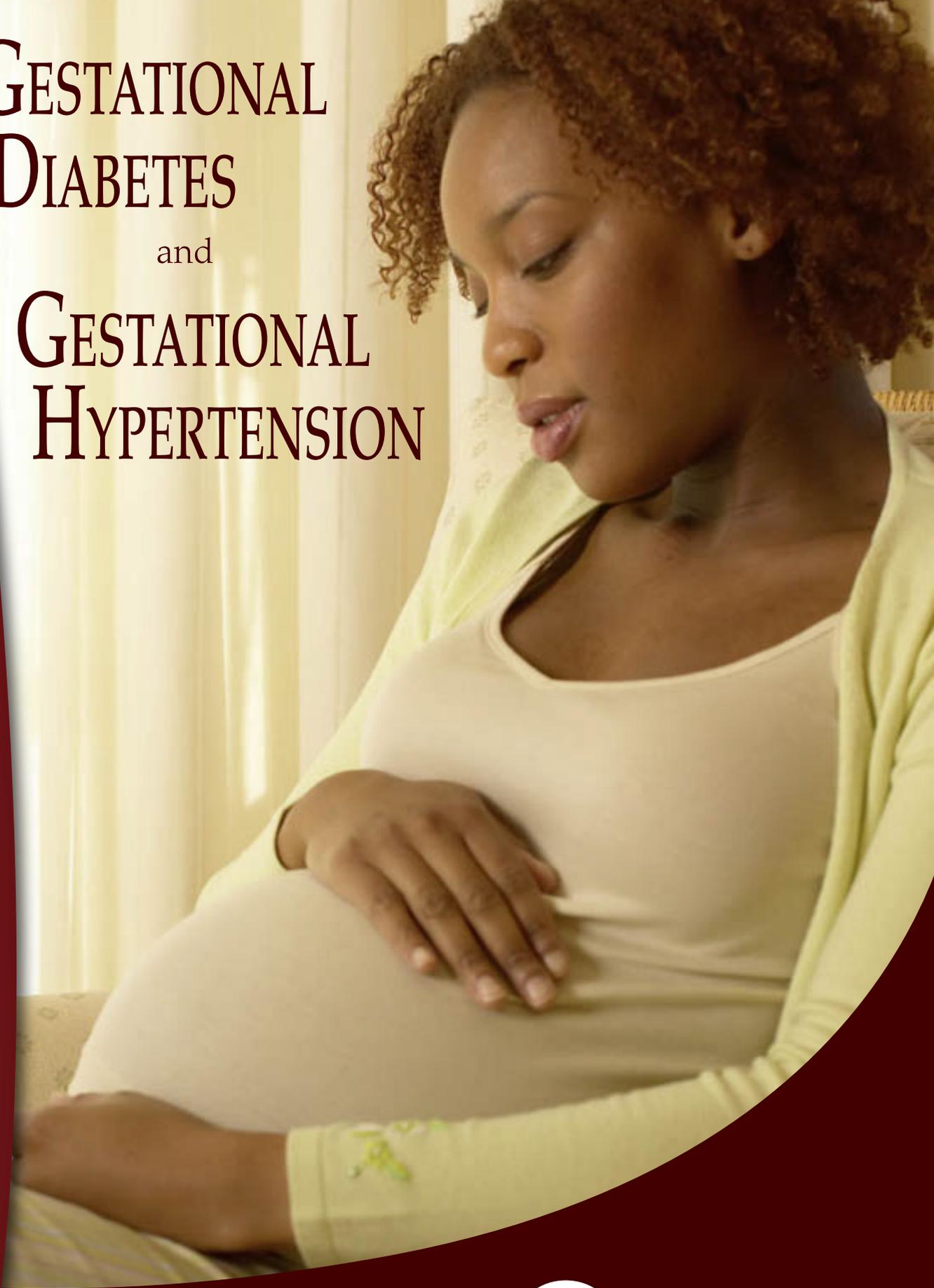


# GESTATIONAL DIABETES and GESTATIONAL HYPERTENSION



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## Fact Sheet Purpose

The purpose of this fact sheet is to describe gestational diabetes and gestational hypertension among Iowa women with Medicaid reimbursed births during 2011. This information may be used to guide decision makers in implementing programs that improve the health outcomes of the women 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's 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.

In 2009, the Institute of Medicine (IOM) re-examined the guidelines for how much weight should be gained during pregnancy. This change in recommendations was prompted by a growing awareness that a large percentage of today's women are entering pregnancy overweight or obese and that they are gaining too much weight during

pregnancy. This adds to the already high burden of chronic diseases associated with excess weight and has potentially negative consequences for the baby.

Current recommendations from the IOM advise women to gain weight according to their pre-pregnancy Body Mass Index (BMI). See Table 1 for the new guidelines. Note that teenagers who are pregnant are advised to follow the same recommendations as adult women. Recommendations for women having twins are provisional. Women pregnant with twins in the normal BMI category should aim to gain 37-54 pounds; overweight women, 31-50 pounds; and obese women, 25-42 pounds. Recommendations for underweight women are not available at this time.

**TABLE 1 New Recommendations for Total and Rate of Weight Gain During Pregnancy, by Pre-Pregnancy BMI**

Pre-pregnancy BMI	BMI (kg/m <sup>2</sup> )	Total Weight Gain Range (lbs)	Rates of Weight Gain 2nd and 3rd Trimester (Mean Range in lbs/wk)
Underweight	<18.5	28-40	1 (1-1.3)
Normal weight	18.5-24.9	25-35	1 (0.8-1)
Overweight	25.0-29.9	15-25	0.6 (0.5-0.7)
Obese (includes all classes)	≥30.0	11-20	0.5 (0.4-0.6)

## Consequences of Gestational Diabetes and Hypertension

Women who enter pregnancy overweight or obese are at increased risk for developing gestational diabetes and hypertension. Gestational diabetes can increase a woman's risk for developing gestational hypertension, delivery via cesarean section and having a large for gestational age baby. Babies born to mothers who developed gestational diabetes are at increased risk for congenital defects and neonatal metabolic abnormalities. Gestational hypertension is a leading cause of maternal death in the US. It can result in eclampsia, renal failure and cerebral hemorrhage in the mother and stillbirth and intrauterine growth restriction for the infant.

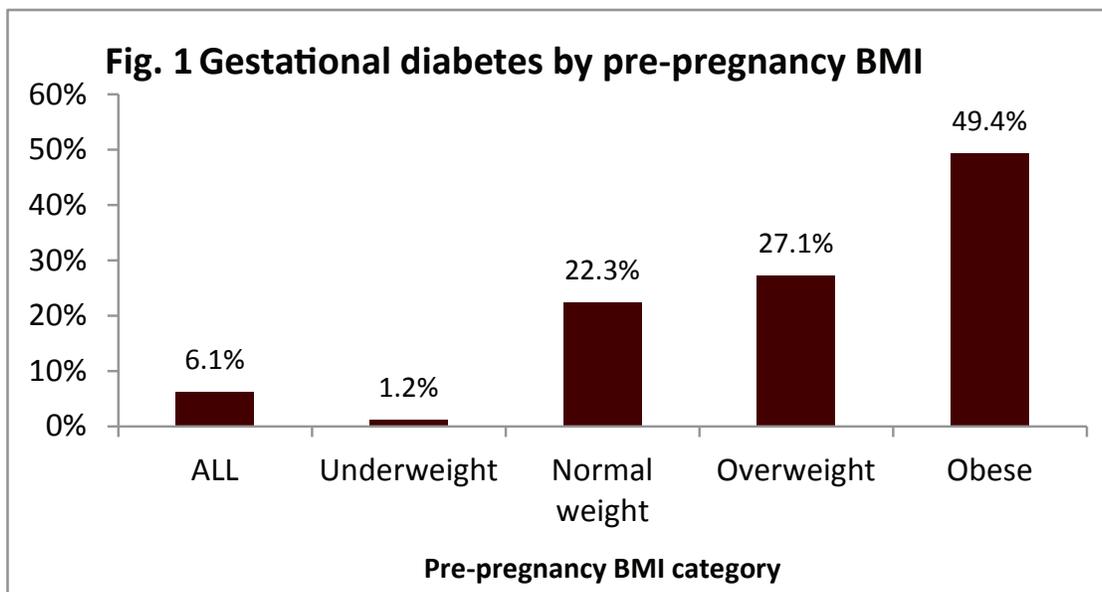
## Data Sources

Data for this report was derived from a matched file of the 2011 birth certificate and Medicaid paid claims for calendar year 2011. Paid claims were used for maternal diagnostic groups (DRGs) 370 through 375, which are the reporting categories for vaginal and cesarean deliveries. The birth certificate was used for maternal demographic characteristics; including age, race, ethnicity and level of education, as well as pre-pregnancy BMI, gestational weight gain (GWG) and gestational diabetes and hypertension. Medicaid status was based on a paid claim for any one of the delivery related DRGs. There were 15,317 births in Iowa reimbursed by Medicaid in 2011. Please note that missing data were not included in the analyses and that percentages are rounded, as such, total values may not equal 15,317 births or 100%, respectively.



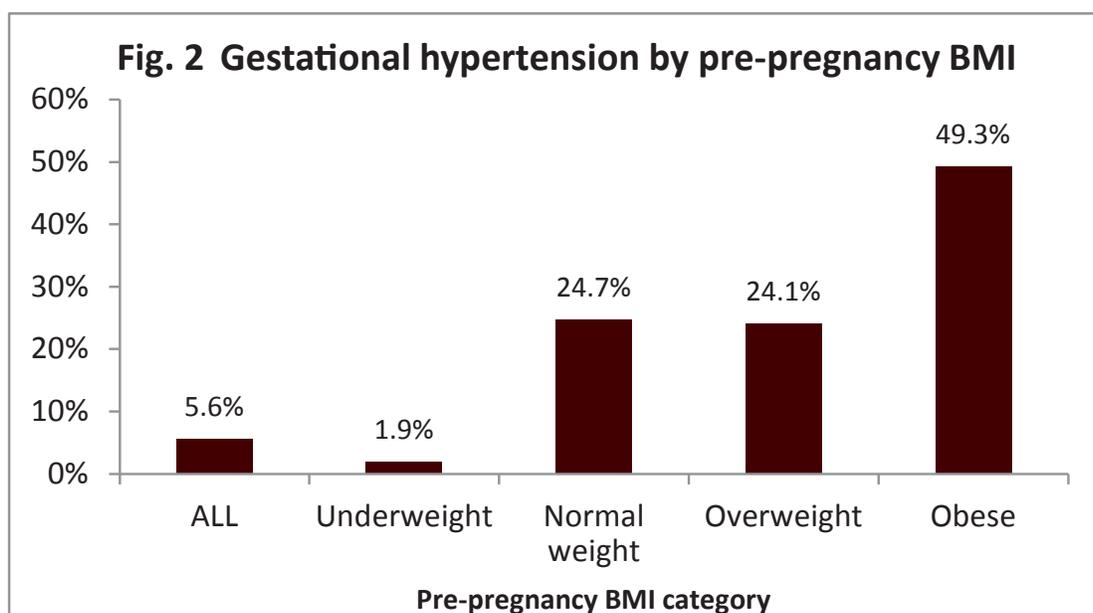
## Gestational Diabetes in Medicaid Mothers in Iowa

Overall, 6% (n=940) of the 2011 Medicaid mothers were diagnosed with gestational diabetes. The majority of these women were obese (49%, n=464) before becoming pregnant. Normal weight and overweight women accounted for 22% (n=210) and 27% (n=255), respectively. Underweight women were 1% (n=11) of those diagnosed with gestational diabetes during their pregnancy.



## Gestational Hypertension in Medicaid Mothers in Iowa

Overall, 6% (n=850) of the 2011 Medicaid mothers were diagnosed with gestational hypertension. The majority of these women were obese (49%, n=419) before becoming pregnant. Normal weight and overweight women each accounted for 24% (n=210 and 205, respectively) of those diagnosed with gestational hypertension. Underweight women were 2% (n=16) of those diagnosed with gestational hypertension during their pregnancy.



## Discussion

Gestational diabetes and hypertension are higher among women who are obese before becoming pregnant. These conditions can lead to health problems beyond the perinatal period. Postpartum weight retention can lead to maternal obesity and the development of chronic conditions, such as diabetes, hypertension and other cardiovascular risk factors. Women could also face complications during any subsequent pregnancies. Women who gain one BMI unit (approximately 7 lbs.) are at a 20-

40% higher risk of developing gestational diabetes, gestational hypertension and having a large-for-gestational age birth during their next pregnancy. Up to 50% of women who develop gestational diabetes may develop Type II diabetes within 5 years of pregnancy. Achieving a healthy BMI before pregnancy and gaining the recommended amount of weight can help to prevent these outcomes.

## Recommendations

### For Women:

- Work towards a healthy BMI before becoming pregnant.
- Follow the IOM guidelines for weight gain during pregnancy. Eating a healthy diet and physician recommended exercise can help.
- Achieve a healthy BMI postpartum. Talk to your doctor about resources that may be available to help. Breastfeeding can help you to lose weight after delivery and prevent infant obesity.

### For Providers:

- Adopt the IOM weight gain recommendations and ensure that this information is available to all women of child-bearing age as part of preconception health care.
- Counsel pregnant women on physical activity as appropriate to the individual woman's needs. The American College of Obstetrics and Gynecology (ACOG) recommends 30 minutes of physical activity per day during pregnancy. The American Diabetes Association has endorsed exercise as 'a helpful adjunctive therapy' for gestational diabetes.
- Talk to women about their reproductive life plan to prevent unintended pregnancies. Recommend an appropriate form of birth control to help space pregnancies.
- Refer women to a Title V Maternal Health agency for dietary counseling. Refer to the link below for more information. [http://www.idph.state.ia.us/hpcdp/common/pdf/mh\\_map.pdf](http://www.idph.state.ia.us/hpcdp/common/pdf/mh_map.pdf)



## **What is the Iowa Medicaid-Birth Certificate Match Project?**

The Iowa Medicaid-Birth Certificate Match project is supported by an inter-departmental agreement between the Iowa Department of Human Services and the Iowa Department of Public Health/ Bureau of Family Health and Bureau of Health Statistics. The purpose of this project is to monitor and describe the characteristics of pregnant Medicaid recipients, their receipt of pregnancy related services, and their birth outcomes relative to women whose deliveries are not reimbursed by Medicaid. The resulting information can be used to improve programs and policies to benefit Medicaid recipients.

### **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, at 321 East 12th Street, Des Moines, IA 50319 or toll-free at 1-800-383-3826.

### **References:**

Centers for Disease Control and Prevention (2006). Recommendations to improve preconception health and health care — United States: a report of the CDC/ATSDR Preconception Care Work Group and the Select Panel on Preconception Care. *MMWR* 2006 55(No. RR-6):[1-22].

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Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion. (2011, October 17). Preventing and managing chronic disease to improve the health of women and infants. Retrieved from <http://www.cdc.gov/reproductivehealth/WomensRH/ChronicDiseaseandReproductiveHealth.htm>

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