Suicide and Depression

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Suicide Deaths Are Rising Across the US

• 10th leading cause of death in US
• 2nd leading cause of death in ages 15-34
• Large increases in rates between 1999 and 2016
  • 32.9% increase in MI

• 28 attempts for every death by suicide

• 20% of those who die by suicide had a known history of suicide attempts\(^2\)
Michigan Suicides

- On average, one person dies by suicide every seven hours in the state.
- More than twice as many people die by suicide in Michigan annually than by homicide.
  The total deaths to suicide reflect a total of 27,778 years of potential life lost (YPLL) before age 65.

- 1,364 Michiganders died from suicide in 2016
- Suicide is the leading cause of injury deaths in Michigan
- 4.1% of MI adults reported serious thoughts about suicide in 2015
More Locally. . .

West Michigan Counties

Suicide is the 8th leading cause of death in both Kent and Ottawa.

<table>
<thead>
<tr>
<th>County</th>
<th>Suicides per 100,000 Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barry</td>
<td>16.0</td>
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<tr>
<td>Newaygo</td>
<td>15.0</td>
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<tr>
<td>Ionia</td>
<td>14.4</td>
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<tr>
<td>Calhoun</td>
<td>14.4</td>
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<tr>
<td>Montcalm</td>
<td>14.0</td>
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<tr>
<td>Van Buren</td>
<td>13.9</td>
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<tr>
<td>Oceana</td>
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<td>Ottawa</td>
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</tbody>
</table>
More Locally...Ottawa County

Death by Suicide

Among All Ages in Ottawa County

What is changing in Ottawa County, and very concerning, is the increase in suicides among younger and younger children.

On average, the last 10 years had 8% of all suicides occurring in teens. In 2018, an estimated 21% of all suicides are of teenagers.

While the United States and Michigan are seeing an increase in suicides, Ottawa County’s overall rate of suicide has been stable since 1990 (when adjusted for the high rate of population growth).

On average, in every classroom of 13-18-year-olds...

5 seriously thought about taking their life and
2 made one or more attempts.


Ottawa and Kent County Youth Assessment Surveys\textsuperscript{9,11}

**In the past year...**

- I stopped doing some usual activities because I felt so sad or hopeless almost every day for two weeks or more in a row.

  - 29% of children
  - 27% White
  - 35% Hispanic
  - 35% Other

  37% 20%

- 24% of Kent County middle school students and 32% of high school students

- 21% of Kent County middle school students and 16% of high school students

- I have made a plan about how to attempt suicide.

  - 14% of children
  - 17% White
  - 10% Hispanic
  - 12% Other

  17% 12%

- 13% of Kent County middle school and high school students

- I attempted suicide 1+ times.

  - 8% of children
  - 10% White
  - 5% Hispanic
  - 6% Other

  10% 6%

- 8% of Kent County middle school students and 7% of high school students

*Of those who thought about suicide, 40% attempted.*
How Common is Depression?

- Past year prevalence: 10.4% of US adults and 12.8% of adolescents\textsuperscript{12, 13}
  - 37% of adults and 60% of adolescents did not receive treatment
- Lifetime Prevalence: 20.6% \textsuperscript{12}
- Postpartum: 21.9% moms will experience depression within 1 year postpartum\textsuperscript{14}
  - Suicides account for 20% of postpartum deaths\textsuperscript{15}

28% of Ottawa County Women age 18-44 have been diagnosed with depression\textsuperscript{8}
Who’s Most At Risk?

- American Indian/Alaska Natives: Suicide rates are 2.8 times higher than national rate\textsuperscript{16}
- Veterans: MI veteran suicide rate in 2016 was >1.5 times greater than the state rate\textsuperscript{17}
- Transgender Individuals: 40% of those identifying as transgender have attempted suicide\textsuperscript{18}
  - Moderated by family support: 37% who identify family as supportive have attempted vs 54% of those reported family is unsupportive\textsuperscript{18}
  - Pine Rest adolescent inpatient study: 5x greater odds of a prior suicide attempt for transgender patients than other adolescent patients\textsuperscript{19}
- No difference from other patients when they report high adult support
Who’s Most At Risk?: Age & Gender Factors

- Middle-aged adults (35 – 64 years): Largest proportion of suicides (54%) in 2013\textsuperscript{16}
- Adolescents and young adults (10-24 years): Suicide was the 2\textsuperscript{nd} leading cause of death in 2013\textsuperscript{16}
- **Women** are 2 times more likely to attempt suicide; **men** are 3.5-4 times more likely to die by suicide\textsuperscript{20,21}

\begin{figure}
\centering
\includegraphics[width=\textwidth]{suicide_rates.png}
\caption{Suicide Rates for Males and Females by Age in the United States (2016)\newline
Data Courtesy of CDC}
\end{figure}

- 78% of suicides in 2017 were white males\textsuperscript{20}
- Suicide is the 2\textsuperscript{nd} leading cause of death (LCOD) for white men ages 5-34 (3\textsuperscript{rd}-4\textsuperscript{th} LCOD for ages 45-64)\textsuperscript{22}
Who’s Most At Risk?

• Those with medical conditions, particularly\textsuperscript{23}:
  • Neurological disorders/Brain injury
  • Visual impairment
  • Chronic lung disease
  • Seizure disorders
  • Moderate to severe pain (back pain, migraines, etc.)
  • Cancer
  • Dementia
  • Sleep Disorders

• Substance use: 17-24\% who die by suicide are \textit{acutely intoxicated} at time of death\textsuperscript{24}
Who’s Most At Risk?: Those with Mental Illness… Or Not???

- When there was a known mental illness:\n  - Depression (75.7%)
  - Anxiety Disorder (16.8%)
  - Bipolar Disorder (15.2%)
  - Problematic Substance Use (25-32%)
- Lifetime risk\(^2\):
  - 2-7% for eating disorder
  - 2-6% for mood disorders\(^2\)
    - 8.6% if hospitalized for suicidality\(^2\)
    - 3% for depression\(^2,28\)
    - 5-8% for bipolar disorders\(^2,29\)
  - 4-5% for schizophrenia\(^2,30\)
  - 7% for alcohol dependence\(^2\)
  - 10% for borderline personality disorder\(^31\)
Depression and Suicide
Untreated Mental Illness

- Of the 329,000 MI adults with serious mental illness, 54.1% did not receive treatment in 2015.
- The median delay in seeking treatment amongst those that made treatment contact were the following:
  - For Anxiety Disorders: 23.0 years (SE = 0.6)
  - For Mood Disorders: 4.0 years (SE = 0.2)
  - For Substance Use Disorders: 13.0 years (SE = 1.2)
Who’s Most at Risk?: Psychosocial Factors

Many factors contribute to suicide among those with and without known mental health conditions.

- Relationship problem (42%)
- Problematic substance use (28%)
- Job/Financial problem (16%)
- Loss of housing (4%)
- Crisis in the past or upcoming two weeks (29%)
- Physical health problem (22%)
- Criminal legal problem (9%)

Note: Persons who died by suicide may have had multiple circumstances. Data on mental health conditions and other factors are from coroner/medical examiner and law enforcement reports. It is possible that mental health conditions or other circumstances could have been present and not diagnosed, known, or reported.

Research-Supported Interventions to Reduce Suicides

Training Primary Care Physicians to identify and treat depression\textsuperscript{33}

- 66\% of those who die by suicide saw their PCP within a month of death\textsuperscript{34}
- 35-50\% of older adults who died by suicide visited PCP within a week prior to death\textsuperscript{23}
- Increased prescription rates for selective serotonin reuptake inhibitors (SSRIs) and other non-SSRI antidepressants are associated with decreased rates of suicide for both adults\textsuperscript{35} and adolescents\textsuperscript{36}
Means Restriction:
Restricting access to highly lethal means has been found to decrease suicide rates\textsuperscript{33, 34}.

- Recommended by numerous medical and governmental organizations (e.g., WHO, the American College of Physicians, and the CDC).
- American Association of Suicidology report concluded “making means restriction a standard of care across settings is an improvement that will save lives”\textsuperscript{37}.

<table>
<thead>
<tr>
<th>Suicide Mechanism</th>
<th>United States, 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td>5.5%</td>
</tr>
<tr>
<td>Fall</td>
<td>2.4%</td>
</tr>
<tr>
<td>Poisoning</td>
<td>16.1%</td>
</tr>
<tr>
<td>Suffocation</td>
<td>24.5%</td>
</tr>
<tr>
<td>Firearms</td>
<td>51.1%</td>
</tr>
</tbody>
</table>

6% of suicide attempts involve guns\textsuperscript{39}.

- 9 out of 10 suicide attempts are not fatal and most (80-95%) of those who survive suicide attempt don't go on to die by suicide\textsuperscript{38}.
- BUT 9 out of 10 attempts using a gun are fatal\textsuperscript{38}.
- More than 55% of attempts are impulsive, with 40% reporting they contemplated suicide for less than 5 minutes\textsuperscript{38}.
Means Restriction: Local Implications

<table>
<thead>
<tr>
<th>County</th>
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<th>% of Suicides by Firearms</th>
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<tr>
<td>Barry</td>
<td>16.0</td>
<td>56%</td>
</tr>
<tr>
<td>Newaygo</td>
<td>15.0</td>
<td>59%</td>
</tr>
<tr>
<td>Ionia</td>
<td>14.4</td>
<td>55%</td>
</tr>
<tr>
<td>Calhoun</td>
<td>14.4</td>
<td>53%</td>
</tr>
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<td>Montcalm</td>
<td>14.0</td>
<td>54%</td>
</tr>
<tr>
<td>Van Buren</td>
<td>13.9</td>
<td>55%</td>
</tr>
<tr>
<td>Ocean</td>
<td>13.7</td>
<td>58%</td>
</tr>
<tr>
<td>Mecosta</td>
<td>12.4</td>
<td>67%</td>
</tr>
<tr>
<td>Kalamazoo</td>
<td>12.1</td>
<td>45%</td>
</tr>
<tr>
<td>Muskegon</td>
<td>11.9</td>
<td>50%</td>
</tr>
<tr>
<td>Allegan</td>
<td>11.6</td>
<td>50%</td>
</tr>
<tr>
<td>Kent</td>
<td>9.6</td>
<td>42%</td>
</tr>
<tr>
<td>Ottawa</td>
<td>8.1</td>
<td>39%</td>
</tr>
</tbody>
</table>

Most common methods of suicide in Michigan, 1999-2016: Gun 41%, Hanging 24%, Drug Overdose 19%, Suffocation 18%, CO 5%, Other 11%.
<table>
<thead>
<tr>
<th>Treating Depression</th>
<th>Reducing Suicide</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Acceptance and Commitment Therapy</td>
<td>- Cognitive Behavior Therapy for Suicide Prevention (CBT-SP)</td>
</tr>
<tr>
<td>- Behavioral Activation</td>
<td>- Suicide attempters were 50% less likely to re-attempt than attempters who received treatment-as-usual$^{41}$</td>
</tr>
<tr>
<td>- Cognitive Behavioral Analysis System of Psychotherapy</td>
<td>- Dialectical Behavior Therapy (DBT)</td>
</tr>
<tr>
<td>- Cognitive Therapy</td>
<td>- Reduced suicide attempts by 2/3</td>
</tr>
<tr>
<td>- Emotion-Focused Therapy</td>
<td>- Patients receiving DBT also had fewer emergency room visits and psychiatric hospitalizations$^{42, 43}$</td>
</tr>
<tr>
<td>- Interpersonal Psychotherapy</td>
<td>- Collaborative Assessment and Management of Suicidality (CAMS): A therapy framework found to be effective in decreasing suicidal thoughts$^{44}$</td>
</tr>
<tr>
<td>- Problem-Solving Therapy</td>
<td></td>
</tr>
</tbody>
</table>
**Research-Supported Interventions to Reduce Suicides**

- Electroconvulsive therapy (ECT) reduces treatment-resistant depression (50% response rate), reduces suicidal thoughts/behaviors, and is recommended by the American Psychiatric Association\(^\text{45, 46}\)
- Improve continuity of care\(^\text{34}\)
  - Highest risk is 1-2 weeks\(^\text{47}\) post-discharge from emergency department or inpatient psychiatric hospital; remains elevated for 1-5+ years\(^\text{37}\)
    - 10% of those who die by suicide were seen in ED in last 2 months
    - 50-70% don’t go to 1\(^{st}\) follow-up appointment post-discharge
- Contact post-hospitalization or emergency room discharge may reduce suicide attempts, self-harm, and suicides by 50%\(^\text{48, 49, 50}\)
Preventing Suicide: A Community Effort

Know the Suicide Warning Signs

- Feeling like a burden
- Being isolated
- Increased anxiety
- Feeling trapped or in unbearable pain
- Increased substance use
- Looking for a way to access lethal means
- Increased anger or rage
- Extreme mood swings
- Expressing hopelessness
- Sleeping too little or too much
- Talking or posting about wanting to die
- Making plans for suicide

Preventing Suicide Involves Everyone in the Community

- Provide financial support to individuals in need. States can help ease unemployment and housing stress by providing temporary help.
- Strengthen access to and delivery of care. Health care systems can offer treatment options by phone or online where services are not widely available.
- Create protective environments. Employers can apply policies that create a healthy environment and reduce stigma about seeking help.
- Connect people within their communities. Communities can offer programs and events to increase a sense of belonging among residents.
- Teach coping and problem-solving skills. Schools can teach students skills to manage challenges like relationship and school problems.
- Prevent future risk. Media can describe helping resources and avoid headlines or details that increase risk.
- Identify and support people at risk. Everyone can learn the warning signs for suicide, how to respond, and where to get help.

What Can We Do to Prevent Suicide?

Preventing Suicide: A Technical Package of Policy, Programs, and Practices, [https://go.usa.gov/xQ8Gc](https://go.usa.gov/xQ8Gc)

Preventing suicide involves everyone in the community.

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  - **Media** can describe helping resources and avoid headlines or details that increase risk.
- Identify and support people at risk.
  - **Everyone** can learn the warning signs for suicide, how to respond, and where to access help.
- 6,580 hospital admissions in 2017
- 9 units
  - Child & Adolescent: 36 beds
  - Adolescent/Young Adult (13-24): 26 beds
  - Dual Diagnosis Adult Unit: 22 beds
  - Older Adult Unit: 26 beds
  - 4 Other Adult Units: 88 beds
Partial Hospitalization
- 1,871 partial hospital admissions in 2017
  - Child & Adolescent
  - Mother & Baby
  - Adult
Residential Services

- **Adolescent** Residential
- Adult **Crisis Residential Services**
- Adult Residential Treatment for adults with **chronic mental illness and substance use disorder or mild developmental disability** (Pine Rest Christian Homes)
- Adult Long-Term Residential Services for **developmentally disabled adults**
- Adult Residential Treatment for **Substance Use Disorder**

Residential Subacute Detox: 12 beds
• Therapy and Psychiatry
• Psychological Testing & Forensic Services
• Electroconvulsive Therapy (ECT)
• Transcranial Magnetic Stimulation (TMS)
• Intensive Outpatient Program and Medication Assisted Treatment (MAT) for Substance Use Disorders (SUD)
• Dialectical Behavior Therapy (DBT)
• Group therapy for Depression, Anxiety, LGBTQ Persons, Postpartum Adjustment, and SUD Recovery
• Street Reach
• Community Case Management
Coming Soon: Psychiatric Urgent Care Center

- Opening in April 2019
- Serving adults (18+) with acute psychiatric symptoms
- 7 days/week
- Multidisciplinary Clinical Team
Works Cited


37. Knepsper, American Association of Suicidology, & Suicide Prevention Resource Center (2010). *Continuity of care for suicide prevention and research: Suicide attempts and suicide deaths subsequent to discharge from the emergency department or psychiatry inpatient unit*. Newton, MA: Education Development Center, Inc.


