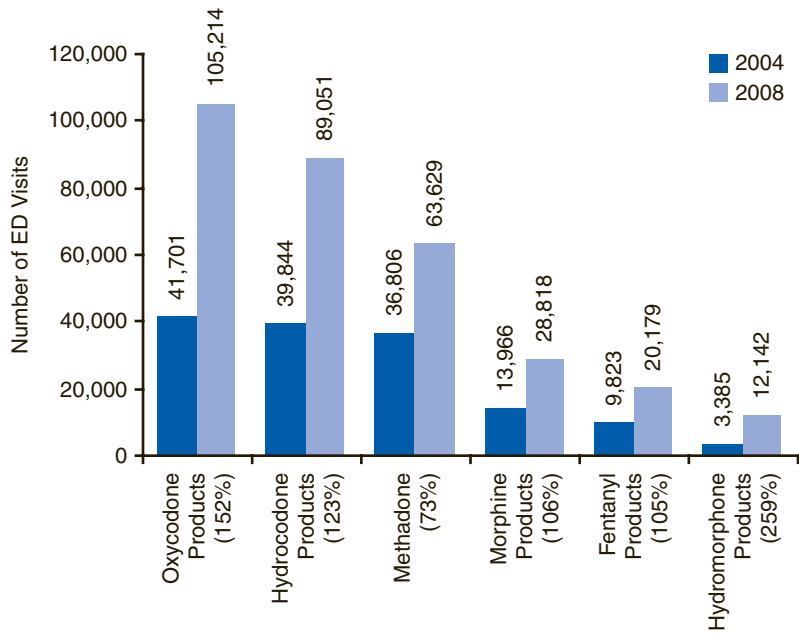
**Figure 2. Emergency Department (ED) Visits Involving the Nonmedical Use of Narcotic Pain Relievers, by Gender and Age Group: 2004 and 2008\***



\* Percentages shown in parentheses represent the percent changes between 2004 and 2008.

Source: 2008 (08/2009 update) SAMHSA Drug Abuse Warning Network (DAWN).

**Figure 3. Emergency Department (ED) Visits Involving the Nonmedical Use of Selected Narcotic Pain Relievers: 2004 to 2008\***



\* Percentages shown in parentheses represent the percent changes between 2004 and 2008. Source: 2008 (08/2009 update) SAMHSA Drug Abuse Warning Network (DAWN).

for ensuring that potential emerging drug problems are identified and addressed as quickly as possible.

The findings reported here highlight the need to strengthen prevention and education programs designed to reduce the misuse of prescription drugs. Increased efforts are needed to educate the public about the risks of misusing narcotic pain relievers and how to recognize possible symptoms of abuse. Prevention and education campaigns should continue to focus on the dangers of sharing prescription medications, the importance of preventing others from having access to personal prescription medications, and methods for properly disposing of remaining dosage units once the need for medication has passed. Additionally, ongoing efforts are needed to keep doctors and other health care professionals informed about emerging drug problems and to help them understand the importance of exercising care in prescribing pain relievers and monitoring their patients or clients for signs of misuse.

**Table 1. Emergency Department (ED) Visits Involving the Nonmedical Use of Selected Narcotic Pain Relievers, by Gender: 2004 and 2008**

Narcotic Pain Reliever	Male Patients			Female Patients		
	2004	2008	Percent Change	2004	2008	Percent Change
Oxycodone Products	23,134	57,335	148	18,567	47,873	158
Hydrocodone Products	16,378	38,854	137	23,464	50,193	114
Methadone	22,424	35,620	59	14,376	27,976	95
Morphine Products	6,218	13,913	124	7,748	14,904	92
Fentanyl Products	4,198	9,688	131	5,624	10,491	87
Hydromorphone Products	1,218	4,907	303	2,166	7,235	234

Source: 2008 (08/2009 update) SAMHSA Drug Abuse Warning Network (DAWN).

**End Notes**

- Office of Applied Studies. (2009). *Results from the 2008 National Survey on Drug Use and Health: National findings* (DHHS Publication No. SMA 09-4434, NSDUH Series H-36). Rockville, MD: Substance Abuse and Mental Health Services Administration. [Available at <http://www.oas.samhsa.gov/nsduhLatest.htm>]
- National Institute on Drug Abuse. (2009, June). *NIDA InfoFacts: Prescription and over-the-counter medications*. Retrieved on April 19, 2010, from <http://www.drugabuse.gov/Infofacts/PainMed.html>
- This report uses the generic names of narcotic pain relievers: oxycodone (e.g., OxyContin®, Percocet®, Percodan®, Roxicodone®); hydrocodone (e.g., Anexsia®, Lortab®, Vicodin®); methadone (e.g., Methadose®, Dolophine®); morphine (e.g., Avinza®, Embeda®, Kadian®, MS Contin®); fentanyl (e.g., Actiq®, Duragesic®, Fentora®); and hydromorphone (e.g., Dilaudid®).
- ED visits involving nonmedical use of other narcotic pain relievers—such as buprenorphine, codeine, propoxyphene, and meperidine products—were either stable between 2004 and 2008 or were found at relatively lower levels and are therefore not discussed in this report.

**Suggested Citation**

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Findings from SAMHSA's 2008 (08/2009 update) Drug Abuse Warning Network (DAWN)

## Trends in Emergency Department Visits Involving Nonmedical Use of Narcotic Pain Relievers

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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. DAWN's method of classifying drugs was derived from the Multum *Lexicon*, Copyright 2008, Multum Information Services, Inc. The Multum Licensing Agreement can be found in DAWN annual publications and at <http://www.multum.com/license.htm>.

DAWN is one of three major surveys conducted by the Substance Abuse and Mental Health Services Administration's Office of Applied Studies (SAMHSA/OAS). For more information on other OAS 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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