



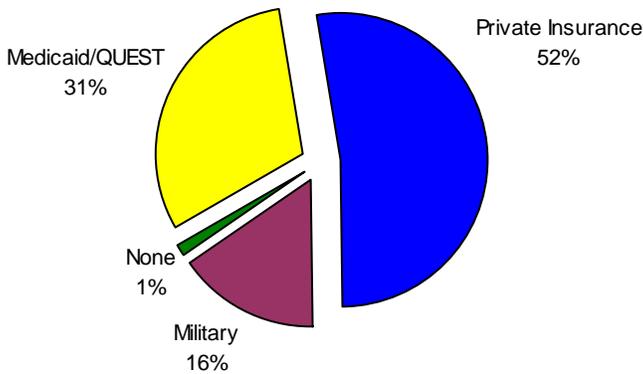
Medicaid/QUEST Birth Outcomes Fact Sheet

Hospital Discharge Data, Hawai'i Health Information Corporation

Medicaid in Hawai'i

Medicaid is a federal program, administered and jointly funded at the state level, to provide health insurance and access to care for low-income individuals. The name of the Medicaid program in Hawai'i is termed QUEST. To monitor the performance of Medicaid in helping to reduce socioeconomic disparities in birth outcomes, the Maternal and Child Health Bureau requires annual reporting of maternal and child health indicators by Medicaid status for the Title V Maternal and Child Health Services Block Grant Program. Due to data linkage difficulties, the State of Hawai'i has never reported these indicators by Medicaid status. Using hospital discharge data, acquired from the Hawai'i Health Information Corporation, various maternal and child health indicators were evaluated by insurance status. The QUEST program accounts for close to one third of all births in Hawaii.

Insurance at Delivery, Hawai'i 2004-2006



"I would like to say thank you to QUEST for giving me medical care. It sure took a lot of pressure off my shoulders and I was much happier. When you're happy as a mother you take care of yourself better, and therefore have a healthier baby and family too. Mahalo"

"It took QUEST a long time to kick in. When I got QUEST, not many OB/Gyns accepted it."

- Hawai'i PRAMS Participants

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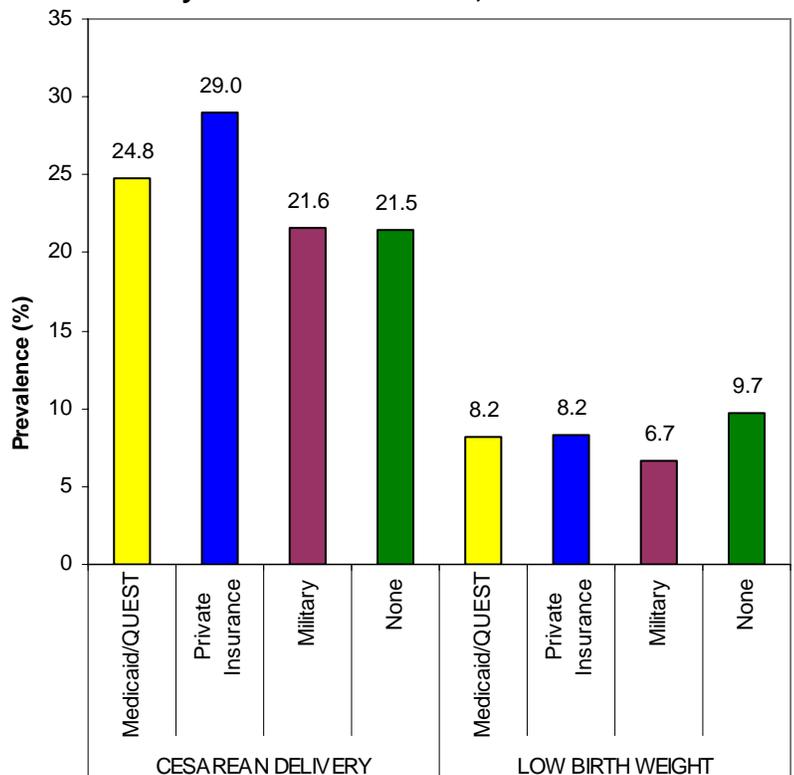
Data Highlights

- Almost 1 in 3 births in Hawai'i were Medicaid/QUEST insured; the remainder were mostly private or military insured; 1% were uninsured
- Cesarean deliveries were highest in those with private insurance and lowest in those with military or were uninsured.
- Those with military insurance had the lowest rates of low birth weight, while those who were uninsured had the highest rate.
- Infant mortality was significantly higher among the Medicaid/QUEST insured compared to those with private or military insurance
- Women with Medicaid/QUEST insured deliveries were more than twice as likely to experience a short birth interval as women who were privately insured

Delivery Outcomes

Cesarean deliveries were highest in those with private insurance, intermediate in those with Medicaid/QUEST, and lowest in those with military insurance or were uninsured. A low birth weight (LBW; <2,500 grams or 5.5 pounds) infant was highest in the uninsured, similar between those on Medicaid/QUEST, and lowest among those with military insurance. There were no meaningful differences in maternal or newborn length of stay (not shown).

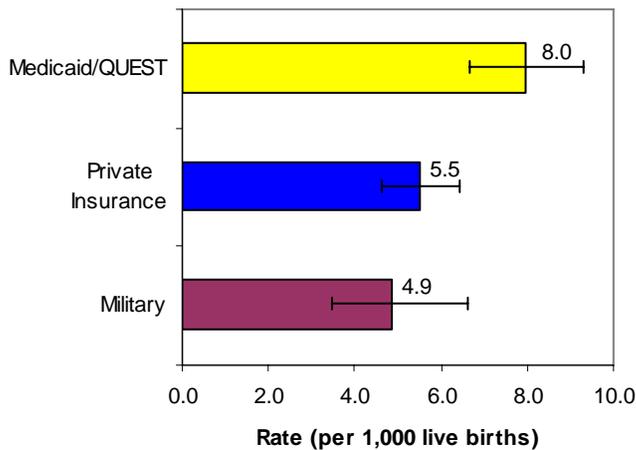
Cesarean Delivery and Low Birth Weight by Maternal Insurance, Hawai'i 2004-2006



Infant Mortality

The infant mortality rate for the Medicaid/QUEST insured was significantly higher, compared to private and military insured births.

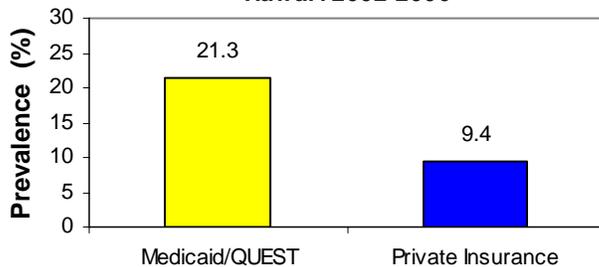
Infant Mortality Rates by Insurance, 2003-2005



Birth Interval

Short birth intervals are associated with adverse perinatal events including preterm birth and growth restriction.³ In women who had multiple deliveries between 2002-2006, those who were Medicaid/QUEST insured were more than twice as likely to deliver another infant within 15 months of the previous birth compared to those with private insurance.

Birth Interval <15 months by Insurance, Hawai'i 2002-2006



Discussion

There is emerging evidence that health status at birth—a product of maternal health—is linked to morbidity and mortality not only in infancy, but throughout the lifespan. LBW is a strong risk factor for infant death and is also related to many adverse health effects including cognitive deficits and adult cardiovascular disorders.¹ Women of low-income or education levels are more likely to deliver low birth weight infants.² Thus, we would expect that mothers on Medicaid/QUEST should have higher rates of LBW than those with private insurance. Our analysis, revealed little differences in LBW and Length of stay between the Medicaid/QUEST and privately insured mothers, but Medicaid/QUEST mothers were much more likely to have an infant death. This is consistent with the literature that shows smaller socioeconomic gaps in LBW than infant death,² and suggests the need for more effective infant mortality prevention programs serving women in Hawai'i.

While few women in Hawai'i are uninsured, comparisons between Medicaid/QUEST and uninsured suggest that Medicaid/QUEST may be helping to reduce LBW and infant mortality among the otherwise uninsured. An increased effort to identify the circumstances of women who remain uninsured and whether they are ineligible due to residency or other factors would be helpful to see if they are eligible for Medicaid/QUEST or other programs.

Future linkage to the birth/death certificate would help to differentiate the timing and underlying causes of infant death according to Medicaid status in addition to prenatal care utilization, and other factors. This could be accomplished by linking the birth certificate file to either Medicaid data or to hospital discharge files. Additionally, implementing the 2003 National Birth Certificate revision (currently in 25 states) would also improve analysis of these issues. Continued evaluation of Medicaid performance will be vital to improve outcomes for Hawai'i's most vulnerable low-income mothers and their children. Adverse birth outcomes have life-long health, social, and economic repercussions so it is important to ensure equity in health from the beginning of life.

References

- ¹ Goldenberg R, Culhane J. Low birth weight in the United States. *American Journal of Clinical Nutrition*. 2007;85(2):584S-590S.
- ² Parker JD, Schoendorf KC, Kiely JL. Associations between measures of socioeconomic status and low birth weight, small for gestational age, and premature delivery in the United States. *Annals of Epidemiology*. 1994;4(4):271-8.
- ³ Zhu BP, Rolfs RT, Nangle BE, Horan JM. Effect of the interval between pregnancies on perinatal outcomes. *NEJM*. 1999; 340(8):589-94.

About the Data

Hospital discharge data, furnished by the Hawai'i Health Information Corporation, included information from all Hawai'i maternal and newborn medical records at delivery and newborn inpatient and emergency room visits through the first year of life. Cesarean delivery and LBW rates were calculated according to maternal insurance at delivery for the most recent three years (2004-2006). Infant mortality was determined by dividing recorded infant deaths by births according to newborn insurance status for the period 2003-2005 (97% coverage compared to state vital statistics). Due to small number of births and deaths among those who were uninsured, we did not calculate an infant mortality rate for this group. Birth intervals were calculated for women who had more than one delivery between 2002-2006 with Medicaid/QUEST or Private Insurance only as we couldn't link successive pregnancies in those with military insurance.

The **Hawai'i Pregnancy Risk Assessment Monitoring System (PRAMS)** 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, about 2,000 women who deliver a live infant are randomly selected to participate. Comment data collected in PRAMS was used in the development of this fact sheet.