Suicidal thoughts and behavior among adults by sex, race/ethnicity, age group, and state – United States, 2008-2009

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Introduction
Background

• Suicidal thoughts and behavior are important public health concerns in the United States

• In 2009
  – 36,909 suicides
  – 633,000 hospital emergency departments visits for non-fatal self-inflicted injuries
Public Health Burden of suicidal behavior among adults aged ≥18 years -- United States, 2009

- 35,839 Deaths*, rate 15.4/100,000
- 138,344 Hospitalizations¶, rate 59.5
- 325,242 Emergency Departments Visits§, rate 139.8

*Source: CDC’s National Vital Statistics System,
¶Source: Agency for Healthcare Research and Quality’s Healthcare Cost and Utilization Project - Nationwide Inpatient Sample (HCUP-NIS)
§Source: CDC’s National Electronic Injury Surveillance System-All Injury Program
Background

- State data on suicide-related issues are needed to help establish and evaluate programs
- Public health surveillance with timely and useful information allows organizations to take appropriate prevention and control actions
Objectives

- To estimate the prevalence of suicidal thoughts, plan, and attempt by age, sex, race/ethnicity, and state among adults
Methods
National Survey on Drug Use and Health (NSDUH)

• Sample Design
  – Annual household survey of civilian, non-institutionalized population (CNP) aged 12 or older
  – Administered in-person
  – Provides national, state, and sub-state representative estimates of substance abuse and mental health issues
National Survey on Drug Use and Health (NSDUH)

• Sample Design
  – Civilian non-institutionalized population:
    • Includes: Households, college dorms, homeless in shelters, civilians on military bases, migratory workers’ camps, halfway houses
    • Excludes: Active-duty military, long-term hospital residents, nursing homes, prison populations, homeless not in shelters
NSDUH administered

- Time period
  - 1 January 2008 - 31 December 2009
- Sample size
  - 92,264 persons responded
Suicidal thought and behavior items in NSDUH

• Asked only of adults aged 18 years and older
• “During the past 12 months did you seriously think about trying to kill yourself?"
• “If yes, during the past 12 months did you make any plans to kill yourself"
• “During the past 12 months did you try to kill yourself?“
Prevalence of suicidal thoughts and behavior among adults by sex and age group -- United States, 2008-2009

<table>
<thead>
<tr>
<th></th>
<th>Ideation</th>
<th>Plan</th>
<th>Attempt</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># in 1,000s</td>
<td>%</td>
<td>95% CI</td>
</tr>
<tr>
<td>Total U.S.</td>
<td>8,359</td>
<td>3.7</td>
<td>(3.5-3.9)</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>3,789</td>
<td>3.5</td>
<td>(3.2-3.8)</td>
</tr>
<tr>
<td>Female</td>
<td>4,571</td>
<td>3.9</td>
<td>(3.7-4.2)</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-29 years</td>
<td>2,865</td>
<td>5.7</td>
<td>(5.4-6.0)</td>
</tr>
<tr>
<td>30+ years</td>
<td>5,494</td>
<td>3.1</td>
<td>(2.9-3.4)</td>
</tr>
</tbody>
</table>

Source: SAMHSA NSDUH
## Prevalence of suicidal thoughts and behavior among adults by race/ethnicity -- United States, 2008-2009

<table>
<thead>
<tr>
<th></th>
<th>Ideation</th>
<th>Plan</th>
<th>Attempt</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># in 1,000s</td>
<td>%</td>
<td>95% CI</td>
</tr>
<tr>
<td>Total U.S.</td>
<td>8,359</td>
<td>3.7</td>
<td>(3.5-3.9)</td>
</tr>
<tr>
<td><strong>Race/ethnicity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>6,044</td>
<td>3.9</td>
<td>(3.7-4.1)</td>
</tr>
<tr>
<td>Black, non-Hispanic</td>
<td>911</td>
<td>3.5</td>
<td>(3.1-4.0)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>933</td>
<td>3.0</td>
<td>(2.6-3.6)</td>
</tr>
<tr>
<td>Asian, non-Hispanic</td>
<td>208</td>
<td>2.1</td>
<td>(1.6-2.8)</td>
</tr>
</tbody>
</table>

Source: SAMHSA NSDUH
## Prevalence of suicidal thoughts and behavior among adults by region -- United States, 2008-2009

<table>
<thead>
<tr>
<th>Region</th>
<th>Ideation</th>
<th>Plan</th>
<th>Attempt</th>
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</thead>
<tbody>
<tr>
<td><strong>Total U.S.</strong></td>
<td>8,359</td>
<td>2,263</td>
<td>1,058</td>
</tr>
<tr>
<td><strong>Geographic region</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Northeast Region</strong></td>
<td>1,469</td>
<td>358</td>
<td>182</td>
</tr>
<tr>
<td><strong>Midwest Region</strong></td>
<td>2,122</td>
<td>598</td>
<td>271</td>
</tr>
<tr>
<td><strong>South Region</strong></td>
<td>2,647</td>
<td>734</td>
<td>353</td>
</tr>
<tr>
<td><strong>West Region</strong></td>
<td>2,122</td>
<td>572</td>
<td>252</td>
</tr>
</tbody>
</table>

Source: SAMHSA NSDUH
Prevalence of suicidal thoughts among adults by state -- United States, 2008-2009 (U.S. avg 3.7%)

Source: Substance abuse and Mental Health Services Administration NSDUH
Prevalence of suicidal thoughts and behavior among adults -- United States, 2008-2009

- Prevalence estimates of suicidal thoughts and behavior varied by socio-demographic factors, region and state.
- The prevalence of serious suicidal thoughts, suicide planning, and suicide attempts was significantly higher among young adults aged 18-29 years than adults aged 30 years and older.
- The prevalence of serious suicidal thoughts and suicide attempts was significantly higher among females than males but there was no difference for suicide planning.
Prevalence of suicide thoughts among adults -- United States, 2008-2009

• In 2008-2009, an estimated 8.3 million (annual average) adult persons in the U.S. reported serious thoughts of suicide in the past year (3.7 percent of the population about 1 in 27 adults).

• The prevalence of reporting serious thoughts of suicide ranged from 2.1 percent (1 in 48) in Georgia to 6.8 percent (1 in 15) in Utah
Prevalence of suicide plans among adults -- United States, 2008-2009

• More than 2.2 million (annual average) adult persons in the U.S. reported suicide plans in the past year (1.0 percent [1 in 100] of the population).

• The prevalence of reports of suicide planning ranged from 0.1 percent (1 in 1000) in Georgia to 2.8 percent (1 in 36) in Rhode Island.

Percentage of population

State

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- More than 1.0 million (annual average) adult persons in the U.S. reported making a suicide attempt in the past year (0.5 percent [1 in 200] of the population)

- The prevalence of reports of suicide attempts ranged from 0.1 percent (1 in 1000) in Delaware and Georgia to 1.5 percent (1 in 67) in Rhode Island

Percentage of population

High
Low
Estimate

State

Northeast

Midwest

South

West

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Prevalence of suicidal attempts among adults aged ≥18 years, by state — United States, 2008–2009

*U.S. average: 0.5%.
Source: Natl Survey on Drug Use and Health

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Conclusions
Conclusions

• The findings in this report indicate that substantial variations exist at the regional and state level in the prevalence of having serious thoughts of suicide, having made plans to attempt suicide, and having attempted suicide in the past year among adults.

• These differences exist when examined for overall prevalence, by age and by sex.

• These findings emphasize the importance of surveillance to collect locally relevant data on which to base prevention and control activities.
Study limitations

• Data based on self-report
• Representative only of civilian, non-institutionalized population aged 18 years or older
• Low precision of some estimates at the state-level
Recommendations

• These results can be used by state health departments and federal agencies to measure progress toward achieving national and state health objectives.

• Continued surveillance is needed to monitor suicidal thoughts and non-fatal suicidal behavior to design, implement, and evaluate public health policies and programs.

• Possible strategies to implement could include a range of strategies such as universal strategies such as means restriction to indicated programs such as cognitive-behavioral therapy for selected populations.
Acknowledgements

• We thank the team from SAMHSA, CDC and RTI who contributed to the planning and implementation of the study. We also thank the respondents for their time and willingness to participate in this study.
Extra slides
Average annual prevalence of suicidal ideation among adults by state -- NSDUH, U.S., 2008-2009
Average annual prevalence of suicidal plans among adults by state -- NSDUH, U.S., 2008-2009
Average annual prevalence of suicidal attempts among adults by state -- NSDUH, U.S., 2008-2009
Public Health Burden of suicidal behavior -- United States, 2009

- **36,909 deaths**, rate 12.0 per 100,000
- **149,577 hospitalizations**, rate 48.7
- **633,000 Emergency dept. visits**, rate 206.2

*Source: CDC’s National Vital Statistics System, 2009
¶Source: Agency for Healthcare Research and Quality’s Healthcare Cost and Utilization Project - Nationwide Inpatient Sample (HCUP-NIS), 2009
§ Source: CDC’s National Hospital Ambulatory Medical Care System, 2009
Age-adjusted suicide rates among all persons by state -- United States, 2009 (U.S. avg 11.8)

Source: Centers for Disease Control and Prevention (CDC) vital statistics