2008 Marijuana Sourcebook

MARIJUANA: THE GREATEST CAUSE OF ILLEGAL DRUG ABUSE

Office of National Drug Control Policy
Executive Office of the President
Washington, DC 20503

July 2008
## Table of Contents

<table>
<thead>
<tr>
<th>SECTION</th>
<th>TITLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>INTRODUCTION</strong></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td><strong>USE PATTERNS AND TRENDS</strong></td>
<td>2</td>
</tr>
<tr>
<td>1.</td>
<td>Marijuana is the Most Commonly Used Illicit Drug</td>
<td>2</td>
</tr>
<tr>
<td>2.</td>
<td>Marijuana Use Rates Vary Across the Country</td>
<td>2</td>
</tr>
<tr>
<td>3.</td>
<td>Age Variability in Marijuana Use</td>
<td>3</td>
</tr>
<tr>
<td>4.</td>
<td>Marijuana Use Among Youth</td>
<td>3</td>
</tr>
<tr>
<td>5.</td>
<td>Higher Rates of Perceived Harmfulness of Marijuana Are Associated with Lower Rates of Use</td>
<td>4</td>
</tr>
<tr>
<td>6.</td>
<td>Percentage of National Workforce Testing Positive for Marijuana is Declining</td>
<td>4</td>
</tr>
<tr>
<td>7.</td>
<td>Initiation of Marijuana Use</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td><strong>HEALTH EFFECTS</strong></td>
<td>6</td>
</tr>
<tr>
<td>8.</td>
<td>A Major Consequence of Marijuana Use Is the Risk of Dependence or Abuse</td>
<td>6</td>
</tr>
<tr>
<td>9.</td>
<td>Growing Need for Marijuana Treatment</td>
<td>6</td>
</tr>
<tr>
<td>10.</td>
<td>Youth Are in Treatment Primarily for Marijuana</td>
<td>7</td>
</tr>
<tr>
<td>11.</td>
<td>For Younger Users, Marijuana is More Addictive and More Dangerous</td>
<td>7</td>
</tr>
<tr>
<td>12.</td>
<td>The Burden on Emergency Departments Has been Increasing</td>
<td>8</td>
</tr>
<tr>
<td>13.</td>
<td>Marijuana Use Is Associated with Mental Health Disorders</td>
<td>8</td>
</tr>
<tr>
<td>14.</td>
<td>Marijuana Growers Present Environmental Hazards</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td><strong>CRIMINAL JUSTICE ASPECTS</strong></td>
<td>9</td>
</tr>
<tr>
<td>15.</td>
<td>Juvenile Delinquent Behavior Is Closely Associated with Marijuana Use</td>
<td>9</td>
</tr>
<tr>
<td>16.</td>
<td>Marijuana Accounts for Two Out of Five Arrests for Drug Violations</td>
<td>10</td>
</tr>
<tr>
<td>17.</td>
<td>However, Marijuana Arrests Do Not Translate to a Large Share of Offenders in Prison</td>
<td>10</td>
</tr>
<tr>
<td>18.</td>
<td>Substantial Proportions of Treatment Referrals for Marijuana, Methamphetamine, and Alcohol Are from the Criminal Justice System</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td><strong>SUPPLY SITUATION</strong></td>
<td>11</td>
</tr>
<tr>
<td>19.</td>
<td>What Marijuana Users Spend</td>
<td>11</td>
</tr>
<tr>
<td>20.</td>
<td>User Social Networks Are Essential Conduits for Obtaining Marijuana for Individual Use</td>
<td>12</td>
</tr>
<tr>
<td>21.</td>
<td>Marijuana Potency Has Been Increasing</td>
<td>13</td>
</tr>
<tr>
<td>22.</td>
<td>Marijuana Seizures Along the Southwest Border Are Increasingly More Potent</td>
<td>13</td>
</tr>
<tr>
<td>23.</td>
<td>The Southwest Border Is a Key Conduit of Marijuana Supply</td>
<td>14</td>
</tr>
<tr>
<td>24.</td>
<td>Domestically Grown Marijuana Is a Major Source of Supply</td>
<td>15</td>
</tr>
<tr>
<td>25.</td>
<td>Mexico Is a Major Marijuana Producer</td>
<td>16</td>
</tr>
<tr>
<td>26.</td>
<td>Canada Is a Consumer as Well as a Producer of Marijuana</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td><strong>THE ‘MEDICAL MARIJUANA’ ISSUE</strong></td>
<td>18</td>
</tr>
<tr>
<td>27.</td>
<td>Smoked Marijuana Is Not Medicine</td>
<td>18</td>
</tr>
<tr>
<td>28.</td>
<td>Compassionate Care for the Sick and Dying Or Another Front for Drug Trafficking?</td>
<td>18</td>
</tr>
<tr>
<td>29.</td>
<td>Medical Marijuana States Are More Likely to Have Higher Marijuana Use and Initiation Rates</td>
<td>19</td>
</tr>
<tr>
<td>30.</td>
<td>Medical Marijuana Dispensaries in California: A Closer Look</td>
<td>20</td>
</tr>
</tbody>
</table>
This Chartbook recognizes marijuana as a major component of the illicit drug problem. Major progress has been achieved in reducing youth marijuana use; nevertheless, the overall demand for marijuana remains strong.

The supply of cannabis is complex, involving domestic and foreign growers — both outdoor and indoor — as well as intricate networks that involve not only conventional drug traffickers, but also established social networks of friends and family. The potency of cannabis has risen dramatically in the past two decades, with concomitant abuse and dependence consequences reflected in increasing cannabis-related emergency and treatment events.

Today, in addition to traditional methods of promoting and consuming the drug, marijuana is being marketed as candy to young people, the next generation of potential buyers.

The data summary on these pages looks at marijuana use patterns and trends, health effects, criminal justice aspects, the supply network, and the issue of so-called medical marijuana.
1. Marijuana Is the Most Commonly Used Illicit Drug

14.8 million Americans were current (past month) users of marijuana in 2006.

<table>
<thead>
<tr>
<th>Drug</th>
<th>Estimated Number of Users, Age 12 or Older (in Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marijuana</td>
<td>14.8</td>
</tr>
<tr>
<td>Psychotherapeutics</td>
<td>7.0</td>
</tr>
<tr>
<td>Cocaine (incl. crack)</td>
<td>2.4</td>
</tr>
<tr>
<td>Crack</td>
<td>0.7</td>
</tr>
<tr>
<td>Meth*</td>
<td>0.7</td>
</tr>
<tr>
<td>Inhalants</td>
<td>0.8</td>
</tr>
<tr>
<td>Ecstasy</td>
<td>0.5</td>
</tr>
<tr>
<td>Heroin</td>
<td>0.3</td>
</tr>
<tr>
<td>LSD</td>
<td>0.1</td>
</tr>
</tbody>
</table>

*Estimation of methamphetamine use is different from those shown in previous NSDUH reports and should not be compared without proper statistical adjustment.

Source: SAMHSA, 2006 National Survey on Drug Use and Health (September 2007).

2. Marijuana Use Rates Vary Across the Country

Current Marijuana Use in Substate Regions
(2004 to 2006 Average, Age 12 or Older)

Source: SAMHSA, Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health (June 2008).
Age Variability in Marijuana Use

Marijuana use rates accelerate to a peak at age 20, with one in five reporting current use of marijuana.

Trends in Current Use of Marijuana

Source: SAMHSA, 2006 National Survey on Drug Use and Health (September 2007).

Marijuana Use Among Youth

Higher Rates of Perceived Harmfulness of Marijuana Are Associated with Lower Rates of Use

12th Graders’ Past Year Marijuana Use vs. Perceived Risk of Occasional Marijuana Use

% Percent reporting past year use


Percentage of National Workforce Testing Positive for Marijuana Is Declining

29% decline from 2000 through 2007

Source: Quest Diagnostics Drug Testing Index, through December 2007.
Initiation of Marijuana Use

Past Year Initiates for Specific Illicit Drugs Among Persons Age 12 or Older

- Approximately 2 million new users began using marijuana in the past year.
- Marijuana initiation occurs at a younger age than for most drugs of abuse.
- Early initiation of marijuana use is associated with drug dependence as an adult: the younger the age at first use, the higher the likelihood of adult drug dependence.

Average Age at First Use among Past Year Initiates to Substance Use (Ages 12 to 49)

- Percent with Illicit Drug Dependence (Past Year) (Drug Dependence Based on DSM-IV Diagnostic Criteria, Age 18 or older)

Source: SAMHSA, 2006 National Survey on Drug Use and Health (September 2007).
A Major Consequence Marijuana Use Is the Risk of Dependence or Abuse

More Than 4 Million Persons Estimated to be Dependent or Abusers of Marijuana in the Past Year

<table>
<thead>
<tr>
<th>Drug Type</th>
<th>Dependent/Abusers (in Thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any Illicit Drug</td>
<td>7,020</td>
</tr>
<tr>
<td>Marijuana</td>
<td>4,172</td>
</tr>
<tr>
<td>Psychotherapeutics</td>
<td>2,035</td>
</tr>
<tr>
<td>Cocaine</td>
<td>1,671</td>
</tr>
<tr>
<td>Hallucinogens</td>
<td>380</td>
</tr>
<tr>
<td>Heroin</td>
<td>323</td>
</tr>
<tr>
<td>Inhalants</td>
<td>176</td>
</tr>
<tr>
<td>Drug-Alcohol</td>
<td>3,205</td>
</tr>
</tbody>
</table>

Source: SAMHSA, 2006 National Survey on Drug Use and Health (September 2007).

Growing Need for Marijuana Treatment

Steady Increase in Treatment Admissions with Marijuana as the Primary Substance of Abuse Since 1994

Number of Admissions (in Thousands)

Source: SAMHSA, Treatment Episode Data Set (TEDS) Highlights - 2005 (January 2008); data for 1994 and 1995 are from the 2004 and 2005 TEDS reports, respectively.
Youth Are in Treatment Primarily for Marijuana

For Younger Users, Marijuana Is More Addictive and More Dangerous

According to NSDUH, one in four 12- to 17-year-olds who report using marijuana in the past year display the characteristics of abuse or dependency. For younger users, the risk of marijuana abuse or dependency exceeds that for alcohol or tobacco. Recent research supports the "gateway" dimension of marijuana — that its use creates greater risk of abuse or dependency on other drugs, such as heroin and cocaine. Marijuana use itself is a serious risk, not only for addiction, but also is an added risk for developing psychosis, including schizophrenia.

Source: SAMHSA, 2006 National Survey on Drug Use and Health (September 2007).
12 The Burden on Emergency Departments Has Been Increasing


13 Marijuana Use Is Associated with Mental Health Disorders

Marijuana use is associated with depression, suicidal thoughts, and suicide attempts. Besides the links to depression shown below, teens who smoke marijuana at least once a month are three times more likely to have suicidal thoughts than non-users.

Source: SAMHSA, 2006 National Survey on Drug Use and Health (September 2007).
Marijuana Growers Present Environmental Hazards

One marijuana garden can generate:
Up to 53 30-gallon garbage bags of trash

Criminal Justice Aspects

Juvenile Delinquent Behavior Is Closely Associated With Marijuana Use

Youth who engage in anti-social behavior are far more likely to use marijuana than those who do not engage in these behaviors.

Percent Reporting Past Month Marijuana Use (Ages 12 to 17)

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sold Illegal Drugs</td>
<td>58.8</td>
<td>4.8</td>
</tr>
<tr>
<td>Stole or Tried to Steal</td>
<td>27.6</td>
<td>5.6</td>
</tr>
<tr>
<td>Carried a Handgun</td>
<td>20.6</td>
<td>6.2</td>
</tr>
<tr>
<td>Grade Average &quot;D&quot; or Lower</td>
<td>15.1</td>
<td>6.2</td>
</tr>
<tr>
<td>Gotten into a Serious Fight</td>
<td>11.0</td>
<td>5.4</td>
</tr>
</tbody>
</table>

Source: SAMHSA, 2006 National Survey on Drug Use and Health (September 2007).
Marijuana Accounts for Two Out of Five Arrests for Drug Violations

Arrests for Drug Violations, 2006

- 43.9% Marijuana
- 20.4% Other Drugs
- 4.9% Synthetics
- 30.8% Heroin/Cocaine

Number of Arrests for All Drug Violations = 1,889,810
Total Arrests = 14.38 million


However, Marijuana Arrests Do Not Translate to a Large Share of Offenders in Prison

Inmates in State Prisons

- 80.4% Offenses Not Involving Drugs
- 16.9% Drug Offenses Not Involving Marijuana
- 2.4% Offenses Involving Marijuana (Excluding Possession Only)
- 0.3% Marijuana Possession Only

All percentages are based on total number of State prisoners

Number of State Prisoners (2004) = 1.262 million

Substantial Proportions of Treatment Referrals for Marijuana, Methamphetamine, and Alcohol Are from the Criminal Justice System

**Source of Referral to Treatment**

- **Individual**: 21.4% (Methamphetamine), 15.1% (Marijuana), 28.4% (Alcohol Only)
- **Criminal justice**: 54.9% (Methamphetamine), 58.0% (Marijuana), 41.5% (Alcohol Only)
- **Alc./Drug or health care provider**: 14.9% (Methamphetamine), 17.0% (Marijuana), 12.6% (Alcohol Only)
- **Other**: 8.7% (Methamphetamine), 9.8% (Marijuana), 17.4% (Alcohol Only)

*Other referrals include school (educational), employer/ER, and other community referrals.

Source: SAMHSA, 2006 Treatment Episode Data Set.

---

**What Marijuana Users Spend**

Marijuana Users Spent an Estimated $11 Billion to Obtain Marijuana

U.S. Users Spent a Total of $64 Billion on Illegal Drugs in 2000

- **Billions of Dollars (Projection)**
  - Cocaine: 35.3
  - Heroin: 10.0
  - Marijuana: 10.5
  - Meth: 5.4
  - Other: 2.4

Source: ONDCP, What America's Users Spend on Illegal Drugs (December 2001).
Method of Obtaining Most Recently Used Marijuana Among Past Year Users

- **53%** Got it free or shared
- **43%** Bought it
- **2%** Unspecified
- **1%** Traded for it
- **1%** Grew it yourself

**Location**
- **55%** Inside home, apt, or dorm
- **22%** Outside in public area
- **14%** Other or unspecified
- **3%** On school property
- **6%** Inside public building

**Source**
- **3%** Relative or family member
- **16%** Someone just met or did not know well
- **3%** Unspecified

**Of the 43% who bought most recently used marijuana:**

**Total Past Year Marijuana Users Age 12 or Older = 25.4 million**

Source: SAMHSA, 2006 National Survey on Drug Use and Health (September 2007).
Marijuana Potency Has Been Increasing

Potency of Marijuana Seizures

151% increase from 1983 to 2007


Marijuana Seizures Along the Southwest Border Are Increasingly More Potent

Potency of Marijuana Seizures Along the Southwest Border, 2003-2007

2003 (median potency = 4.8%)
2004 (median potency = 5.6%)
2005 (median potency = 5.2%)
2006 (median potency = 6.9%)
2007 (median potency = 7.3%)

Source: ONDCP analysis of data from the University of Mississippi, Potency Monitoring Project and the Drug Enforcement Administration, System to Retrieve Information on Drug Evidence (February 2008).
The Southwest Border is a Key Conduit of Marijuana Supply

Marijuana Seizure Amounts*
Southwest Border: April 2007 - March 2008
Office of Field Operations (OFO) Ports of Entry and Office of Border Patrol (OBP) Sectors

*Data represent total sector and POE seizure amounts

Total Marijuana Seized along the Southwest Border for April 2007 - March 2008
Sectors: 769,891.10 kg
POEs: 221,814.25 kg
Total: 990,705.35 kg

Marijuana amounts seized by OBP in Sectors:
- greater than 150,000 kg
- 50,001 to 150,000 kg
- 30,001 to 50,000 kg
- 22,001 to 30,000 kg
- up to 22,000 kg

Marijuana amounts seized by OFO at POEs:
- greater than 15,000 kg
- 2,500.01 to 15,000 kg
- 1,500.01 to 2,500 kg
- 500.01 to 1,500 kg
- up to 500 kg

Source: U.S. Customs and Border Protection May 1, 2008
Domestically Grown Marijuana Is a Major Source of Supply

- The largest number of eradicated marijuana plants are concentrated in the West and in Appalachian states.
- Although indoor-grown marijuana plants comprise less than 10 percent of total eradicated plants, the quantity is rapidly increasing.

Number of Outdoor and Indoor Marijuana Plants Eradicated, By State (2007)

Outdoor and Indoor Marijuana Eradication 2000-2006


Source: Drug Enforcement Administration, Office of Domestic Cannabis Eradication/Suppression Program (January 2008).
Mexico Is a Major Marijuana Producer

Eradication and Net Cultivation

Net Cultivation Impact on Production

Mexican Seizures of Cannabis Herb, 2000-2005

Canada is a Consumer as Well as a Producer of Marijuana

Percent Reporting Marijuana Use (Age 15 or Older)

<table>
<thead>
<tr>
<th>Year</th>
<th>Lifetime</th>
<th>Past Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1989</td>
<td>23.2</td>
<td>6.5</td>
</tr>
<tr>
<td>1994</td>
<td>28.2</td>
<td>7.4</td>
</tr>
<tr>
<td>2004</td>
<td>44.5</td>
<td>14.1</td>
</tr>
</tbody>
</table>

Source: 2004 Canadian Addiction Survey.

Canadian Seizures of Cannabis Plants, 2000-2006

Street Value of Potential Proceeds of Canadian Drug Seizures, By Drug

- Cannabis: 81%
- Cocaine: 5%
- Ecstasy/MDMA: 1%
- Heroin/Opium: 1%
- Hashish: 12%

Total value of potential proceeds of drug seizures is C$2.335 billion in 2006
Cannabis accounts for C$1.881 billion (81%)


- Seizures of plants have fluctuated in the past 6 years.
- Canada is a net exporter of cannabis.
- Cannabis and hashish accounted for almost all of the total value of Canadian drug seizures in 2006.

NOTE: In addition to number of plants, seizures by weight were reported. For 2001, 86,457 kg of seized marijuana were reported; in 2002, 2003, and 2006, an additional 83,444 kg, 127,326 kg, and 13,154 kg were reported, respectively.

Smoked Marijuana Is Not Medicine

In April 2006, the Food and Drug Administration (FDA) issued an interagency advisory stating that it has not approved smoked marijuana for any medical condition or disease indication. FDA’s drug approval process requires well-controlled clinical trials that provide the necessary scientific data upon which FDA makes its approval and labeling decisions, consistent with the standards of the Federal Food, Drug, and Cosmetic Act. New drugs must be shown to be safe and effective for their intended use before being marketed in this country.

Efforts that seek to bypass the FDA drug approval process might expose patients to unsafe and ineffective drug products. A growing number of states have passed voter referenda or legislative initiatives making smoked marijuana available for a variety of medical conditions upon a doctor’s recommendation. These measures are deemed by FDA to be inconsistent with efforts to ensure that medications undergo the rigorous scientific scrutiny of the approval process. Accordingly, FDA, along with the Drug Enforcement Administration and the Office of National Drug Control Policy, do not support the use of smoked marijuana for medical purposes.

What Did the Institute of Medicine Conclude?

The Institute of Medicine (IOM) reviewed the scientific evidence for the potential benefits and risks associated with marijuana and makes a clear distinction between smoked marijuana and cannabinoids:

- Smoked marijuana is a crude THC delivery system that also delivers harmful substances—hence, smoked marijuana should generally not be recommended for medical use.
- There is potential therapeutic value of cannabinoid drugs for pain relief, control of nausea and vomiting, and appetite stimulation, and this value would be enhanced by a rapid onset of drug effect.
- The future for marijuana as medicine lies in its isolated components—the cannabinoids and their synthetic derivatives. Isolated cannabinoids will provide more reliable effects than crude plant mixtures.

IOM recommends research and clinical trials of cannabinoid drugs and studies of health risks of smoking marijuana.


Compassionate Care for the Sick and Dying Or Another Front for Drug Trafficking?

Marijuana Dispensary Vending Machine
(California 2008)
Medical Marijuana States Are More Likely to Have Higher Marijuana Use and Initiation Rates

- 12 states have medical marijuana programs in effect as of July 2007
- 8 of the 10 states with the highest percentage of past month marijuana users also are states with medical marijuana programs
- 5 of the 10 states with the highest percentage of new youth marijuana users also are states with medical marijuana programs

States with Medical Marijuana Programs in Effect as of July 2007

States with Highest and Lowest Rates of Current Marijuana Use


Medical Marijuana Dispensaries in California: A Closer Look

Data from San Diego marijuana dispensaries provide a window into the clientele.

- Only a small minority of marijuana dispensary customers have AIDS, glaucoma, or cancer—ailments for which medical marijuana is advocated by proponents.
- The vast majority of dispensary customers are relatively young—almost 4 out of 5 are age 40 or younger.

San Diego Marijuana Dispensaries, 2006

**Customer Ailments**

- Muscle spasms, insomnia, back/neck/post-surgical pain, anxiety, headache, and other (98%)
- AIDS (2%)
- Glaucoma (1%)
- Cancer (1%)

**Customer Age Distribution**

- Ages 41-50 (13%)
- Ages 31-40 (19%)
- Ages 21-30 (41%)
- Ages 51-60 (9%)
- Over 60 or unknown (6%)
- Under 21 (12%)
