

## Drug Abuse Warning Network

## The DAWN Report

May 24, 2012

## Emergency Department Visits Involving Drug Misuse or Abuse by Children Aged 12 to 14

### In Brief

- In 2009, an estimated 28,068 visits to the emergency department (ED) involved misuse or abuse of drugs by children aged 12 to 14; 58 percent of these visits involved girls, and 42 percent involved boys
- Prescription and over-the-counter medications were involved in 50 percent of ED visits for misuse or abuse of drugs by children aged 12 to 14
- Overall, 37 percent of ED visits made by children aged 12 to 14 involved alcohol; alcohol in combination with medications or illicit drugs was involved in 11 percent of visits
- About one quarter (22 percent) of ED visits made by children aged 12 to 14 involved marijuana, and boys made more such visits than girls (33 vs. 15 percent)

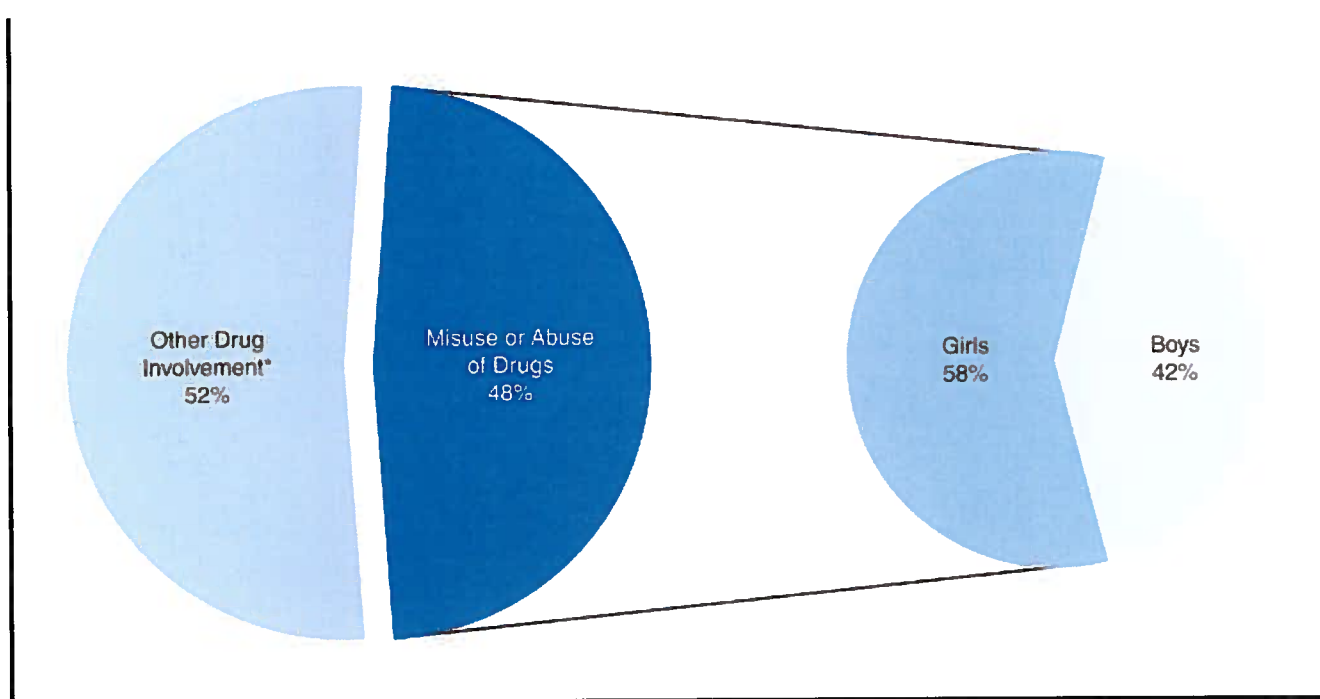
Children undergo dramatic physical, mental, and emotional changes and establish important health and behavior patterns as they transition between childhood and adolescence. Research findings indicate that early initiation of substance misuse or abuse is associated with changes in brain functioning, substance abuse or dependence in adolescence or adulthood, and numerous negative behaviors.<sup>1,2,3</sup> In 2009, public health surveillance measures showed that an estimated 627,000 children aged 12 to 14 reported past month alcohol use, and about 560,000 reported past month illicit drug use.<sup>4</sup> The majority of young adolescent users report receiving alcohol and marijuana for free from friends or their own family members.<sup>5,6</sup> In 2009, approximately 23,760 substance abuse treatment admissions were young adolescents aged 12 to 14.<sup>7</sup> This issue of *The DAWN Report* focuses on emergency department (ED) visits involving misuse or abuse by children aged 12 to 14.

The Drug Abuse Warning Network (DAWN) is a public health surveillance system that monitors drug-related ED visits in the United States. All DAWN cases involve an ED visit with a drug as either the direct cause of the visit or as a contributing factor. Misuse or abuse is broadly defined in DAWN to include all ED visits associated with nonmedical use of medications, illicit drug use, and any alcohol use among those aged 20 or younger. Data are collected on numerous illicit drugs, including cocaine, marijuana, heroin, amphetamines, and methamphetamines, as well as prescribed and over-the-counter medications. Data are also collected for visits involving alcohol only or in combination with other substances for persons aged 20 or younger.

### Overview

In 2009, there were 58,663 drug-related ED visits involving children aged 12 to 14, and about half (28,068 visits, or 48 percent) involved misuse or abuse of drugs (Figure 1). Girls aged 12 to 14 made three fifths (58 percent) of the visits for misuse or abuse. In this age group, about one tenth (9 percent) of these ED visits involved patients aged 12, one quarter (26 percent) involved those aged 13, and nearly two thirds (65 percent) involved those aged 14.

Figure 1. Emergency Department (ED) Visits Involving Misuse or Abuse of Drugs by Children Aged 12 to 14, by Gender: 2009



**Figure 1 Table. Emergency Department (ED) Visits Involving Misuse or Abuse of Drugs by Children Aged 12 to 14, by Gender: 2009**

Visits	Percent
Other Drug Involvement*	52%
Misuse or Abuse of Drugs	48%
Girls	58%
Boys	42%

\* Includes accidental ingestions, adverse reactions, and suicide attempts.  
 Source: 2009 data from 2010 SAMHSA Drug Abuse Warning Network (DAWN).

### Drug Involvement

Prescription and over-the-counter medications were involved in half (50 percent) of ED visits for misuse or abuse of drugs by children aged 12 to 14 (Table 1). Pain relievers were involved in 14 percent, including those containing acetaminophen (7 percent) or ibuprofen (5 percent). Anti-anxiety and insomnia drugs (e.g., Xanax®, clonazepam) were involved in 11 percent of visits, and central nervous system stimulants (e.g., Adderall®, Ritalin®) were involved in 4 percent. Table 1 describes other drugs that contributed to ED visits in this age group. Medication involvement overall was more likely among girls than boys (55 vs. 42 percent) (Figure 2).

**Table 1. Emergency Department (ED) Visits Involving Misuse or Abuse of Drugs by Children Aged 12 to 14, by Drug Type\* and Gender: 2009**

Drug Category	Number of ED Visits:	Percent of ED Visits:	Number of ED Visits:	Percent of ED Visits:	Number of ED Visits:	Percent of ED Visits:
	Total	Total	Boys	Boys	Girls	Girls
<b>Total ED Visits</b>	<b>28,068</b>	<b>100%</b>	<b>11,817</b>	<b>100%</b>	<b>16,250</b>	<b>100%</b>
Medications	13,927	50%	5,015	42%	8,912	55%
Pain Relievers	3,979	14%	712	6%	3,267	20%
Acetaminophen Products	1,859	7%	**	**	1,687	10%
Ibuprofen Products	1,273	5%	**	**	1,093	7%
Narcotic Pain Relievers	484	2%	**	**	**	**
Anti-anxiety and Insomnia Drugs	3,200	11%	1,591	13%	1,609	10%
Benzodiazepines	2,542	9%	**	**	1,142	7%
Antidepressants	1,723	6%	**	**	1,291	8%
Central Nervous System Stimulants	1,011	4%	797	7%	214	1%
Respiratory System Medications	1,533	5%	**	**	1,102	7%

Illicit Drugs	7,813	28%	4,726	40%	3,087	19%
Marijuana	6,305	22%	3,928	33%	2,377	15%
Alcohol	10,427	37%	3,996	34%	6,431	40%

\* 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.  
 \*\* Estimate suppressed due to low statistical precision.  
 Source: 2009 data from 2010 SAMHSA Drug Abuse Warning Network (DAWN).

Figure 2. Emergency Department (ED) Visits Involving Misuse or Abuse of Selected Drugs by Children Aged 12 to 14, by Gender: 2009

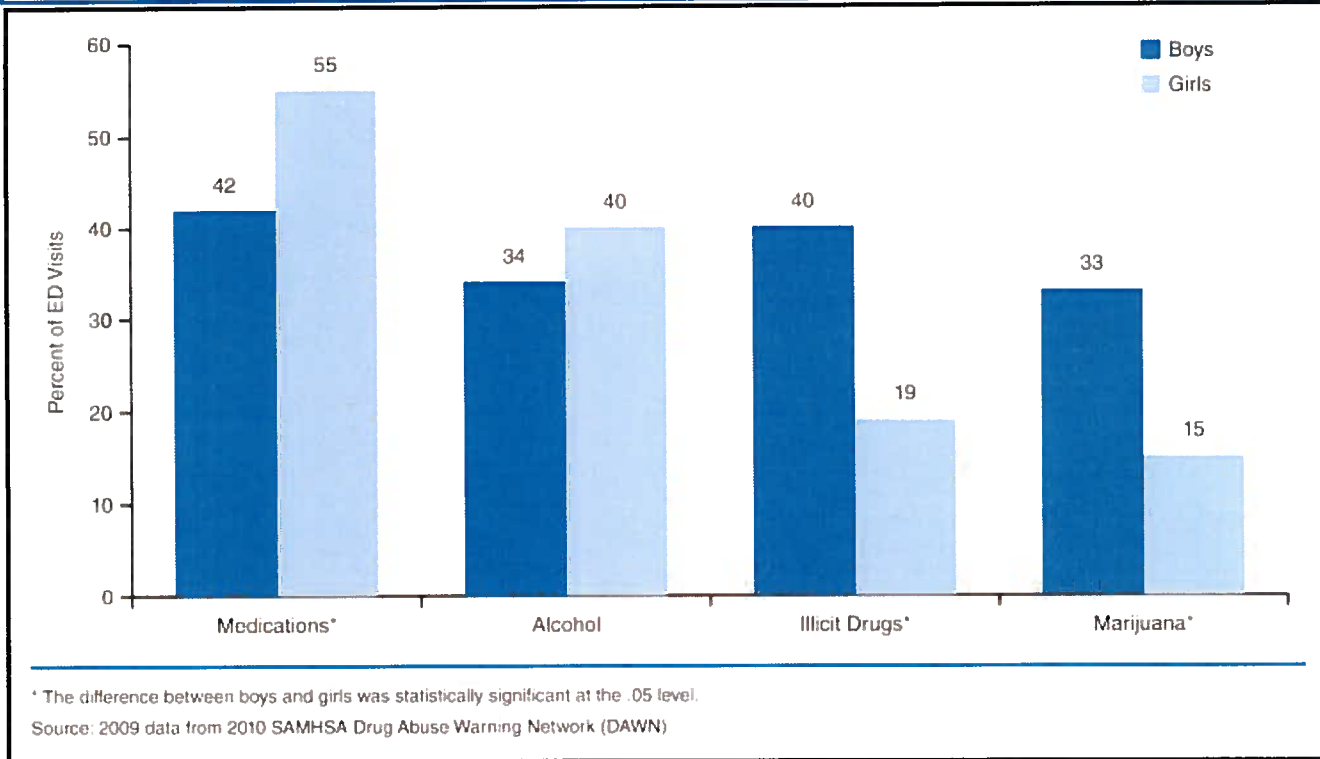


Figure 2 Table. Emergency Department (ED) Visits Involving Misuse or Abuse of Selected Drugs by Children Aged 12 to 14, by Gender: 2009

Selected Drugs	Boys	Girls
Medications*	42%	55%
Alcohol	34%	40%
Illicit Drugs*	40%	19%
Marijuana*	33%	15%

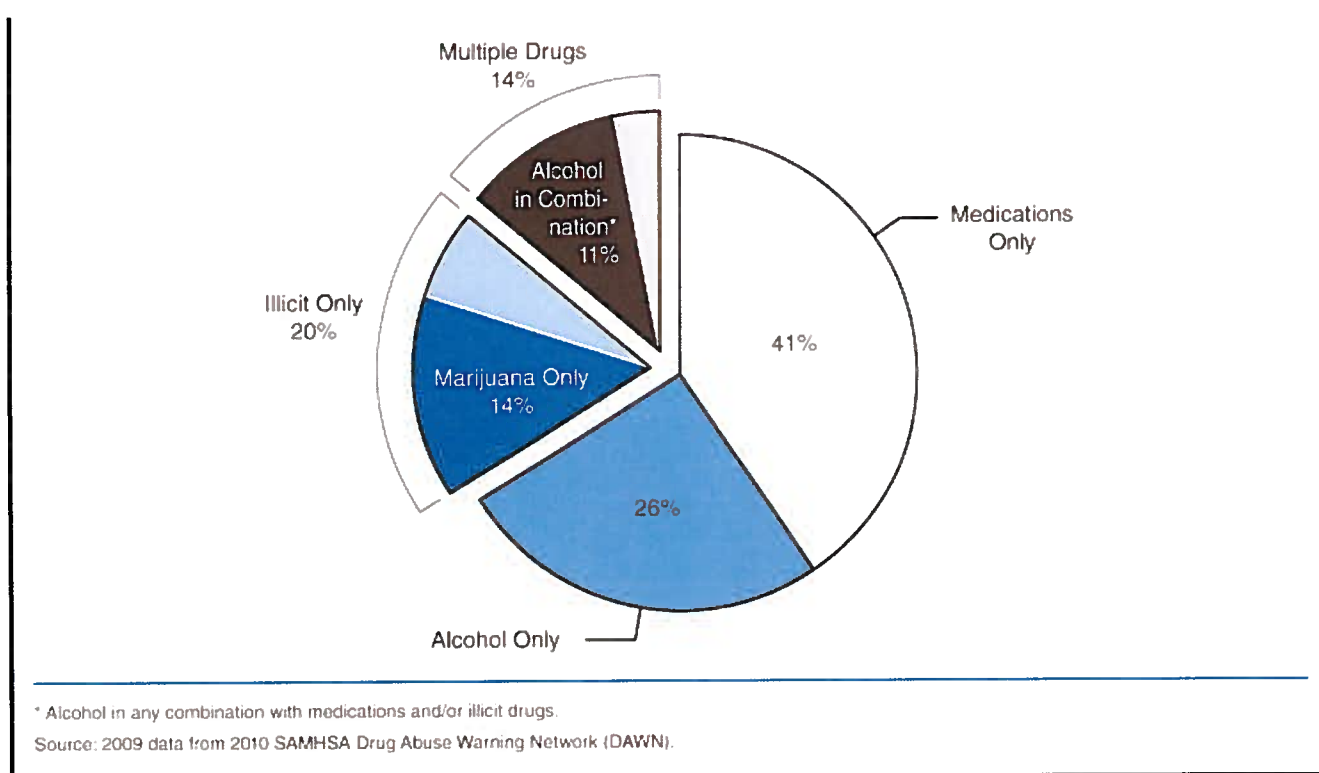
\* The difference between boys and girls was statistically significant at the .05 level.  
 Source: 2009 data from 2010 SAMHSA Drug Abuse Warning Network (DAWN).

Illicit drugs were involved in 28 percent of visits for misuse or abuse of drugs by children aged 12 to 14, much of which was accounted for by visits involving marijuana (22 percent). Visits by boys were more likely than visits by girls to involve illicit drugs (40 vs. 19 percent); 33 percent of visits by boys involved marijuana compared with 15 percent of visits by girls. Alcohol was involved in 37 percent of ED visits, with similar proportions for boys and girls (34 and 40 percent, respectively).

The majority of ED visits for misuse or abuse of drugs by children aged 12 to 14 (86 percent) involved a single drug type (alcohol only, illicit drugs only, or medications only). The remaining 14 percent of drug misuse or abuse ED visits by children aged 12 to 14 involved drugs in combination, much of which was accounted for by visits involving alcohol in combination (11 percent) (Figure 3).

Figure 3. Emergency Department (ED) Visits Involving Misuse or Abuse of Drugs by Children Aged 12 to 14, by Drug: 2009





**Figure 3 Table. Emergency Department (ED) Visits Involving Misuse or Abuse of Drugs by Children Aged 12 to 14, by Drug: 2009**

Drugs	Percent
Medications Only	41%
Alcohol Only	26%
Illicit Only	20%
Marijuana Only	14%
Other Illicit Drug Only	6%
Multiple Drugs	14%
Alcohol in Combination*	11%
Other Drug Combinations	3%

\* Alcohol in any combination with medications and/or illicit drugs.  
 Source: 2009 data from 2010 SAMHSA Drug Abuse Warning Network (DAWN).

## Discussion

Substance use, related ED visits, and admission to substance use treatment programs among children aged 12 to 14, although they occur on a relatively small scale, are disturbing occurrences. Despite legal restrictions, children can gain access to a variety of drugs and alcohol. Although there is ample research that supports the adverse effects of drugs on the developing child, youths frequently lack the developmental maturity to understand and act on knowledge about the risks involved. Parents and other adults should monitor and prevent access to these drugs in the home. Girls aged 12 to 14 are of particular concern because they made a higher proportion of visits overall. However, visits by boys were more likely to involve illicit drugs, especially marijuana; thus, prevention activities to reduce illicit drug use in this group are important.

Early education and prevention programs concerning substance use are important, and a number of approaches have been developed.<sup>8,9</sup> The findings in this report support the importance of addressing the dangers of nonmedical use of medications, in addition to alcohol and illicit drug use, as part of the drug use prevention curriculum.

Primary care providers can also play an important role in reducing the number of children aged 12 to 14 who are seen in the ED for drug-related medical emergencies. The American Academy of Pediatrics recommends that all adolescents be screened for alcohol, tobacco, and other drug use at every office visit, and practical and validated screening methods are available.<sup>10,11</sup> Resources have been developed to help parents and others have open and direct conversations about the dangers of drug and alcohol use with their children.<sup>12,13</sup> When appropriate, ED staff can refer patients to substance abuse treatment programs that are designed to meet the unique needs of these emerging young adolescents.<sup>14</sup>

## End Notes

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- <sup>3</sup> Dawson, D. A. (2000). The link between family history and early onset alcoholism: Earlier initiation of drinking or more rapid development of dependence? *Journal of Studies on Alcohol, 61*(5), 637-646.
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- <sup>11</sup> National Institute on Alcohol Abuse and Alcoholism. (2011). *Alcohol screening and brief intervention for youth: A practitioner's guide* (NIH Publication No. 11-7805). Retrieved from <http://pubs.niaaa.nih.gov/publications/Practitioner/YouthGuide/YouthGuide.pdf>
- <sup>12</sup> National Council on Patient Information and Education. (2011). *Not worth the risk—Even if it's legal*. Retrieved from [http://www.talkaboutit.org/not\\_worth\\_the\\_risk.jsp](http://www.talkaboutit.org/not_worth_the_risk.jsp)
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## Suggested Citation

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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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