Maternal Illness and Complications During Pregnancy in Alaska

Illnesses and health conditions related to pregnancy can result in short or long-term maternal morbidity, especially if not appropriately treated through adequate prenatal and post-delivery care. An estimated two to three women die in the U.S. every day from pregnancy complications, and over 30% of pregnant women experience some type of illness or injury during childbirth beyond what would be expected in a normal delivery.1,2

Most pregnancy-related complications are preventable. The most common are: ectopic pregnancy, premature labor, hemorrhage, blood clots, high blood pressure, infection, stroke, amniotic fluid in the bloodstream, diabetes, and heart disease.1 Sexually transmitted diseases (STDs) among pregnant women are associated with increased risk of poor prenatal and birth outcomes; adverse outcomes associated with STDs during pregnancy are generally preventable through adequate prenatal care.

Seriousness

Healthy People 2010 Targets and National Data

<table>
<thead>
<tr>
<th>Maternal illness and complications due to pregnancy:</th>
<th>Alaska 2002</th>
<th>Nation 2001</th>
<th>Healthy People 2010 Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitalizations during labor and delivery</td>
<td>---</td>
<td>31.9%</td>
<td>&lt;24%</td>
</tr>
<tr>
<td>Hospitalizations for ectopic pregnancy</td>
<td>---</td>
<td>---</td>
<td>Developmental</td>
</tr>
<tr>
<td>Hospitalizations for postpartum complications including postpartum depression</td>
<td>---</td>
<td>---</td>
<td>Developmental</td>
</tr>
</tbody>
</table>

At this time Alaska does not have data to address the Healthy People objectives listed above.

Severity

Maternal morbidity during pregnancy and after delivery contributes to perinatal mortality, chronic health problems for mothers and infants, increased health care expenditures and decreased quality of life. Ectopic pregnancy is an important cause of pregnancy-related illness and disability in the U.S. and is the leading cause of maternal death in the first trimester of pregnancy.3

A pregnant woman with a sexually transmitted disease has an increased risk of preterm labor, premature rupture of membranes, and uterine infection after delivery.4 Pelvic inflammatory disease (PID) increases the risk of ectopic pregnancy. Among women with PID, 9% will have an ectopic pregnancy due to tubal scarring.5 Chlamydia is a leading cause of early infant pneumonia and conjunctivitis in newborns.6 Other poor perinatal outcomes may include stillbirth, low birth weight, neonatal sepsis, neurological damage, blindness, deafness, acute hepatitis, meningitis, chronic liver disease, and cirrhosis.4

Alaska PRAMS data indicated that among the top self-reported prenatal conditions among Alaskan women in 2002:

1 in 4 reported:
- preterm labor
- severe nausea, vomiting, and dehydration

1 in 6 reported:
- high blood pressure or edema
- kidney or bladder infections

1 in 7 reported:
- vaginal bleeding

Urgency

- Approximately 34% of women who delivered a live-born infant in 2002 indicated they did not have any of the conditions listed in Figure 1.

- The most prevalent self-reported prenatal condition for women who delivered a live-born infant in Alaska during 2002 was preterm labor (26.6%), followed by severe nausea, vomiting, and dehydration (24.9%). (Figure 1)
In 2003, the rate of Chlamydia among Alaskan women was the highest in the Nation at 857.8 per 100,000 – an increase of 77.5% from 1999. 

From 1994-2003, the rate of death to Alaskan newborns affected by maternal factors and complications during pregnancy was 59.2 per 100,000 infants.

Maternal factors and complications during pregnancy was the second leading cause of mortality among Alaskan newborns – accounting for 13.5% of all infant deaths over the last decade (see notes for definition).  

Disparities
The risk of ectopic pregnancy increases with maternal age. Regardless of race group, the risk of ectopic pregnancy among women ages 35-44 is 3 times that of women ages 15-24.

Prenatal maternal illness data from Alaska Pregnancy Risk Assessment Monitoring System (PRAMS) have not been analyzed for disparities at this time.

Economic Loss
Emergency room visits, hospital stays, and missed days of work due to maternal illness and complications of pregnancy can have a significant financial impact on pregnant women, families, and society. Nationally, complications before delivery account for more than 2 million hospital days of care and over $1 billion each year in the United States. Alaska PRAMS data indicated that of the women who indicated they had at least one of the conditions in Figure 1; 26.6% went to the hospital or emergency room and stayed less than 1 day, 10.9% went to the hospital and stayed 1 to 7 days, 1.7% went to the hospital and stayed more than 7 days, and 17.6% stayed in bed at home more than 2 days because of their doctor’s or nurse’s advice.

Interventions & Recommendations
Recommendations for reducing maternal deaths and pregnancy-related complications include better data collection on maternal death and disability, better policies addressing the health needs of women before, during and after pregnancy, including gaps in prevention programs and comprehensive family planning services, and more research on racial and ethnic disparities.

Healthy People 2010 (HP2010), the initiative that defines our national targets, recommends focusing attention on the major causes of maternal illness and complications, especially those associated with maternal death, such as ectopic pregnancy. HP2010 also recommends that postpartum complications, such as postpartum depression (PPD) be included when assessing maternal illness and complications during pregnancy. The percent of women having an ectopic pregnancy and the percent of women with postpartum complications, including PPD, are developmental indicators that are sub-parts to the objective of reducing maternal illness and complications due to pregnancy.

Intervention Effectiveness
National objectives associated with maternal illness and complications during pregnancy are still in the developmental stages and data sources are still being identified.

Capacity

Propriety
Reducing risk factors associated with poor birth and maternal health outcomes for Alaskan infants and mothers falls within the overall mission of the Women’s, Children’s, and Family Health Section. Maternal illness around the prenatal period is an important issue among the maternal and child health population – national initiatives have been set forth to address maternal health and poor birth outcomes (HP2010) and the Maternal and Child Health Bureau requires that several indicators of poor birth outcomes of the perinatal period are monitored and assessed on a yearly basis.

Acceptability
Although unsubstantiated with research, promoting better health and well-being during and after pregnancy is most likely acceptable to the community and the target population.

Resources
Data: Alaska PRAMS data can be used to better understand significant risk factors associated with maternal illness and complications due to pregnancy in Alaska so that high-risk groups might be identified for more effective targeting of prevention measures.

Legality
Not an issue.

References
4 Centers for Disease Control and Prevention. STDs and Pregnancy Fact Sheet. Atlanta, GA: U.S. Department of Health and Human Services, Division of Sexually Transmitted Diseases. May 2004
Data Sources

^ National Hospital Discharge Survey (NHDS) 2001, Centers for Disease Control and Prevention, National Center for Health Statistics.


† Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 2002 Data: State of Alaska, DHSS, DPH.

Notes

Prevalence estimates for PRAMS data are among women that delivered a live-born infant.

Maternal factors and complications during pregnancy were: complications of labor and delivery; maternal complications of pregnancy; maternal hypertensive disorders; placenta, cord and membranes; noxious influences transmitted via placenta or breast milk; other maternal conditions that may be unrelated to the present pregnancy.