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Editorial

Minority Populations Remain Vulnerable to Adverse Health Outcomes

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In this editorial we address the connection between the socioeconomic indicators education and poverty, and adverse health outcomes specifically two of the most significant public health concerns currently facing the United States; adverse birth outcomes and obesity. It is evident that there are significant health gaps among racial and ethnic groups and our minority populations are at increased risk of both adverse health outcomes.

Adverse birth outcomes such as premature birth (infants born at < 37 weeks from the first day of the last menstrual period), low birth weight (< 2500g) and most seriously infant mortality, are often used as indicators of the health of a nation and are generally better in developed countries. However, at present infant mortality rate in the United States is approximately 6.14 deaths per 1000 live births [1] higher than most other developed countries including Japan (2.3 deaths per 1000 live births) Germany (3.4 deaths per 1000 live births) and the United Kingdom (4.2 deaths per 1000 live births) (Organization for economic Cooperation and Development 2011-2013). The high infant mortality rate in the African American population remains twice the national average and these racial/ethnic disparities represent a particularly significant public health concern at present in the United States.

According to the World Health Organization the United States ranks a lowly 131st in terms of its preterm birth rate behind Zimbabwe (16.5% of all births) and Cyprus (14.8% of all births) despite significantly higher healthcare spending. Preterm births currently represent approximately 12% of all births in the United States and the complications associated with preterm delivery are responsible for approximately 33% of all infant deaths in the United States. Preterm delivery represents a significant etiological factor in pediatric health issues such as cerebral palsy and respiratory distress syndrome [2]. In addition, premature birth can negatively impact the child's development both cognitively and physically, leading to academic underachievement, and reduced earnings in later life suggesting that these disadvantages at birth persist into adolescence and beyond [3].

The high infant mortality rate and incidence of preterm birth in the United States is largely driven by disparities in healthcare. Significant racial disparities have been identified in both infant mortality and preterm birth data with minority populations at increased risk [4]. For example, black women are more than twice as likely to have a preterm birth and have twice the infant mortality rate as other ethnic/racial groups. Closer inspection of the infant mortality rate data for the United States also reveals significant geographic disparities, with the Southern States notably Mississippi and Louisiana suffering most significantly [5]. The health of the nation cannot be significantly improved without reducing these disparities in the health of ethnic minorities particularly in the most severely affected regions.

Our own analysis of the most recent birth outcome data has confirmed these prior observations and we hypothesize that within these minority populations both infant mortality and

preterm birth are influenced by key socioeconomic indicators (poverty and education). Infant mortality and preterm birth are more likely to occur when the mother is economically disadvantaged and less educated (without a college degree). This observation is of particular concern since it perpetuates a cycle of disadvantage from which it is difficult to escape: Preterm children born into a low income family are more likely to suffer from cognitive impairment and thus not reach their full academic potential. As an adult, reduced earnings make life below the poverty line more likely along with the birth of preterm children.

In addition, we have also identified a significant relationship between the socioeconomic indicators poverty and education and adolescent obesity. There can be no doubt that overweight and obesity in the United States has reached epidemic proportions [6]. It now represents a major public health crisis with almost 17% of children and adolescents and 35% of the adult population classified as obese and obesity-related hospitalizations likely to account for $900 billion by 2030 [7]. The increased prevalence of obesity in the United States is of particular concern for minority populations who are at increased risk [6]. Over 75% of the African American population are overweight or obese and African American adults are 1.5 times more likely to be obese than white adults. Among the African American population low income individuals are more likely to be obese, as are the less well educated (without a college degree).

It is well established that a variety of environmental influences such as access to obesogenic, addictive fast-food, food marketing, fewer supermarkets, and the relative safety of urban neighborhoods contribute to the obesity epidemic [8]. Low income neighborhoods with significant socioeconomic deprivation, high crime and homicide rates provide the ideal environment for the obesity epidemic to flourish. Here, the adolescent has fewer places and less opportunity for physical activity making them most vulnerable to obesity [9].

The adverse health outcomes preterm birth, infant mortality and obesity that predominantly affect our minority populations require continued attention. It is essential that the Center for Disease Control and Prevention maintain its efforts to end racial and ethnic health gaps.

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