

# Who Are America's Poor Children?

## *Examining Health Disparities by Race and Ethnicity*

David Seith | Courtney Kalof

July 2011



The National Center for Children in Poverty (NCCP) is a leading public policy center dedicated to promoting the economic security, health, and well-being of America's low-income families and children. Using research to inform policy and practice, NCCP seeks to advance family-oriented solutions and the strategic use of public resources at the state and national levels to ensure positive outcomes for the next generation. Founded in 1989 as a division of the Mailman School of Public Health at Columbia University, NCCP is a nonpartisan, public interest research organization.

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### Introduction

Good health in childhood both reflects and predicts full social and economic participation. Conversely, social divisions by race and income are often associated with health disparities, which inhibit children from achieving their full potential. Although many would agree that health is a fundamental right, children subject to exclusion by race and class are less likely to enjoy this right.<sup>1</sup>

An earlier report in the NCCP *Who are America's Poor Children?* series examined child health disparities by poverty status. In the introduction to that report two points were made. First, "the relationship between socioeconomic status and health is one of the most robust and well documented findings in social science."<sup>2</sup> Second, the relationship is also reciprocal, as poverty detracts from resources used to maintain health, while poor health detracts from the educational and employment paths to income mobility.<sup>3</sup>

This report goes one step further to consider health disparities among poor children by race and ethnicity. As in the earlier report, it identifies a list of publicly

available indicators found in the National Health Interview Survey (NHIS) and the National Health and Nutrition Examination Survey (NHANES). It examines selected disparities in six domains of health risk and health status: family composition and poverty, food insecurity, environmental conditions, health insurance coverage, access to healthcare services, and health outcomes.<sup>4</sup>

It offers a short introduction to a dozen indicators, explaining how each reflects one of the six dimensions of health and how public policies might help to reduce relevant disparities. Intended for a generalist audience, this report summarizes and references primary research resources.

Although the leading causes of mortality have changed over time in the most developed countries, from infectious diseases (such as tuberculosis and influenza) to chronic diseases (like heart disease, cancer, and stroke) those who are socially marginalized by race and class continue to be at substantially higher risk for poor health.<sup>5</sup>

All of the children included in this analysis are poor and thus subject to the range of disadvantages associated with growing up in low-income families. Poverty is defined based on the ratio of family income to the federal poverty guideline for a family with a given composition of adults and children. This report explores differences among poor Hispanic, non-Hispanic black, and non-Hispanic white children. (For simplicity, hereafter, “poor Hispanic,” “poor black,” and “poor white” children.)

Previous research shows that the association between poverty and health differs among these groups. The “income-health gradient,” that is, the continuous linear association between income and health across a wide spectrum of incomes, is most evident for white and black children, and less so for Hispanic and Asian children.<sup>6</sup> Health outcomes among immigrants in general, and Hispanics in particular, are often found to be more favorable than would be predicted based on their socioeconomic status, an oft-cited anomaly sometimes referred to as the “healthy immigrant effect” or the “Hispanic paradox.”<sup>7</sup>

Previous research also suggests that although there are differences in health outcomes among racial subgroups, no group always leads or falters on every indicator.<sup>8</sup> It finds that health disadvantages are often greatest among Native American and black children, least severe among white and Asian children, and moderately severe among Hispanic children. Nevertheless, certain risks are more relevant for a particular group than others, (as seen below).

Since the landmark Institute of Medicine 2002 report “Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care,” several leading federal agencies have made explicit commitments to reduce disparities in healthcare quality and outcomes by race and ethnicity. The Agency for Healthcare Research and Quality (AHRQ) produces an annual National Health Disparities Report, within which a recurring finding is that although the quality of care is improving for the general population, disparities related to race, ethnicity, and socioeconomic status are not.<sup>9</sup>

Reducing these disparities is an explicit goal of *Healthy People 2020*, an initiative coordinated by the U.S. Department of Health and Human Services. In addition, for the first time this year, HHS released its “HHS Action Plan to Reduce Racial and Ethnic Health Disparities: A Nation Free of Disparities in Health and Health Care,” outlining the ways in which the reduction of these disparities will be used as a performance outcome across a broad range of HHS initiatives.<sup>10</sup>

### Differences of Substantive and Statistical Significance

Often reports make a distinction between differences that are statistically significant and those that are substantively important. Differences are conventionally judged to be statistically significant if they would be observed at least 90, 95, or 99 percent of the time from many random samples drawn the population (in this case, from many surveys of poor Hispanic, black, and white families). Substantive differences rest on judgments of how large differences need be to be relevant to the analysis. If the sample size is large enough, even very small differences can be statistically significant but add little of interest to the study.

When research is based on serial datasets with consistent measures, the researcher can often combine sample sizes to ensure that differences large enough to be substantively important are statistically significant. In other words, the alignment of statistical and substantive significance is often within the researcher’s control. Researchers simply set a “minimum detectible effect” based on substantive significance and conduct a “power analysis” to determine the minimum sample size necessary to detect differences of a given size.

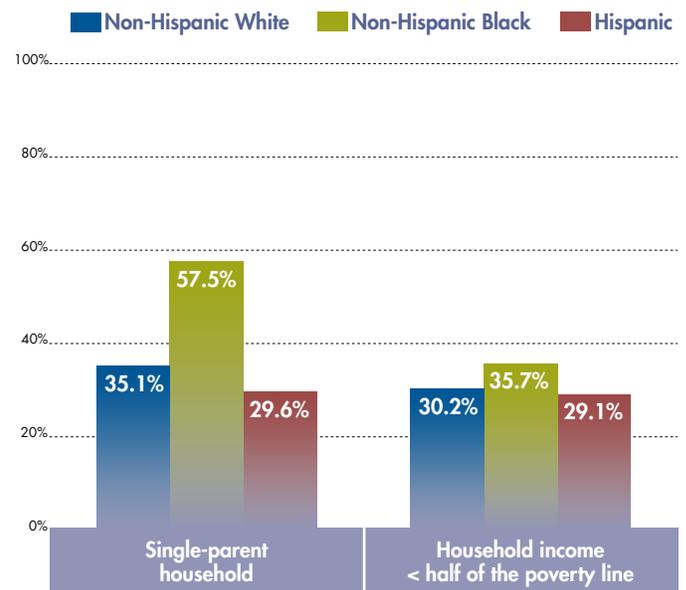
This report is designed to capture differences of at least six percentage points 90 percent of the time, with 90 percent confidence. In technical terms, samples were aggregated to achieve a minimum detectible effect of six percentage points, given a one-tailed test, with 90 percent power and 90 percent confidence for each indicator. What this means for the reader is that we can be confident that most differences of six percentage points or more would be observed at least 80 percent of the time.<sup>11</sup> Conversely, differences of less than six percentage points are often (though not always) idiosyncratic to the survey samples drawn.<sup>12</sup>

## Family Composition and Poverty

Although most children raised by single parents fare well, on average they are at greater risk of poverty as well as accompanying health, academic, and behavior problems compared to children growing up with married biological parents.<sup>13</sup> The first set of columns in Figure 1 show that poor black children are substantially more likely than poor white or Hispanic children to reside in a single-parent family (58 vs. 35 and 30 percent).

Although all children included in this report live in households with incomes less than the federal poverty line (FPL), they differ with respect to *how far below* the FPL their households' incomes fall. The second set of columns show that poor black children are most likely to live in households' with incomes less than half of the FPL (36 percent vs. 30 and 29 percent).

**Figure 1: Family composition and income to poverty ratio among poor children (ages 0-17) by race and ethnicity, 2008-2009**



Source: NCCP calculations based on the National Health Interview Survey (NHIS), 2008-2009.

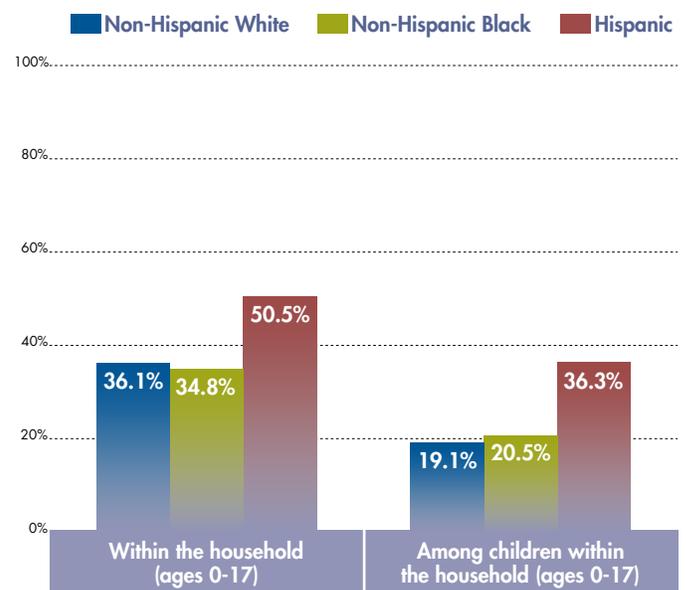
## Food Insecurity

### The Issues

One of the clearest ways in which income deprivation affects health is through food insecurity. For several years, the U.S. Department of Agriculture (USDA), the federal agency responsible for administering most nutrition assistance programs, has measured food security based on a series of questions about whether families consumed the amount and types of food that they wanted in the prior year. The National Health and Nutrition Examination Survey (NHANES) asks these questions and characterizes households based on the following USDA definitions. (See text box, Food Insecurity).

Figure 2 shows that Hispanic households are significantly more likely to be food insecure (51 vs. 36 and 35 percent) and food insecure for children (36 vs. 19 and 21 percent) than the others.

**Figure 2: Food insecurity among poor children by race and ethnicity, 2003-2008**



Source: NCCP calculations based on the National Health and Nutrition Examination Survey (NHANES), 2003-2008.

## The Policy Response

The major federal welfare reform legislation of 1996 denied food stamps eligibility to most noncitizens. Following protests, eligibility was subsequently restored to children, elderly, and disabled noncitizens, but adult noncitizens are ineligible for a “waiting period” of five years upon entry into the U.S. Although receipt of these entitlements does not jeopardize citizenship applications, confusion and fear that it might have created a “chilling effect” on benefit receipt among otherwise eligible households.<sup>14</sup> Eligible children in families with at least one non-citizen parent participate in the food stamp program at a much lower rate compared to eligible children with citizen parents.

Research shows that participating in the food stamp program (now known as the Supplemental Nutrition Assistance Program, SNAP) can relieve hunger and food insecurity and improve health outcomes for children.<sup>15</sup> A recent NCCP report recommends states strengthen program participation among eligible children with immigrant parents (many of them Hispanic) by increasing outreach efforts, improving program access for working parents, and ensuring SNAP offices are staffed with culturally competent caseworkers knowledgeable of federal and state regulations and program policy regarding immigrant applicants.<sup>16</sup>

### Measuring Food Insecurity in the United States

Households which reported two of the following are characterized as food insecure:

1. “We worried whether our food would run out before we got money to buy more.” Was that often, sometimes, or never true for you in the last 12 months?
2. “The food that we bought just didn’t last and we didn’t have money to get more.” Was that often, sometimes, or never true for you in the last 12 months?
3. “We couldn’t afford to eat balanced meals.” Was that often, sometimes, or never true for you in the last 12 months?
4. In the last 12 months, did you or other adults in the household ever cut the size of your meals or skip meals because there wasn’t enough money for food? (Yes/No)
5. (If yes to Question 4) How often did this happen – almost every month, some months but not every month, or in only 1 or 2 months?
6. In the last 12 months, did you ever eat less than you felt you should because there wasn’t enough money for food? (Yes/No)
7. In the last 12 months, were you ever hungry, but didn’t eat, because there wasn’t enough money for food? (Yes/No)
8. In the last 12 months, did you lose weight because there wasn’t enough money for food? (Yes/No)
9. In the last 12 months did you or other adults in your household ever not eat for a whole day because there wasn’t enough money for food? (Yes/No)
10. (If yes to Question 9) How often did this happen – almost every month, some months but not every month, or in only 1 or 2 months?

Since adults in low-income households will often reduce their own food consumption before reducing consumption among children, the same set of questions are asked specifically with respect to the children in the household. Households which reported two of these conditions with respect to children are characterized as food insecure among children.

11. “We relied on only a few kinds of low-cost food to feed our children because we were running out of money to buy food.” Was that often, sometimes, or never true for you in the last 12 months?
12. “We couldn’t feed our children a balanced meal, because we couldn’t afford that.” Was that often, sometimes, or never true for you in the last 12 months?
13. “The children were not eating enough because we just couldn’t afford enough food.” Was that often, sometimes, or never true for you in the last 12 months?
14. In the last 12 months, did you ever cut the size of any of the children’s meals because there wasn’t enough money for food? (Yes/No)
15. In the last 12 months, were the children ever hungry but you just couldn’t afford more food? (Yes/No)
16. In the last 12 months, did any of the children ever skip a meal because there wasn’t enough money for food? (Yes/No)
17. (If yes to Question 16) How often did this happen – almost every month, some months but not every month, or in only 1 or 2 months?
18. In the last 12 months did any of the children ever not eat for a whole day because there wasn’t enough money for food? (Yes/No)

# Children Exposed to Second-hand Smoke, in Utero and in the Home

## The Issues

One of the most prevalent risks to neonatal health is smoking during pregnancy, which is associated with higher risks of low birthweight, preterm birth, and infant death.<sup>17</sup> Figure 3 shows that mothers of poor white children from birth to 15 years-old today were much more likely to smoke when pregnant than mothers of poor black and Hispanic children (41 vs. 18 and 8 percent).<sup>18</sup>

Children exposed to second-hand smoke are at increased risk of developing a range of respiratory illnesses, including asthma. In 2006 the U.S. Surgeon General determined that there is no risk-free level of exposure to second-hand smoke.<sup>19</sup> Figure 3 shows that poor white children are substantially more likely to live with someone who smokes in the home than poor black or Hispanic children (43 vs. 35 and 11 percent).

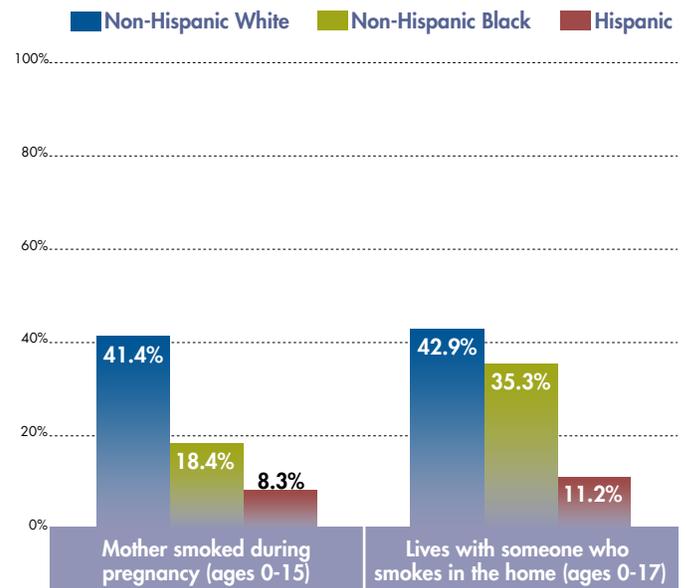
Although striking, these differences are consistent with research focused on the prevalence of cigarette smoking by race, ethnicity, class, and occupation, which finds highest prevalence among low-income, less educated, working-class white adults.<sup>20</sup>

## The Policy Response

Efforts to reduce parental smoking have been rigorously evaluated and some have shown promise. Since smoking during pregnancy is strongly associated with low birthweight, premature birth, and perinatal death, dozens of studies have evaluated the effectiveness of programs to reduce smoking among expecting mothers.

A review of 64 clinical trials, the most rigorous research designs available for assessing the effectiveness of intervention programs, finds that three-quarters of the programs reduced smoking rates among expecting mothers, by six percent, on average.<sup>21</sup> Some approaches are more effective than others. For example, the two interventions that combined incentives and social support reduced smoking among expecting mothers by 23 percent.<sup>22</sup>

**Figure 3: Children exposed to second-hand smoke, in utero and in the home by race and ethnicity, 2003-2008**



Source: NCCP calculations based on the National Health and Nutrition Examination Survey (NHANES), 2003-2008.

Another model of care that has proven quite successful is the home health visiting program. In home health visiting programs (a universal public health service in Denmark, Great Britain, the Netherlands, and Ireland) a qualified nurse practitioner regularly visits first-time expecting mothers at home. Arriving at a time when many new parents are receptive to coaching, the nurse practitioner monitors the mother's and child's health, offers informed advice about prenatal care, delivery, and newborn care, and assesses the safety and preparation of the home for newborn care.

Home health visiting programs have been implemented in various ways in 40 states to achieve a range of different objectives, including maternal and infant care, social service referrals, adult literacy, and child maltreatment prevention.<sup>23</sup> They serve families with children of different ages. Some are staffed strictly by registered nurses and others use paraprofessionals.

Consequently, their effects have been mixed. The most successful programs, such as the Nurse Family Partnership, have demonstrated measurable reductions in child maltreatment and accidental injuries and improvements in child health and parenting practices. One of the most intriguing findings of the Nurse Family Partnership is the extent to which visiting nurses reduced smoking among expecting mothers, especially poor white mothers in the Elmira site.<sup>24</sup>

Following the families until the children were adolescents, independent studies have found that some of the more successful home visiting programs increased employment and reduced reliance on public income supports (such as cash assistance) among mothers, while also reducing children’s need for health or juvenile justice services as adolescents.<sup>25</sup>

President Obama’s 2010 budget requested \$8.6 billion over 10 years to fund a major new home visiting initiative, a request that Congress did not explicitly address in its FY10 Consolidated Appropriation Labor-HHS Bill.<sup>26</sup> Since then, several bills supporting home visiting programs have been introduced in Congress, including the Early Support for Families Act (H.R. 2667) and the Pregnant Woman Support Act (S. 270 and H.R. 2035). In addition, the recently passed Affordable Care Act provides significant increases of federal funding to support home visiting programs.

## Lead Poisoning

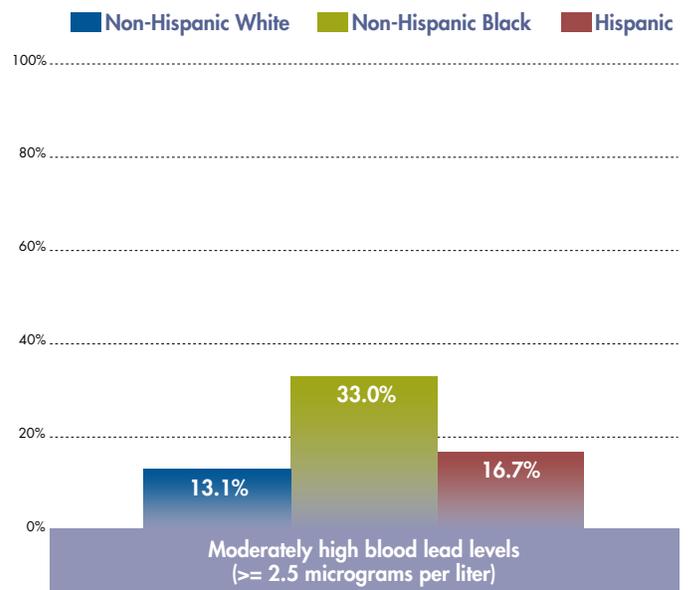
### The Issues

Because they explore their surroundings with frequent hand-to-mouth behaviors, infants and toddlers can ingest harmful substances like lead-based paint chips and dust. Despite significant reductions in lead poisoning throughout the 1970s, lead remains one of the most prevalent environmental toxins affecting children.<sup>27</sup>

Many older homes have lead-based paint, which chips and accumulates in surrounding dust and soil. In addition, some water supply pipes in older buildings are soldered with lead. Lead has been shown to affect behavioral and cognitive functioning.<sup>28</sup> Elevated blood lead levels are typically defined as 10 micrograms per deciliter, but lower concentrations of 2.5 and 5.0 micrograms per deciliter are also associated with adverse health outcomes.<sup>29</sup>

Figure 4 shows that poor black children are twice as likely as poor Hispanic and white children to have levels of lead in their blood of at least 2.5 micrograms per deciliter (33 percent vs. 17 and 13 percent).

**Figure 4: Lead in the blood of poor children (ages 1-11) by race and ethnicity, 2003-2008**



Source: Blood lead estimates are based on the National Health and Nutrition Examination Survey (NHANES) laboratory files, 2003-2008.

## The Policy Response

A recent cost-effectiveness study by Columbia public health economist Peter Muennig estimates that reducing blood-lead levels to one microgram per liter among would generate approximately \$36,000 to \$64,000 in net benefits per child.<sup>30</sup> Muennig estimates that this could result in an overall savings of approximately \$1.2 trillion and produce 4.8 million quality-adjusted life years for society as a whole. As in many life course cost effectiveness studies, the primary sources of benefits are predicted crime reduction and higher levels of high school graduation and subsequent earnings.

Lead has been known to be a public health concern for over 100 years. Since the mid-1970s, a series of laws and executive orders have phased out lead in gasoline, food and beverage cans, and new paint, and provided resources for more than a dozen agencies to undertake comprehensive site testing and mitigation and child screening and care.<sup>31</sup> Thanks to these efforts lead poisoning levels have declined more than 80 percent.<sup>32</sup> Nevertheless, children living in older (pre-1946 construction) and low-income housing remain at disproportionately high risk.

The federal strategy to eliminate childhood lead poisoning consists of four main components. To *prevent* lead poisoning, the U.S. Department of Housing and Urban Development (HUD) awards competitive public grants to help public housing authorities to mitigate lead paint hazards in existing structures and to provide additional lead-free affordable housing.

Title X of the Housing and Community Development Act, the “Residential Lead Hazard Reduction Act” provides additional *regulations and enforcement* resources to ensure the identification and mitigation of lead paint hazards in existing structures. Through the National Childhood Lead Poisoning Prevention Program the Centers for Disease Control provides resources for *public education* and early childhood lead screening. In addition, the Health Care Financing Administration (HCFA) has required blood lead *screening* as part of Medicaid’s Early Periodic Screening, Diagnostic, and Treatment (EPSDT) guidelines since 1990.

## Health Insurance Coverage

### The Issues

Over the course of the twentieth century health insurance has become the principal means of paying for medical care, and lack of health insurance remains the most significant barrier to healthcare access. In the 1930s, hospital associations created the Blue Cross System to help patients afford (and thus pay) for hospital services. In 1954, under the Truman Administration, generous federal tax incentives encouraged employers to yield to pressure from unions and health insurance companies to provide coverage to all employees as a form of compensation.

In 1965, under the Johnson administration, Congress created Medicare, a universal healthcare insurance program for the elderly, and Medicaid, a means-tested, federal-state healthcare insurance entitlement

program for poor mothers and children. Medicaid was dramatically expanded in the late 1980s and early 1990s to provide coverage for a greater share of poor, unemployed women and children, and disabled adults. In 1997, under the Clinton administration, Congress established the Children’s Health Insurance Program (CHIP), a federal block grant to enable states to provide health insurance coverage to children in near-poor families.

Since then, many states have enhanced eligibility and streamlined application procedures. Most states cover children in families with incomes up to 200 percent of the federal poverty line (44), have waived the face-to-face application interview requirement (48), and allow annual (as opposed to twice annual) recertification (40).<sup>33</sup>

Despite efforts to increase take-up through outreach campaigns, streamlined application processes, and eligibility expansions, experts estimate that five million eligible children remain uninsured. Put differently, nearly two-thirds of the estimated 8.1 million uninsured children in the U.S. appear to be eligible for public health insurance.<sup>34</sup>

Three of the more persistent obstacles to broader coverage are unaffordable private premiums, enrollment churning (children cycling on and off public insurance), and parents' ineligibility. Uninsured children are three times more likely to have an unmet health need than privately insured children.<sup>35</sup>

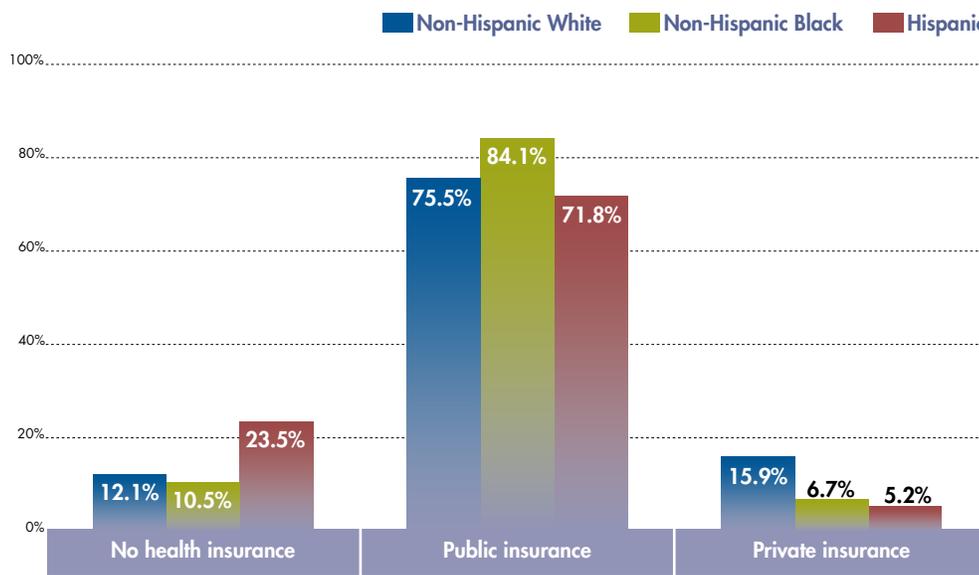
To avoid the risk that public insurance might “crowd out” private insurance, most states (47) use waiting periods, CHIP premiums, or other practices to discourage low-income working families with employer-sponsored coverage from enrolling in CHIP.<sup>36</sup> Unfortunately, many low-income working families find the premiums for their employer sponsored insurance plans prohibitively expensive. The catch-22 for these families is that a private plan that they feel they cannot afford disqualifies them for a public plan for which they would otherwise be eligible.

A related problem is enrollment churning. Due to month-to-month fluctuations in earnings and family income, families with incomes close to the eligibility limits for public insurance often lose public coverage when their incomes rise, only to reapply months later, following income losses. Studies suggest that 40 to 75 percent of eligible but unenrolled children in any given year were enrolled only one to two years earlier.<sup>37</sup> Churning poses additional costs for public systems, complicates payment for providers, and most significantly, causes disruptions in child healthcare.

Providing eligibility to children but not their parents creates confusion, given that most private plans provide full-family coverage. Recognizing this, 18 states provide comprehensive public insurance coverage to families with incomes up to 100 percent of the federal poverty line.<sup>38</sup> Even so, parents with incomes between 100 and 200 percent of poverty are most often ineligible for public coverage, and non-custodial parents are categorically ineligible regardless of income.

Figure 5 shows that poor Hispanic children are most likely to have no health insurance (24 percent), a proportion twice as high as that for poor white and black children (12 and 11 percent). Among poor children

**Figure 5: Type of health insurance coverage among poor children (ages 0-17) by race and ethnicity, 2008-2009**



Source: NCCP calculations based on the National Health Interview Survey (NHIS), 2008-2009.

with health insurance coverage, black children are more likely to have public insurance (84 percent) than white or Hispanic children (76 and 72 percent). Poor white children are most likely to be covered by private insurance (16 percent vs. seven and five percent).

### The Policy Response

The Children’s Health Insurance Program Reauthorization Act of 2009 (CHIPRA), passed under the Obama administration, enhanced states’ ability to expand coverage to uninsured children in several important ways. CHIPRA extends coverage to children in families with incomes up to 300 percent of the federal poverty line.

Second, CHIPRA encourages states to establish “express lane eligibility” processes, for example, by using applicant information from other public systems (such as the National School Lunch Program), and by offering children immediate, temporary (presumptive) coverage until the final eligibility determination is made.<sup>39</sup>

Third, CHIPRA allows states to offer federally subsidized Medicaid and CHIP coverage to noncitizen children without imposing the five-year waiting period required under previous legislation (that is, the federal Deficit Reduction Act of 2005).

In addition, the Affordable Care Act, signed into law in March 2010, would provide coverage to an estimated 30 million additional Americans, reducing the percent of nonelderly uninsured from eight to six percent.<sup>40</sup> Most expect the ACA to go a long way toward resolving each of these three persistent barriers to broader coverage. It extends eligibility for federal subsidies up to 400 percent of poverty, enabling low-income families with employer sponsored plans to afford premiums and reducing churning by raising the eligibility ceiling. In addition, by extending subsidies for full-family coverage, the bills would eliminate the confusion surrounding child-only eligibility plans.

## Physician Care

### The Issues

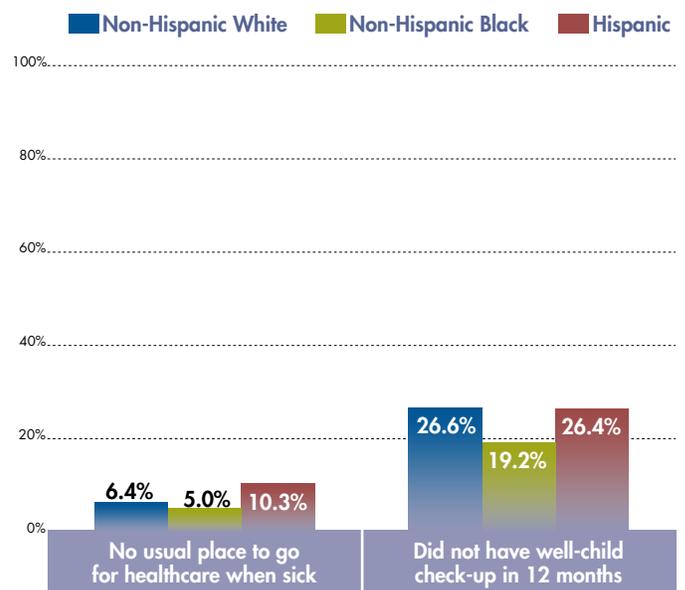
Of course, health insurance is valuable to the extent that it provides access to a complete range of medical care, including “physical examinations, preventive care, health education, screening, immunizations, and sick care.”<sup>41</sup> Two important overall indicators of access to primary healthcare services are whether the child has a regular place to go for care when sick and whether he/she had a “well-child” check-up in the previous year.

Figure 6 shows that nearly twice as many poor Hispanic children have no place to go for healthcare when sick compared to poor black and white children (10 vs. six and five percent). More than a quarter of poor white and Hispanic children and 19 percent of poor black children did not have a check-up in the past 12 months.

### The Policy Response

Broader health insurance coverage alone will not eliminate disparities in health services for several

Figure 6: Physician care among poor and non-poor children (ages 0-17) by race and ethnicity, 2008-2009



Source: NCCP calculations based on the National Health Interview Survey (NHIS), 2008-2009.

reasons. Many private healthcare providers refuse or limit the number of patients accepted with public health insurance. In many poor, rural areas of the country there is an acute shortage of healthcare providers. Low-income patients often require care that is responsive to linguistic and cultural differences in the ways symptoms are described and managed, and behavioral differences in the ways in which life stressors sometimes interfere with treatment plans.

One policy response has been to provide publicly funded Community Health Centers (CHCs). In 2011, there were more than 1,200 CHCs operating in 8,000 rural and underserved communities nationwide, serving approximately 20 million patients.<sup>42</sup> In recent years, community health centers have sometimes been framed as a supply side alternative to demand side reforms broadening public health insurance.<sup>43</sup> In the long run, to the extent that broader and more effective healthcare is a public priority, both strategies are essential.

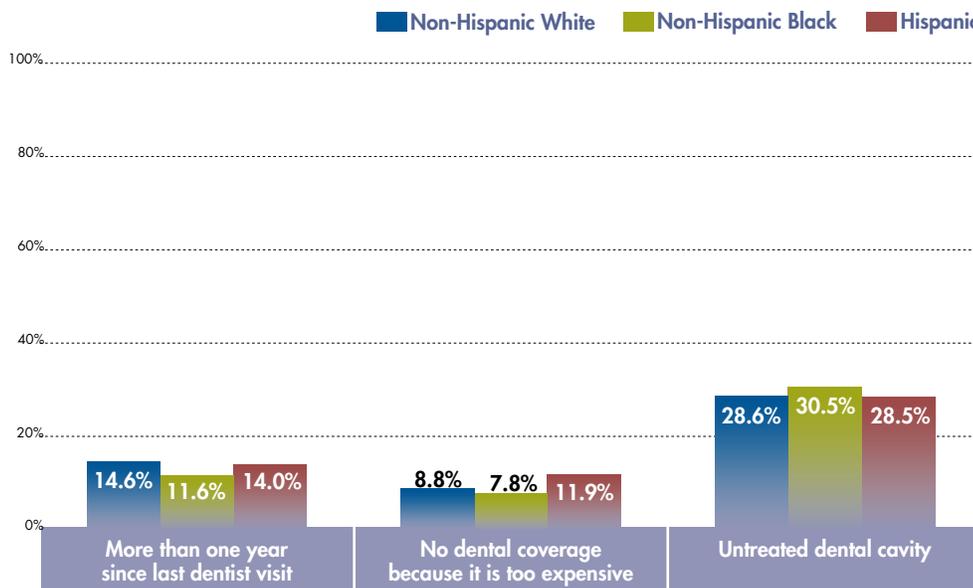
## Dental Care

### The Issues

Good oral health is the product of public health advances (such as the fluoridation of the water supply and the commercial availability of fluoride toothpastes); routine professional care for cleaning, examination, diagnosis, and treatment; and daily self-care, including eating habits, brushing, and flossing. Indeed, brushing their teeth is one of the first ways that children learn to care for their health, and dental caries (cavities) is one of the most prevalent chronic childhood health conditions.<sup>44</sup>

The leading medical associations for pediatric physical and dental care recommend that children should be scheduled for an initial oral examination between 6 and 12 months of age.<sup>45</sup> This report did not find significant differences by race and ethnicity in dental care, dental insurance coverage, or untreated dental caries, as shown in Figure 7. For each of the subgroups however, inadequate dental care is a cause for concern. Between 12 and 15 percent did not have a dental exam within the past year, eight to 12 percent had no dental insurance coverage, and 29 to 30 percent had an untreated dental cavity.

**Figure 7: Dental care among poor and non-poor children (ages 1-17) by race and ethnicity, 2008-2009**



Source: NCCP calculations of dental care and coverage based on the National Health Interview Survey (NHIS), 2008-2009, and examination reports of untreated dental caries, based on the National Health and Nutrition Examination Survey (NHANES), 2003-2005.

Note: The affordability of dental coverage indicator is based on a sample of uncovered children ages 2-17.

## The Policy Response

New federal funding has also been committed to reducing disparities in oral health. The Children’s Health Insurance Program Reauthorization Act of 2009 (CHIPRA) requires states to provide dental

coverage to all children enrolled in CHIP. In addition, CHIPRA gives states the option of providing reduced cost dental-only plans to privately insured children with limited dental coverage.

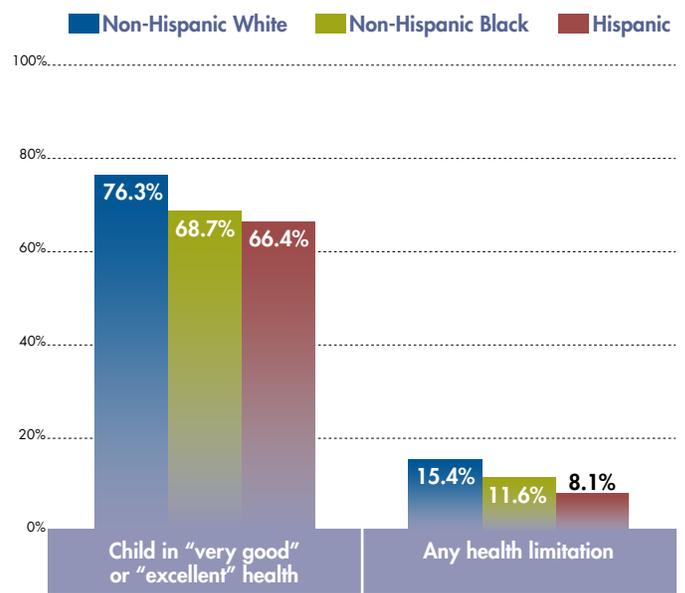
## Overall Health and Health Limitations

### The Issues

Over the years, survey researchers have proven that respondents’ self-rated health (SRH) on a simple five-point scale from “poor” to “excellent,” is a reliable predictor of later survival, morbidity, and health care need.<sup>46</sup> Parents’ reports of their children’s health seem to be similarly reliable.<sup>47</sup>

Poor white children were more likely to be in very good or excellent health (76 vs. 69 and 66 percent), as shown in Figure 8. Hispanic children were least likely to report a health limitation (eight percent vs. 15 and 12 percent).

**Figure 8: Overall health and health limitations among poor children (ages 0-17) by race and ethnicity, 2008-2009**



Source: NCCP calculations based on the National Health Interview Survey (NHIS), 2008-2009.

## Low Birthweight Births

### The Issues

Infants born weighing less than 2,500 grams (5 lbs. 5 oz.) are at risk for premature death as infants and long-term health and economic disadvantages, such as lower than average cognitive skills, education, employment, and earnings.<sup>48</sup> Low birthweight is strongly associated with preterm birth, (that is, birth before 37 weeks of gestation). Two-thirds of low birthweight infants are born prematurely and together low birth-

weight preterm births are among the leading causes of infant death in the U.S.<sup>49</sup>

Among the most developed countries, the U.S. evidences a comparatively high rate of low birthweight births. Nationally, the incidence is highest among women who are young, black, thin, and among those who regularly smoke cigarettes.<sup>50</sup>

Figure 9 shows that rates of low birthweight births are highest among poor black children (20 percent), followed by white (15 percent) and Hispanic (12 percent) children.

## The Policy Response

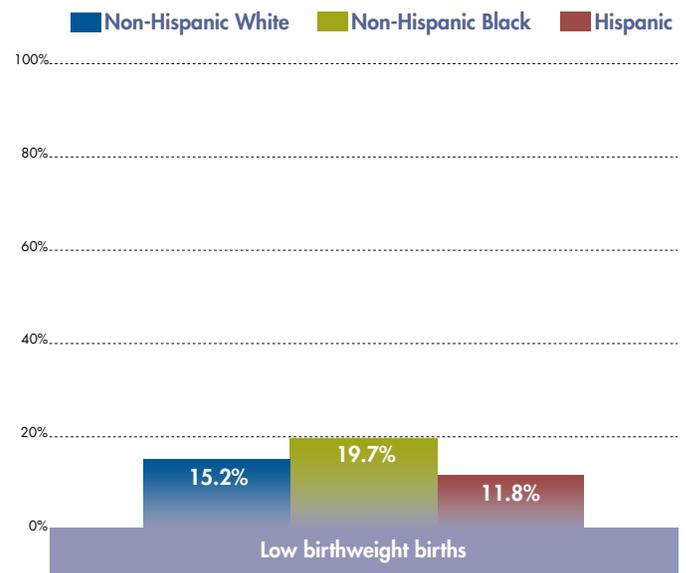
Birth outcomes are a good illustration of the ways in which a coordination of primary, secondary, and tertiary responses is often required to reduce the incidence of otherwise intractable problems. Primary, or population-based, prevention strategies are targeted to all pregnant women, and focus on reducing work-related stressors, for example by reducing the work week to 42 hours, reducing the time that pregnant women are required to stand, eliminating night shifts, and providing for maternity leave of at least 14 weeks.<sup>51</sup> Primary prevention strategies have been more readily adopted in Europe than in the United States.

Secondary strategies, targeted to pregnant women at risk, include adequate prenatal care, smoking cessation, participation in safety net services, and home visitation programs. Although prenatal care has proven effective for many outcomes (reduced infant and maternal mortality and improved infant vaccination rates), it has been less effective with respect to reducing the incidence of low birthweight births.<sup>52</sup> Smoking cessation programs have been modestly effective.

Participation in safety net programs like Community Health Centers and the Women's Infants' and Children (WIC) nutrition program appears to mitigate the risks of low birthweight births for some subgroups, but the extent to which these reduced risks are attributable to self-selection as opposed to a causal program impact are uncertain.<sup>53</sup>

Home visitation programs are one of the few secondary interventions that have reduced the incidence of low birthweight in a rigorous randomized control trial evaluation.<sup>54</sup> More specifically, a recent randomized control trial of the Healthy Families New York (HFNY) estimated home visitation services to have reduced the incidence of low birthweight births by more than half.<sup>55</sup>

**Figure 9: Low birthweight births among poor children (ages 0-15) by race and ethnicity, 2003-2008**



Source: NCCP calculations based on the National Health and Nutrition Examination Survey (NHANES), 2003-2008.

Although few primary prevention strategies have been taken to scale and few secondary prevention strategies have been consistently effective, pronounced improvements in tertiary care have substantially reduced mortality among children born low-birthweight. Specifically, regionalized perinatal networks, within which mothers at risk for delivering low birthweight babies are cared for in institutions with neonatal care specialists and intensive care equipment, have dramatically increased survival rates among children born preterm and very low birthweight.<sup>56</sup>

# Asthma

## The Issues

Asthma is one of the most common chronic health conditions in children and the leading cause of child hospitalizations.<sup>57</sup> Asthma can be aggravated by second-hand smoke and pollution, and yet managed with the use of medication.

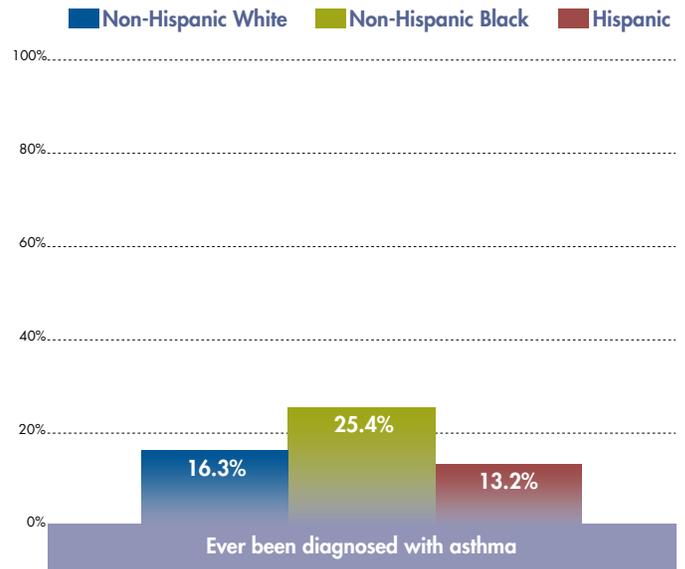
Figure 10 shows that poor black children are more likely than poor white or Hispanic children to have been diagnosed with asthma (25 percent vs. 16 and 13 percent). This is consistent with the existing literature on asthma disparities by income, race, and ethnicity.<sup>58</sup>

## The Policy Response

The persistence of disparities in the prevalence and severity of asthma is particularly disappointing given that effective strategies for asthma management are well documented.

Children in low-income housing experience greater exposure to indoor allergens (mold, cockroaches, mice, and dust mites), air pollutants (nitrous oxide), and irritants (second-hand tobacco smoke).<sup>59</sup> Rigorous studies have shown that home-based interventions combining education, high efficiency air filtration systems, and multi-faceted pest control strategies can substantially reduce asthmatic symptoms.<sup>60</sup> Interventions to reduce nitrous oxide pollutants of home heating systems have also been shown to reduce asthmatic symptoms and school absences.<sup>61</sup>

**Figure 10: Asthma among poor children (ages 0-17) by race and ethnicity, 2008-2009**



Source: NCCP calculations based on the National Health Interview Survey (NHIS), 2008-2009.

Children without a medical home, that is a regular source of professional, family-centered medical care and coordination, are less likely to receive high-quality asthma care. Studies have shown that children relying on Medicaid and, or emergency room treatment are more likely to use inhaled bronchodilator medications rather than control medications, to be treated by general providers rather than asthma specialists, and to have irregular medical follow-up.<sup>62</sup>

# Emotional and Behavioral Problems and Learning Disabilities

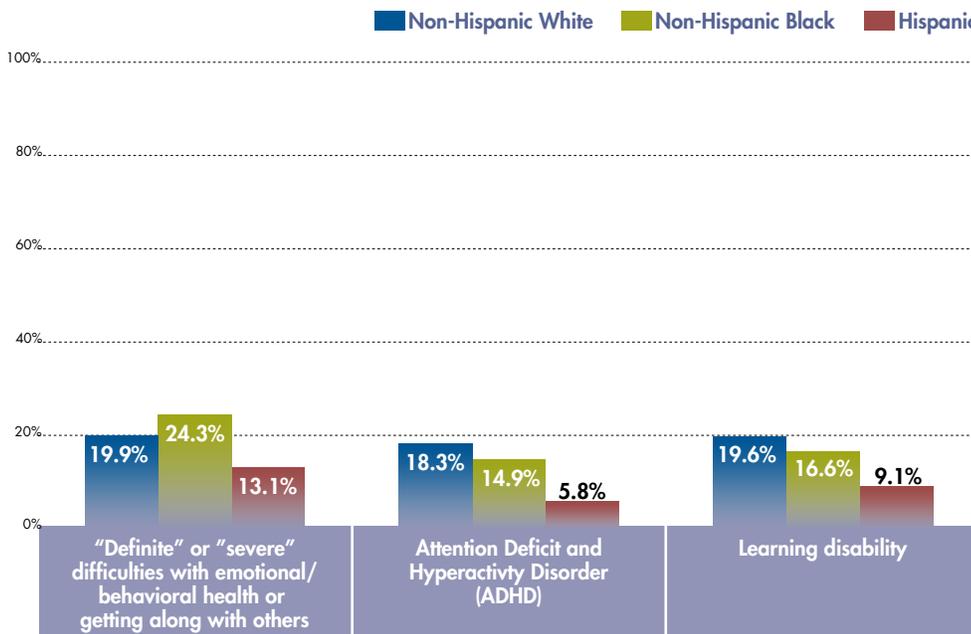
## The Issues

When poor child health interferes with learning it detracts from children’s ability to achieve their fullest potential. Emotional problems, learning disabilities, and Attention Deficit and Hyperactivity Disorder (ADHD) often pose significant obstacles to children’s academic and career achievements.

Figure 11 shows that poor Hispanic children are least likely to have been diagnosed with “severe” difficulties with emotional or behavioral health (13 percent vs. 20 and 24 percent), ADHD (6 percent vs. 15 and 18 percent) or a learning disability (9 percent vs. 17 and

20 percent). Previous research based on the NHIS has shown that controlling for the child’s weight at birth, family income, and health insurance status, reduces these differences.<sup>63</sup> It also shows that black and Hispanic children are less likely to be singly diagnosed with ADHD, apart from a learning disability, or to take prescription medication to regulate ADHD. Although medication can help to improve behavior for 70 to 80 percent of children with ADHD, it is often less effective with respect to improving academic achievement, and black and Hispanic parents are less likely to medicate their children than white parents.<sup>64</sup>

**Figure 11: Emotional and behavioral problems and learning disabilities among poor children (ages 6-17) by race and ethnicity, 2008-2009**



Source: NCCP calculations based on the National Health Interview Survey (NHIS), 2008-2009.

# Overweight and Obese

## The Issues

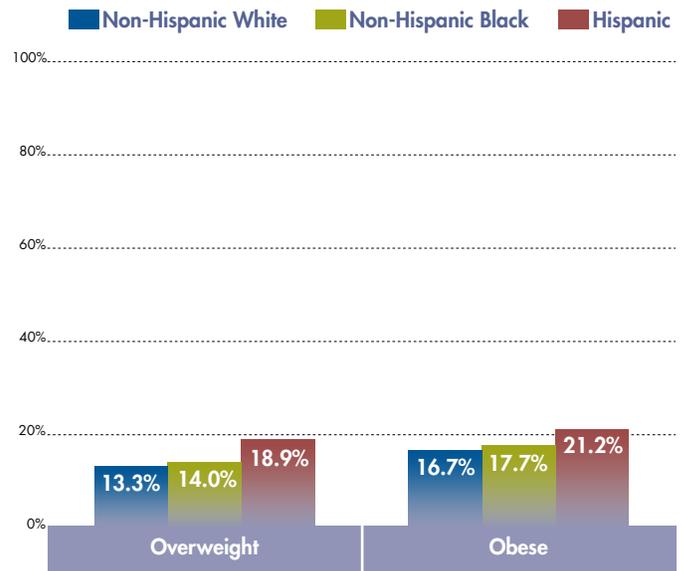
Children who are overweight are more likely to have poor self esteem and to be overweight as an adult, which poses greater risks for future health conditions, such as diabetes, heart disease, stroke, and certain cancers.<sup>65</sup> Following the definitions of overweight and obesity established by the Centers for Disease Control and Prevention, we characterize children with a body mass score between the 85th and 94th percentile of normal for their age and sex as overweight, and those with a body mass score greater than or equal to the 95th percentile for age and sex, as obese. Figure 12 shows that among poor children ages 2 to 17, Hispanic children are most likely to be overweight (19 vs. 13 and 14 percent) and obese (21 vs. 17 and 18 percent).

## The Policy Response

One promising approach is the taxation and/or regulation of sweetened beverages. Thirty-three states currently impose a sales tax on soft drinks, at a mean tax rate of 5.2 percent.<sup>66</sup> A number of high-quality clinical trials have found associations between sugar-sweetened beverage consumption and body weight. Between 1977 and 2002, the per-capita consumption of sugar-sweetened beverages in the U.S. doubled across all age groups. Based on the known price elasticity of soft-drinks in the U.S., public health advocates estimate that a one-cent-per-ounce tax on sugar-sweetened beverages could reduce calorie consumption from these beverages by 10 percent.

Although regressive, proponents argue that this excise tax would encourage consumers to make better long-term consumption decisions and raise public revenues to help to pay for the public health costs of private over-consumption. In addition, they argue, a national one-cent-per-ounce tax could raise \$14.9 billion, which could then be used to support childhood nutrition programs.

**Figure 12: Overweight and obese among poor children (ages 2-17) by race and ethnicity, 2003-2008**



Source: NCCP calculations based on the National Health and Nutrition Examination Survey (NHANES), 2003-2008.

Note(s): Children with body mass index scores between the 85th and 94th percentile for their age and sex are characterized as "Overweight;" those with body mass index scores at or above the 95th percentile for their age and sex are characterized as "Obese."

Increasing access to healthy foods for poor families is a second area of potential policy action. Research suggests that obesity is to a large extent an economic problem. Stated simply, fattening foods (high-density, low-nutrition foods) are cheaper than healthy foods (low-density, high-nutrition foods).<sup>67</sup> Policy options for states include adding green market stamps into their food stamp and WIC programs, and offering incentives for businesses to relocate or change their current practice to locations where poor families have no access to fruits and vegetables (so-called "food deserts").

## Conclusion

The relationship between health and social marginalization is one of the most well-documented and longstanding dimensions of inequality. Throughout history the marginalized have been more vulnerable to the prevailing threats to health – famines in the agricultural era, contagious diseases in the industrial

era, and chronic diseases in our own era.<sup>68</sup> Within this context, improving children’s health entails collective investments to reduce exposure to known toxins, to provide families with the means to access high-quality care to promote healthy behaviors, and to remediate illnesses.

## Data Sources and Definitions

This report draws primarily on two waves of the National Health Interview Survey (the 2008 and 2009 NHIS) and three waves of the National Health and Nutrition Examination Survey (2003-2004, 2005-2006, and 2007-2008), two national health surveys, sponsored jointly by the U.S. Department of Health and Human Services, the Centers for Disease Control and Prevention, and the National Center for Health Statistics. Sample sizes for each indicator are shown in Appendix A.

Established by the federal National Health Survey Act of 1956, NHIS is an annual survey used to monitor the health of the civilian noninstitutionalized population of the United States. The annual survey file contains information on a nationally representative sample of more than 74,000 individuals in close to 29,000 households. The NHIS is comprised of a core household interview in which the health status of each individual within the household is assessed, in addition to a set of questions about the health of one sample adult and one sample child for each family within each household. Data for children younger than 17 years old are reported by the person most knowledgeable about the child’s health, often a parent or guardian.

NHANES provides detailed information about the health and nutritional status of adults and children. The NHANES is unique in that it combines information from survey interviews, professional physical

examinations, and laboratory tests. Thus, while the NHIS asks a comprehensive series of questions of a large, representative sample of households and individuals, the NHANES collects more detailed survey, examination, and laboratory data on a smaller sample of respondents in 15 randomly selected counties across the country each year. Each wave of NHANES data included in this report reflects the experiences of close to 10,000 individuals.

Analyses in this report are restricted to poor children, based on similar household poverty measures available in the NHIS and the NHANES. Both surveys ask respondents to report the family’s total income from several sources, including earnings, retirement income, disability payments, interest income, and public assistance programs. Both surveys also characterize total family income relative to the census poverty threshold, taking into account not only the overall family size, but also the number of children in the family. In both surveys, families reported total income from the prior year and health status in the current year. Both surveys provide sampling weights to maintain the representativeness intended of survey responses, adjusting for selection, nonresponse, and stratification. These weights were used in this analysis.

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APPENDIX A:

Unweighted Sample Sizes by Indicator, Exhibit, Age Group, and Data Source

Indicator	Exhibit	Age group	Sample size	Data source
<b>Family Composition and Income to Poverty Ratio</b>				
Single parent household	Fig. 1	0-17	3,452	NHIS (2008-2009)
Household income < 50 pct. of fed. pov. line	Fig. 1	0-17	3,452	NHIS (2008-2009)
<b>Food Insecurity</b>				
Within the household	Fig. 2	0-17	3,724	NHANES (2003-2008)
Among children within the household	Fig. 2	0-17	3,724	NHANES (2003-2008)
<b>Children exposed to second-hand smoke</b>				
In utero	Fig. 3	0-15	3,322	NHANES (2003-2008)
In the home	Fig. 3	0-17	3,724	NHANES (2003-2008)
<b>Lead in the Blood of Children</b>				
Low blood lead levels	Fig. 4	1-11	2,078	NHANES (2003-2008)
<b>Health Insurance</b>				
No health insurance	Fig. 5	0-17	3,439	NHIS (2008-2009)
Public	Fig. 5	0-17	3,452	NHIS (2008-2009)
Private	Fig. 5	0-17	3,439	NHIS (2008-2009)
<b>Physician Care</b>				
No usual place to go for healthcare when sick	Fig. 6	1-17	3,210	NHIS (2008-2009)
Did not have well-child check-up in past 12 months	Fig. 6	1-17	3,192	NHIS (2008-2009)
<b>Dental Care</b>				
Never seen dentist	Fig. 7	1-17	3,142	NHIS (2008-2009)
More than one year since last dentist visit	Fig. 7	1-17	3,142	NHIS (2008-2009)
Untreated dental cavity	Fig. 7	5-17	2,078	NHANES (2003-2008)
<b>Overall Health</b>				
Child in "very good" or "excellent" health	Fig. 8	0-17	3,450	NHIS (2008-2009)
Any health limitation	Fig. 8	0-17	3,449	NHIS (2008-2009)
<b>Low Birthweight</b>	Fig. 9	0-15	3,278	NHANES (2003-2008)
<b>Asthma</b>				
Ever been diagnosed with asthma	Fig. 10	0-17	3,447	NHIS (2008-2009)
<b>Emotional &amp; Behavioral Problems, Learning Disabilities</b>				
"Definite" or "severe" difficulties	Fig. 11	6-17	2,058	NHIS (2008-2009)
Attention Deficit & Hyperactivity Disorder (ADHD)	Fig. 11	6-17	2,080	NHIS (2008-2009)
Learning disability	Fig. 11	6-17	2,081	NHIS (2008-2009)
<b>Overweight</b>	Fig. 12	2-17	2,840	NHANES (2003-2008)
<b>Obese</b>	Fig. 12	2-17	2,840	NHANES (2003-2008)