

Improvement in Birth Outcomes – Dane County

Infant mortality rates for African Americans in Dane County decreased dramatically since 2002. In contrast, other African American population centers in WI remain at consistently high levels of 17-22 deaths per 1,000 – approximately 3 times the rate for Wisconsin whites. Similar racial disparities prevail nationwide. Dane County appears to be unique in that for the 3 year period of 2004 – 2006, black and white infant mortality rates in Dane County are roughly the same at 2-3 deaths per 1,000 – equivalent to the world leader, Sweden.

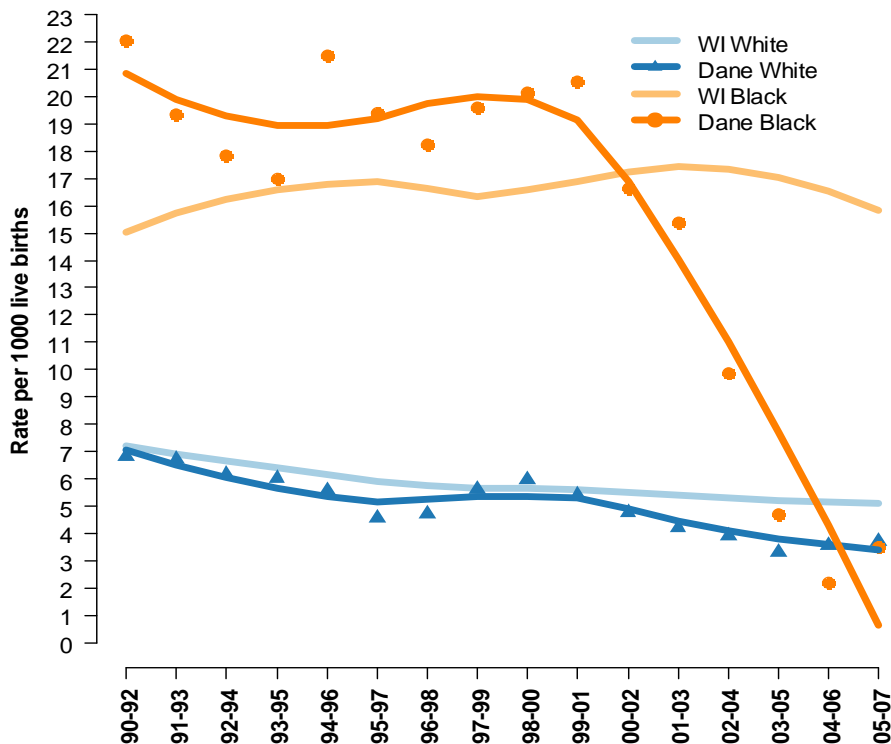


Figure 1 Infant Mortality for Dane County and Wisconsin, 1989 To 2007

Dots represent 3-year moving average and fitted lines. Wisconsin Black infant mortality (light orange) is high and stagnant throughout the two decades while Dane county Black infant mortality (dark orange) rates dropped from around 2002. The white rates in both Dane and Wisconsin were always lower and decreasing over the time.

Analysis of approximately 100,000 birth and infant death records from 1989-2007 demonstrates that the decline in Dane county's African American infant mortality is a true and meaningful trend. Over the recent period of improvement, 2002-2006, prevalence for premature births, a strong risk factor for infant death, decreased from 18.1% to 15.3%. Extreme premature births (less than 28 weeks gestation), a VERY strong risk factor for infant death and a category that despite its low prevalence contributes to approximately half of all infant deaths nationally, decreased 61% from 2.4% to 0.9%. Fetal deaths also decreased over the same time periods. Thus, the decline in infant mortality in Dane County is not an isolated or aberrant finding. Rather, infant mortality trends parallel those of its most contributory risk factor, premature birth.

Population Trends. Dane County, Wisconsin including its capital, Madison, is growing rapidly (2006 population 466,357) and becoming more diverse. Latinos are the fastest growing racial/ethnic majority, followed by African Americans and Asians. In 1990, greater than 90% of all births were to whites; by 2006, less than 74% were. During this time period, African American births almost doubled (478 in 2006) as a result of overall population growth rather than change in fertility.

Demographics. The proportion of total African American births to teenage mothers decreased significantly from 25.2% in the previous decade to 20.3% during the past 5 years while the median age of women giving birth increased from 23 to 24. Despite this welcome trend, teen pregnancy rates among African Americans are still approximately 5 times those of whites. Of note, 5 of the 13 African American infant deaths during the more recent period were to teenage mothers. Prevalence of African American teen fatherhood also decreased significantly from 11.7% to 8.1%. For African American women, marriage status (25% married) and education (82% high school graduates) have not changed significantly. Information on fathers is very limited in the vital statistic data

The rate of plural births (twins or greater) has increased slightly from 3% to 4%, at the same time that the risk of plural birth has decreased. Multiparity (at or greater than 4 births) decreased slightly from 20.5% to 18.7%. Percentage of mothers with previous spontaneous or induced termination remained unchanged. Mothers who report a previous child death decreased significantly from 2.6% to 1.8% while the risk of infant death associated with a previous child death in the family dropped dramatically from a risk ratio of 5.7 to zero. Intervals between pregnancies showed no change.

Behavioral Risk Factors. Prevalence of smoking among African American women giving birth decreased significantly from 28% to 23%. Reported drinking during pregnancy also decreased significantly from 4.6% to 1.3%.

Greatly improved infant mortality rates among African Americans in Dane County are largely driven by the simultaneous decline in extremely premature births, which coincides with, but is not fully explained by, improvements in smoking, more effective prenatal care, and fewer teen births.

Impact of Fewer Black Premature Births

Dane County, 2002-2007

- **34 lives saved**
Instead of the 17 actual infant deaths for 2654 live births during 2002-2007 (IMR=6.4), 51 would have been expected if the 1990-2001 trend (IMR=19.4) had prevailed.
- **34 babies not at-risk for lifelong disabilities**
Instead of the 29 actual extremely premature births 2002-2007 (EPR=1.1%), 74 would have been expected if the 1990-2001 trend (EPR=2.8%) had prevailed. Of the 45 additional extreme premies, 75% would have survived.
- **\$7.4million in short-term hospital charges**
Forty-five additional extreme premies X \$165,032 (hospitalization charges during first year of life for birth weights 750-999 grams, DHFS "2005 Medicaid Births") = \$7,426,440.

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