Youth Suicide in Maine

Erika Lichter, ScD
University of Southern Maine / Maine CDC
Suicides in Maine

- On average, 160 people in Maine die by suicide each year
  - 156 suicides in 2006

- Men in Maine are 4X more likely than women to die by suicide (19.4 vs. 4.4 per 100,000)
Suicide Rates (per 100,000) for Maine, Northeast, and the U.S., 1985–2005, All Ages, Age-Adjusted
Age-adjusted suicide rates (per 100,000) for Maine and Northeast Region, 2001–2005
### Suicide rates (per 100,000) for Maine Public Health Districts, 2002–2006

<table>
<thead>
<tr>
<th>District</th>
<th>Number of Suicides</th>
<th>Crude Rate</th>
<th>Age-Adjusted Rate 95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aroostook District</td>
<td>39</td>
<td>11.8</td>
<td>11.0 (7.8, 15.1)</td>
</tr>
<tr>
<td>Central Maine District</td>
<td>114</td>
<td>14.9</td>
<td>14.5 (11.8, 17.1)</td>
</tr>
<tr>
<td>Cumberland District</td>
<td>145</td>
<td>12.0</td>
<td>11.8 (9.9, 13.7)</td>
</tr>
<tr>
<td>Downeast District</td>
<td>60</td>
<td>15.4</td>
<td>14.6 (11.2, 18.8)</td>
</tr>
<tr>
<td>Mid Coast District</td>
<td>114</td>
<td>16.9</td>
<td>16.7 (13.6, 19.7)</td>
</tr>
<tr>
<td>Penquis District</td>
<td>113</td>
<td>15.3</td>
<td>15.1 (12.3, 17.9)</td>
</tr>
<tr>
<td>Western Maine District</td>
<td>92</td>
<td>10.7</td>
<td>10.5 (8.4, 12.8)</td>
</tr>
<tr>
<td>York</td>
<td>125</td>
<td>14.1</td>
<td>13.9 (11.5, 16.4)</td>
</tr>
<tr>
<td>Maine</td>
<td>802</td>
<td>13.7</td>
<td>13.4 (12.5, 14.3)</td>
</tr>
</tbody>
</table>

Central = Somerset and Kennebec
Downeast=Washington, Hancock
Midcoast=Waldo, Knox, Lincoln, Sagadahoc
Penquis= Penobscot, Piscataquis
Western=Franklin, Oxford, Androscoggin
Methods of Suicide Mortality in Maine

- Overall, firearms are the most common method of suicide followed by suffocation (e.g., hanging) and self-poisoning.
- Between 2002–2006, 60% of men killed themselves using a firearm, compared to 29% of women.
- 47% of women killed themselves using poison (e.g., drugs), compared to 12% of men.
- About 20% of men and women suffocated themselves.
Suicide among adolescents

- In Maine, suicide is the second leading cause of death for youth age 10–24 years.
  - 89 deaths to youth age 10–24 between 2002–2006

- In 2006, there were 14 suicide deaths among youth 10–24 years.
Suicide deaths among Maine youth, 1995–2006

5-Year Trailing Averages

Source: National Center for Health Statistics, WISQARS
Methods of Suicide by Age, 2002–2006

[Chart showing the methods of suicide by age group from 10-14 to All, with categories for Firearm, Suffocation/Hanging, Poisoning, and Other.]
In 2006, among 10–24 year olds in Maine:

- 14 suicide deaths
- 291 hospitalizations for self-inflicted injuries
- 819 outpatient emergency department visits for self-inflicted injury
Adolescents and young adults have the highest rates of hospitalization and emergency department visits for self-inflicted injury

- In 2006, young adults age 20–24 had the highest rates of hospitalization of any age group.
- Adolescents age 15–19 years had the highest outpatient ED visit rate for self-inflicted injury.
- Adolescent girls (age 15–19 yrs) have the highest self-injury hospitalization and ED visit rates of any age group.

Rate per 10,000

- 10-14
- 15-19
- 20-24

Outpatient emergency department visits for self-inflicted injury among youth, Maine 2000–2006
Methods of Self–inflicted Injury

- 77% of hospitalizations for self–inflicted injury in Maine between 2002–2006 were for poisoning.
  - 10% cutting
  - 10% other

- 45% of outpatient emergency department visits for self–inflicted injury were due to poisoning
  - 36% cutting
  - 17% other
Self-reported Suicidal Behavior and Ideation among Maine High School Students, 2007

Source: Youth Risk Behavior Survey, 2007
Percent of Maine & US high school students who considered suicide in past year, 1995–2007

Source: Youth Risk Behavior Survey, High School

*1999 Maine YRBS data are unweighted and may not be representative of the population
Percent of Maine middle school students who ever considered suicide, 1997–2007

Source: Youth Risk Behavior Survey, Middle School

*1999 Maine YRBS data are unweighted and may not be representative of the population
Percent of Maine & U.S. high school students who attempted suicide in past year, 1995–2007

Source: Youth Risk Behavior Survey, High School

*1999 Maine YRBS data are unweighted and may not be representative of the population
Self-reported suicide attempts among Maine and U.S. high school students by sex, 2001–2007

Source: Youth Risk Behavior Survey, High School
Percent of Maine middle school students who ever attempted suicide 1997–2007

Source: Youth Risk Behavior Survey, Middle School

*1999 Maine YRBS data are unweighted and may not be representative of the population.
Percent of Maine high school students who reported symptoms of depression in past year, 2001–2007

Source: Youth Risk Behavior Survey, High School
What are the most common factors associated with suicidal ideation and attempts among Maine high school students?
### Demographics and Suicide Ideation

<table>
<thead>
<tr>
<th>Grade</th>
<th>9&lt;sup&gt;th&lt;/sup&gt;</th>
<th>10&lt;sup&gt;th&lt;/sup&gt;</th>
<th>11&lt;sup&gt;th&lt;/sup&gt;</th>
<th>12&lt;sup&gt;th&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% (95% C.I.)</td>
<td>% (95% C.I.)</td>
<td>% (95% C.I.)</td>
<td>% (95% C.I.)</td>
</tr>
<tr>
<td>Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9&lt;sup&gt;th&lt;/sup&gt;</td>
<td>21.4 (19.3, 23.7)</td>
<td>22.0 (18.9, 25.5)</td>
<td>19.8 (16.3, 23.7)</td>
<td>15.0 (12.5, 17.9)</td>
</tr>
<tr>
<td>10&lt;sup&gt;th&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11&lt;sup&gt;th&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12&lt;sup&gt;th&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td>23.6 (21.4, 26.0)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>16.1 (14.1, 18.3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>19.5 (17.8, 21.3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Am. Indian/AN</td>
<td>19.7 (13.5, 27.9)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>30.1 (24.8, 35.9)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Maine HS YRBS, 2001-2005
Grades by Suicide Ideation

p<.05; A & B vs. C & D

Maine HS YRBS, 2001-2005
Mental Health by Suicide Ideation

*p<.05 Maine HS YRBS, 2001-2005

Percent with suicide ideation:
- Depression: Yes 53.3%, No 9.1%
- Disordered eating: Yes 40.8%, No 15.5%

Maine HS YRBS, 2001-2005
Substance Use and Suicide Ideation

Binge drinking = 5 or more drinks in a row at least once in past month
Smoking = >20 or more cigarettes in past month vs. none
Other drugs = Marijuana/cocaine in past month, lifetime heroin, inhalants, prescription drugs

*p<.05
Sexual Contact and Suicide Ideation

- No sexual contact: 14.8%
- Opposite sex contact only: 20.9%
- Same sex/bisexual contact: 38.7%

p < .05

Maine HS YRBS, 2001-2005
Aggressive Behavior and Suicide Ideation

Fights at school:
- Yes: 34.9%
- No: 18%

Carrying weapon at school:
- Yes: 38.3%
- No: 18.4%

*p < .05 Maine HS YRBS, 2001-2005
Peer Victimization and Suicide Ideation

Maine HS YRBS, 2001-2005

- Threats*
  - Yes: 41.8%
  - No: 17.9%

- Property damaged*
  - Yes: 25.8%
  - No: 15.5%

- Felt unsafe*
  - Yes: 43.1%
  - No: 18.9%

- Any school victim*
  - Yes: 29.6%
  - No: 16.8%

*p<.05

Maine HS YRBS, 2001-2005
Victimization and Suicide Ideation

- **Dating Violence**: Yes 36.6%, No 17.3%
- **Sexual Abuse**: Yes 46.3%, No 17.2%
- **Racial Harassment**: Yes 32.8%, No 17.6%
- **Sexual Orientation Harassment**: Yes 44.4%, No 16.6%

* *p* < .05

Maine HS YRBS, 2001-2005
Multiple Victimization and Risk

Victimization=Dating violence, sexual assault, threatened at school, property damaged at school, unsafe at school, racial harassment, sexual orientation harassment

Risk behaviors=low grades, multiple sexual partners, substance use, smoking, binge drinking, fighting at school, weapon to school, eating disorder
Multiple risks and suicide ideation

% Suicide Ideation

Number of victimizations

Number of risk behaviors
Odds of Ideation by Number of Victimization/Risk Experiences

Adjusted for sex, grade, race, same sex sexual contact

*p<.01

Maine HS YRBS, 2001-2005
Odds of Suicide Attempt by Number of Victimization/Risk Experiences

Adjusted for sex, grade, race, same sex sexual contact

*p<.01

Maine HS YRBS, 2001-2005
Summary

- About 1 in 10 suicides in Maine each year are among those age 10–24.

- Adolescents and young adults have the highest rates of hospitalization and emergency department visits for self-inflicted injury.

- 1 in 10 high school students every year considers committing suicide in Maine.

- Correlates of suicide ideation and attempts in Maine are similar to those found in the literature.
  - Female, low grades, younger, substance use, eating disorders, depression, aggressive behaviors, victimization

- Multiple victimization experiences and multiple risk factors are associated with increased odds of suicide ideation and attempts.
Implications

- School personnel, clinicians, parents and others who work with youth must be made aware that adolescents who are bullied and/or victimized by peers are at increased risk for suicide ideation and attempts.

- Those who exhibit multiple risk behaviors may be most at risk for actually attempting suicide.
For more information on youth, injury and suicide data

- WISQARS (Web-based Injury Statistics Query and Reporting System)
  - [http://www.cdc.gov/ncipc/wisqars](http://www.cdc.gov/ncipc/wisqars)

  - Has county-level data available

- YRBS (Youth Risk Behavior Survey)

- Maine Integrated Youth Health Survey coming in 2009!
Erika Lichter
Maine CDC/USM
(207) 287-4598
Erika.lichter@maine.gov