



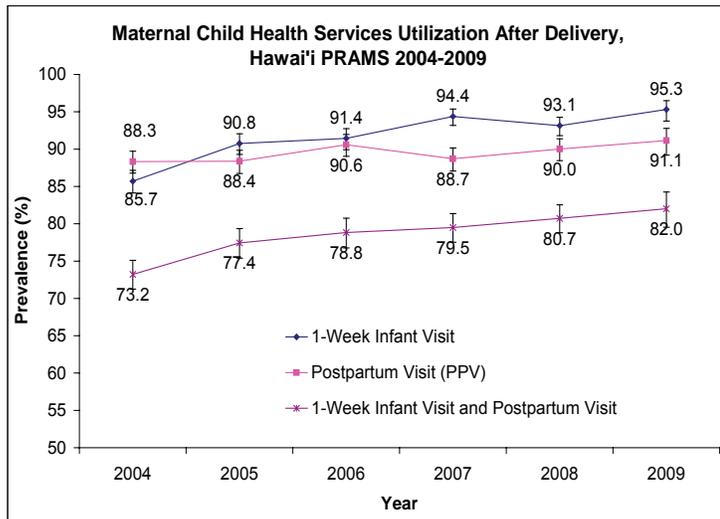
Family Health
Services Division

Health Services Utilization After Delivery for Mother and Infant

Pregnancy Risk Assessment Monitoring System

Background

The American Academy of Pediatrics (AAP) and the American College of Obstetricians and Gynecologists (ACOG) recommend that women who give birth have a postpartum care visit (PPV) 4-6 weeks after delivery.¹ Women with a more complicated pregnancy or delivery by cesarean section are recommended to have a PPV within 7-14 days of delivery. The PPV is used to evaluate the mother's current physical and mental status provide counseling on infant care and family planning, detect and provide referrals for any medical conditions pertaining to the mother and/or infant. Similarly, the AAP recommends that infants should visit a health care provider within 2-3 days of bringing the infant home. The 1-week visit is used to monitor the infant's growth and development. Utilization of both the PPV and 1-week visit are important for the overall health to mother and the infant.



Trends in Post-Delivery Health Services Utilization

The overall prevalence of 1-week infant visit and PPV among women who birth live infants in Hawai'i was high at approximately 90% between 2004-2009. In the past 6 years, the prevalence of both the 1-week infant visit and PPV each increased by approximately 5%. However, PPV prevalence was 2-6% lower than the 1-week visit prevalence, except in 2004. The prevalence of mothers and infants who used both services is markedly lower at 79% across all years. This indicates that 21% of mothers and infants (or over 3,500 mothers and infants per year) were missing one or both services after delivery across all years, respectively.

For More Information Contact:

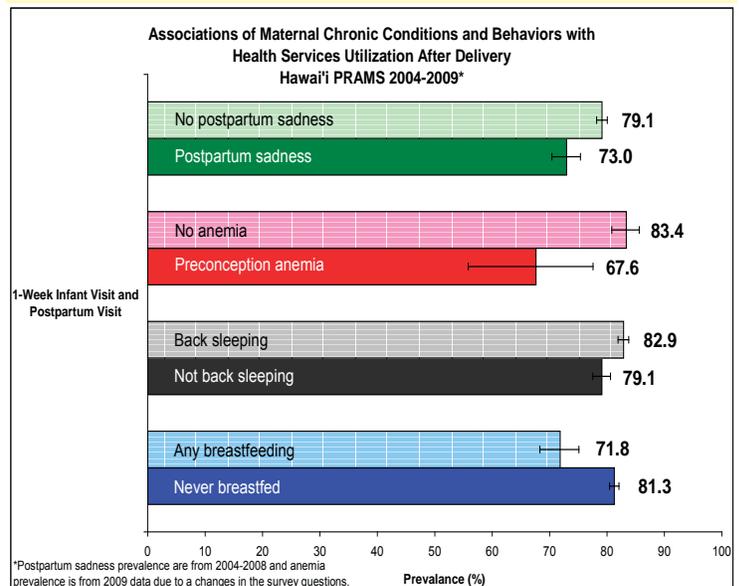
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Data Highlights

- About 1 in 5 mothers or infants did not receive a postnatal or a postpartum visits.
- Prevalence of postpartum visit was lower than prevalence of a 1-week infant visit, except in 2004.
- Mothers with preconception anemia and postpartum sadness were 16% and 6%, respectively, less likely to have had both a postpartum visit and taken their infant for a 1-week visit.
- Mothers who were black, Hispanic, Samoan, or other Pacific Islander were 7-14% less likely to have accessed both a postpartum visit and a 1-week infant visit than average.
- Mothers who were younger, less educated, very poor, uninsured, and participated in prenatal WIC were less likely to have had a postpartum visit.
- Mothers who birthed 4 or more infants in their lifetime, a low birthweight infant, or an early preterm were less likely to have had a postpartum visit.
- Mothers who had military insurance (TRICARE) were less likely to have taken their infant for a 1-week visit.
- Mothers from Maui County were less likely to have either a postpartum visit or take their infants for a 1-week visit.



Outcomes Associated with Post-Delivery Health Services Utilization

Maternal chronic conditions and behaviors were also examined to determine differences in services utilization. Significant reductions in the prevalence of women who utilized both the 1-week infant visit and PPV were found in mothers who had anemia prior to pregnancy and had postpartum sadness compared to mothers without either condition. Women who did not exclusively put their babies on their backs to sleep were significantly less likely to have taken their infant for a 1-week visit and had a PPV. Women who breastfed their child at least once were also less likely to have both services.

Characteristics of Mothers by Health Services Utilization After Delivery,

Hawai'i PRAMS 2004-2009

	1-Week Infant Visit % Prevalence (95% CI)*	Postpartum Visit (PPV) % Prevalence (95% CI)*	1-Week Infant Visit and PPV % Prevalence (95% CI)*
Maternal race/ethnicity			
White	89.3 (87.9-90.6)	91.4 (90.1-92.5)	78.6 (76.7-80.3)
Hawaiian	94.0 (92.9-94.8)	87.8 (86.4-89.1)	79.2 (77.5-80.7)
Chinese	92.4 (90.9-93.7)	94.0 (91.3-95.9)	83.4 (80.4-86.1)
Filipino	93.6 (92.4-94.6)	92.2 (91.0-93.3)	81.3 (79.6-83.0)
Japanese	92.0 (90.3-93.4)	93.3 (91.7-94.6)	82.1 (79.8-84.2)
Black	83.9 (78.3-88.2)	87.7 (82.3-91.6)	72.0 (65.5-77.8)
Korean	92.3 (89.9-94.2)	92.7 (88.7-95.3)	80.7 (76.5-84.3)
Other Asian	89.9 (83.9-93.8)	90.9 (85.5-94.4)	75.9 (68.9-81.7)
Samoan	92.5 (88.4-95.2)	81.2 (75.7-85.8)	71.8 (65.7-77.2)
Other Pacific Islander	90.0 (86.6-92.6)	76.7 (72.1-80.6)	65.1 (60.3-69.6)
Hispanic	84.0 (77.9-88.7)	87.4 (81.7-91.6)	72.9 (66.0-78.9)
Other/Unknown	92.0 (85.9-95.6)	82.5 (75.6-87.7)	75.1 (67.8-81.3)
Maternal age			
under 20 years	93.7 (91.7-95.3)	85.6 (82.7-88.0)	76.4 (73.1-79.3)
20-24 years	91.5 (90.2-92.6)	87.2 (85.7-88.6)	76.9 (75.0-78.6)
25-34 years	91.9 (91.1-92.6)	90.5 (89.6-91.3)	79.7 (78.6-80.8)
35 and greater	91.3 (89.9-92.4)	91.9 (90.6-93.1)	79.2 (77.4-81.0)
Maternal education			
Less than high school	90.8 (88.5-92.7)	80.8 (77.7-83.5)	69.9 (66.5-73.1)
High school	91.1 (90.1-92.0)	87.2 (86.0-88.3)	76.2 (74.7-77.6)
Some college	92.4 (91.3-93.4)	90.6 (89.3-91.7)	79.8 (78.2-81.3)
College graduate	92.8 (91.8-93.7)	95.0 (94.1-95.8)	84.4 (83.0-85.7)
Marital status			
Married	91.2 (90.5-91.8)	91.2 (90.5-91.9)	79.8 (78.8-80.7)
Unmarried	93.0 (92.0-93.8)	86.6 (85.4-87.8)	76.8 (75.3-78.2)
% of Federal Poverty Level (FPL)			
0-100% FPL	92.1 (91.0-93.1)	83.5 (82.0-84.9)	74.6 (72.8-76.2)
101-185% FPL	90.7 (89.4-92.0)	89.9 (88.4-91.3)	79.4 (77.5-81.2)
186-250% FPL	90.5 (88.4-92.2)	93.0 (91.2-94.5)	81.2 (78.5-83.7)
251+% FPL	91.9 (91.0-92.8)	94.1 (93.2-94.8)	84.3 (83.1-85.5)
County of residence			
Hawai'i	95.0 (93.7-96.0)	89.2 (87.3-90.8)	81.3 (79.2-83.3)
Honolulu	91.9 (91.2-92.5)	90.1 (89.3-90.8)	79.2 (78.2-80.1)
Kauai	96.8 (94.8-98.0)	91.8 (89.1-93.9)	82.8 (79.3-85.8)
Maui	85.9 (83.7-87.8)	85.5 (83.3-87.4)	70.5 (67.9-73.0)
Delivery insurance			
No insurance	87.0 (79.3-92.1)	83.1 (76.2-88.3)	68.9 (60.6-76.2)
QUEST/Medicaid	93.4 (92.5-94.3)	84.2 (82.8-85.5)	75.3 (73.7-76.8)
Private Insurance	92.8 (92.1-93.5)	93.3 (92.5-94.0)	83.1 (82.1-84.1)
TRICARE/military	85.3 (83.3-87.1)	90.3 (88.5-91.8)	74.7 (72.2-77.0)
Prenatal WIC participation			
No	91.6 (90.8-92.3)	91.0 (90.2-91.8)	80.2 (79.1-81.2)
Yes	92.2 (91.3-93.0)	87.6 (86.5-88.6)	77.4 (76.1-78.7)
Parity			
First birth	92.0 (91.1-92.8)	90.8 (89.8-91.7)	80.0 (78.7-81.2)
Second or third birth	91.5 (90.6-92.2)	89.7 (88.7-90.6)	78.5 (77.3-79.7)
Fourth or more birth	92.8 (91.0-94.2)	84.4 (82.1-86.5)	74.6 (71.9-77.2)
Low birthweight (<2,500 grams)			
No	91.6 (91.0-92.2)	89.7 (89.1-90.4)	78.9 (78.0-79.7)
Yes	94.9 (93.1-96.3)	87.5 (84.9-89.6)	77.5 (74.6-80.2)
Gestational age			
Early preterm (<32 weeks)	96.8 (91.0-98.9)	85.2 (76.9-90.8)	60.6 (51.9-68.7)
Preterm (32-36 weeks)	95.6 (94.0-96.8)	89.3 (87.1-91.3)	82.2 (79.6-84.6)
Term (37-42 weeks)	91.4 (90.8-92.0)	89.6 (88.9-90.3)	78.6 (77.7-79.4)
Delivery type			
Cesarean section	92.3 (91.2-93.3)	90.2 (89.0-91.4)	79.0 (77.3-80.5)
Vaginal	91.7 (91.0-92.3)	89.3 (88.5-90.0)	78.6 (77.6-79.5)
Overall	91.8 (91.3-92.4)	89.5 (88.9-90.2)	78.7 (77.8-79.5)

* 95% CI refers to the 95% confidence interval around the estimate.

Maternal Characteristics

Despite the high overall rates of 1-week infant visits and PPV, the prevalence varied considerably by several maternal characteristics in Hawai'i. Blacks, Hispanics, Samoan, and other Pacific Islanders had the lowest prevalence of having both a 1-week infant visit and a PPV. Mothers who were younger (≤ 24 years), had a high school education or less, very poor (0-100% of Federal Poverty Level), unmarried, uninsured during delivery, participating in prenatal WIC, birthed 4 or more infants in their lifetime, had a low birthweight infant, and had an early preterm infant were less likely to have a PPV. Mothers who had military insurance during the delivery period were less likely to have taken their infant for a 1-week visit. Compared to the state average, women living in Maui County were

considerably less likely to utilize both health services after delivery.

Discussion

Although reported utilization of health services after delivery, specifically the 1-week infant visit and PPV, is high at approximately 90% of live births, about 3,500 mothers and infants are missing one or both services after delivery. Significant differences were noted among several groups in Hawai'i.

While the 1-week visit is important for the infants' health, mothers should be encouraged to see a health care provider for their own health. During the postpartum period, the mother may undergo physical and psychological changes.² During the PPV, providers should promote healthy behaviors such as nutrition, physical activity and stress management and address conditions identified in pregnancy. Behavioral counseling during these visits will reinforce messages about breastfeeding continuance, good infant sleep practices, and family planning to avoid unintended or closely-spaced pregnancies. The PPV will also address possible postpartum depression.

Pregnancy-related services are available through several venues in Hawai'i. The Hawai'i Department of Health (DOH) Maternal and Child Health Branch has a Family Planning Program provides birth control and other support through the interception period. The DOH covers PPVs through contracted services, and the Women, Infants, and Children program (WIC) provides perinatal support services.

These trends in low utilization of post-pregnancy health services occur despite high levels of insurance coverage in Hawai'i. Therefore, it is essential for health care providers to communicate the importance of timely 1-week infant visits and postpartum visits at the time of discharge.

About the Data

The Hawai'i Pregnancy Risk Assessment Monitoring System is a self-reported survey of recent mothers conducted by mail with telephone follow-up. It is designed to monitor the health and experiences of women before, during, and just after pregnancy. Every year in Hawai'i, about 2,000 women who deliver a live infant are randomly selected to participate. Due to a change in wording between different versions of the survey, 1-week infant visit was defined as an infant check-up within one week of leaving the hospital in 2004-2008 and as an infant check-up within one week of birth in 2009. Postpartum visit was defined as a regular check-up for the mother after giving birth in 2004-2008 and as a regular check-up for the mother within 6 weeks of giving birth in 2009. The 1-week visit and postpartum visit category includes all women who delivered a live birth, brought their infant in for a check-up within 1 week and had regular check-up for herself.

References

1. American Academy of Pediatrics and the American College of Obstetricians and Gynecologists (AAP/ACOG). Guidelines for Perinatal Care, Sixth Edition. October, 2007.
2. Blenning CE, Paladine H. An Approach to the Postpartum Office Visit. Am Fam Physician. 2005.