Demographic, Clinical, and Service Utilization Factors Associated with Suicide-Related Visits among Alaska Native and American Indian Adults

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65,000 voices
Objectives

- Study background and methods
- Factors associated with suicide-related visits among AN/AI adults
- Screening and evaluation of suicide risk in healthcare systems
Background

- 64% of Alaskans who died by suicide saw a doctor within 6 months of death and 39% saw a behavioral health counselor or therapist in last year of life.

- Alaska Native males (n=30) who died by suicide were 2.8 more likely to receive treatment at a hospital and 22.2 times more likely to be treated for an alcohol-related injury than controls (n=30).
Goal and Specific Aim

- **Specific Aim**
  - To assess demographic, clinical, and service utilization characteristics of Alaska Native/American Indian people with a suicide-related visit compared to controls matched on age, gender, and residence (urban vs. rural)

- **SCF Corporate Objective**
  - Reduce the incidence of suicide.

- **SCF Corporate Initiative**
  - Improve identification of Customer-Owners at-risk for suicide and improve Customer-Owner awareness of existing suicide prevention and postvention resources
Methods

- Cases comprised all AN/AIs seen at an SCF clinic or ANMC between January 1, 2005 and December 31, 2009 with ICD-9-CM code for a self-inflicted injury or death.

- Cases were matched with AN/AIs who were the same age in years on the date of a case's suicide-related index visit, gender, and residence type (urban vs. rural).
Methods

- For cases and controls, additional demographic, clinical, and service use factors were extracted for the year prior to and 6 months after the index visit.
- Univariable conditional logistic regression estimated odds ratio and 95% CI for a suicide-related visit by demographic, clinical, and service utilization factors in year prior among cases and controls.
- All factors with univariable association of $p < .25$ were included in multivariable models and interactions investigated.
### Individual Analysis of Suicide-Related Visit by Demographic Variables (odds ratio)

<table>
<thead>
<tr>
<th>Demographic Variable</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital status</td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>1.8</td>
</tr>
<tr>
<td>Divorced/separated/widowed</td>
<td>4.5</td>
</tr>
<tr>
<td>Income</td>
<td></td>
</tr>
<tr>
<td>0 to 39.9K</td>
<td>0.9</td>
</tr>
<tr>
<td>40 to 49.9K</td>
<td>1.7</td>
</tr>
<tr>
<td>50 to 59.9K</td>
<td>0.8</td>
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<tr>
<td>Insurance</td>
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<tr>
<td>None</td>
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<tr>
<td>Medicaid/Medicare</td>
<td>2.5</td>
</tr>
<tr>
<td>Any religious affiliation</td>
<td>1.3</td>
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</tbody>
</table>

- Decreased Risk
- Increased Risk
Individual Analysis of Suicide-Related Visit by Clinical Variables (odds ratio)
Individual Analysis of Suicide-Related Visit by Service Utilization Variables (odds ratio)
Multivariable Results

- No private insurance or Medicaid/Medicare benefits
  - (2.2 and 3.1 times the odds of a suicide-related visit versus private insurance)
- Behavioral health condition
  - (33.8 times the odds of a suicide-related visit versus no condition)
- Injury diagnosis
  - (4.8 times the odds of a suicide-related visit versus no other injury)
- Dispensation of an opioid medication
  - (2.8 times the odds of a suicide-related visit versus no dispensation of an opioid)
- Increased behavioral health specialty visits
  - (5.4 times the odds of a suicide-related visit for two or more visits versus none)
- Increased other ambulatory visits protective
  - (0.4 and 0.3 times the odds of a suicide-related visit for three to six, seven plus)
Demographic Results

Insurance Status

Cases (N = 890)

Controls (N = 890)

<table>
<thead>
<tr>
<th>Insurance Status</th>
<th>Cases</th>
<th>Controls</th>
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</thead>
<tbody>
<tr>
<td>None or Medicaid/Medicare</td>
<td>88%</td>
<td>85%</td>
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<tr>
<td>Private</td>
<td>12%</td>
<td>15%</td>
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</table>
Clinical Results

Clinical Factors

- Behavioral health condition: 75% cases, 7% controls
- Injury: 42% cases, 6% controls
- Opioid medication dispensed: 44% cases, 11% controls

Cases (N = 890) vs. Controls (N = 890)
Service Utilization Results

Behavioral Health Specialty Care Visits

- **None**: 77% (Cases), 95% (Controls)
- **One**: 5% (Cases), 2% (Controls)
- **Two or more**: 18% (Cases), 3% (Controls)
Service Utilization Results

Other Ambulatory Visits

- None: Cases (41%) vs. Controls (31%)
- One or two: Cases (25%) vs. Controls (26%)
- Three to six: Cases (22%) vs. Controls (17%)
- Seven or more: Cases (22%) vs. Controls (17%)

Legend:
- Blue bars: Cases (N = 890)
- Orange bars: Controls (N = 890)
Service Utilization Results

One or More Visit

- Primary Care: 65% (Cases) vs. 48% (Controls)
- BH Consultant: 17% (Cases) vs. 6% (Controls)
- Emergency/Urgent care: 67% (Cases) vs. 43% (Controls)

Cases (N = 890) vs. Controls (N = 890)
Discussion & Next Steps

- Primary care, emergency room/urgent care, and other ambulatory clinics offer the most useful opportunities for screening and detection of suicide risk.

- Replication using information since October 2012.

- Consider application for funding to develop suicide risk detection algorithms to signal need for thorough suicide risk assessment.
Questions?
<table>
<thead>
<tr>
<th>Language</th>
<th>Native Name</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Chin’an</td>
<td>Dena’ina Athabascan</td>
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