Investigating All Causes of Pregnancy-Associated Death in Wisconsin through Maternal Mortality Review

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Background

The Wisconsin Maternal Mortality Review (MMR) Committee reviews medical records, coroner's reports, and vital records related to the deaths of pregnant and recently pregnant women in order to identify prevention opportunities. The Committee currently excludes homicide, transport-related, and cancer deaths from review and focuses on events likely due to pregnancy-related medical causes. In 2014, as part of an effort to better incorporate a public health approach into its reviews, the MMR program reassessed these exclusion criteria.

Overview of Current Maternal Mortality Review Process

Step 1: Methods - Determine the Distribution of Pregnancy-Associated Deaths by Cause

- Pregnancy-associated deaths among Wisconsin residents were identified using mortality statistical files for 2008-2012.
- Deaths were considered pregnancy-associated if the death certificate pregnancy status variable indicated pregnant at the time of death, within 42 days of death, or within 43 days to one year of death.

Step 2: Explore Opportunities to Review Excluded Cases

- Conduct Wisconsin MMR Homicide Pilot
  - 1 case: not pregnancy related
  - 2 cases: possibly pregnancy related
  - 1 case: pregnancy related
  - Key themes: preconception, mental health, intimate partner violence, and alcohol use

- Research Other State MMR Findings
  - Transport-related deaths²
    - 88% preventable
    - Key themes: seatbelt use, alcohol, and sedating medications

Recommended Action

Expand Maternal Mortality Review to investigate all causes of pregnancy-associated death, beginning with homicide and transport-related deaths.

Study Objectives

1. Identify distribution of causes of pregnancy-associated deaths in Wisconsin.
2. Determine whether excluded pregnancy-associated deaths are relevant to public health prevention strategies.

Step 1: Results - Distribution of Pregnancy-Associated Deaths by Cause

About 50% of pregnancy-associated deaths in Wisconsin resulted from injuries, 45% from obstetric causes, and 5% from chronic diseases.

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obstetric causes</td>
<td>15.9%</td>
</tr>
<tr>
<td>Transport related</td>
<td>13.1%</td>
</tr>
<tr>
<td>Suicide</td>
<td>11.2%</td>
</tr>
<tr>
<td>Unintentional poisoning</td>
<td>8.4%</td>
</tr>
<tr>
<td>Assault</td>
<td>1.9%</td>
</tr>
<tr>
<td>Undetermined poisoning</td>
<td>1.9%</td>
</tr>
<tr>
<td>Cancer</td>
<td>1.9%</td>
</tr>
<tr>
<td>Cardiovascular Disease</td>
<td>1.9%</td>
</tr>
<tr>
<td>Epilepsy</td>
<td>0.9%</td>
</tr>
</tbody>
</table>

Distribution of pregnancy-associated deaths by cause (N=107), Wisconsin mortality statistical file, 2008-2012

Citations