THE Children's Health FUND

Preventing Pediatric Diabetes: Are Racial Disparities A Factor?

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The Children's Health Fund (CHF), working with hospitals and health centers throughout the country, has provided comprehensive pediatric care to more than 300,000 medically underserved children and families since its inception in 1987. Using fully equipped mobile medical units, health providers travel to urban and rural areas where there is a lack of medical resources – isolated rural areas, homeless shelters, housing developments, migrant communities – to bring quality health care to children and families who would otherwise would not have access to a "medical home." The CHF National Network is comprised of sixteen programs in ten states plus the District of Columbia, with its flagship program in New York City.

In addition to providing routine care, CHF develops and implements "special initiatives" to enhance primary care in response to health problems faced by this vulnerable population. Each special initiative combines direct service, research, public information and professional training, and advocacy strategies to address issues such as the optimal diagnosis, treatment and management of asthma; access to subspecialty medical care; and the rapidly escalating problem of pediatric overweight and obesity and its health consequences. In its Starting Right Initiative, a partnership with Bristol-Myers Squibb, CHF is focusing on screening and early diagnosis of type 2 diabetes mellitus (T2DM) in high-risk children.

Background

The three main goals of the federal initiative "*Healthy People 2000: National Health Promotion and Disease Prevention Objectives*" were to increase healthy life spans; reduce health disparities; and increase access to preventive care. There were more than 200 specific objectives targeting the reduction of health care disparities (which refer to diminished health status and outcomes for the poor and for people of racial and ethnic minority backgrounds) contained in *Healthy People 2000*. By 1995, the mid-point for meeting the *Healthy People 2000* goals, there was negative progress in at least 30% of the target objectives.[i] Therefore, it is not surprising that two of the goals of *Healthy People 2010* remain the increase in healthy life spans and the reduction of health disparities. While some progress has been made, health disparities for people of lower socioeconomic status and minority race/ethnicity persist.

For example, life expectancy has increased to a new high for all Americans. Yet there is a more than five year difference (77.7 years to 72.2 years) for white compared with black Americans. At the other end of the age spectrum, despite continuing reductions in infant mortality rates, the rate for blacks is more than double that of others (14.1 per 1,000 live births, compared with 5.7/1,000 for whites and 5.6/1,000 for Hispanics). Furthermore, first trimester prenatal care is lower for Hispanic (74.4%) and black (74.3%) women than for white women (88.5%).

A significant barrier to health care access faced by many children is the lack of health insurance. Nationally, 21% of children do not have health insurance at some point during the year. However, among Hispanic children the figure is 41%, compared to 23% of black children and 17% of white children. Consistent with insurance status, white children are more likely to have a regular health care provider. Seventeen percent of white children report clinics, hospital outpatient departments or emergency rooms as their usual source of care compared to 28% of black children and 28% of Hispanic children.[ii]

For children, having a regular source of health care in a "medical home" setting is the key to receiving preventive health services including immunization, perceptual and developmental screening, chronic disease management, and coordination of specialist care.[iii] Having health insurance is essential to having a medical home. Uninsured children are more than three times as likely as insured children to lack a regular health provider, and more than four times as likely to miss timely delivery of needed health care. Consistent with their over-representation among the uninsured, nearly one-third of minority children (31.2% black; 31.5% Hispanic) are not up-to-date for immunization at two years of age, compared to about one-fourth (24%) of white children.[iv]

Racial Disparities and Chronic Conditions

Prevalence figures for childhood asthma, the most common pediatric chronic condition, are not readily available because most data are derived from hospital use rather than diagnosis. New York City data show that emergency room use for asthma treatment varies with the poverty rate in zip code of residence. For example, emergency room use for asthma treatment is ten times as high in East Harlem as it is in the more affluent contiguous Upper East Side community. Especially for young children, asthma hospitalization and emergency room use are higher for black than white children, and asthma deaths are five times higher among blacks.[v] [vi]

A critical area in which health disparities are evident is pediatric overweight and obesity. The 2001 *Call to Action* by then U.S. Surgeon General David Satcher found increases in overweight and obesity among people regardless of age, gender, or race-ethnicity, but with dramatic disparities based on race/ethnicity.[vii]

Federal data (NHANES III) show that child and adolescent overweight and obesity were stable from the 1960's through the mid-1980's. Between 1988 and 2000, the prevalence of overweight and obesity among children from 6-11 years of age more than doubled; for adolescents (12-19 years) it tripled.[viii] Using national Longitudinal Survey of Youth data, researchers found that between 1986 and 1998 overweight and obesity increased by 21.5% among black children and 21.8% among Hispanic children compared to12.3% of white children. Further, the degree of overweight was significantly higher in 1998 than in 1986.[ix]

Overweight and obesity are associated with health conditions which may dramatically reduce quality of life and life expectancy. Type 2 diabetes mellitus (T2DM) is a relatively new condition, having emerged over the past two decades. Increasingly this form of acquired diabetes is affecting children, especially minority children. It is characterized by

obesity, hyperglycemia, and insulin resistance. More girls than boys are diagnosed, and the peak time for diagnosis is around puberty.[x] Obesity is a significant risk factor for diagnosis of T2DM.[xi] This risk is compounded by increasingly sedentary lifestyles of children and adolescents – long hours watching television and being unable to access organized physical activities such as physical education classes or team sports.[xii]

Diabetes is a leading cause of death primarily due to associated cardiovascular disease. Hispanics, blacks, and Native Americans are among the racial/ethnic groups that have a disproportionately high prevalence of diabetes. Diabetes related deaths are twice as common among black as white Americans, and diabetes-related renal failure is 2.5 times as common. Among the possible explanations of these disparities are restricted access to diabetes prevention and control programs, and poor quality of care.[xiii]

The same risk factors – all of which disproportionately affect children in low income communities – are also associated with cardiovascular disease, another health condition for which there are notable racial/ethnic disparities. This is critical, because cardiovascular disease is the leading cause of death in the United States.[xiv]

Death from stroke, especially among younger adults (35-64), is much higher among black than white Americans – sufficiently higher to be considered "a national crisis." As is so often case in areas of racial-ethnic disparity, despite improvements among all populations, the magnitude of difference remains stable.[xv]

For heart disease, high blood pressure associated with obesity is a major risk factor. Racial disparities are notable in age-adjusted death rates from heart disease: recent data show a 42% higher rate for black males compared to white males and a 65% higher rate for black females compared to white females. Effective ways to reduce or delay death from a heart attack or stroke include timely receipt of health care – less likely for the uninsured and others with poor access to care.

A Barrier to Prevention

For this discussion, we have used the term "pediatric overweight and obesity" for children with a body mass index (BMI) at or above the 85th and 95th percentiles respectively. However, the term "pediatric obesity" does not yet exist as a diagnosis. The terms currently in use, "at risk of overweight" and "overweight," mask the urgency of the health problems being described. The absence of a pediatric diagnosis of "obesity" makes it difficult for health care providers to bill insurance companies for interventions that help children at the highest risk of conditions such as diabetes and cardiovascular disease. Diet and nutrition, for example, can improve quality of life and life expectancy. Nutrition interventions have been highlighted as a potential way to narrow disparities in diabetes morbidity and mortality.[xvi] However, without a diagnosis such as diabetes or hypertension, nutrition counseling or BMI monitoring will not be reimbursed and is therefore unlikely to occur to the extent needed.
With this obstacle to prevention, more children are likely to develop diabetes and cardiovascular disease as a consequence of obesity and sedentary life style. Disparities are so prominent in diabetes and heart disease that they are two of the six focus areas targeted

in *Healthy People 2010* to reduce "serious disparities in health access and outcomes" for racial and ethnic minority populations.[xvii]

Conclusions and Recommendations

Children who are poor, and children who are black or Hispanic, are more likely to be without health insurance and less likely to have a regular source of care and receive preventive services. If diagnosed with a chronic health condition, they have worse health outcomes. Because they are more likely to be overweight or obese, poor and minority children are more likely to develop chronic health conditions associated with obesity, diabetes and cardiovascular disease. Once diagnosed, their quality of life and possibly life expectancy are likely to be compromised. One potentially powerful way to close the gap in health outcome for diabetes and heart disease is to prevent them through early identification and intervention for pediatric overweight and obesity.

The Children's Health Fund therefore makes the following recommendations to prevent or reduce childhood overweight and obesity and its health consequences:

1. Implement primary care-based screening programs to identify children who are at risk of overweight, overweight, or obese as early as possible. Screening should begin with consistent use of the CDC growth charts, which require calculation of BMI and percentile for age.

2. Develop and implement pediatric-specific screening and diagnostic protocols for early identification of type 2 diabetes. There should be focus on high-risk, minority pediatric populations, although the protocols should be used throughout the pediatric community.

3. Develop and implement a diagnosis of "pediatric obesity." This will allow primary care providers to be reimbursed for interventions to monitor and manage BMI, and allow reimbursement of nutrition services, for the children at the highest risk of diabetes or heart disease.

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