

Metro

BRIEF



Detroit

Drug-Related Emergency Department Visits in Metropolitan Areas

Center for Behavioral Health Statistics and Quality



This report is one in a series of reports that provide a snapshot of drug-related emergency department (ED) visits in 11 metropolitan areas across the United States. This report focuses on drug-related ED visits in the Detroit Metropolitan Statistical Area, hereafter referred to as “Detroit.”¹

The Drug Abuse Warning Network (DAWN) is a public health surveillance system that monitors drug-related ED visits in the United States. DAWN uses a probability sample of hospitals to produce annual estimates of drug-related ED visits for the United States and selected metropolitan areas. 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.

As a national public health resource, DAWN data can track trends, spot emerging problems, and gauge the impact of intervention programs. This information enables communities to manage resources more efficiently, target treatment efforts, and improve the well-being of individuals and their communities. This report uses national statistics as the comparison base for Detroit statistics.² Statistical testing was used for comparisons of rates for the sociodemographic characteristics, trends, and drug types within Detroit and between Detroit and the Nation. Each comparison was tested independently and does not account for differences in other characteristics (e.g., geographic variations). A glossary is included at the end of this report to provide more information about the pharmaceuticals that are highlighted in the following analyses.

Overview

In 2009, DAWN data show an estimated 94,596 drug-related visits—a rate of 2,148.2 visits per 100,000 population—were made to Detroit EDs. These data represent the total ED visits in which drugs were

¹ Data for Detroit are representative of the 24-hour, general purpose EDs in the Detroit-Warren-Livonia, MI, Metropolitan Statistical Area. The area includes: Detroit, Warren, Livonia, Dearborn, Farmington Hills, Troy, Southfield, Pontiac, and Taylor.

² The percentage of missing data for age or gender in Detroit was less than 0.1 percent.

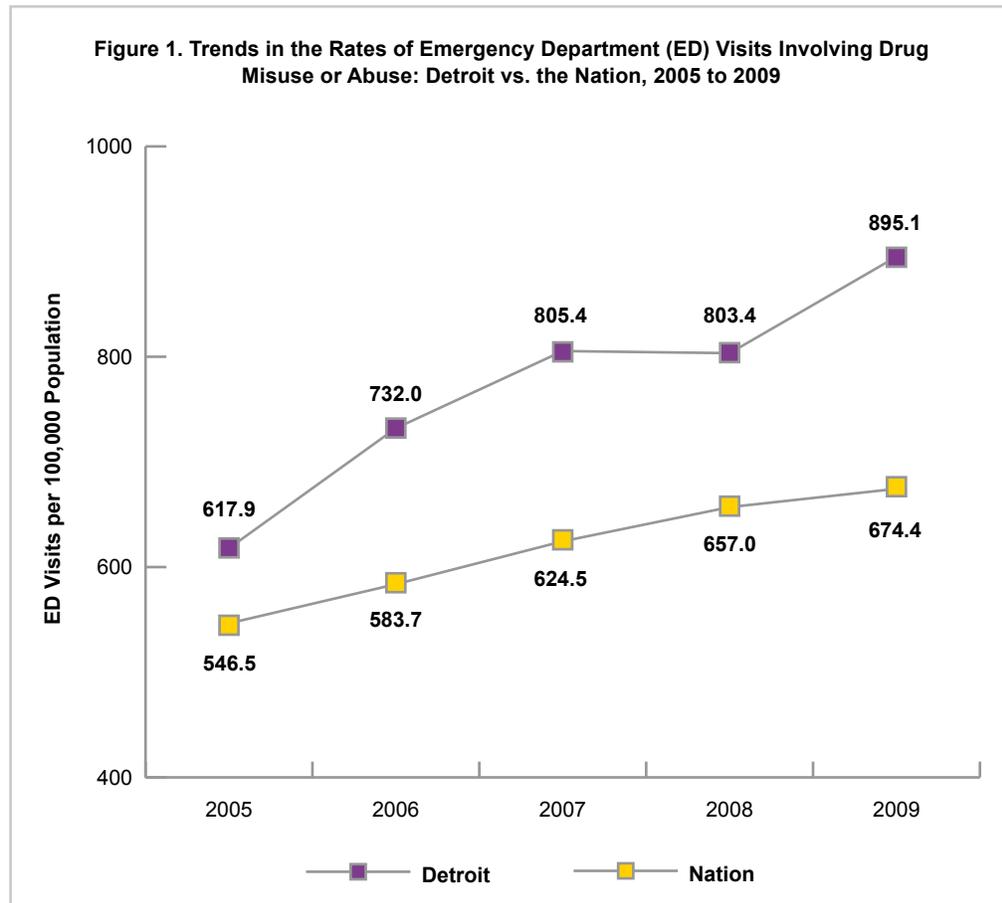


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taken for any reason—not just drug abuse—and involve illegal drugs, prescription and over-the-counter pharmaceuticals (e.g., dietary supplements, cough medicine), nonpharmaceutical inhalants, alcohol in combination with other drugs, and alcohol only (for patients aged 20 or younger).

ED Visits Involving Drug Misuse or Abuse

This section presents information about ED visits involving drug misuse or abuse, which is defined as a group of ED visits that includes all visits associated with illicit drugs, use of alcohol in combination with other drugs, use of alcohol only among those aged 20 or younger, and nonmedical use of pharmaceuticals. Trend data show that there were no statistically significant differences between Detroit and the Nation for any of the years examined (Figure 1). In 2009, Detroit's rate of ED visits involving drug misuse or abuse was 895.1 ED visits per 100,000 population, and the national rate was 674.4 ED visits per 100,000 population.



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

The demographic characteristics of patients in Detroit who made an ED visit involving drug misuse or abuse in 2009 show that

- the most ED visits were made by patients aged 45 to 54 (8,509 visits, or 21.6 percent);
- when population is taken into account, patients aged 18 to 24 had the highest rate of ED visits (1,939.8 visits per 100,000 population); and
- 54.7 percent of ED visits were made by male patients (Table 1).

Table 1. Distribution of Emergency Department (ED) Visits Involving Misuse or Abuse of Drugs, by Gender* and Age: Detroit, 2009**

Demographic Characteristic	Estimated Number of ED Visits	Percentage of ED Visits	Rate of ED Visits per 100,000 Population
Total ED Visits	39,417	100.0	895.1
Male	21,540	54.7	1,002.7
Female	17,848	45.3	791.4
Aged 0 to 11	281	0.7	40.7
Aged 12 to 17	2,402	6.1	634.7
Aged 18 to 24	7,123	18.1	1,939.8
Aged 25 to 34	7,040	17.9	1,286.4
Aged 35 to 44	7,754	19.7	1,232.2
Aged 45 to 54	8,509	21.6	1,214.7
Aged 55 to 64	4,185	10.6	793.7
Aged 65 or Older	2,112	5.4	374.9

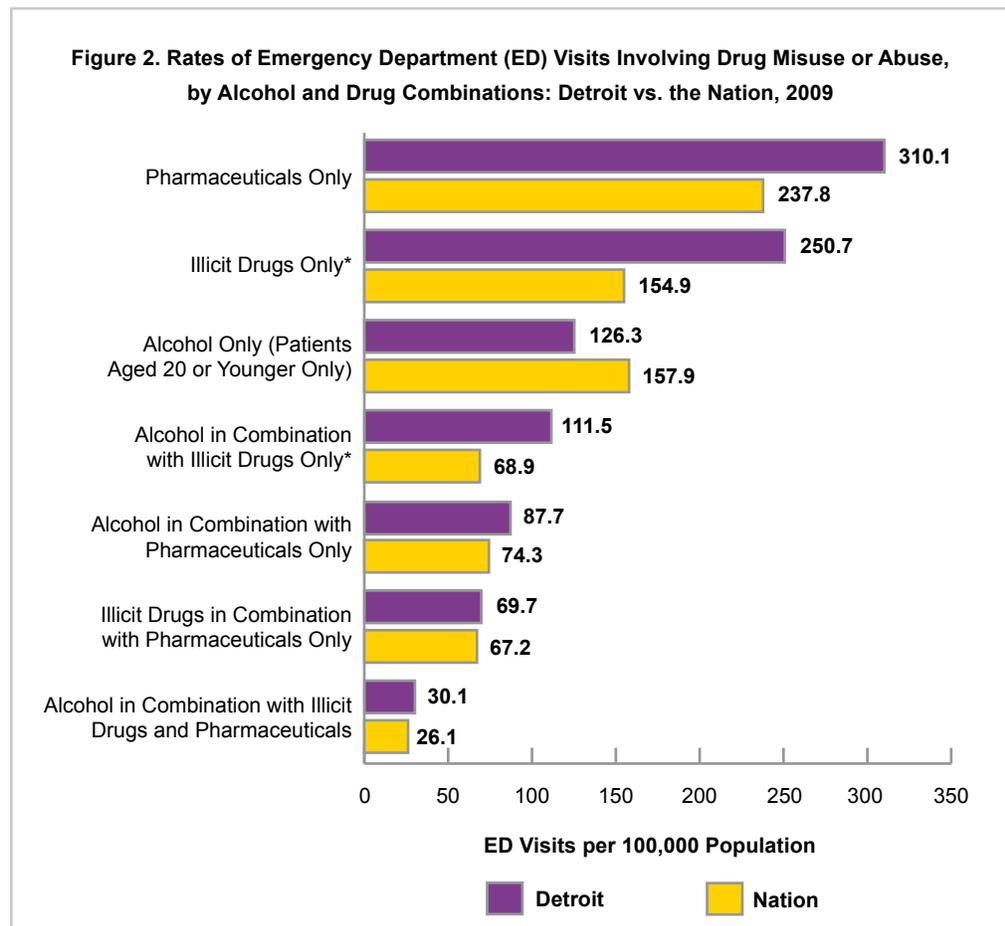
*ED visits for which gender is unknown have been excluded.

**ED visits for which age is unknown have been excluded.

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

DAWN data also can provide information on the different drug combinations involved in ED visits related to drug misuse or abuse. In 2009, there were key differences between Detroit and the Nation with respect to the types and combinations of drugs in ED visits involving drug misuse or abuse (Figure 2). Specifically, Detroit's rates were significantly higher than those of the Nation as a whole for visits involving

- illicit drugs only (250.7 vs. 154.9 visits per 100,000 population); and
- alcohol in combination with illicit drugs only (111.5 vs. 68.9 visits per 100,000 population).

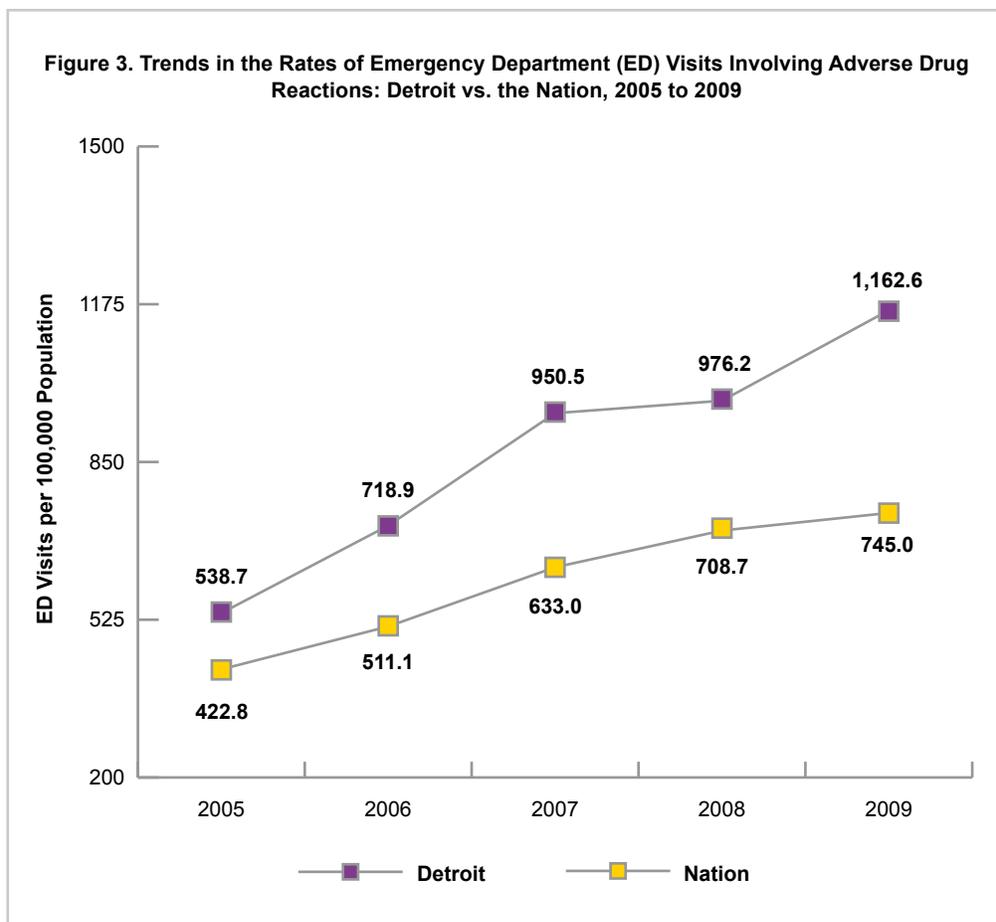


*The difference between Detroit and the Nation was statistically significant at the .05 level.

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

ED Visits Involving Adverse Drug Reactions

Within DAWN, adverse reactions are defined as ED visits in which an adverse health consequence results from taking prescription drugs, over-the-counter medications, or dietary supplements as prescribed or recommended. In 2009, Detroit's rate of ED visits involving adverse drug reactions was 1,162.6 visits per 100,000 population, and the national rate was 745.0 visits per 100,000 population (Figure 3).



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

The demographic characteristics of patients in Detroit who made ED visits involving adverse reactions to drugs in 2009 show that

- patients aged 65 or older made the most ED visits (17,023 visits, or 33.3 percent) and had the highest rate of ED visits (3,021.6 visits per 100,000 population); and
- approximately 3 in 5 ED visits (60.8 percent) were made by female patients (Table 2).

Table 2. Distribution of Emergency Department (ED) Visits Involving Adverse Drug Reactions, by Gender* and Age: Detroit, 2009**

Demographic Characteristic	Estimated Number of ED Visits	Percentage of ED Visits	Rate of ED Visits per 100,000 Population
Total ED Visits	51,194	100.0	1,162.6
Male	20,025	39.2	932.1
Female	31,121	60.8	1,380.0
Aged 0 to 11	3,516	6.9	509.5
Aged 12 to 17	1,346	2.6	355.7
Aged 18 to 24	3,561	7.0	969.8
Aged 25 to 34	5,361	10.5	979.5
Aged 35 to 44	5,689	11.1	904.0
Aged 45 to 54	7,466	14.6	1,065.9
Aged 55 to 64	7,227	14.1	1,370.6
Aged 65 or Older	17,023	33.3	3,021.6

*ED visits for which gender is unknown have been excluded.

**ED visits for which age is unknown have been excluded.

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

In 2009, the rates of adverse reaction-related ED visits in Detroit compared with those in the Nation as a whole varied by drug type (Table 3). Detroit’s rate of ED visits involving adverse reactions to oxycodone was significantly lower than the national rate (9.4 vs. 21.2 visits per 100,000 population). However, compared with the Nation, Detroit had significantly higher rates of ED visits involving adverse reactions to

- hydrocodone (43.9 vs. 26.0 visits per 100,000 population);
- codeine (12.4 vs. 6.0 visits per 100,000 population);
- alprazolam (11.5 vs. 5.3 visits per 100,000 population);
- blood modifiers (148.8 vs. 70.8 visits per 100,000 population);
- cardiovascular system medications (133.6 vs. 80.8 visits per 100,000 population);
- drugs for metabolic disorders (110.6 vs. 56.6 visits per 100,000 population), including antidiabetic agents (96.1 vs. 45.3 visits per 100,000 population); and
- cancer drugs (68.7 vs. 34.2 visits per 100,000 population).

Table 3. Rates of Emergency Department (ED) Visits Involving Adverse Drug Reactions, by Drug Category: Detroit vs. the Nation, 2009

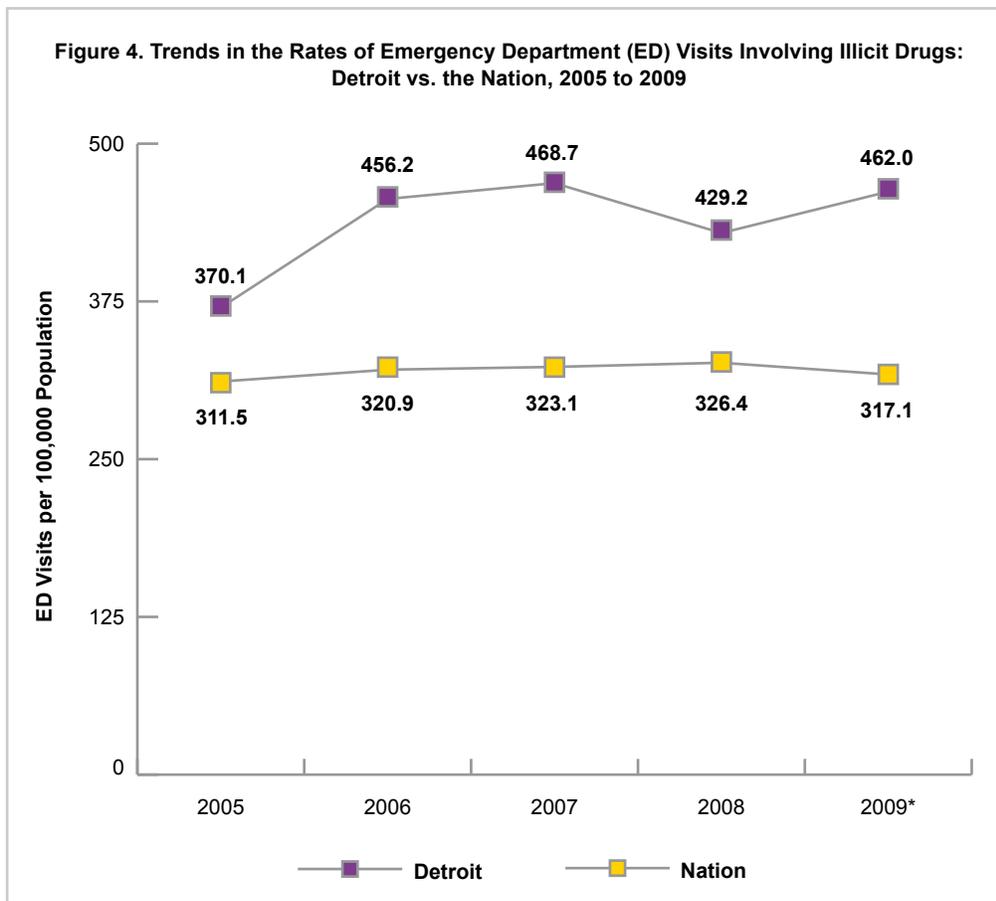
Drug Category and Selected Drugs	Detroit Rate per 100,000 Population	National Rate per 100,000 Population
Central Nervous System Medications	257.1	192.6
Pain Relievers	155.0	126.1
Opiates/Opioids	95.7	73.5
Narcotic Pain Relievers	91.0	71.1
Hydrocodone*	43.9	26.0
Codeine*	12.4	6.0
Oxycodone*	9.4	21.2
Drugs That Treat Anxiety or Insomnia	46.4	34.0
Benzodiazepines	29.1	20.7
Alprazolam*	11.5	5.3
Anticonvulsants	45.2	28.3
Anti-infection Medications	212.7	155.4
Blood Modifiers*	148.8	70.8
Cardiovascular System Medications*	133.6	80.8
Drugs for Metabolic Disorders*	110.6	56.6
Antidiabetic Agents*	96.1	45.3
Cancer Drugs*	68.7	34.2
Hormones	63.3	38.8
Gastrointestinal System Medications	39.2	26.8
Immune System Medications	38.1	32.7
Respiratory System Medications	37.6	31.0
Nutritional Products	27.3	21.8
Topical Agents	23.7	16.4

*The difference between Detroit and the Nation was statistically significant at the .05 level.

Source: 2009 SAMHSA Drug Abuse Warning Network (DAWN)

ED Visits Involving Illicit Drug Use

Within DAWN, ED visits involving illicit drug use are defined as all visits related to the use of illicit or illegal drugs, such as cocaine, marijuana, heroin, and stimulants (e.g., amphetamines and methamphetamines). In 2009, the rate of ED visits involving illicit drugs was significantly higher in Detroit than that in the Nation as a whole (462.0 vs. 317.1 visits per 100,000 population) (Figure 4).



*The difference between Detroit and the Nation was statistically significant at the .05 level.

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

The demographic characteristics of patients in Detroit who made ED visits related to illicit drugs in 2009 show that

- patients aged 45 to 54 made 4,801 visits (or 23.6 percent);
- when population is taken into account, the rate of ED visits was highest for patients aged 18 to 24 (1,011.1 visits per 100,000 population); and
- approximately 3 in 5 (62.9 percent) ED visits were made by male patients (Table 4).

Table 4. Distribution of Emergency Department (ED) Visits Involving Illicit Drugs, by Gender* and Age: Detroit, 2009**

Demographic Characteristic	Estimated Number of ED Visits	Percentage of ED Visits	Rate of ED Visits per 100,000 Population
Total ED Visits	20,345	100.0	462.0
Male	12,774	62.9	594.6
Female	7,547	37.1	334.7
Aged 0 to 11	***	***	***
Aged 12 to 17	734	3.6	194.0
Aged 18 to 24	3,713	18.3	1,011.1
Aged 25 to 34	4,085	20.1	746.5
Aged 35 to 44	4,556	22.4	723.9
Aged 45 to 54	4,801	23.6	685.4
Aged 55 to 64	2,155	10.6	408.8
Aged 65 or Older	265	1.3	47.0

*ED visits for which gender is unknown have been excluded.

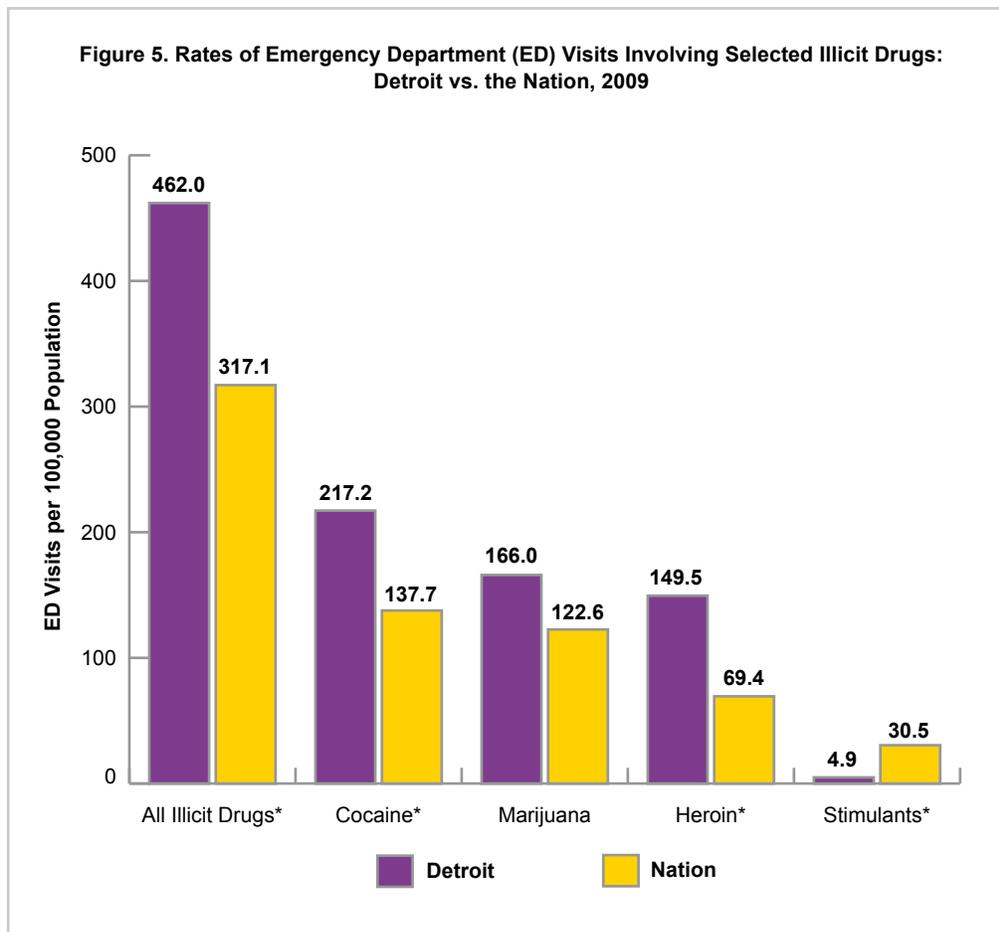
**ED visits for which age is unknown have been excluded.

***Estimate suppressed because of low statistical precision.

Source: 2009 SAMHSA Drug Abuse Warning Network (DAWN)

In 2009, rates of drug-related ED visits varied by illicit drug type. For example, Detroit's rate of ED visits involving stimulants was significantly lower than that of the Nation as a whole (4.9 vs. 30.5 visits per 100,000 population) (Figure 5). However, compared with the Nation as a whole, Detroit had significantly higher rates of ED visits involving

- cocaine (217.2 vs. 137.7 visits per 100,000 population); and
- heroin (149.5 vs. 69.4 visits per 100,000 population).

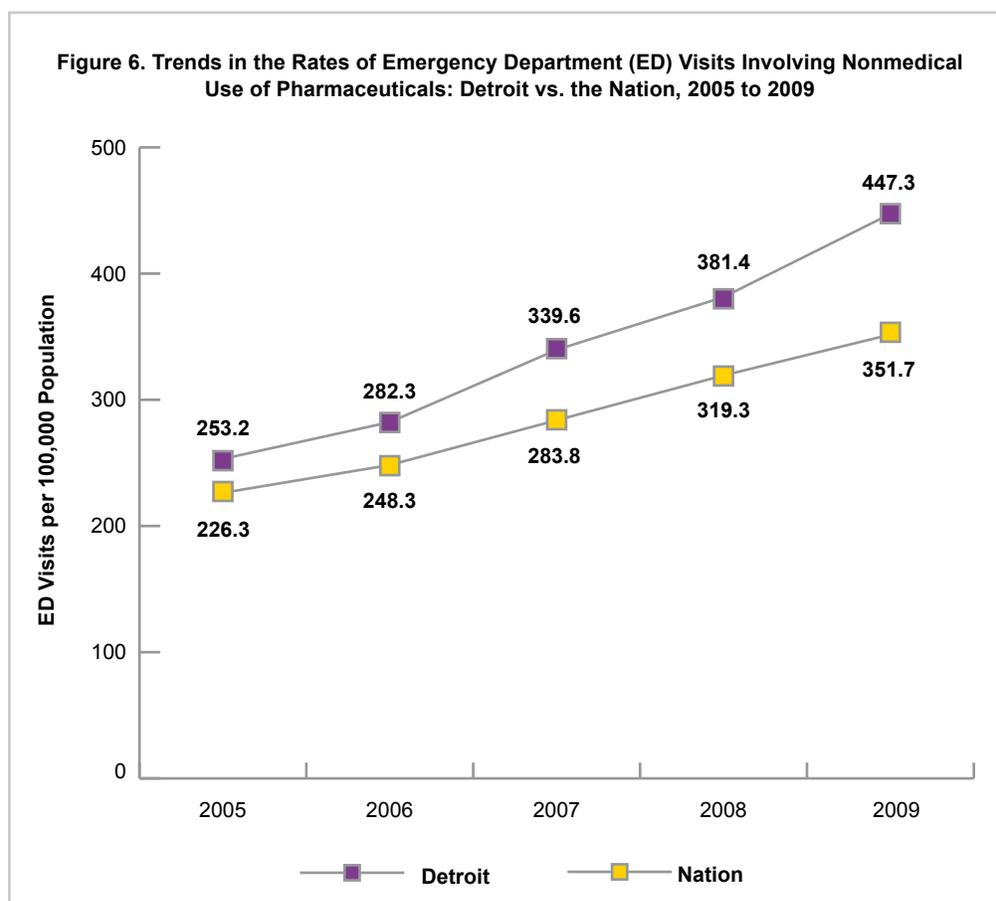


*The difference between Detroit and the Nation was statistically significant at the .05 level.

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

ED Visits Involving Nonmedical Use of Pharmaceuticals

In DAWN, the nonmedical use of pharmaceuticals includes taking more than the prescribed dose of a prescription pharmaceutical or more than the recommended dose of an over-the-counter pharmaceutical or supplement; taking a pharmaceutical prescribed for another individual; deliberate poisoning with a pharmaceutical by another person; and documented misuse or abuse of a prescription drug, an over-the-counter pharmaceutical, or a dietary supplement. Nonmedical use of pharmaceuticals may involve pharmaceuticals only or pharmaceuticals in combination with illicit drugs or alcohol. From 2005 to 2009, Detroit's rate for nonmedical use of pharmaceuticals was not significantly different from that of the Nation as a whole (Figure 6). In 2009, Detroit's rate of ED visits in was 447.3 ED visits per 100,000 population, and the national rate was 351.7 ED visits per 100,000 population.



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

The demographic characteristics of patients in Detroit who made drug-related ED visits involving nonmedical use of pharmaceuticals in 2009 show that

- patients aged 45 to 54 made the most ED visits (4,011 visits, or 20.4 percent);
- patients aged 18 to 24 had the highest rate of such visits (813.7 visits per 100,000 population); and
- 52.3 percent of ED visits were made by female patients (Table 5).

Table 5. Distribution of Emergency Department (ED) Visits Involving Nonmedical Use of Pharmaceuticals, by Gender* and Age: Detroit, 2009**

Demographic Characteristic	Estimated Number of ED Visits	Percentage of ED Visits	Rate of ED Visits per 100,000 Population
Total ED Visits	19,698	100.0	447.3
Male	9,391	47.7	437.1
Female	10,302	52.3	456.8
Aged 0 to 11	241	1.2	34.9
Aged 12 to 17	1,368	6.9	361.5
Aged 18 to 24	2,988	15.2	813.7
Aged 25 to 34	3,524	17.9	643.9
Aged 35 to 44	3,592	18.2	570.8
Aged 45 to 54	4,011	20.4	572.6
Aged 55 to 64	2,158	11.0	409.2
Aged 65 or Older	1,809	9.2	321.2

*ED visits for which gender is unknown have been excluded.

**ED visits for which age is unknown have been excluded.

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

In 2009, there were a few statistical differences between Detroit and the Nation with regard to the rates of ED visits for nonmedical use of pharmaceuticals within selected drug categories (Table 6). Specifically, Detroit’s rate of ED visits involving nonmedical use of pharmaceuticals was significantly higher than the national rate for visits involving

- hydrocodone (69.2 vs. 28.1 visits per 100,000 population);
- codeine (7.1 vs. 2.6 visits for 100,000 population); and
- cardiovascular system medications (22.6 vs. 15.1 visits per 100,000 population).

Table 6. Rates of Emergency Department (ED) Visits Involving Nonmedical Use of Pharmaceuticals, by Drug Category: Detroit vs. the Nation, 2009

Drug Category and Selected Drugs	Detroit Rate per 100,000 Population	National Rate per 100,000 Population
Central Nervous System Medications	328.5	257.8
Pain Relievers	207.4	168.1
Opiates/Opioids	173.2	135.7
Narcotic Pain Relievers	141.6	111.6
Hydrocodone*	69.2	28.1
Oxycodone	24.7	48.4
Methadone	21.6	20.5
Codeine*	7.1	2.6
Drugs That Treat Anxiety or Insomnia	151.1	118.3
Benzodiazepines	136.8	101.9
Anticonvulsants	17.6	13.7
Psychotherapeutic Medications	57.2	43.2
Antidepressants	36.0	29.0
Antipsychotics	28.2	18.9
Cardiovascular System Medications*	22.6	15.1
Drugs for Metabolic Disorders	13.5	10.0
Respiratory System Medications	10.1	11.7

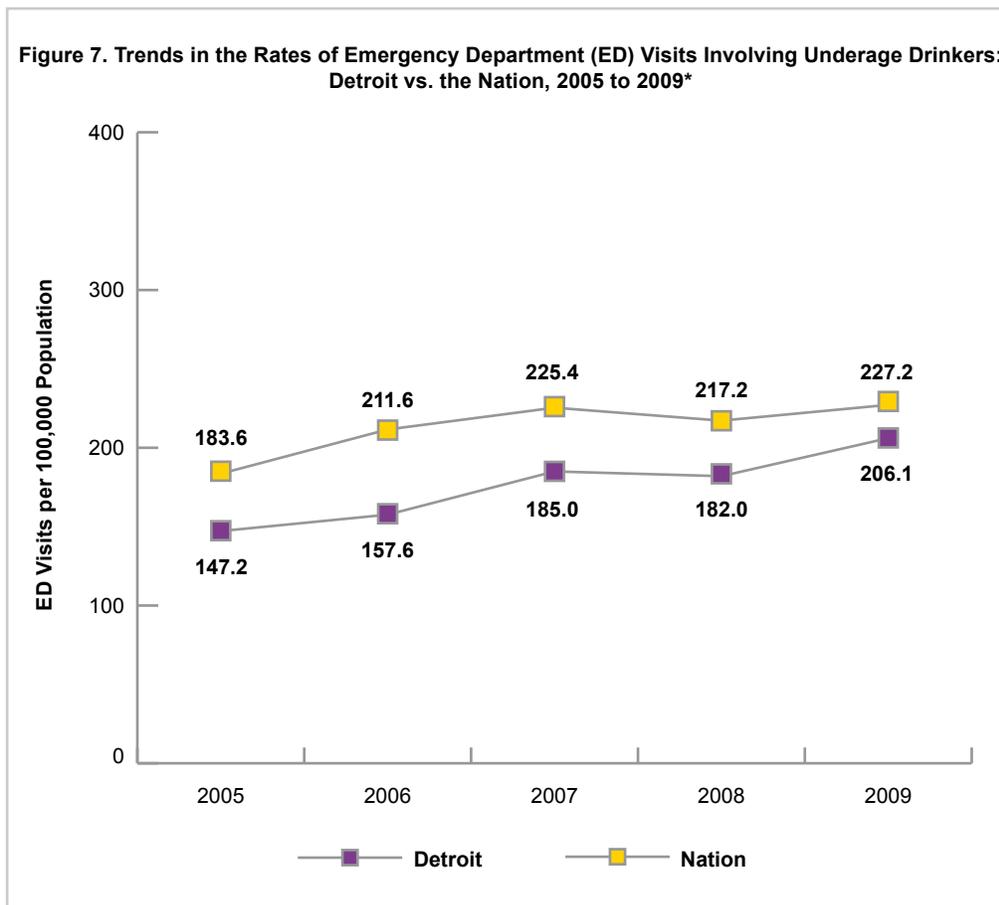
*The difference between Detroit and the Nation was statistically significant at the .05 level.

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

ED Visits Involving Underage Drinkers

Underage drinking continues to be a public health concern in many metropolitan areas and in the Nation as a whole. In DAWN, drug-related ED visits involving underage drinking are those visits related to alcohol use by patients aged 20 or younger. These visits may include alcohol only or alcohol in combination with other drugs. From 2005 to 2009, no significant differences in rate were found between Detroit and the Nation (Figure 7). By 2009, Detroit's rate was 206.1 ED visits per 100,000 population, and the national rate was 227.2 ED visits per 100,000 population.

Figure 7. Trends in the Rates of Emergency Department (ED) Visits Involving Underage Drinkers: Detroit vs. the Nation, 2005 to 2009*



*The rate includes visits involving alcohol only and alcohol in combination with other drugs.

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

Demographic characteristics of underage drinkers who made drug-related visits to Detroit EDs in 2009 indicate that

- young adults aged 18 to 20 made the most ED visits related to underage drinking (1,692 visits, or 66.6 percent) and had the highest rate of visits (1,030.7 visits per 100,000 population); and
- by gender, ED visits related to underage drinking were almost evenly divided between males and females (50.7 percent for males and 49.3 percent for females) (Table 7).

Table 7. Distribution of Emergency Department (ED) Visits Involving Underage Drinking, by Gender* and Age: Detroit, 2009**

Demographic Characteristic	Estimated Number of ED Visits	Percentage of ED Visits	Rate of ED Visits per 100,000 Population
Total ED Visits	2,540	100.0	206.1
Male	1,287	50.7	203.9
Female	1,253	49.3	208.4
Aged 0 to 11	***	***	***
Aged 12 to 17	837	33.0	221.2
Aged 18 to 20	1,692	66.6	1,030.7

*ED visits for which gender is unknown have been excluded.

**ED visits for which age is unknown have been excluded.

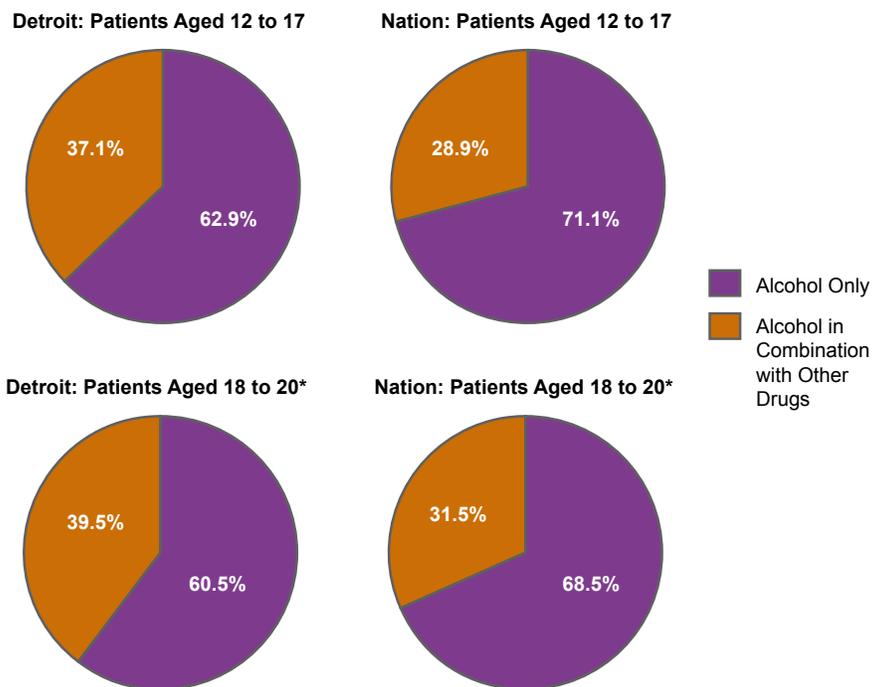
***Estimate suppressed because of low statistical precision.

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

In 2009, among underage drinkers aged 12 to 20, Detroit had a significantly lower proportion of ED visits that involved alcohol only than the Nation as a whole did (61.3 vs. 69.5 percent, respectively) (data not shown). Among underage drinkers aged 12 to 20, Detroit had a significantly higher proportion of ED visits that involved alcohol in combination with other drugs than the Nation as a whole did (38.7 and 30.5 percent, respectively).

Among underage drinkers aged 18 to 20, the proportion of ED visits involving alcohol only was significantly lower for Detroit than for the Nation (60.5 vs. 68.5 percent, respectively) (Figure 8). Conversely, among underage drinkers aged 18 to 20, Detroit had a significantly higher proportion of ED visits that involved alcohol in combination with other drugs than the Nation as a whole did (39.5 vs. 31.5 percent, respectively).

Figure 8. Distribution of Emergency Department (ED) Visits Involving Underage Drinkers Aged 12 to 17 and Aged 18 to 20: Detroit vs. the Nation, 2009

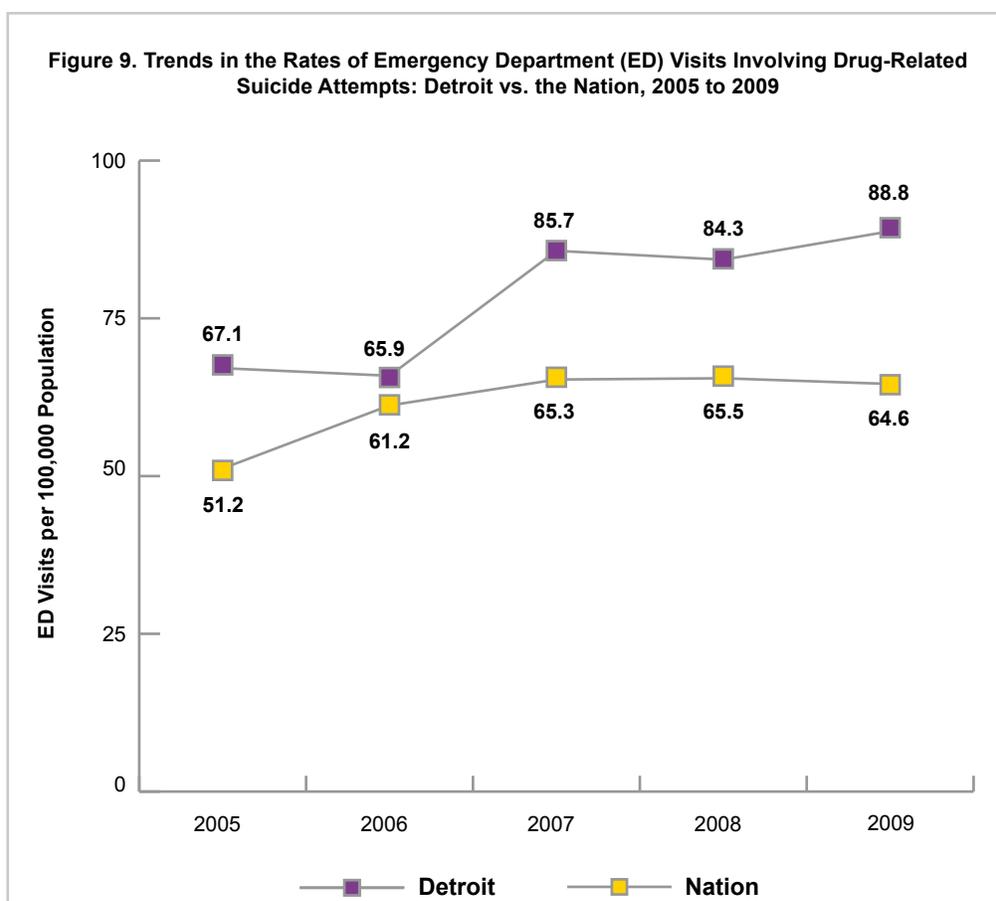


* The difference between Detroit and the Nation was statistically significant at the .05 level.

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

ED Visits Involving Drug-Related Suicide Attempts

This section presents information on drug-related suicide attempts that resulted in ED visits. Drug-related suicide attempts are not limited to drug overdoses. If there is drug involvement in a suicide attempt by other means (e.g., if a patient cut his or her wrists while smoking marijuana), the case is considered to be drug related. Excluded are suicide-related behaviors other than actual attempts (e.g., suicidal ideation or suicidal thoughts). From 2005 to 2009, there were no significant differences between Detroit and the Nation in the rate of ED visits involving drug-related suicide attempts. In 2009, Detroit's rate of ED visits involving drug-related suicide attempts was 88.8 visits per 100,000 population, and the national rate was 64.6 visits per 100,000 population (Figure 9).



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

Demographic characteristics of patients who made a visit involving a drug-related suicide attempt to Detroit EDs in 2009 indicate that

- patients aged 25 to 34, patients aged 18 to 24, and patients aged 35 to 44 had similar proportions of ED visits (21.6 percent, 21.3 percent, and 20.1 percent);
- patients aged 18 to 24 had the highest rate of ED visits (226.6 visits per 100,000 population); and
- 57.3 percent of ED visits were made by female patients (Table 8).

Table 8. Distribution of Emergency Department (ED) Visits Involving a Drug-Related Suicide Attempt, by Gender* and Age: Detroit, 2009**

Demographic Characteristic	Estimated Number of ED Visits	Percentage of ED Visits	Rate of ED Visits per 100,000 Population
Total ED Visits	3,908	100.0	88.8
Male	1,664	42.7	77.5
Female	2,231	57.3	98.9
Aged 0 to 11	***	***	***
Aged 12 to 17	456	11.7	120.4
Aged 18 to 24	832	21.3	226.6
Aged 25 to 34	843	21.6	154.0
Aged 35 to 44	785	20.1	124.8
Aged 45 to 54	644	16.5	91.9
Aged 55 to 64	272	7.0	51.6
Aged 65 or Older	***	***	***

*ED visits for which gender is unknown have been excluded.

**ED visits for which age is unknown have been excluded.

***Estimate suppressed because of low statistical precision.

Source: 2009 SAMHSA Drug Abuse Warning Network (DAWN)

An examination of the rate of ED visits involving a drug-related suicide attempt in 2009 revealed that there were differences between Detroit and the Nation in the types of drugs involved (Table 9). Detroit’s rates were significantly higher than the Nation’s for visits involving

- heroin (3.7 vs. 1.6 visits per 100,000 population);
- opiates/opioids (18.3 vs. 10.7 visits per 100,000 population); and
- narcotic pain relievers (17.2 vs. 9.6 visits per 100,000 population), including hydrocodone (11.4 vs. 4.5 visits per 100,000 population).

Table 9. Rates of Emergency Department (ED) Visits Involving a Drug-Related Suicide Attempt, by Drug Category: Detroit vs. the Nation, 2009

Drug Category and Selected Drugs	Rate per 100,000 Population	National Rate per 100,000 Population
Alcohol	22.6	20.1
Illicit Drugs	15.6	11.6
Cocaine	9.2	5.9
Marijuana	6.0	4.6
Heroin*	3.7	1.6
Central Nervous System Medications	65.3	46.8
Drugs That Treat Anxiety or Insomnia	35.9	25.3
Benzodiazepines	28.1	18.5
Pain Relievers	33.6	24.6
Opiates/Opioids*	18.3	10.7
Narcotic Pain Relievers*	17.2	9.6
Hydrocodone*	11.4	4.5
Anticonvulsants	6.0	4.3
Psychotherapeutic Medications	22.1	17.1
Antidepressants	13.6	11.8
Antipsychotics	11.3	7.8
Cardiovascular System Medications	4.3	3.5
Respiratory System Medications	2.8	2.5

* The difference between Detroit and the Nation was statistically significant at the .05 level.

** Estimate suppressed because of low statistical precision.

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

Glossary for the Pharmaceuticals Mentioned in This Report

- **Anticonvulsants**—These medications prevent the brain from seizure activity and include those that treat epilepsy as well as those that can alleviate the discomfort associated with nerve damage. Common anticonvulsants include phenytoin (Dilantin®) and carbamazepine (Carbatrol®).
- **Antidepressants**—This category of drugs includes psychotherapeutic medications that are used to treat depression and other mental disorders. There are several types of antidepressants including: selective serotonin reuptake inhibitors (e.g., fluoxetine, or Prozac®), serotonin and norepinephrine reuptake inhibitors (e.g., duloxetine, or Cymbalta®), norepinephrine and dopamine reuptake inhibitors (e.g., bupropion, or Wellbutrin®), and atypical antidepressants (e.g., trazodone, or Desyrel®; mirtazapine, or Remeron®), and monoamine oxidase inhibitors (e.g., phenelzine, or Nardil®).
- **Anti-infection Medications**—Anti-infection medications are used to treat conditions caused by bacteria, viruses, protozoa, worms, fungi, and yeast. Drugs that treat infections include penicillins, azithromycin (Zithromax®), cephalexin (Keflex®), clindamycin (Cleocin®), and fluconazole (Diflucan®).
- **Antipsychotics**—Antipsychotic pharmaceuticals are used to treat mental disorders; the antipsychotic category includes drugs such as chlorpromazine (Thorazine®), haloperidol (Haldol®), and clozapine (Clozaril®). See also *Antidepressants* and *Psychotherapeutic Medications*.
- **Blood Modifiers**—Medications that alter the blood, including drugs that prevent blood from clotting, that dissolve blood clots, or that cause the blood to clot. Examples of blood modifiers include warfarin (Coumadin®), alteplase (Activase®), and factor IX complex.
- **Cancer Drugs**—A category of drugs that treats cancer. Examples of cancer drugs include medications such as paclitaxel (Taxol®), cyclophosphamide (Cytosan®), and chlorambucil (Leukeran®).
- **Cardiovascular System Medications**—Cardiovascular system medications treat conditions of the cardiovascular system such as angina and arrhythmia. Examples of such medications include beta blockers and diuretics.
- **Central Nervous System Medications**—As used by DAWN, central nervous system medications are a broad class of pharmaceuticals that act on the central nervous system. Major drug types grouped under this heading are: narcotic pain relievers (e.g., OxyContin®), nonnarcotic pain relievers (e.g., tramadol), anticonvulsants (e.g., Depakote®), drugs to treat anxiety (e.g., Klonopin®), central nervous system stimulants (e.g., Adderall®), and muscle relaxants (e.g., Soma®).
- **Drugs for Metabolic Disorders**—A category of medications that treat disorders or conditions that impact the metabolism. Examples of such drugs include antidiabetic agents (e.g., insulin), lipid-lowering drugs (e.g., Zocor® and Lipitor®), and antiobesity drugs (e.g., Orlistat®).

- **Drugs That Treat Anxiety or Insomnia**—This category includes drugs to treat anxiety or insomnia and includes: barbiturates (e.g., Seconal®), benzodiazepines (e.g., Xanax®, Klonopin®, Ativan®), and medications to treat sleep disorders (e.g., Ambien®).
- **Gastrointestinal System Medications**—A category of drugs that includes antacids, antidiarrheals, digestive enzymes, and laxatives.
- **Hormones**—A category of drugs that supplies hormones to the body, such as adrenal cortical steroids, thyroid medications (e.g., Synthroid®), hydrocortisone, prednisone, and contraceptives.
- **Immune System Medications**—Used to treat immune system conditions, this category includes antivirals (e.g., influenza shot) and vaccines (e.g., tetanus shot).
- **Narcotic Pain Relievers**—Used to treat severe pain, the category of narcotic pain relievers includes codeine, fentanyl (e.g., Actiq®), hydrocodone (e.g., Lortab® and Vicodin®), hydromorphone (e.g., Dilaudid®), oxycodone (e.g., OxyContin®), morphine, and methadone.
- **Nutritional Products**—A broad category of pharmaceuticals that includes products such as minerals, electrolytes, and vitamins.
- **Opiates/Opioids**—This category comprises pain relievers that contain opiates or opioids (synthetic opiates). *Narcotic Pain Relievers* are in this category, as are drugs identified by toxicology as opiate/opioid metabolites.
- **Pain Relievers**—This category includes narcotic and nonnarcotic pain relievers.
- **Psychotherapeutic Medications**—A general grouping of drugs that primarily includes *Antidepressants* and *Antipsychotics*.
- **Respiratory System Medications**—Drugs that treat conditions or diseases of the respiratory system, including medications such as antihistamines, bronchodilators, decongestants, and expectorants.
- **Topical Agents**—A category of drugs that includes antiseptics and germicides, dermatological medications, and topical antibacterials.