

Births to Women on Medicaid

Infant low birth weight among Medicaid recipients

Iowa 2009



FACT SHEET PURPOSE

The purpose of this fact sheet is to highlight the characteristics of Iowa women who gave birth to low birth weight (LBW) infants during 2009 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 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 with household incomes up to 300 percent of the federal poverty level are eligible for Medicaid coverage.

INFANT 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.

INFANT LOW BIRTH WEIGHT

Women 17 years of age and younger and women 30 and older are more likely to have a LBW infant than women in other age groups. Women of racial minorities are at higher risk for giving birth to a LBW compared to white and Hispanic women. Maternal behavioral factors thought to contribute to infant LBW are smoking during pregnancy, poor nutrition and low weight gain during pregnancy.

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. Early and continuous prenatal care is important because it can help providers identify maternal conditions and behaviors that may contribute to low infant birth weight such as maternal smoking and inadequate weight gain during pregnancy. Early prenatal care creates the opportunity for women to receive education and support to change behaviors that may contribute to infant LBW. Early and continuous prenatal care also creates the opportunity for women to receive treatment for health conditions such as diabetes, high blood pressure and infections.

DATA SOURCES

Data from the matched file of the birth certificate and Medicaid paid claims health related services were used to develop this fact sheet. Specifically paid claims for maternal diagnostic related groups (DRGs) 370 through 375 for calendar year 2009 were used. These DRGs report categories of vaginal and cesarean deliveries. The birth certificate was used for maternal demographic characteristics such as maternal age, race, ethnicity and education. The birth certificate was also used for maternal behavioral characteristics such as cigarette smoking and weight gain during pregnancy, as well as WIC enrollment and prenatal care adequacy. Medicaid status was based on a paid claim for any one of the delivery related DRGs. The analysis was limited to Medicaid reimbursed deliveries and to women who delivered low birth weight singleton infants (n=905).

RESULTS

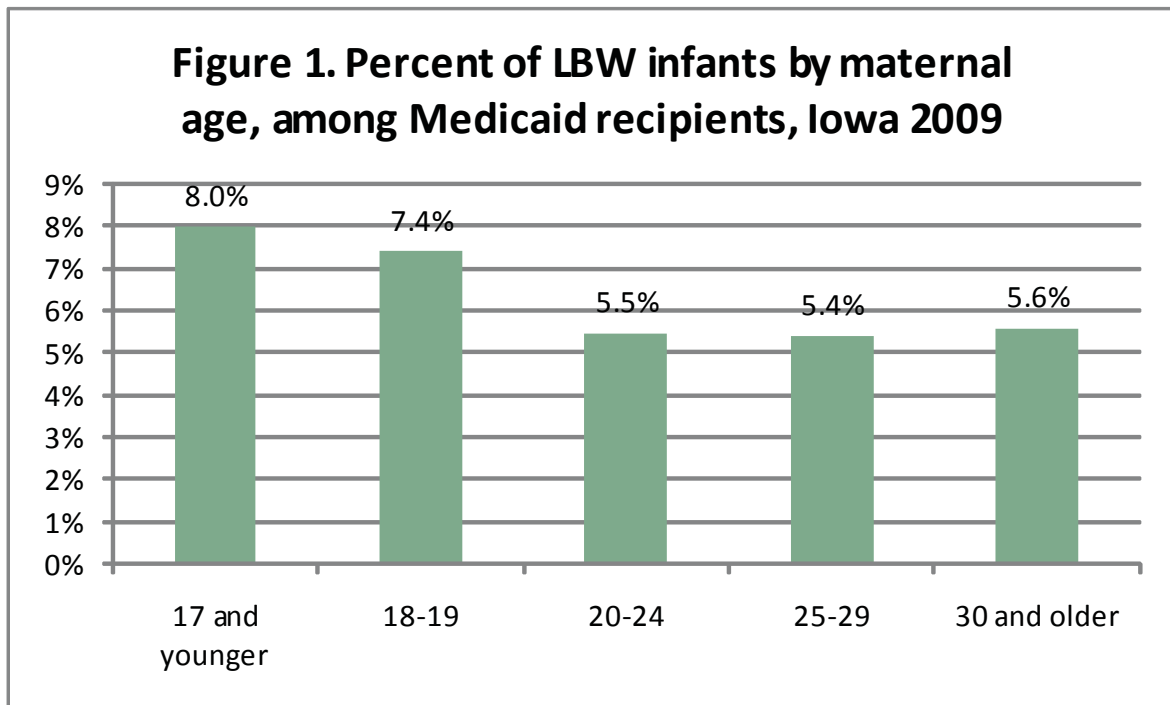
Infant low birth weight by maternal demographic characteristics

In calendar year 2009, nearly five percent of singleton infants were born at a weight of less than 2500 grams or at a low birth weight (4.8%; n=1850). Among Medicaid recipients, five percent (5.8%; n=905 of 15,516) of infants were at a low birth weight. In comparison, four percent (4.2%; n=945 of 22,640) of LBW infants were born to non-Medicaid recipients.



Maternal Age

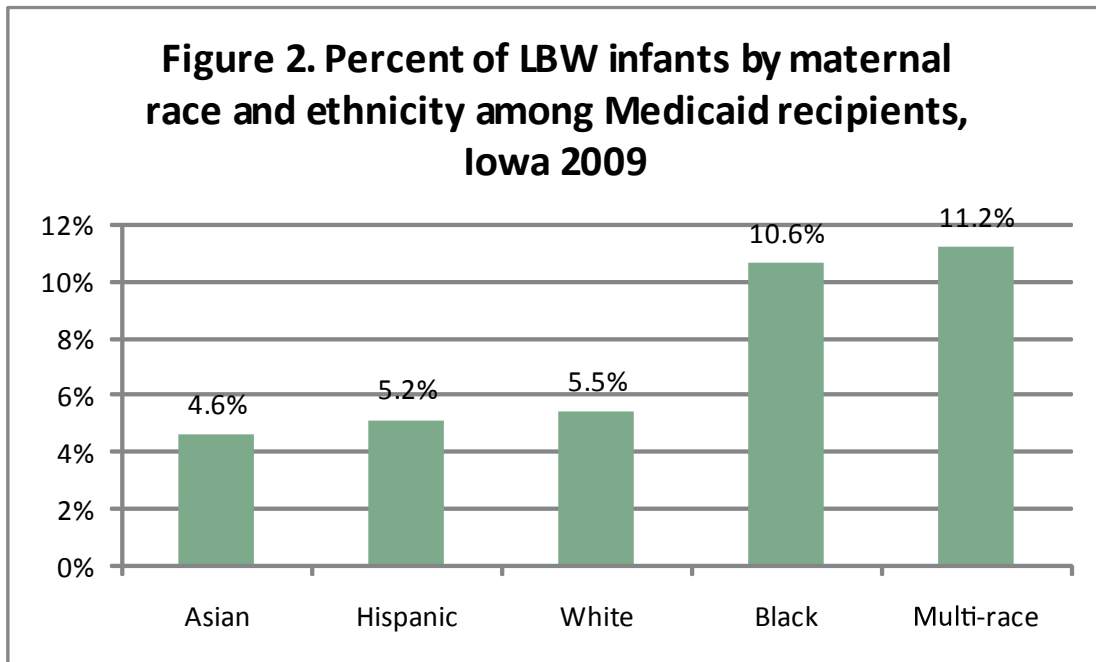
Of the infants born to Medicaid recipients ages 17 and younger, eight percent (n=58) were born at a low birth weight (Figure 1). Of the infants born to Medicaid recipients ages 18 to 19, over seven percent (7.4%; n=152) were born at a low birth weight. The proportion of LBW infants born to Medicaid recipients of other age groups was nearly identical for ages 20 to 24 (5.5%; n=341), 25 to 29 (5.4%; n=214), and 30 and older (5.6%; n=139).



Maternal race and ethnicity

The highest proportion of LBW infants were born to Medicaid recipients who identified themselves as multiple races (11.2%) compared to Medicaid recipients of other racial and ethnic groups (Figure 2). However the actual number of LBW infants born to multiple race Medicaid recipients was low (n=26). Likewise, although the proportion of Black Medicaid recipients who delivered LBW infants was high (10.6%) compared to other groups, the number of LBW infants was low (n=143). In contrast, although the proportion of white Medicaid recipients (5.5%) who delivered LBW infants was lower compared to multiple race and Black women, the number of LBW infants born to white Medicaid recipients was the highest (n=663).

Asian (4.6%; n=11) and Hispanic (5.2%; n=112) Medicaid recipients delivered the lowest proportion of LBW infants compared to other races and non-Hispanics. Native American and Native Hawaiian Medicaid recipients were excluded from this report because of the low number of LBW infants born to these women (less than 5 for each group).

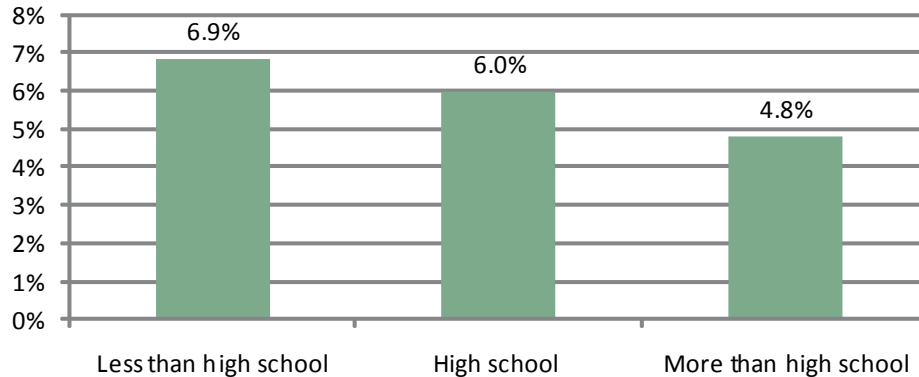


Maternal educational level

Medicaid recipients with less than a high school education delivered the highest proportion of LBW infants (6.9%; n=286) compared to Medicaid recipients with a high school education (6.0%; n=316) and those with more than a high school education (4.8%; n=289). (Figure 3 on page 5.)



Figure 3. Percent of LBW infants by maternal educational level among Medicaid recipients, Iowa 2009



Infant low birth weight by maternal behavioral characteristics

Maternal smoking

Smoking status is a self-reported variable on the birth certificate. Women who reported that they smoked any cigarettes during pregnancy were categorized as smokers. Non-smokers were those that reported that they did not smoke any cigarettes during pregnancy.

Thirty percent of Medicaid recipients reported that they smoked during pregnancy. Smokers delivered a significantly greater proportion of LBW infants (7.7%; n=369) compared to Medicaid recipients who reported that they did not smoke during pregnancy (5.0%; n=532) (Figure 4).

Figure 4. Percent of LBW infants by maternal smoking during pregnancy, Medicaid recipients, Iowa 2009



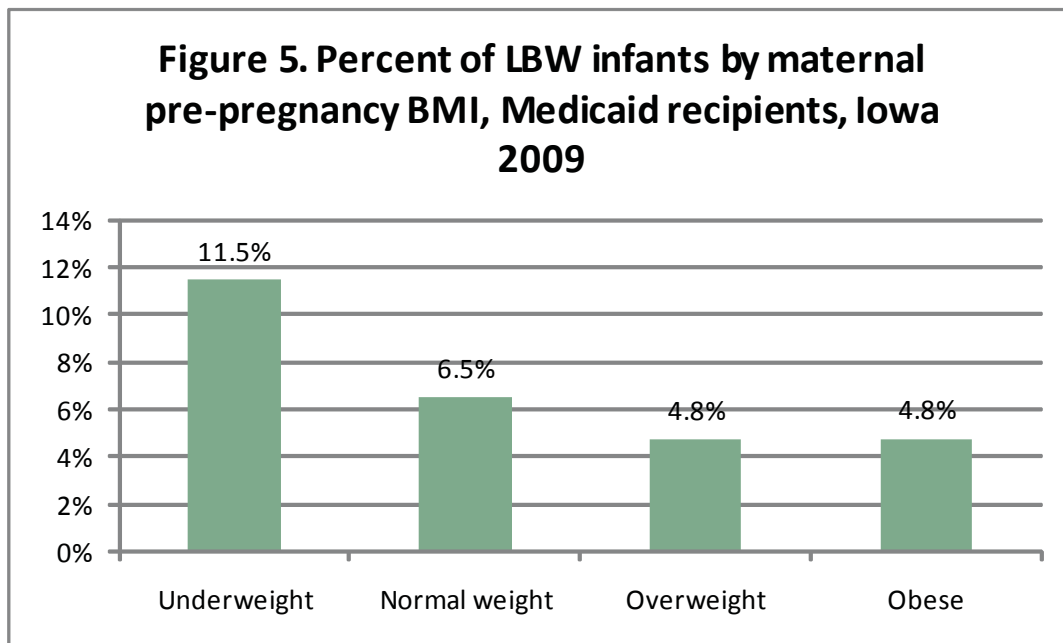
Maternal pre-pregnancy body mass index and weight gain during pregnancy

Maternal pre-pregnancy body mass index (BMI) is a calculated value based on the mother's reported pre-pregnancy weight and her height. Body mass index is categorized as underweight, normal weight, overweight and obese.

Healthy weight gain during pregnancy is based on pre-pregnancy BMI. For example, underweight women are urged to gain more weight during pregnancy than obese and overweight women.



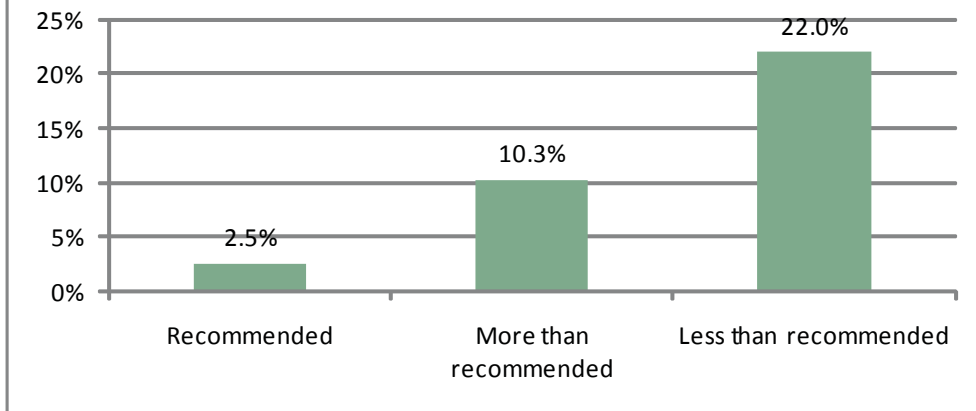
Eleven percent (11.5%; n=79) of Medicaid recipients who were underweight based on their pre-pregnancy BMI, delivered LBW infants (Figure 5). Of normal weight Medicaid recipients, 6.5 percent (n=426), delivered LBW infants. Four percent of Medicaid recipients who were obese (4.8%; n=209) delivered LBW infants and four percent of Medicaid recipients who were overweight (4.8%; n=177) delivered LBW infants.



Underweight Medicaid recipients who gained less than the recommended weight during pregnancy delivered a LBW infant at a much higher proportion (22.0%) than those who gained more than the recommended amount of weight (10.3%) or those who gained the recommended amount of weight (2.5%). (Figure 6 on page 7.)



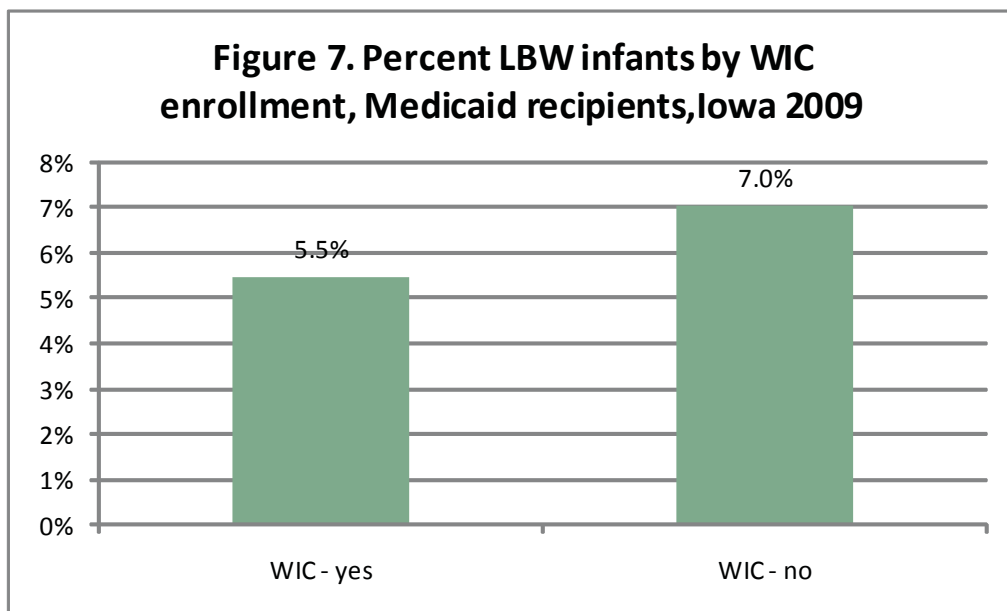
Figure 6. Percent of LBW infants by weight gain among underweight Medicaid recipients, Iowa 2009



Infant low birth weight by maternal WIC enrollment

All women who are eligible to receive Medicaid would also be eligible to receive services through the Special Supplemental Nutrition Program for Women, Infants and Children, known as WIC. WIC provides women with vouchers to obtain healthy foods and nutritional counseling to promote healthy weight gain during pregnancy. Yet nearly one-fourth of women with a Medicaid reimbursed delivery (23.4%; n=3,610) were not enrolled in WIC during their pregnancies. More importantly, women who were not enrolled in WIC gave birth to LBW infants at a higher proportion (7.0%; n=254 of 905) than women who were enrolled in WIC during pregnancy (Figure 7).

Figure 7. Percent LBW infants by WIC enrollment, Medicaid recipients, Iowa 2009



Infant low birth weight by maternal access to prenatal care

Prenatal care initiation and prenatal care adequacy

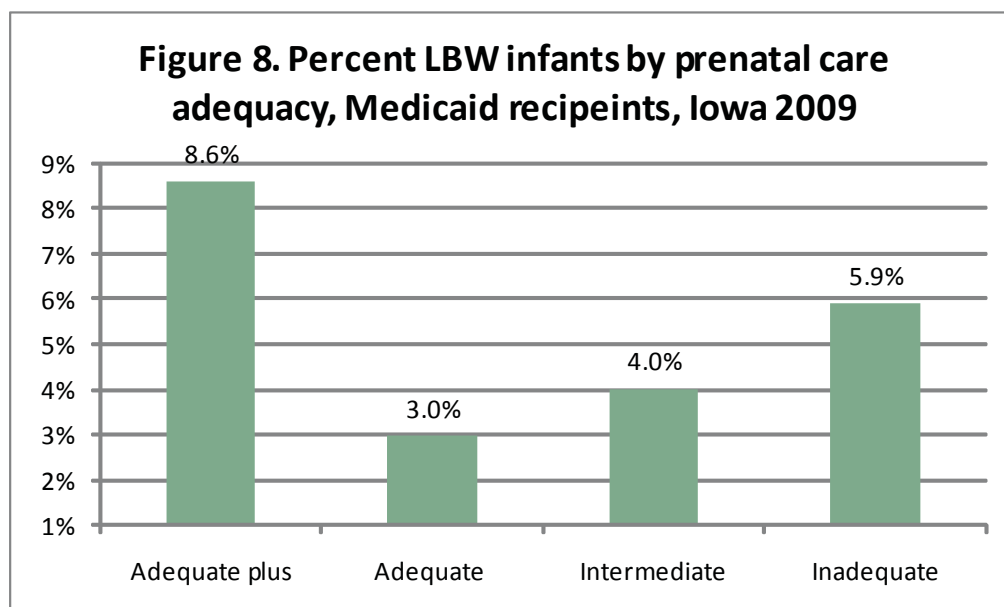
The proportion of Medicaid recipients who delivered LBW infants did not significantly differ by the trimester that women entered prenatal care. In contrast, among Medicaid recipients who did not receive prenatal care 13 percent (13.5%; n=16) delivered LBW infants.



Prenatal care adequacy (the Kotelchuck index) is a calculated value based on the month that a woman began prenatal care, the number of visits she had and the gestational age of her infant at birth. The calculated values are divided into four categories: adequate plus, adequate, intermediate and inadequate receipt of prenatal care.

Women with health conditions such as diabetes or high blood pressure and those who may be at risk to deliver a LBW infant typically receive more prenatal care than women who are well during their pregnancies. Pregnant women with health conditions or who are at risk to have a LBW infant might therefore receive adequate plus prenatal care.

Among Medicaid recipients who received adequate plus prenatal care, eight percent (8.6%; n=499) delivered LBW infants (Figure 8). The next highest proportion of Medicaid recipients who delivered LBW infants was among those who received inadequate prenatal care (5.9%; n=171). The lowest proportion of Medicaid recipients who delivered LBW infants was among those who received adequate prenatal care (3.0%; n=175). Four percent of Medicaid recipients (n=29) who received intermediate prenatal care delivered LBW infants.



DISCUSSION

The proportion of LBW infants born to Medicaid recipients in Iowa differed by maternal age, race and educational level. Specifically, women 18 and younger gave birth to a higher proportion of LBW infants compared to women 20 and older. Perhaps related to this age differential was that women with less than a high school education gave birth to a higher proportion of LBW infants compared to women with more education. Medicaid recipients of racial minorities (multi-race and blacks) gave birth to the highest proportions of LBW infants compared to white and Hispanic Medicaid recipients.

Medicaid recipients who smoked cigarettes during pregnancy gave birth to LBW infants at a greater proportion than non-smokers. Pre-pregnancy BMI and weight gain during pregnancy also appeared to influence infant birth weight among Medicaid recipients. Namely, underweight women gave birth to the highest proportion of LBW infants compared to normal weight, obese or overweight women. Among underweight women, those who gained less than the recommended amount of weight gave birth to LBW infants at the highest proportion. Medicaid recipients who had not enrolled in WIC gave birth to a higher proportion of LBW infants compared to Medicaid recipients who had been enrolled in WIC during pregnancy.

Medicaid recipients who did not receive prenatal care gave birth to the highest proportion of LBW infants compared to Medicaid recipients who received any prenatal care. The trimester that women started prenatal care did not appear to influence whether a woman gave birth to a LBW infant. Medicaid recipients who received adequate plus prenatal care based on the Kotelchuck index gave birth to a higher proportion of LBW infants compared to Medicaid recipients who received adequate, intermediate or inadequate prenatal care.

CONCLUSION

Based on demographic characteristics, young women, those with less than a high school education, and those of racial minorities, gave birth to LBW infants more than other groups of women. Maternal behaviors that appear to contribute to whether a woman has a LBW infant were smoking, pre-pregnancy weight and weight gain during pregnancy.

Medicaid recipients who did not obtain prenatal care gave birth to LBW infants at a higher proportion than Medicaid recipients who received any prenatal care, regardless of when they started prenatal care. More women who received adequate plus prenatal care gave birth to LBW infants. This result suggests that women at risk to have a LBW infant were appropriately linked to prenatal care providers. On the other hand, the proportion of Medicaid recipients who obtained inadequate prenatal care gave birth to a higher proportion of LBW infants compared to those who received adequate or intermediate prenatal care.

RECOMMENDATIONS

Prenatal Care Coordination

- Raise awareness of the availability of Medicaid prenatal care coordination, provided by Iowa Department of Public Health Title V maternal health care centers
- Through Medicaid prenatal care coordination services, use the risk assessment to identify women at higher risk to deliver a LBW infant
- Through care coordination refer pregnant women for prenatal care and other services, and provide education and counseling to promote a healthy pregnancy and improved birth outcomes

Maternal nutrition and weight gain

- Promote healthy preconception weight for all women of child-bearing age through well-women care and community-based programs
- Promote healthy weight gain during pregnancy, including referrals for Medicaid covered nutritional counseling
- Urge pregnant women on Medicaid to also enroll in WIC

Smoking

- Through prenatal care coordination and prenatal care, promote smoking cessation during pregnancy by referring women to QUITLINE IOWA /1-800-QUIT NOW (1-800-784-8669) / www.quitlineiowa.org
- Urge prenatal care providers to prescribe Medicaid reimbursable smoking cessation drugs to pregnant women

Access to prenatal care

- Determine and address barriers to prenatal care access and adequacy
- Support and expand Medicaid prenatal care coordination to improve early and continuous receipt of prenatal care

ADDITIONAL INFORMATION

For additional information or to obtain copies of this fact sheet, write or call the Iowa Department of Public Health, Bureau of Family Health, 321 E. 12th Street, Des Moines, IA 50309; 1-800-383-3826

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