

# Addressing Infant Mortality Disparity Rates in a Small Rural County

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"Two babies dying in a county this size is not that statistically significant unless it is your baby; then it is devastating," said Brunswick County Health Director Don Yousey in 1999. That year, in response to alarming statistics showing high rates of pregnancies among minority women, the Brunswick County Minority Infant Mortality Task Force was formed with a single goal in mind, to reduce the rate of minority infant mortality. It was a goal that some considered unattainable. In 1997, there were 2 infant deaths and 120 live births among minorities in Brunswick County, which translates into a minority infant mortality rate of 16.7 per 1,000 live births, compared with 8.0 per 1,000 live births for whites (who had 5 infant deaths and 628 live births that year) [1].

The task force was made up of members of the faith community, civic leaders, and medical providers, who all tried to help get the word out about existing services in the community. Jere McMillan, task force chair and North Carolina Public Health Association Public Health Social Worker of the Year in 2000, said that the first objective was to reach out to minority women, informing them about clinic services for prenatal care. "We knew all the services were in place to reduce infant mortality," said McMillan. "We just had to connect the services to the people who needed them."

In 2000, only 1 year after the task force was formed, the minority infant mortality rate was 0.0; there were no infant deaths and 149 live births among minorities [2]. Although in 2001 the rate jumped to 19 per 1,000 live births (there were 3 infant deaths and 158 live births that year) [3], in 2002 a rate of 0.0 was once again achieved; there

were no deaths and 127 live births [4]. In comparison, the infant mortality rates for whites during the same years was 4.3 deaths per 1,000 live births (2000, 2001), and 5.8 deaths per live birth in 2002 [2-4]. "Lowering the rate to zero for 1 year may involve some luck, but twice in 3 years is a sign that something is indeed working," said Yousey in 2002.

Yousey has retired, but the task force continues to work on eliminating health disparities. David Stanley, current Brunswick County health director, says, "We support the task force and remain committed to closing the health disparities gap. A good start in life depends on providing proper care for mothers and young children."

Cyndi Simmons, director of nursing for Brunswick County, reaffirms the clinical aspects of the importance of prenatal care. "The foundations of adult health are laid before birth and in early childhood," she notes. "Public health has always focused on prenatal care and childhood immunizations."

The target population is women of childbearing age. Members of the task force have known that the success of the program requires that the whole community be empowered to change the underlying economic and social conditions that influence the health of individuals and their communities.

The task force was initially formed based on the results of the 1997 Community Health Assessment, which led the Brunswick County Board of Health to make reducing the minority infant mortality rate its No. 1 priority. A grant was received from the Kate B. Reynolds Charitable Trust to hire a minority outreach worker. A grant from the North Caro-

impactful as it is for diabetes. In the case of diabetes, which is much more common, the absolute difference can be used for population approaches to prevention. However, the relative difference is important because it helps us identify specific risk factors for disease. Both HIV infection and diabetes, in different ways, represent significant public health burdens and health disparities for African American and other minority populations.

There are some limitations to the data contained in these reports. For example, the documentation of race/ethnicity in medical records, on death certificates, and in other sources of data is notoriously fraught with error and omissions. For some health conditions, there are limited data available, and some population groups are not large enough to generate stable rate measures for less common health outcomes. For example, although there are 8 American Indian tribes in North Carolina, data are reported for American Indians as a whole, because most tribes are small. Finally, data on the Hispanic population in North Carolina may be difficult to interpret, particularly data for

chronic diseases, because of the younger age distribution of that population in the state. Reporting on the Hispanic population also often does not take into consideration the diversity of this population in country of origin and length of time in the United States.

Despite these limitations, these reports are the most comprehensive sources of documentation on health disparities available to state policymakers, researchers, and health care providers. These reports not only demonstrate wide disparities in many health and health care indicators, they also unfortunately show that these disparities have been stubbornly persistent across long periods of time.

It is extremely important to continue to use data to document whether disparities continue to exist. According to the Institute of Medicine, increasing awareness of health disparities among health care providers, insurance companies, and policymakers is a key element in addressing health disparities [9]. Efforts on the part of providers, insurance companies, and policymakers to understand the reasons for these disparities are sorely needed, so that they can develop

lina Office of Minority Health was used to provide education and resources. In 2002, GlaxoSmithKline presented the task force with a monetary award in recognition of its outstanding achievements.

A plan was developed by the task force to make minorities aware of programs that can assist them during their pregnancies. The plan includes having maternity care coordinators involved in the care of minority women during pregnancy; in addition, minority expectant mothers are encouraged to seek prenatal care in the first 3 months of pregnancy and to use food supplements provided by the WIC program. Other strategies have included offering a parenting class, holding health fairs, and providing baby-sitting services for single moms so they can go to doctor's appointments or to the department of social services, attend support groups or community events, or address other needs. Participating agencies have adopted a policy of providing water and at least 1 healthy food choice at all events and meetings. Walking trails have been developed in minority neighborhoods to encourage physical activity.

To increase access to care, qualified minority staff members have been promoted, with a goal of attracting more minorities to the health department clinic. "We wanted to make minorities feel welcome coming here," said McMillan. "People tend to trust people they identify with." The lobby has been remodeled to make women feel more comfortable, and a new fleet of clinical vehicles has been purchased for home visits.

Since 1999, when the program went into effect, the overall minority infant mortality rate declined 32%, from 12.9 per 1,000 live births between 1995-1999 [5], to 8.8 for African-American, non-Hispanic and Hispanics between 2006-2010 [6].

As Stanley has observed, "This is an excellent example of what can happen when the whole community becomes engaged." NCMJ

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effective and sustainable interventions that reach the greatest number of people.

So, what to do? Recently, efforts have focused on understanding the social determinants of health. As the World Health Organization explains [13],

The social determinants of health are the conditions in which people are born, grow, live, work and age, including the health system. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels. The social determinants of health are mostly responsible for health inequities—the unfair and avoidable differences in health status seen within and between countries.

If we were to consider the social determinants that shape the life and health of communities, we might come to more fully understand the circumstances that have contributed to persistent health disparities. For example, consider the hypothetical case of a middle-aged African American man with high blood pressure. He might have this condi-

tion because he has an elevated stress level as a result of living in a dangerous neighborhood, or because he experiences discrimination from his employer or other people he interacts with on a regular basis. He may fail to keep follow-up appointments because he has difficulty taking time off from work or because he had an adverse experience with a provider on his last visit. He may have not have filled his prescription because he couldn't afford the medication and has no health insurance that would cover its cost. His diet may be unhealthy because there are no places to purchase healthy foods in his neighborhood. He may not be exercising because he is unable to afford a gym membership and there are no safe parks or recreation areas in his neighborhood.

Recent research has found strong associations between the social determinants of health and various health outcomes. For example, Auchincloss and colleagues [14] have demonstrated that the incidence of type 2 diabetes is significantly lower in neighborhoods with better resources for physical activity and healthy eating. Given the high costs associated with the