Drug Abuse Warning Network

The DAWN Report

June 16, 2011

Trends in Emergency Department Visits for Drug-Related Suicide Attempts among Males: 2005 and 2009

In Brief

- In 2009, there were 77,971 emergency department (ED) visits for drug-related suicide attempts among males
- By age group, the number of ED visits for drug-related suicide attempts among males aged 21 to 34 increased 54.6 percent between 2005 (19,024 visits) and 2009 (29,407 visits)
- Among males aged 21 to 34, the number of visits involving pain relievers showed a statistically significant increase of 60.2 percent (from 7,185 to 11,509 visits), the number of visits involving antidepressants increased 155.2 percent (from 1,519 to 3,876 visits), and the number of visits involving drugs that treat anxiety or insomnia increased 93.4 percent (from 5,018 to 9,706 visits)
- Between 2005 and 2009, narcotic pain reliever involvement in ED visits for suicide attempts almost doubled among visits made by males aged 35 to 49 (from 2,380 to 4,270 visits) and almost tripled among visits made by males aged 50 or older (from 882 to 2,589 visits)

Suicide ranks as the seventh leading cause of death among males.[1] In 2007, males committed suicide at nearly 4 times the rate of females and represented 79.0 percent of all U.S. suicides.[2] Individuals with substance dependence or abuse were more than 3 times more likely to report serious thoughts of suicide.[3] Because previous suicide attempts are one of the strongest predictors for completed suicides,[4] examining data from drug-related emergency department (ED) visits involving suicide attempts can be one way to identify particular patterns in suicidal behaviors among men who are at the highest risk for taking their lives. Such information can be used to inform prevention and treatment efforts targeting this population.

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

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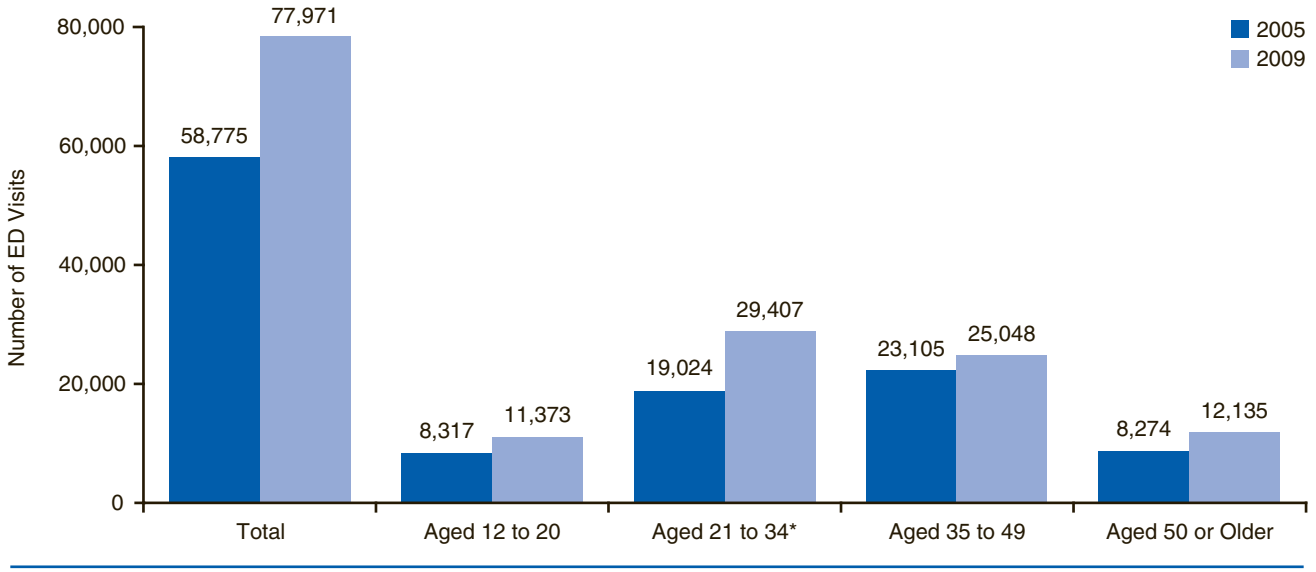
Figure 1. Emergency Department (ED) Visits for Drug-Related Suicide Attempts among Males, by Age Group: 2005 and 2009



*The difference between 2005 and 2009 was statistically significant at the .05 level.

Source: 2005 and 2009 estimates from the 2009 SAMHSA Drug Abuse Warning Network (DAWN).

drug, either as the direct cause of the visit or as a contributing factor. DAWN data can be used to examine ED visits for drug-related suicide attempts. Although DAWN includes only suicide attempts that involve drugs, these attempts are not limited to drug overdoses. If there is drug involvement in a suicide attempt by other means (e.g., if a patient cuts his or her wrists while under the influence of marijuana), the case is included as drug related. Excluded are suicide attempts with no drug involvement and suicide-related behaviors other than actual attempts (e.g., suicidal ideation or suicidal thoughts); also excluded are suicide attempts involving alcohol only for patients aged 21 or older. This issue of *The DAWN Report* describes trends in ED visits for drug-related suicide attempts among males in 2005 and 2009.

Overview

Between 2005 and 2009, younger males (those aged 21 to 34) experienced a statistically significant increase of 54.6 percent in the number of visits for drug-related suicide attempts (from 19,024 to 29,407 visits) (Figure 1). For all age groups combined, the difference between 2005 and 2009 was not significant. In 2009, there were 77,971 ED visits for drug-related suicide attempts among males.

Table 1. Trends in Emergency Department (ED) Visits for Drug-Related Suicide Attempts among Males, by Drug Category and Selected Drugs: 2005 and 2009

Drug Category and Selected Drugs	Estimated Number of ED Visits in 2005	Estimated Number of ED Visits in 2009	Percent Change between 2005 and 2009
Total ED Visits	58,775	77,971	32.7
Alcohol in Combination with Other Drugs*	19,081	28,873	51.3
Illicit Drugs	18,859	19,056	1.0
Cocaine	10,931	9,492	-13.2
Marijuana	5,509	7,815	41.9
Stimulants*	3,744	1,380	-63.2
Heroin	2,270	3,474	53.0
Pharmaceuticals*	49,816	70,671	41.9
Central Nervous System Medications*	36,462	53,392	46.4
Drugs That Treat Anxiety and Insomnia	19,493	27,075	38.9
Benzodiazepines	14,100	20,757	47.2
Lorazepam*	1,393	3,765	170.3
Pain Relievers*	18,292	27,696	51.4
Narcotic Pain Relievers*	7,055	12,236	73.4
Hydrocodone*	2,421	5,975	146.8
Oxycodone*	2,334	5,070	117.2
Psychotherapeutic Medications	14,548	19,403	33.4
Antidepressants*	8,754	12,668	44.7
Antipsychotics	7,923	9,161	15.6
Cardiovascular System Medications*	2,067	5,644	173.0

*The percent difference between 2005 and 2009 is statistically significant at the .05 level.

Source: 2005 and 2009 estimates from the 2009 SAMHSA Drug Abuse Warning Network (DAWN).

Alcohol and Illicit Drug Involvement Trends

The number of ED visits for suicide attempts involving alcohol in combination with other drugs significantly increased by 1.5 times from 19,081 visits in 2005 to 28,873 visits in 2009 (Table 1); however, the number of visits involving each of most other types of illicit drugs did not change significantly during this period of time. An exception is visits involving stimulants, which decreased 63.2 percent (from 3,744 visits in 2005 to 1,380 visits in 2009).

Pharmaceutical Involvement Trends

Between 2005 and 2009, the number of drug-related ED visits among males involving pharmaceutical drugs increased by 41.9 percent (from 49,816 visits in 2005 to 70,671 visits in 2009) (Table 1). In particular, several types of pharmaceuticals showed striking increases during this period. For example, the number of visits involving the narcotic pain relievers hydrocodone and oxycodone more than doubled between these years (146.8 and 117.2 percent, respectively). At the same time, the number of visits made by males involving lorazepam—a type of benzodiazepine—increased by 170.3 percent.

Table 2. Statistically Significant Trends in Emergency Department (ED) Visits for Drug-Related Suicide Attempts among Males, by Age Group and Selected Drugs: 2005 and 2009

Age Group	Drug Category and Selected Drugs	Estimated Number of ED Visits in 2005	Estimated Number of ED Visits in 2009	Percent Change between 2005 and 2009
Aged 12 to 20	Anticonvulsants	361	1,319	265.5
Aged 21 to 34	Pain Relievers	7,185	11,509	60.2
Aged 21 to 34	Drugs That Treat Anxiety and Insomnia	5,018	9,706	93.4
Aged 21 to 34	Clonazepam	459	1,330	189.6
Aged 21 to 34	Antidepressants	1,519	3,876	155.2
Aged 21 to 34	Respiratory System Medications	398	1,234	210.3
Aged 35 to 49	Narcotic Pain Relievers	2,380	4,270	79.5
Aged 35 to 49	Hydrocodone	691	2,480	259.0
Aged 35 to 49	Oxycodone	486	1,776	265.4
Aged 35 to 49	Cardiovascular System Medications	713	1,831	156.9
Aged 50 or Older	Narcotic Pain Relievers	882	2,589	193.3
Aged 50 or Older	Cardiovascular System Medications	620	2,099	238.3

Source: 2005 and 2009 estimates from the 2009 SAMHSA Drug Abuse Warning Network (DAWN).

Pharmaceutical Involvement by Age Group

Among males aged 12 to 20, the number of visits that involved anticonvulsants showed a significant difference between 2005 (361 visits) and 2009 (1,319 visits).[5] This represents a 265.5 percent change between these years (Table 2).

Among males aged 21 to 34, the number of visits involving pain relievers showed a statistically significant increase of 60.2 percent (from 7,185 to 11,509 visits). Likewise, there were also differences for this age group with respect to drugs that treat symptoms related to mental health problems, such as depression or anxiety. For example, the number of visits involving antidepressants increased 155.2 percent (from 1,519 to 3,876 visits), and the number of visits involving drugs that treat anxiety or insomnia increased 93.4 percent (from 5,018 to 9,706 visits).

Among males aged 35 to 49, the number of visits involving narcotic pain relievers almost doubled between 2005 and 2009 (from 2,380 to 4,270 visits). In particular, the number of visits involving hydrocodone and oxycodone each increased almost threefold (from 691 to 2,480 visits for hydrocodone, and from 486 to 1,776 visits for oxycodone). Among males aged 50 or older, the number of visits involving narcotic pain relievers almost tripled from 2005 to 2009 (from 882 to 2,589 visits).

Discussion

The data in this report suggest that approaches for addressing drug-related suicide attempts among men may vary based on age group. For adolescents, many sources recommend that physicians annually ask about thoughts or behaviors that may indicate risk for suicide. Specialized screening instruments have been developed for this purpose.[6] The overall increase in the number of ED visits for drug-related suicide attempts among males aged 21 to 34—an age group for which suicide ranks as the third leading cause of death and for which the prevalence of substance misuse is at its highest[1,7]—suggests that young adult males identified as at risk may benefit from continued efforts to integrate mental health services into substance abuse treatment. This is also the same age group that has had significant increases in suicide attempts involving antidepressants and medications that treat insomnia and anxiety.

Symptoms of depression can accompany declining physical health among older adults. For this reason, older men who use medications such as pain relievers and cardiovascular system medications also can be at high risk for mental health problems. This may be especially true for men aged 75 or older—an age at which suicide rates are highest among men.[2] As a part of routine primary care, health care providers can screen for depression, provide counseling, and/or refer patients and their families to educational and community resources. For additional information about suicide screening and prevention, see the U.S. Preventive Services Task Force publication *Screening for Suicide Risk: Recommendation and Rationale*.[8]

End Notes

[1] Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. (2011, February 24). *Injury prevention & control: Data & statistics (WISQARS)*. Retrieved from http://www.cdc.gov/injury/wisqars/index.html

[2] Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. (2009). *Suicide facts at a glance.* Retrieved from http://www.cdc.gov/violenceprevention/pdf/Suicide-DataSheet-a.pdf

[3] Office of Applied Studies. (2010). *Results from the 2009 National Survey on Drug Use and Health: Mental health findings* (NSDUH Series H-39, HHS Publication No. SMA 10-4609). Rockville, MD: Substance Abuse and Mental Health Services Administration.

[4] Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. (2010). *Understanding suicide: Fact sheet.* Retrieved from http://www.cdc.gov/violenceprevention/pdf/Suicide-FactSheet-a.pdf

[5] For more information about anticonvulsants, please see National Institute of Mental Health. (2008). *Mental health medications* (NIH Publication No. 08–3929). [Available as a PDF at http://www.nimh.nih.gov/health/publications/mental-health-medications/nimh-mental-health-medications.pdf]

[6] King, C. A., O'Mara, R. M., Hayward, C. N., & Cunningham, R. M. (2009). Adolescent suicide risk screening in the emergency department. *Academic Emergency Medicine, 16*(11), 1234-1241.

[7] Office of Applied Studies. (2010). *Results from the 2009 National Survey on Drug Use and Health: Volume I. Summary of national findings* (NSDUH Series H-38A, HHS Publication No. SMA 10-4856Findings). Rockville, MD: Substance Abuse and Mental Health Services Administration.

[8] U.S. Preventive Services Task Force. (2004, May). *Screening for suicide risk: Recommendation and rationale*. Retrieved from http://www.uspreventiveservicestaskforce.org/3rduspstf/suicide/suiciderr.htm

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Findings from SAMHSA's 2005 and 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://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://www.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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