

Factors associated with infant low birth weight among Medicaid reimbursed births in Iowa, 2010



Fact sheet purpose

The purpose of the fact sheet is to highlight the characteristics of Iowa women who gave birth to low birth weight infants during 2010 and to guide decision makers in implementing programs that improve the health outcomes of the mothers and infants who rely on Medicaid coverage.

Background

Medicaid is a health insurance program that includes prenatal care coverage for low income pregnant women. It is funded by both state and federal dollars and is administered by the State of Iowa, Department of Human Services. In Iowa, pregnant women may be eligible for Medicaid if their household income is below 300 percent of the federal poverty level.

Infant low birth weight

Low birth weight (LBW) infants are those born at a birth weight of less than 2500 grams (5.5 pounds). Low birth weight infants are at increased risk for infant mortality, illness and postnatal complications such as feeding problems, poor weight gain, and future learning problems.

Factors associated with infant low birth weight

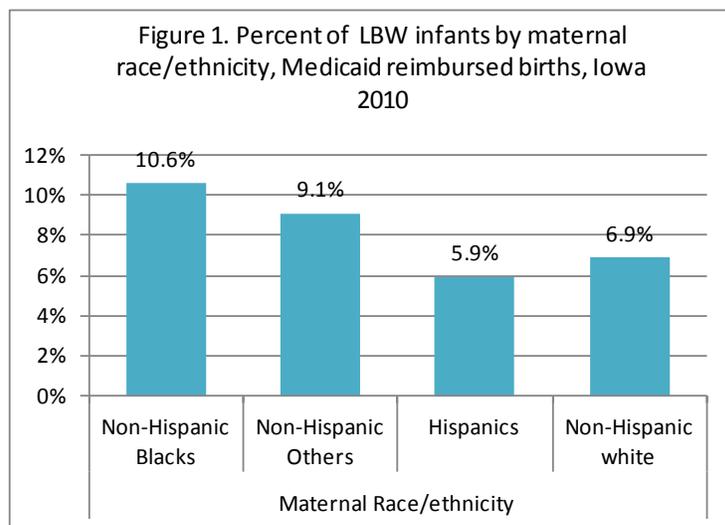
Women aged 17 years and younger and women aged 30 years and older are more likely to have a LBW infant than women in other age groups¹. Women of racial minorities are at higher risk for giving birth to a LBW infant compared to white and Hispanic women. Maternal behavioral factors thought to contribute to infant LBW are smoking during pregnancy², poor nutrition, and low weight gain during pregnancy¹. Researchers report that women who start prenatal care late (after the 1st trimester) are more likely to deliver a LBW infant compared to women who enter prenatal care in the first trimester. Access to early prenatal care creates the opportunity for pregnant women to be screened and treated for conditions that can influence birth outcomes³. Early prenatal care also can link women with services for smoking cessation and nutritional support programs like WIC.

Methods

Medicaid paid claims were linked to the birth certificate. Medicaid status was based on a paid claim for any one of the delivery related DRGs (370 – 375). The analysis was limited to Medicaid reimbursed deliveries (n=15,582). Infant low birth weight was examined by maternal demographics (race, ethnicity, age, educational level, & urbanicity). Infant low birth weight was also examined by prenatal care initiation, receipt of preventive dental care, and maternal smoking in the 3rd trimester of pregnancy. Chi-squared analysis and logistic regression was used to explore the factors associated with infant low birth weight among women with Medicaid reimbursed deliveries in Iowa.

Results

Bivariate: Overall, 7.2% (n=1,115), of women with a Medicaid reimbursed delivery, gave birth to low birth weight (LBW) infants. By race/ethnicity, the percent of non-Hispanic Black women and non-Hispanic women of other races who delivered a LBW infant were significantly greater than that of non-Hispanic white women who delivered a LBW infant (Figure 1). The percent of Hispanic women who delivered a low birth weight infant was significantly less than that of non-Hispanic white women who delivered a LBW infant.

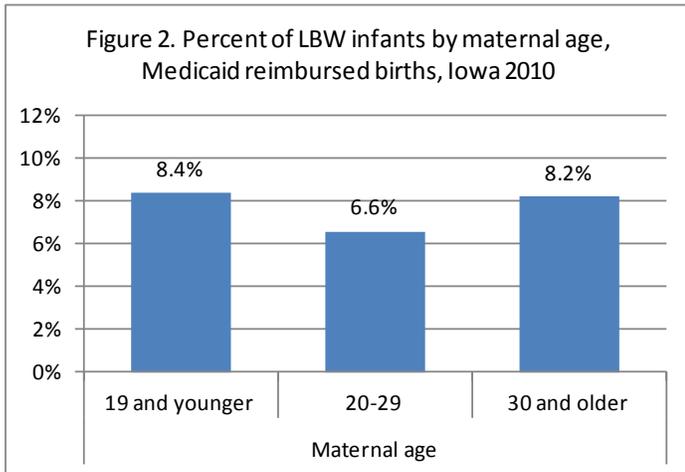


¹American College of Obstetricians and Gynecologists (ACOG). Intrauterine Growth Restriction. ACOG Practice Bulletin, No. 12, January 2000.

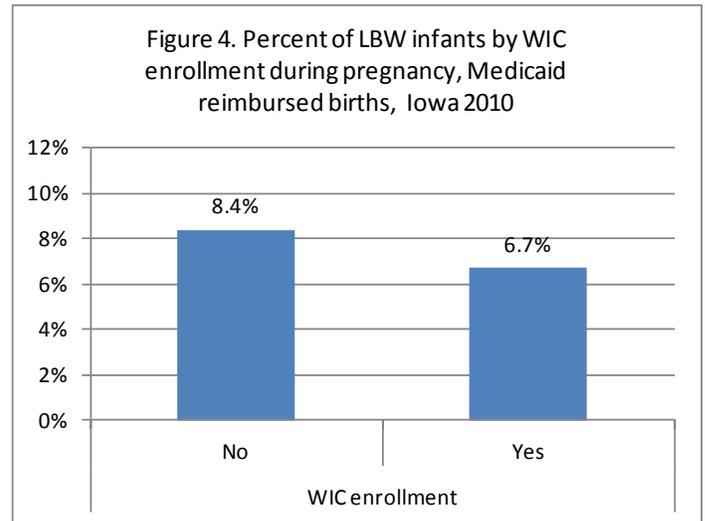
²U.S. Department of Health and Human Services. The Health Consequences of Smoking: A Report of the Surgeon General, 2004. Centers for Disease Control and Infection, Office on Smoking and Health, Atlanta, GA, May 2004.

³Shore R. & Shore B. KIDS COUNT Indicator Brief – Preventing Low Birthweight, The Annie E. Casey Foundation, Baltimore, MD, July 2009.

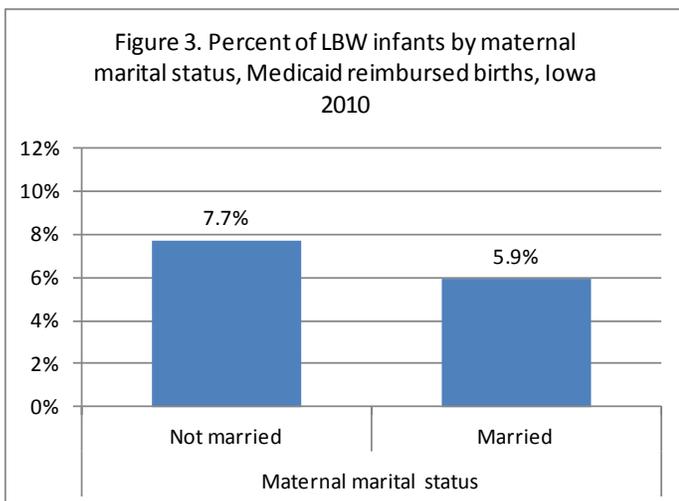
The percent of women aged 19 years and younger as well as those aged 30 years and older who delivered a LBW infant were significantly greater than that of women between the ages of 20 and 29 years. (Figure 2).



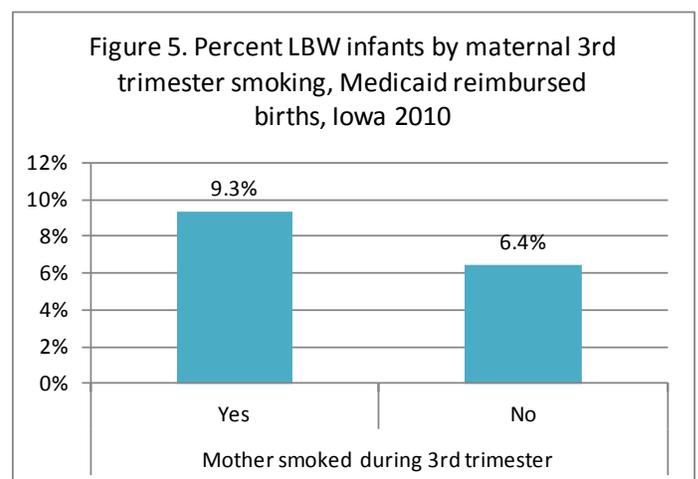
The percent of women who were **not** enrolled in WIC during pregnancy who delivered a LBW infant was significantly greater than that of women who were enrolled in WIC (Figure 4).



The percent of unmarried women who delivered a LBW infant was significantly greater than that of married women (Figure 3).



The percent of women who reported that they smoked during their 3rd trimester and delivered a LBW infant was significantly greater than those who reported that they did not smoke in the 3rd trimester (Figure 5).



The percent of women who delivered a LBW infant did not differ significantly by maternal educational level, urbanicity, prenatal care initiation, or receipt of preventive dental care during pregnancy (Data not shown).

Logistic regression: When controlling for race/ethnicity, age, marital status, WIC enrollment, and maternal smoking in the 3rd trimester of pregnancy, non-Hispanic Black women were 1.7 times more likely to give birth to a LBW infant than non-Hispanic white (NHW) women (Table 1). Likewise, non-Hispanic women of other races were 1.4 times more likely to give birth to a LBW infant compared to NHW women. Hispanic women were equally likely to give birth to a LBW infant compared to non-Hispanic white women.

By age women who were either 19 years and younger or 30 years and older were 1.3 times more likely to give birth to a LBW infant compared to women between the ages of 20 to 29 years (Table 1). Women who were not married were 1.3 times more likely to give birth to a LBW infant compared to married women.

Women who were not enrolled in WIC during pregnancy were 1.2 times more likely to give birth to a LBW infant compared to women who were enrolled in WIC.

Women who reported that they smoked during their 3rd trimester were 1.5 times more likely to give birth to a LBW infant compared to women who reported that they had not smoked during their 3rd trimester.

Table 1. Crude and adjusted odds ratios for factors associated with infant LBW among Medicaid reimbursed deliveries, Iowa 2010.

Factor	Logistic regression	
	Crude OR (95% CL)	Adjusted OR (95% CL)
Maternal Race/Ethnicity		
Non-Hispanic Blacks	1.6 (1.3 - 1.9)	1.7 (1.4 - 2.0)
Non-Hispanic Others	1.4 (1.0 - 1.9)	1.5 (1.1 - 2.0)
Hispanics	0.9 (0.7 - 1.0)	0.9 (0.8 - 1.2)
Non-Hispanic White	REF	-
Maternal Age		
19 and younger	1.3 (1.1 - 1.5)	1.3 (1.1 - 1.5)
20-29	REF	-
30 and older	1.3 (1.1 - 1.5)	1.3 (1.1 - 1.6)
Maternal Marital Status		
Not married	1.3 (1.2 - 1.5)	1.2 (1.1 - 1.4)
Married	REF	-
WIC Enrollment		
No	1.2 (1.1 - 1.4)	1.3 (1.1 - 1.5)
Yes	REF	-
Mother smoked during 3rd trimester		
Yes	1.5 (1.3 - 1.7)	1.5 (1.3 - 1.8)
No	REF	-

Conclusions

Based on this analysis, key factors associated with infant low birth weight among Medicaid recipients in Iowa were maternal race/ethnicity, age, marital status, recipient of WIC, and smoking during the 3rd trimester.

Recommendations

Smoking during pregnancy: The importance of smoking cessation during pregnancy cannot be overemphasized. Medicaid in Iowa generally covers smoking cessation medications such as nicotine replacement therapy and oral smoking cessation therapy.

QUITLINE IOWA is important resource to assist pregnant women and others to quit smoking: 1-800-QUIT NOW (1-800-784-8669) or www.quitnow.net/iowa.

QuitNet is another resource to assist pregnant women and others to quit smoking. It is described as the world's largest and most comprehensive online quit-smoking service. It offers tools and support to help people quit and remain smoke free. Their website is as follows: <http://quitnet.com/qnhomepage.aspx>.

WIC enrollment: It was surprising to note that 25 percent of women with Medicaid reimbursed births reported that they had not received WIC during their pregnancy. Medicaid eligible women may not be aware that they are also eligible for WIC. Care coordinators and prenatal care providers may play a key role in informing their Medicaid clients to enroll in WIC during pregnancy.

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