

Healthy Babies in Wisconsin: A Call to Action

Summary of the Wisconsin Perinatal Summit General Plenary Sessions, July 15, 2003, Wisconsin Rapids, Wis

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Background

Healthy Babies in Wisconsin: A Call to Action was held July 15, 2003 in Wisconsin Rapids, Wis. This summit began as a discussion among Wisconsin state and local Maternal and Child Health professionals, academicians, and leaders of community-based organizations regarding the continuing disparity in infant mortality rates, prematurity, low birth weight, and use of prenatal care among racial and ethnic groups in Wisconsin. The purpose of this summary of *Healthy Babies in Wisconsin: A Call to Action* is to provide content and a framework for change in reduc-

ing disparities. As a result of the summit, 5 state regional teams formed, as well as an African American and a Native American team that will use a new data model, Perinatal Periods of Risk, to create innovative action plans and recommendations to improve perinatal outcomes for women and their families in Wisconsin.

The summit featured the following plenary sessions: "Social Determinants of Reproductive Health" presented by Diane L. Rowley, MD, MPH, Director of Research on Health Disparities, Morehouse College, Atlanta, GA; "Wisconsin Data" presented by Helene Nelson, Secretary, Wisconsin Department of Health and Family Services, Madison, Wis; "Prematurity in Wisconsin: A Call to Action" presented by Karla Damus, RN, MSPH, PhD, March of Dimes; and "Racial and Ethnic Disparities in Birth Outcomes: A New Perspective" presented by Michael C. Lu, MD, MS, MPH, Assistant Professor of Obstetrics and Gynecology, UCLA. The following represents the combined summary of these presentations.

Infant Mortality

On an average day in Wisconsin:

- 189 babies are born;
- 20 of these babies are born prematurely;
- 12 have a low birth weight (<5.5lb = <2500g);

- 6 babies are born to mothers who received late or no prenatal care;
- 30 are born to mothers who smoke; and
- at least 1 baby will die before his/her 1st birthday.

The Wisconsin black infant mortality rate in 2001 was 18.7 deaths for every 1000 live births (Figure 1); this is higher than the US rate of 14.2 and more than 3.2 times the rate for white Wisconsin infants (5.7). The Wisconsin American Indian infant mortality rate of 10.7 is a 3-year average and is also almost twice as high as for white infants. Upon examination of trends in black and white infant mortality rates in Wisconsin, the rate for white infants is declining steadily, with a near 50% reduction during the past 20 years (from 10.0 in 1979 to 5.7 in 2001). In contrast, the black infant mortality rate has seen some variation but no decline during this period (from 18.8 to 18.7). Comparing Wisconsin's infant mortality rates relative to other states, for the period 1979-1981, Wisconsin had the 10th best infant mortality rate overall; and, for black infant mortality, Wisconsin ranked 5th best. More recently, for the period 1998-2000, Wisconsin ranked 21st overall for all states, and 29th of 34 states with comparable data for black infant mortality rates.

The leading cause of infant mortality in blacks is preterm birth and low birth weight. When comparing pre-

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term births (<37 weeks) by maternal race/ethnicity in Wisconsin from 1999 to 2001, the proportion of preterm birth was 18.0% for non-Hispanic blacks, 11.6% for non-Hispanic Asians, 10.9% for Hispanics, 10.8% for non-Hispanic Native Americans, and 9.8% for non-Hispanic whites. When comparing very preterm births (<32 weeks) relative to other states, by maternal race/ethnicity from 1999 to 2001, the proportion of very preterm births is 4.4% for non-Hispanic blacks, 2.0% for non-Hispanic Asians, 1.8% for Hispanics, 1.7% for non-Hispanic Native Americans, and 1.5% for non-Hispanic whites. High socioeconomic status is associated with a reduction in the rate of preterm/low birth weight babies born to white women, but this does not hold true for black women.

One key perinatal indicator is the percent of babies born with low birth weight. In Wisconsin, more than 13% of black babies weigh <2500g (<5.5 pounds) at birth, more than twice the percent of low birth weight of white babies (5.8%). In addition to the increased risk of morbidity and mortality, low birth weight babies generate enormous health care expenditures. Medicaid costs in the first year of life for a normal weight infant are approximately \$3500 per baby. When birth weight is <2500g, costs are \$12,500 to \$20,000. For very low birth weight infants (<1500g = 3 1/3 pounds), costs range from \$47,000 to \$192,000. In 2000, the total US hospital charges for infant stays due to prematurity/low birth weight were \$11.9 billion. The 1996 Geronimus study showed that the rates of low birth weight and very low birth weight increase with age in blacks but not in whites. This study also showed that low birth weight rates increase with age among blacks of low socioeconomic status but not high socioeconomic status.

Another indicator of perinatal health is the percent of pregnant women who receive prenatal care

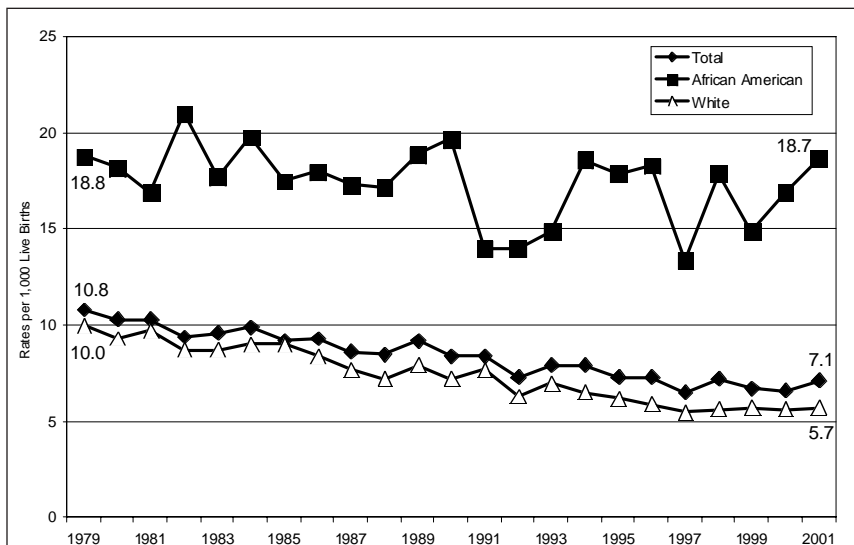


Figure 1. Wisconsin Infant Mortality Rates, Total*, White and African American, 1979-2001.

* Includes all races.

Sources: Wisconsin Department of Health and Family Services, Division of Health Care Financing, Bureau of Health Information.

that begins in the first trimester. The white population is approaching Wisconsin's 2010 goal of 90%, but the state has significant gaps among other racial and ethnic groups (69% for blacks, 70% for Hispanics, 72% for American Indians, and 49% for Southeast Asians). Black and Hispanic women have similar rates of either adequate prenatal care or prenatal care established in the first trimester. Yet infant mortality among blacks is 2.5 times that of Hispanic women. In addition, black women who establish prenatal care in the first trimester still have twice the rate of infant mortality when compared to white women who received first-trimester prenatal care. In fact, establishing early prenatal care seems to do little to close the black/white gap in infant mortality. Black women who receive early prenatal care still have nearly 2 times the infant mortality as white women who received late or no prenatal care.

Maternal Mortality

In the United States, black women are now 4 times more likely to die from pregnancy-related disorders than white women. This 4-fold increased risk for maternal death is one of the

largest racial disparities today. Higher education levels are associated with decreased pregnancy-related mortality among white women, but not among black women. Prenatal care reduces the risk of pregnancy-related death, but death rates are higher at all levels of prenatal care for black women compared to white women. A discrepancy in hospitalization rates and death rates also exists. Black women are 4% to 60% more likely to be hospitalized for a pregnancy complication, and once hospitalized have a longer length of stay. However, black women are 400% more likely to die of a pregnancy complication.

Race does not appear to have a biologic or genetic basis. Examples that race and ethnicity are not factors in birth outcomes include the fact that blacks who are foreign born have significantly lower rates of infant mortality than those born in the United States. Similarly, foreign-born Mexican Americans have lower rates of low birth weight births than American-born Mexican Americans.

More black women have a high school education than Hispanic women, and yet infant mortality is 2-

3 times higher among blacks. Disturbingly, college-educated black women have higher infant mortality than white women with no high school education. Thus, neither education nor income appears to be as protective in black women as it is in white women.

As they age, black women have poorer health than white women. Also, they are more likely to smoke as they get older, and are more likely to have chronic diseases like hypertension and other medical risks. Many more white women smoke than black women, yet infant mortality is higher for blacks. Also, infant mortality for white women who smoke is still significantly less than infant mortality among non-smoking black women.

Adverse Determinants of Birth Outcomes

Stress has been associated with preterm birth. Women who have preterm babies have higher levels of corticotrophin releasing hormone and therefore higher levels of stress hormones than controls. Black women have higher rates of preterm births than white women, and increasing evidence points to the association of preterm births with maternal infection. Women with urinary tract infections, periodontal disease, and sexually transmitted infections are at increased risk of preterm deliv-

ery. There are multiple reasons why black women who are pregnant might be more prone to infection. Chronic stress and the resultant release of stress hormones have been shown to impair immunity.

Some populations are more vulnerable to negative external influences on health because of low socioeconomic status, limited control over resources, and poor nutrition. In Wisconsin, 48% of the men incarcerated are black, but only about 5% of the state adult male population is black. This is clearly an example of how social context may be the cause of the reproductive disparities we face.

The traditionally-taught social determinants of reproductive health being related to individual characteristics (income/employment status, education, lifestyle choices, access to health care, etc.) are no longer tenable. Recent studies have focused on the processes through which economic circumstances, environmental issues and social conditions create situations which expose African American women to stress and chronic strain, eventually leading to adverse pregnancy outcomes. Loss of support, disease, sense of powerlessness, and social neglect contribute significantly to worse health in the family.

It seems clear that there are multiple determinants of birth outcomes. Perhaps the best way to understand

the racial and ethnic disparities in birth outcomes is from a "life course perspective." The life course perspective takes a more holistic, longitudinal approach to the problem of poor birth outcomes, which spans generations, and its solutions will need to be inter-generational.

The state of Wisconsin can do better! This Healthy Babies summit and follow-up activities will work within the framework of the national and state health plans to:

- eliminate disparities and assure the best health outcomes for all mothers and babies;
- address statewide and regional perinatal issues; and
- develop a process to improve perinatal outcomes so we do not have the same numbers for infant mortality and low birth weight in years to come.

Racial and ethnic disparities in birth outcomes are the consequences of disadvantages and inequities carried over a life course of differential exposures. There is no quick fix to the complex intergenerational problem of poor birth outcomes. Research efforts need to target different risk exposures not only during pregnancy but also over the entire life course.

Editor's Note: A summary of this summit's workshop sessions will be published in a future issue of WMJ.



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