Abuse of Pharmaceuticals in the USA

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Rates
Pharmaceutical Drug Abuse is a Particular Problem in USA

Past Month Use of Illicit Drugs among Persons Aged 12+ in 2007

<table>
<thead>
<tr>
<th>Drug Type</th>
<th>Numbers in Millions</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illicit Drugs</td>
<td>19.9</td>
<td>8.0%</td>
</tr>
<tr>
<td>Marijuana</td>
<td>14.4</td>
<td>5.8%</td>
</tr>
<tr>
<td>Psychotherapeutics</td>
<td>6.9</td>
<td>2.8%</td>
</tr>
<tr>
<td>Cocaine</td>
<td>2.1</td>
<td>0.8%</td>
</tr>
<tr>
<td>Hallucinogens</td>
<td>1.0</td>
<td>0.4%</td>
</tr>
<tr>
<td>Inhalants</td>
<td>0.6</td>
<td>0.3%</td>
</tr>
<tr>
<td>Heroin</td>
<td>0.2</td>
<td>0.1%</td>
</tr>
</tbody>
</table>

Source: SAMHSA, 2007 National Survey on Drug Use and Health
Past Year Initiates for Specific Illicit Drugs, Ages 12+, 2007

Numbers in Thousands

- Marijuana: 2,147
- Cocaine: 1,232
- Inhalants: 642
- LSD: 270
- Heroin: 198
- PCP: 58

Pain Relievers
Tranquilizers
Ecstasy
Stimulants
Sedatives

Source: SAMHSA, 2007 National Survey on Drug Use and Health
# 2009 Monitoring the Future Study of USA Secondary Students, 12th Grade (~Age 17-18): Past Year Drug Use

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>66.2</td>
<td>MDMA (Ecstasy)</td>
<td>4.3</td>
</tr>
<tr>
<td>Marijuana/Hashish</td>
<td>32.8</td>
<td>Cocaine (any form)</td>
<td>3.4</td>
</tr>
<tr>
<td>Vicodin*</td>
<td>9.7</td>
<td>Inhalants</td>
<td>3.4</td>
</tr>
<tr>
<td>Amphetamines*</td>
<td>6.6</td>
<td>Cocaine Powder</td>
<td>3.0</td>
</tr>
<tr>
<td>Tranquilizers*</td>
<td>6.3</td>
<td>Ritalin*</td>
<td>2.1</td>
</tr>
<tr>
<td>Cough Medicine*</td>
<td>5.9</td>
<td>LSD</td>
<td>1.9</td>
</tr>
<tr>
<td>Salvia</td>
<td>5.7</td>
<td>Provigil*</td>
<td>1.8</td>
</tr>
<tr>
<td>Adderall*</td>
<td>5.4</td>
<td>Ketamine</td>
<td>1.7</td>
</tr>
<tr>
<td>Sedatives*</td>
<td>5.2</td>
<td>Steroids</td>
<td>1.5</td>
</tr>
<tr>
<td>OxyContin*</td>
<td>4.9</td>
<td>Crack</td>
<td>1.3</td>
</tr>
<tr>
<td>Hallucinogens</td>
<td>4.7</td>
<td>Methamphetamine</td>
<td>1.2</td>
</tr>
</tbody>
</table>

* Nonmedical use

**Cigarettes:**
- Lifetime: 43.6%
- Past Month: 20.1%
Past Month Nonmedical Use of Psychotherapeutic Drugs among Persons Aged 12 or Older: 2002-2008

**Pain Relievers**

- 2002: 1.9%
- 2003: 2.0%
- 2004: 1.8%
- 2005: 1.9%
- 2006: 2.1%
- 2007: 2.1%
- 2008: 1.9%

**Tranquilizers**

- 2002: 0.8%
- 2003: 0.8%
- 2004: 0.7%
- 2005: 0.7%
- 2006: 0.7%
- 2007: 0.7%
- 2008: 0.7%

**Stimulants**

- 2002: 0.6%
- 2003: 0.6%
- 2004: 0.5%
- 2005: 0.5%
- 2006: 0.6%
- 2007: 0.4%
- 2008: 0.4%

**Sedatives**

- 2002: 0.2%
- 2003: 0.1%
- 2004: 0.1%
- 2005: 0.1%
- 2006: 0.2%
- 2007: 0.1%
- 2008: 0.1%

* Difference between this estimate and the 2008 estimate is statistically significant at the .05 level.

Source: SAMHSA, 2008 National Survey on Drug Use and Health
Consequences
Emergency Department Mentions Increasing for Pharmaceuticals, Not for Illicit Drugs in the USA

Opioid Analgesics increased from 144,600 to 305,900 (111%), 2004 to 2008

Benzodiazepines increased from 143,500 to 271,700 (89%), 2004 to 2008

No change in illicit drug reports (1.9 million to 1.9 million overall, non-alcohol illicit 1.0 million to 1.0 million, cocaine 475,425 to 482,188).
Dependence on or Abuse of Specific Illicit Drugs in the Past Year among Persons Aged 12 or Older: 2008

<table>
<thead>
<tr>
<th>Drug</th>
<th>Numbers in Thousands</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marijuana</td>
<td>4,199</td>
</tr>
<tr>
<td>Pain Relievers</td>
<td>1,716</td>
</tr>
<tr>
<td>Cocaine</td>
<td>1,411</td>
</tr>
<tr>
<td>Tranquilizers</td>
<td>451</td>
</tr>
<tr>
<td>Hallucinogens</td>
<td>358</td>
</tr>
<tr>
<td>Stimulants</td>
<td>351</td>
</tr>
<tr>
<td>Heroin</td>
<td>282</td>
</tr>
<tr>
<td>Inhalants</td>
<td>175</td>
</tr>
<tr>
<td>Sedatives</td>
<td>126</td>
</tr>
</tbody>
</table>

Source: SAMHSA, 2008 National Survey on Drug Use and Health
Increasing Treatment for Pharmaceutical Opioids

Opioid Admissions in Adolescents Aged 12 to 17 Years

Source: Subramaniam G. Treatments for adolescents/young adults with opioid use disorder. Presented at: 8th National Institute on Drug Abuse Blending Conference; April 22, 2010; Albuquerque, NM.
Numbers in Thousands

<table>
<thead>
<tr>
<th>Year</th>
<th>Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>360+</td>
</tr>
<tr>
<td>2003</td>
<td>415</td>
</tr>
<tr>
<td>2004</td>
<td>424</td>
</tr>
<tr>
<td>2005</td>
<td>466</td>
</tr>
<tr>
<td>2006</td>
<td>547</td>
</tr>
<tr>
<td>2007</td>
<td>558</td>
</tr>
<tr>
<td>2008</td>
<td>601</td>
</tr>
</tbody>
</table>

* Difference between this estimate and the 2008 estimate is statistically significant at the .05 level.

SAMHSA: 2008 National Survey on Drug Use and Health
Increasing Mortality from Unintentional Drug Overdose

Figure 2: Unintentional drug overdose deaths by major type of drug, United States, 1999-2006

Figure 3: Drug Overdose Death Rates by State, 2006

Causes
Increased Media Attention?
Easy Access? Possible Role of the Internet
“Delivered in the Privacy of your Home”

“Some reasons why you should consider using this pharmacy”
No prescription required!
In 2007-2008 Where Pain Relievers Were Obtained for Most Recent Nonmedical Use: Ages 12+

Source Where Respondent Obtained

- One Doctor: 81.7%
- Free from Friend/Relative: 55.9%
- Bought/Took from Friend/Relative: 14.3%
- Drug Dealer/Stranger: 4.3%
- Bought on Internet: 0.4%
- Other: 1.6%

Source Where Friend/Relative Obtained

- One Doctor: 81.7%
- Free from Friend/Relative: 6.2%
- Bought/Took from Friend/Relative: 5.4%
- Drug Dealer/Stranger: 1.6%
- Bought on Internet: 0.1%
- Other: 1.6%
- More than One Doctor: 3.4%

Note: Totals may not sum to 100% because of rounding or because suppressed estimates.

1. The Other category includes the sources: “Wrote Fake Prescription,” “Stole from Doctor’s Office/Clinic/Hospital/Pharmacy,” and “Some Other Way.”
Increasing Non-Fatal Overdose Associated with Higher Opioid Dosages

<table>
<thead>
<tr>
<th>Opioid Dose</th>
<th>Patients Who Overdosed, n</th>
<th>Person-Years</th>
<th>Overdose Rate (95% CI) per 100 000 Person-Years</th>
<th>Hazard Ratio for All Overdose Events (95% CI)†</th>
<th>Hazard Ratio for Serious Overdose Events (95% CI)‡</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>6</td>
<td>16 780</td>
<td>36 (13–70)</td>
<td>0.31 (0.12–0.80)</td>
<td>0.19 (0.05–0.68)</td>
</tr>
<tr>
<td>1 to &lt;20 mg/d</td>
<td>22</td>
<td>13 770</td>
<td>160 (100–233)</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>20 to &lt;50 mg/d</td>
<td>6</td>
<td>2311</td>
<td>260 (95–505)</td>
<td>1.44 (0.57–3.62)</td>
<td>1.19 (0.40–3.60)</td>
</tr>
<tr>
<td>50 to &lt;100 mg/d</td>
<td>6</td>
<td>886</td>
<td>677 (249–1317)</td>
<td>3.73 (1.47–9.50)</td>
<td>3.11 (1.01–9.51)</td>
</tr>
<tr>
<td>≥100 mg/d</td>
<td>11</td>
<td>614</td>
<td>1791 (894–2995)</td>
<td>8.87 (3.99–19.72)</td>
<td>11.18 (4.80–26.03)</td>
</tr>
<tr>
<td>Any opioid use</td>
<td>45</td>
<td>17 582</td>
<td>256 (187–336)</td>
<td>5.16 (2.14–12.48)</td>
<td>8.39 (2.52–27.98)</td>
</tr>
</tbody>
</table>

Opioid-related overdose death or nonfatal event.
† Adjusted for smoking, depression, substance abuse, comorbid conditions, pain site, age, sex, recent sedative-hypnotic prescription, and recent initiation of opioid use.
‡ Opioid-related overdose death or serious nonfatal event (n = 40).
Total Number of Prescriptions for Hydrocodone and Oxycodone Products Dispensed by US Retail Pharmacies, Years 1991–2009

Projected Number of Prescriptions for Stimulants* Dispensed by US Retail Pharmacies, Years 1991-2009  *excludes modafinil and atomoxetine products
Epidemiology

- How many adults and adolescents misuse/abuse pharmaceuticals?
  - MANY

- Is misuse/abuse of pharmaceuticals changing?
  - STABLE AT HIGH RATE AFTER INCREASING IN 1990s
  - CONSEQUENCES (MORBIDITY, MORTALITY, TREATMENT SEEKING) MAY BE INCREASING
What Explains the Increase in Pharmaceutical Abuse?

1) Increasing numbers of prescriptions (greater availability)
2) Attention by the media and advertising (television and newspaper)
3) Easy access through family and friends
4) Improper knowledge and monitoring (addiction may go unrecognized)
When used properly, opioid, sedative and stimulant pharmaceutical agents have many benefits; however, risks of abuse and addiction are significant and NIDA seeks to draw research attention to these vital issues.
Visit Our Website @

www.drugabuse.gov

http://www.nida.nih.gov/nidamed/