What Difference Does It Make? Patterns in Drug-related Emergency Department Visits from DAWN

Elizabeth H. Crane, Ph.D., M.P.H.
Drug Abuse Warning Network
Center for Behavioral Health Statistics and Quality, SAMHSA

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Disclosure Information

Elizabeth Crane, Ph.D., M.P.H.
Drug Abuse Warning Network, SAMHSA

I have no financial or other disclosures
Drug Abuse Warning Network

- Public health surveillance system
- Direct review of emergency department (ED) patient records
- ED visits related to drugs
  - Direct cause or contributing factor
  - 4 million drug-related visits in 2008
What Drugs are Covered?

- All types of drugs
  - Illegal drugs
  - Prescription and OTC pharmaceuticals
  - Dietary supplements
  - Non-pharmaceutical inhalants
- Alcohol-in-combination (any age)
- Alcohol alone (age < 21)
DAWN Emergency Department Component

- Data collected from non-Federal general hospitals with full-time EDs (24/7)
- Statistical sample
  - Nationally representative
  - 12 oversampled metropolitan areas/subareas
- ED visit counts from hospitals are used to produce estimates
DAWN Emergency Department Component

- ED visits involving recent drug use
- All motives
  - Drug misuse/abuse
  - Nonmedical use of pharmaceuticals
  - Underage drinking
  - Drug-related suicide attempts
  - Seeking detox
  - Adverse reactions
  - Accidental ingestion
  - Malicious poisoning
Analytic Categories in this Presentation

- For illicit drugs
  - Includes all ED visits that involved an illicit drug, regardless of the reason for the ED visit.

- For pharmaceuticals
  - ED visits that involved the nonmedical use of a pharmaceutical
Nonmedical Use of Pharmaceuticals (NMUP) – Definition

- Taking a higher than prescribed or recommended dose of a pharmaceutical
- Taking a pharmaceutical prescribed for another individual
- Drug-related assault of the patient by another individual
- Substance abuse involving pharmaceuticals
National Trends, 2004 - 2008
Drugs-related ED Visits – Nation, 2008

- Over 4.3 million drug-related ED visits
  - 73% increase from 2004 to 2008
  - 27% increase from 2006 to 2008

- Almost 2 million involved drug misuse/abuse
  (46% of total visits)

- Almost 1 million involved NMUP (22% of total visits)

Note: Trends were analyzed by comparing 2008 with 2004, 2006, and 2007 only.
Trends in ED Visits by Adults+ – 2004 compared to 2008

- Total of all illicit drugs stable
  - Cocaine, marijuana, heroin: stable

- Nonmedical use of pharmaceuticals increased 91%
  - Narcotic pain relievers increased 112%
  - Benzodiazepines increased 92%

+Ages 21 and older
ED Visits involving Selected Illicit Drugs and NMU Pharmaceuticals, Adults†—Nation, 2004 - 2008

Source: DAWN Estimates, 2009

† Ages 21 and older

* Statis. significant difference from 2008
Metropolitan Areas, 2004 - 2008
ED Visits involving Cocaine – Adults+, 2004 - 2008

Source: DAWN Estimates, 2009

* Statis. significant difference from 2008
+ Ages 21 and older
Rates of Cocaine-related ED Visits for Adults* by Metro Area – 2008

<table>
<thead>
<tr>
<th>Metro Area</th>
<th>Rate: ED Visits per 100K population</th>
</tr>
</thead>
<tbody>
<tr>
<td>NYC</td>
<td>510</td>
</tr>
<tr>
<td>Chicago</td>
<td>444</td>
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<tr>
<td>Miami</td>
<td>405</td>
</tr>
<tr>
<td>Houston</td>
<td>387</td>
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<tr>
<td>Detroit</td>
<td>307</td>
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<tr>
<td>San Francisco Div</td>
<td>286</td>
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<tr>
<td>Seattle</td>
<td>284</td>
</tr>
<tr>
<td>Boston</td>
<td>262</td>
</tr>
<tr>
<td>Ft Lauderdale</td>
<td>235</td>
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<tr>
<td>Minn-St Paul</td>
<td>221</td>
</tr>
<tr>
<td>Denver</td>
<td>218</td>
</tr>
<tr>
<td>Nation</td>
<td>212</td>
</tr>
<tr>
<td>Phoenix</td>
<td>119</td>
</tr>
<tr>
<td>San Diego</td>
<td>62</td>
</tr>
</tbody>
</table>

Source: DAWN Estimates, 2009

*Ages 21 and older
Rates of Cocaine-related ED Visits by Sex (all ages) – Selected Metro Areas, 2008

<table>
<thead>
<tr>
<th>City</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>NYC</td>
<td>588</td>
<td>186</td>
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<tr>
<td>Chicago</td>
<td>429</td>
<td>214</td>
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<tr>
<td>Miami</td>
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<td>176</td>
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<tr>
<td>Detroit</td>
<td>293</td>
<td>163</td>
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<tr>
<td>Boston</td>
<td>383</td>
<td>188</td>
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<tr>
<td>Nation</td>
<td>205</td>
<td>114</td>
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<tr>
<td>Phoenix</td>
<td>122</td>
<td>61</td>
</tr>
<tr>
<td>San Diego</td>
<td>62</td>
<td>32</td>
</tr>
</tbody>
</table>

Rate: ED Visits per 100K population

Source: DAWN Estimates, 2009

SAMHSA / CBHSQ
Rates of NMU Narcotic Pain Reliever ED Visits for Adults* by Metro Area – 2008

<table>
<thead>
<tr>
<th>City</th>
<th>Rate (ED Visits per 100K population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seattle</td>
<td>165</td>
</tr>
<tr>
<td>Detroit</td>
<td>151</td>
</tr>
<tr>
<td>Denver</td>
<td>138</td>
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<tr>
<td>Minneapolis</td>
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<tr>
<td>Nation</td>
<td>127</td>
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<tr>
<td>Boston</td>
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<tr>
<td>Phoenix</td>
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<tr>
<td>San Francisco</td>
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</tr>
<tr>
<td>NYC</td>
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<tr>
<td>Houston</td>
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<td>San Diego</td>
<td>84</td>
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<tr>
<td>Ft Lauderdale</td>
<td>70</td>
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<tr>
<td>Chicago</td>
<td>50</td>
</tr>
<tr>
<td>Miami</td>
<td>24</td>
</tr>
</tbody>
</table>

Rate: ED Visits per 100K population

*Ages 21 and older

Source: DAWN Estimates, 2009
Rates of NMU Narcotic Pain Reliever ED Visits by Sex (all ages) – Selected Metro Areas, 2008

<table>
<thead>
<tr>
<th>City</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>NYC</td>
<td>101</td>
<td>49</td>
</tr>
<tr>
<td>Chicago</td>
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<td>37</td>
</tr>
<tr>
<td>Miami</td>
<td>20</td>
<td>19</td>
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<tr>
<td>Detroit</td>
<td>117</td>
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<td>Boston</td>
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<td>112</td>
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<tr>
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<td>Phoenix</td>
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<td>90</td>
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<tr>
<td>San Diego</td>
<td>59</td>
<td>65</td>
</tr>
</tbody>
</table>

Rate: ED Visits per 100K population

Source: DAWN Estimates, 2009
Rates of NMU Narcotic Pain Reliever ED Visits by Age Group – New York City, 2008

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Rate: ED Visits per 100K population</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 to 20</td>
<td>40</td>
</tr>
<tr>
<td>21 to 24</td>
<td>42</td>
</tr>
<tr>
<td>25 to 29</td>
<td>89</td>
</tr>
<tr>
<td>30 to 34</td>
<td>82</td>
</tr>
<tr>
<td>35 to 44</td>
<td>139</td>
</tr>
<tr>
<td>45 to 54</td>
<td>167</td>
</tr>
<tr>
<td>55 to 64</td>
<td>82</td>
</tr>
<tr>
<td>65 and over</td>
<td>21</td>
</tr>
</tbody>
</table>

Source: DAWN Estimates, 2009
ED Visits involving Selected Illicits and NMU Pharmaceuticals, Adults+ – NYC, 2004 - 2008

Source: DAWN Estimates, 2009

* Statistically significant difference from 2008
+ Ages 21 and older
ED Visits involving Selected Illicit and NMU Pharmaceuticals, Adults† – Detroit, 2004 - 2008

Source: DAWN Estimates, 2009

* Statis. significant difference from 2008
† Ages 21 and older
ED Visits involving Selected Illicit and NMU Pharmaceuticals, Adults+ – Phoenix, 2004 - 2008

Source: DAWN Estimates, 2009

* Statis. significant difference from 2008
+ Ages 21 and older
ED Visit Rates for Cocaine and for NMU Narcotic Pain Relievers for Adults* – Miami and Fort Lauderdale, 2008

- Miami: Cocaine rate 405, Narcotic pain relievers rate 24
- Ft Lauderdale: Cocaine rate 235, Narcotic pain relievers rate 70.2

Rate: ED Visits per 100K population

*Ages 21 and older

Source: DAWN Estimates, 2009
Summary

- Nationally, cocaine, heroin, marijuana stable from 2004-2008
- Cocaine had overall increase from 2004 to 2008 in selected metros, but it has also decreased since 2006 in those areas
- Narcotic pain relievers, benzodiazepines increasing nationally and for the selected metropolitan areas
National rates are just that—national. There is variation between the metropolitan areas

- Rates of cocaine ED visits for adults ranged from 62 per 100,000 pop. in San Diego to 510 per 100,000 in NYC
- Rates of NMU narcotic pain reliever visits ranged from 24 per 100k pop. in Miami to 165 per 100k in Seattle
Summary, cont.

- Cocaine is still the leading drug in misuse/abuse ED visits for adults
- Emergence of nonmedical use of pharmaceuticals at both the national level and for the selected metropolitan areas
  - NMU pharmaceuticals account for half of the misuse/abuse ED visits among adults nationally
  - In selected metros, narcotic pain relievers and benzos are catching up with heroin and marijuana
- For NMU narcotic pain relievers and benzos, rates are similar for males and females—unlike what we’re used to seeing for the major illicit drugs

Select a metro area and an analytic category for emergency department tables.

Select a metro area:
- Boston
- Chicago
- Denver
- Detroit
- Houston
- Miami-Dade
- Miami-Fort Lauderdale
- Minneapolis
- New York-5 Boroughs
- Phoenix
- San Diego
- San Francisco
- Seattle

Select an analytic category:
- All Misuse and Abuse
- Illicits (excluding alcohol)
- Nonmedical Use of Pharmaceuticals
- All Alcohol
- Underage Drinking
- Suicide Attempts
- Seeking Detox
- Adverse Reactions
- Accidental Ingestions
- All Visits

[Links to DAWN website and Adobe Acrobat Reader to view PDFs]
Drug Abuse Warning Network

DAWNinfo.samhsa.gov