A Novel Study of Premature Sudden Death

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**Introduction**

- The annual incidence of sudden death is between 180,000 and 250,000 in the United States.¹
- Previous data collection is extensive and has exclusion criteria that leads to the underreporting of sudden death cases.²,³,⁴
- Better data is needed to accurately determine sudden death risk and mortality in North Carolina.

**County contributions to new sudden death dataset**

- Guilford: 38% (195)  
- Mecklenburg: 39% (200)  
- Surry: 3% (16)  
- Wake: 20% (106)

**Methods**

- Electronic death certificates obtained for out of hospital deaths, ages 16-24, non-homicide or suicide.
- Death attendant determined and corresponding medical records requested.
- ME toxicology report used to exclude based on “toxicology” criterion.
- Physical death certificates used to exclude based on “non-free living” criterion.
- Included cases screened by interns using death certificates.
- 518 sudden death cases included in SUDDEN Rebuild.
- Geocode home address to census tract using TAMU Geocoder.

**Results**

**Demographics and location of sudden death victims in SUDDEN Rebuild vs SUDDEN Pilot**

<table>
<thead>
<tr>
<th></th>
<th>SUDDEN Rebuild (n=518)</th>
<th>SUDDEN Pilot (n=190)</th>
</tr>
</thead>
<tbody>
<tr>
<td>% (n)</td>
<td>% (n)</td>
<td></td>
</tr>
<tr>
<td>Median Age</td>
<td>54</td>
<td>53</td>
</tr>
<tr>
<td>Male</td>
<td>66% (343)</td>
<td>64% (122)</td>
</tr>
<tr>
<td>Black/African American</td>
<td>37% (192)</td>
<td>35% (66)</td>
</tr>
<tr>
<td>Non-Hispanic</td>
<td>98% (505)</td>
<td>97% (184)</td>
</tr>
<tr>
<td>Married</td>
<td>34% (178)</td>
<td>33% (62)</td>
</tr>
<tr>
<td>Food desert</td>
<td>20% (103)</td>
<td>23% (88)</td>
</tr>
<tr>
<td>Urban</td>
<td>87% (452)</td>
<td>89% (336)</td>
</tr>
</tbody>
</table>

**Conclusion**

- Case adjudication in the SUDDEN Rebuild dataset is more efficient than that of the SUDDEN pilot dataset.
- Demographic data is consistent between SUDDEN Rebuild and SUDDEN Pilot.
- Further study is needed to explain the undercounting of Hispanic deaths.

**References**