Pregnancy-Associated and Pregnancy-Related Mortality in Alaska

Although pregnancy-associated mortality affects relatively few women in Alaska annually, death around the time of pregnancy has a substantial impact on families and serves as an indicator of issues that affect the health and well being of mothers and pregnant women.

A pregnancy-associated death is defined as death during or within one year of pregnancy. Pregnancy-related death is defined as death resulting from causes directly related to pregnancy and childbirth.

**Seriousness**

*Healthy People 2010 Targets and National Data*

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Alaska 1990-99†</th>
<th>Nation 1991-99*</th>
<th>Healthy People 2010 Goal*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pregnancy-related mortality ratio per 100,000 live births</td>
<td>7.4</td>
<td>11.8</td>
<td>3.3</td>
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</tbody>
</table>

- Alaska’s pregnancy-related mortality ratio is 2.2 times the Healthy People 2010 goal.
- Alaska’s pregnancy-related mortality ratio is well below the national average (37% lower). According to national surveillance, states with large populations of black women have higher pregnancy-related mortality ratios. According to recent national data, blacks were 3 to 4 times more likely to die from pregnancy-related causes than whites.1
- Alaska has one of the Nation’s highest documented pregnancy-associated mortality ratios – 58 per 100,000 live births during 1990-1999. (Figure 1)

**Severity**

In the United States, 2 to 3 women die of pregnancy complications each day.2 In 2002 the estimated years of potential life lost (YPLL) before age 65 due to death from pregnancy complications was 13,144 for the Nation.3

**Urgency**

Over the last decade, pregnancy-associated mortality has not decreased in Alaska. From 1990-1999, over 90% of pregnancy-associated deaths in Alaska occurred post-delivery. (Figure 2)

**Pregnancy-Associated Mortality**

- Over the last decade, pregnancy-associated mortality has not decreased in Alaska. From 1990-1999, over 90% of pregnancy-associated deaths in Alaska occurred post-delivery. (Figure 2)
- Unintentional injury was the leading manner of pregnancy-associated death in Alaska, accounting for 37% of mortality during 1990-99.
- Medical causes meeting the definition of pregnancy-related death accounted for 14% of pregnancy-associated deaths while other medical causes accounted for 18%.
- The proportion of mortality due to homicide, suicide and substance abuse was equally distributed and together accounted for 30% of pregnancy-associated mortality during this time period.
Pregnancy-Related Mortality

In Alaska, pregnancy-related deaths are rare – with only 8 deaths from 1990-1999. The three conditions responsible for all pregnancy-related deaths that occurred during this time period were hypertension, embolism, and hemorrhage.

Disparities

Pregnancy-Associated Mortality

Compared to white women, Alaska Native women had a three-fold higher risk of pregnancy-associated mortality for all manners of death with the exception of pregnancy-related. (Figure 3)

Pregnancy-Related Mortality

National data indicated that maternal age (35 years or older) and women who received no prenatal care, were at increased risk of a pregnancy-related death.1

Analysis of Alaska MIMR data, from 1990-1999, indicated that white women had slightly higher risk of death from a pregnancy-related cause than Alaska Natives. No black or Asian women died from pregnancy-related causes during this time period.

Interventions & Recommendations

The Alaska Maternal-Infant Mortality Review (MIMR) – a committee made up of Alaska physicians, social workers, and public health providers – reviews pregnancy-associated deaths. The MIMR Committee determined that for 28% of pregnancy-associated deaths occurring during 1990-99, alcohol use was a contributing factor. Socio-economic conditions contributed to 23% and inappropriate medical care to 10% of the deaths. Between 60-77% of pregnancy-associated mortality was considered preventable.2

The Alaska MIMR committee identified improvements in medical care and social and behavioral services that might have prevented most pregnancy-associated deaths. These include: better patient education, more aggressive tertiary care referral, improvements in medical management, mental health counseling, alcohol treatment, drug abuse treatment, social support, domestic violence shelters and safety education. Several state programs conduct specific interventions to address these issues.

Intervention Effectiveness

Intervention effectiveness was not evaluated.

Capacity

Propriety

Reducing maternal mortality is within the overall mission of the Women’s, Children’s, and Family Health Section. There is a national initiative to reduce pregnancy-related mortality (HP2010) and Alaska is in an excellent position to address pregnancy-associated death and to bring this issue to the attention of health and social services providers.

Economic Feasibility

Full support of the MIMR committee and state funding for surveillance and other epidemiological activities is economically feasible and critical to addressing pregnancy-associated mortality in Alaska. Implementation of specific interventions recommended by the Division of Public Health will fall on a broad spectrum of public and private providers and programs, many of which are already in place.

Acceptability

Addressing pregnancy-associated mortality is acceptable. This issue has received recent attention nationally and many existing programs address medical, social and behavioral issues that are associated with pregnancy-associated mortality.

Resources

Data: Alaska has conducted pregnancy-associated mortality surveillance since 1990 and has an excellent professional review process (MIMR) in place. In addition to case-identification, the MCH Epidemiology Unit analyzes pregnancy-associated mortality data and publishes findings. Other data sources include: Alaska Bureau of Vital Statistics; Office of the State Medical Examiner.

Services: Alcohol and Drug Abuse programs; Social Service programs serving women and families.

Legality

Not an issue.

References

Data Sources


Notes
For national estimates of pregnancy-related mortality ratios, pregnancy-related was defined as a death that occurred during pregnancy or within 1 year of pregnancy and resulted from 1) complications of the pregnancy, 2) a chain of events that was initiated by the pregnancy, or 3) the aggravation of an unrelated condition by the physiologic effects of the pregnancy or its management.