**INTRODUCTION**

- Mental and substance use disorders are important contributors to the global burden of disease.
- Individuals with mental and substance use disorders are at an increased risk for cardiovascular events and have a higher mortality rate compared to the general population.
- Adults with mental and substance use disorders are at an elevated risk for sudden cardiac death.
- Prevalence of mental and substance use disorders in sudden unexpected death victims has not been well defined.

**OBJECTIVE**

To estimate the prevalence of mental and substance use disorders in all cause out-of-hospital sudden unexpected death victims in Wake County, North Carolina.

**METHODS**

**SUDDEN REGISTRY**

- **SUDDEN** is a retrospective registry study that came to identify potential risk factors associated with Out-of-hospital Sudden Unexpected Death (OHSUD).
- From 2003-2012 to 2015, all out-of-hospital deaths in Wake County, North Carolina (population 974,289) were screened to identify presumed OHSUD victims among free-living adults ages 18-65.
- Victims with a terminal disease or suicidal intent were excluded.
- Three cardiologists adjudicated 408 victims.
- Individuals with mental and substance use disorders are at an increased risk for sudden cardiac death.
- Prevalence of mental and substance use disorders in sudden unexpected death victims has not been well defined.

**MENTAL HEALTH STUDY**

- We reviewed medical examiner reports and medical records for a diagnosis of mental and substance use disorders including depression, anxiety, bipolar disorder, schizophrenia, and substance use disorders.
- Diagnosis of a mental or substance use disorder was considered.
- Comparison of the present diagnosis of a mental or substance use disorder was considered.
- Ever diagnosis was compared between those with and without a disorder.

**STATISTICAL ANALYSIS**

- Analysis was restricted to victims with a medical examiner report (N=408).
- Victims with medical examiner reports were included.
- Ever diagnoses were compared and presented to all US adult population national estimates.
-Victim characteristics and chronic conditions were compared between those with and without an ever diagnosis of a mental or substance use disorder.

**RESULTS**

Table 1: Mental and substance use disorders in SUDDEN registry compared to the US adult population national estimates

<table>
<thead>
<tr>
<th>Disorder</th>
<th>SUDDEN registry</th>
<th>US adult population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>172 (54%)</td>
<td>146 (53%)</td>
</tr>
<tr>
<td>Anxiety</td>
<td>100 (36%)</td>
<td>112 (41%)</td>
</tr>
<tr>
<td>Bipolar Disorder</td>
<td>25 (8%)</td>
<td>25 (8%)</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>17 (5%)</td>
<td>17 (6%)</td>
</tr>
<tr>
<td>Alcohol or Substance Abuse</td>
<td>10 (3%)</td>
<td>9 (4%)</td>
</tr>
<tr>
<td>Substance Abuse</td>
<td>7 (2%)</td>
<td>7 (2%)</td>
</tr>
<tr>
<td>2+ mental health conditions</td>
<td>10 (3%)</td>
<td>10 (3%)</td>
</tr>
</tbody>
</table>

**DISCUSSION**

- More than half of out-of-hospital sudden death victims had a mental or substance use disorder. Some chronic conditions were also common in victims.
- Mental and substance use disorders were more likely in white and female victims.

**LIMITATIONS**

- US adult population estimates (as referenced) were compared (Table 1) were based on surveys either from diagnosis or recency as the proportions from SUDDEN registry were not.

**REFERENCES**

- Grant BF, Goldstein RB, Saha TD, et al. Epidemiology of DSM-5 Alcohol Use Disorder: Results From the National Epidemiologic Survey on Alcohol and Related Conditions III. J Stud Alcohol Drugs. 2015;76(6):978-986.