

Maternal Illness During Pregnancy

Maternal illness during pregnancy can lead to serious health problems for both the mother and her infant. The three most frequently reported illnesses for women whose babies are born alive are pregnancy-associated hypertension, gestational diabetes and anemia.

Data from North Dakota resident birth certificates from 2000 through 2002 were examined for the presence of these medical risk factors in the mothers. The frequency of these risk factors was stratified by the following demographic characteristics: race, geographic residence, age, amount of weight gained and payer.

State/National Comparisons

North Dakota rates from 2002 through 2003 were compared to United States rates for 2001. The rate of anemia in North Dakota women whose babies were born alive was 9.8 per 1,000 births, substantially lower than the United States rate of 25. The North Dakota rate of gestational diabetes was 31.4 per 1,000 births, similar to the national rate of 31.1 in 2001. The state rate of pregnancy-associated hypertension

was 41.4 per 1,000, slightly higher than the 2001 United States rate of 37.7.

Risk Factors by Race

American Indian women had significantly higher rates of anemia than did white women (40.9 compared to 5.3). However, there was no significant difference in the rates of diabetes and hypertension by race.

Risk Factors by Geography

For this study, women were designated as either rural or urban based upon their city of residence. Women who had zip codes for the cities of Bismarck, Fargo, Grand Forks, Mandan, Minot and West Fargo were considered urban, and all others rural. Of the births from 2000 through 2002, 54 percent were to mothers designated as urban, and 46 percent rural.

Rural women (14.5) had significantly higher rates of anemia than did urban women (5.7). There was no significant difference in the rates of diabetes and hypertension by geography.

Maternal Age

Women were divided into three age groups: younger than 20, 20 to 40, and older than 40. Women



younger than 20 had significantly higher rates of anemia than did women older than 20 (21.6 compared to 8.4). The rate of diabetes increased significantly by age group: younger than 20 (7.4); age 20 to 40 (30.1); and older than 40 (59.5). There was no significant difference in hypertension by age group.

Maternal Weight Gain

Diabetes was significantly more common among women who gained less than 20 pounds (64.7) than among women who gained more than 20 pounds (25.2). Hypertension was significantly more likely among

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women who gained more than 40 pounds (63.2) than in women who gained less than 40 pounds (35.6). There was no difference in anemia by maternal weight gain.

Payer

Women whose births were paid for by Medicaid had significantly higher rates of anemia than women whose births were paid for by Blue Cross Blue Shield (21.9 compared to 4.6). There was no significant difference in the rates of diabetes or hypertension by payer.

Summary

The three most frequently reported illnesses for women whose babies are born alive are pregnancy-associated hypertension, gestational diabetes and anemia.

For North Dakota women whose babies were born alive during the three-year period 2000-2002, anemia was associated with mothers who were American Indian, who lived in rural areas, Medicaid recipients, and younger than 20.

Gestational diabetes was associated with maternal age (older

than 40) and maternal weight gain (less than 20 pounds). Pregnancy-associated hypertension was associated with weight gain (more than 40 pounds).

Interventions directed at high-risk pregnant women (American Indian, rural, Medicaid recipients, and those younger than 20 or older than 40), along with early and adequate prenatal care to ensure optimal weight gain during pregnancy, may help reduce the frequency of maternal medical risk factors.

Dental Care Among North Dakota Medicaid Women Ages 20 to 44

During the three-year period 1999 through 2001, just more than one-half (54.5%) of women age 20 to 44 enrolled in the North Dakota Medicaid program received dental care as measured by a claim for a dental service or procedure. Within that group:

- White women (61.3%) were more than twice as likely to receive dental care than were American Indian women (30.0%).
- Women younger than 30 (48.4%) were less likely to receive care than were women 30 or older (62.1%).
- Women living in rural areas (51.1%) were less likely to receive than were women living in urban areas (60.1%).

One factor that may influence disparities in receipt of dental care is access to dental providers, which may be related to the availability of

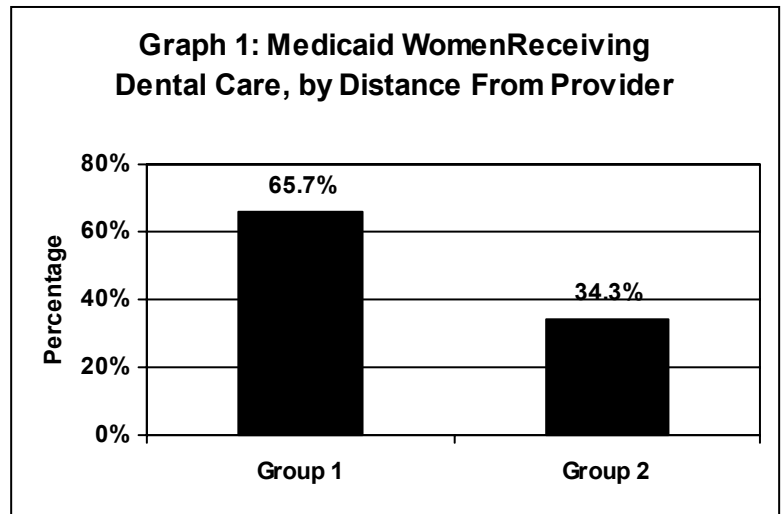
providers and the geographic distance between Medicaid recipients and providers. The 8,842 Medicaid recipients who received dental services were assigned to one of two

groups based on their zip codes and that of their dental providers to estimate the geographic distance between recipients and providers. The groups were defined as follows:

- Group 1: Four or more of the provider and recipient zip code digits matched

- Group 2: Fewer than four of the provider and recipient zip code digits matched

Nearly two-thirds (65.7%) of the Medicaid women who received dental care were in Group 1, having seen a provider with four or more zip



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code digits matching theirs. More than one-third (34.3%) of the recipients were in Group 2, having received dental care from a provider whose zip code matched on fewer than four of the digits. (Graph 1)

Recipients in each of the two groups were compared based on race, age and geography (urban/rural status). There was no difference between the two groups based on age. There were, however, differences between groups by race and geography. Among the Medicaid population of women ages 20 through 44, a higher percentage of American Indian women lived in rural areas and a higher percentage of white women lived in urban areas.

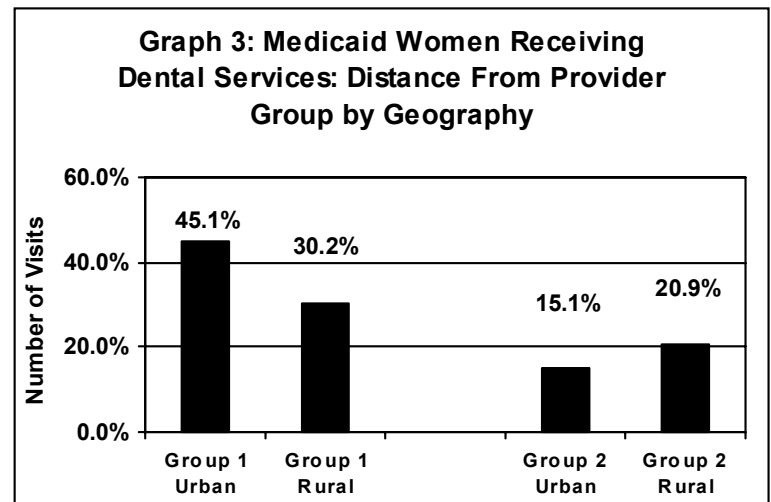
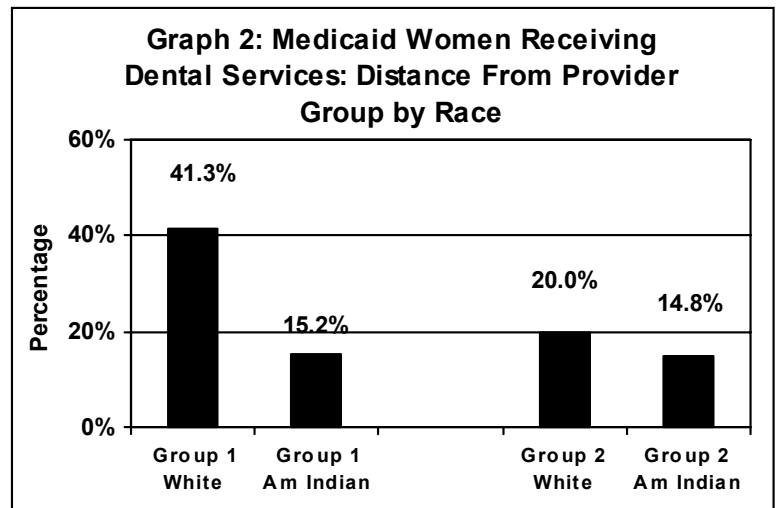
Of women in Group 1, 41.3 percent of white women received a dental service, compared to 15.2 percent of American Indian women. (Graph 2) As expected, 45.1 percent of urban women in Group 1 received a dental service, compared to 30.2 percent of rural women. (Graph 3)

Summary

During the three-year period 1999 through 2001, just more than one-half of North Dakota women enrolled in Medicaid had a claim for a dental service or procedure. Women who were white, age 30 or older and living in urban areas were more likely to receive dental services than were American Indian women, women younger than 30 and women in rural areas.

In addition to differences by race and geography, women living farther from their dental providers received less dental care than women living near their providers.

Race, age, geographic residence and distance from dental providers appear to be factors that influence access to dental services for Medicaid women.



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