

Chapter Five

Health Status, Conditions, and Risks

This chapter describes the health status of WIC participants and nonparticipants. The discussion is divided into several topic areas: general health status, women's health conditions and risks, children's birth characteristics, health status of children and infants, and dental health.

Several of the measures examined in this chapter are indicators of nutritional risk that may qualify individuals for participation in WIC. Consequently, a greater prevalence of these characteristics among WIC participants than nonparticipants may simply be a reflection of criteria for selection into the program. Risk criteria that were in use at the time of the NHANES-III data collection, based on mention in the IOM (1996) report on WIC nutrition risk criteria (see Chapter One), are noted in the text.

General Health Status

General health status was measured in NHANES-III by self-report as well as by direct physician assessment.¹ In both cases, response options were: excellent, very good, good, fair, and poor.

Overall, women's self-reported health status was less positive than the health status reported for infants and children (table D-78 and D-79). Only a little more than half (56%) of women rated their health as excellent or very good. In contrast, more than three-quarters of infants and 1-4-year-old children were reported to be in excellent or very good health (statistical significance of age-based difference not tested).

¹For ease in discussion, the term "self-report" is used to describe data reported by sampled women as well as data provided by mothers or other caregivers for sampled infants and children.

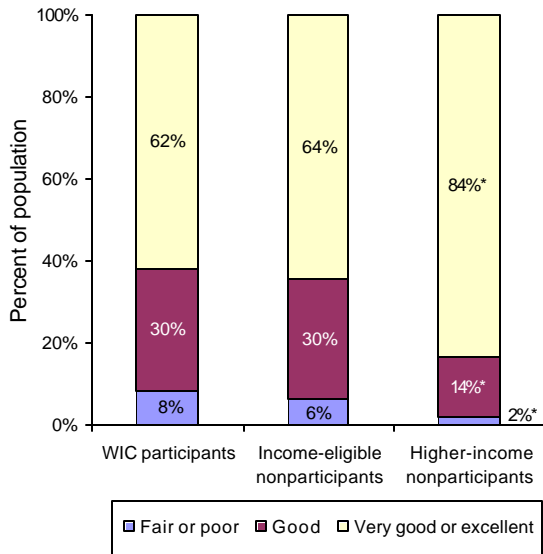
Physicians tended to rate health status more positively than survey respondents (table D-80 and D-81).

WIC participants and income-eligible nonparticipants had approximately equivalent health status, as measured by both self-reports and physician assessments (figure 26 and tables D-78 and D-79). Roughly 63 percent of WIC participants and income-eligible nonparticipants rated their health as very good or excellent, 30 percent rated their health as good, and about 7 percent rated their health as fair or poor. According to the more-positive physician assessments, more than 85 percent of both WIC participants and income-eligible nonparticipants were in very good or excellent health and 12 percent of both groups were in good health (figure 27 and tables D-80 and D-81).

In comparison with higher-income nonparticipants, WIC participants rated their health status more negatively. WIC participants were significantly *less* likely than higher-income nonparticipants to rate their health status as very good or excellent (62% vs. 84%) and significantly *more* likely to rate their health status as fair or poor (8% vs. 2%) (figure 26). These significant between-group differences were noted consistently for women, infants, and children (tables D-78 and D-79).

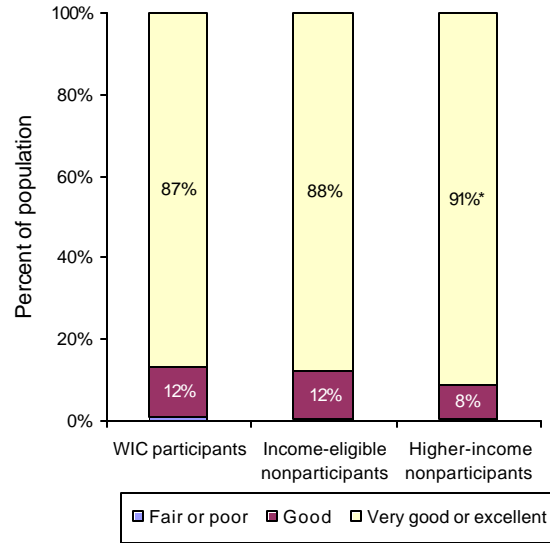
Physician assessments revealed the same pattern of differences between WIC participants and higher-income nonparticipants, but the between-group differences were smaller. The difference in the percentage considered to be in excellent or very good health was statistically significant (87% vs. 91%); while the difference

Figure 26 - Self- or caregiver-reported general health status



*Statistically significant difference from WIC participants at the .05 level or better.
Source: NHANES-III, 1988-94.

Figure 27 - Physician-assessed general health status



*Statistically significant difference from WIC participants at the .05 level or better.
Source: NHANES-III, 1988-94.

in the percentage considered to be in fair or poor health (a very rare event) was not (figure 27). The between-group difference in physician-assessed health status was concentrated among women (table D-80). In addition, there was a significant difference between WIC infants and higher-income infants in the percentage considered to be in fair or poor health (although this was a rare occurrence in both groups) (table D-81).

Women's Health Conditions and Risks

This section provides information on selected health conditions and risks of pregnant and postpartum women. Topics include the prevalence of chronic health conditions and pregnancy and childbirth history.

Chronic Health Conditions

NHANES-III asked adult respondents (17 years and older) if a physician had ever told them that they had specific types of health conditions. Queried conditions include high blood pressure, diabetes, heart attack, stroke, emphysema,

congestive heart failure, and cancer other than skin cancer.

With the exception of high blood pressure, which was reported by 10 percent of women overall, the reported prevalence of the health conditions queried in NHANES-III was low among pregnant and postpartum women (table D-82). In reality, high blood pressure was also rare in this group of women. Physician-measured blood pressure revealed that very few women actually had high blood pressure (table D-82). No statistically significant differences were found between WIC women and either group of nonparticipating women on any of these measures.

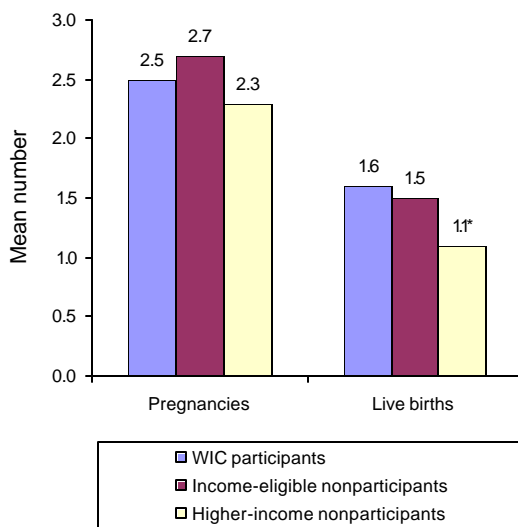
Pregnancy and Childbirth History

NHANES-III collected a detailed reproductive history for all female respondents 12 years of age and older. Tabulations prepared for this report include the mean number of pregnancies, mean number of live births, mean age at time of first live birth, and the percent of women who were teenagers or more than 35 years of age at

the time of their first live birth. Although high parity (having many pregnancies) was not recommended as a nutritional risk criterion by the IOM in its 1996 report, some States were using this characteristic to define WIC eligibility during the time the NHANES-III data were collected. Young maternal age and advanced maternal age were also used as nutritional risk criteria by some States (IOM, 1996).

There were no significant differences between WIC women and income-eligible women for any of the pregnancy and childbirth measures examined in this analysis (table D-83). In comparison with higher-income women, however, women who were participating in WIC had a significantly greater number of live births (1.6 vs. 1.1) (figure 28). In addition, at the time of the first live birth, WIC women were significantly younger than higher-income women and were significantly more likely to have been teenagers (point estimates for WIC participants are statistically unreliable for both of these measures) (table D-83).

Figure 28 - Mean number of pregnancies and mean live births



*Statistically significant difference from WIC participants at the .05 level or better.
Source: NHANES-III, 1988-94.

Birth Characteristics of Infants and Children

For infants and children under the age of 12, NHANES-III collected data on a number of characteristics of both mother and child at the time of birth. This includes information on maternal age, maternal smoking during pregnancy, the child's birthweight (reported by mother or other caregiver), and receipt of neonatal intensive care services.

The following sections summarize data on birth characteristics for infants and 1-4-year-old children. During the period of the NHANES-III data collection, all of these characteristics were employed by some States to establish eligibility for WIC participation (IOM, 1996).

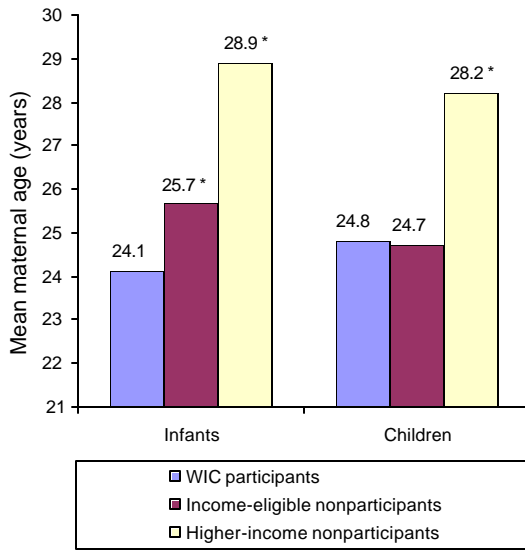
Maternal Age

WIC infants were born to younger mothers, on average, than either income-eligible infants or higher-income infants (mean age of 24.1 years vs. 25.7 years and 28.9 years) (figure 29 and table D-84). In addition, WIC children were born to younger mothers, on average, than higher-income children (24.8 years vs. 28.2 years).

WIC infants were also significantly more likely than infants in either nonparticipant group to be born to teenage mothers (23% vs. 14% and 3%) (figure 30 and table D-85). A similar pattern was observed among children; however, the difference between WIC children and income-eligible children was not statistically significant.

Finally, both WIC infants and WIC children were less likely than their higher-income nonparticipant counterparts to be born to mothers over age 35 (table D-86). Four percent of WIC infants and 4 percent of WIC children were born to women over the age of 35. This compares with 11 percent of higher-income nonparticipant infants and 9 percent of higher-income nonparticipant children.

Figure 29 - Mean age of mother at birth



*Statistically significant difference from WIC participants at the .05 level or better.
Source: NHANES-III, 1988-94.

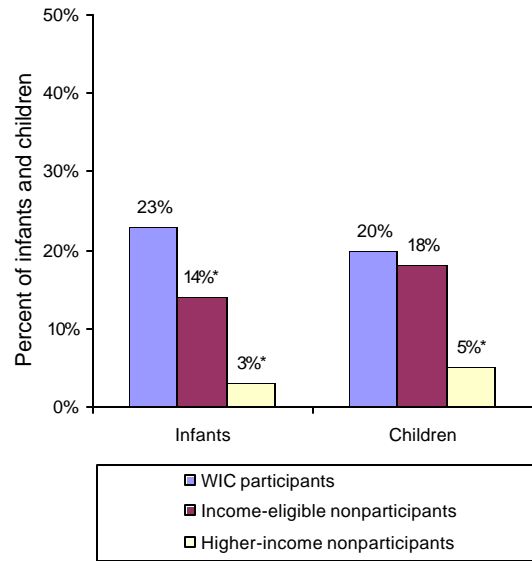
Maternal Smoking During Pregnancy

Overall, 24 percent of infants and 1-4-year-old children were born to women who smoked during the pregnancy (table D-87). There were no significant differences between WIC infants and children and income-eligible infants and children in this regard (figure 31). WIC infants and children were, however, significantly more likely than higher-income infants and children to have been born to women who smoked during the pregnancy. This was true for 27 percent of WIC infants and 29 percent of WIC children, compared with 17 percent of higher-income infants and 19 percent of higher-income children.

Birthweight (Self-Report)

According to data reported by parents and caregivers, infants and children participating in WIC had a significantly lower mean birthweight than either income-eligible or higher-income infants and children. The reported mean birthweight for WIC infants was 3,258 gm. (7.2 pounds), compared with 3,343 gm. (7.4 pounds) for income-eligible infants and 3,470 gm. (7.7

Figure 30 - Percent of infants and children born to teenage mothers

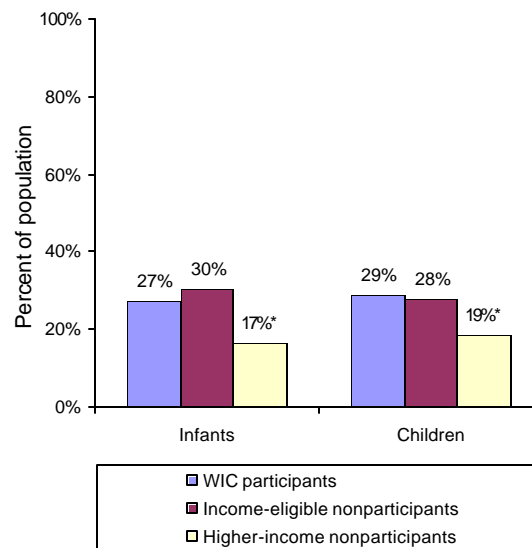


*Statistically significant difference from WIC participants at the .05 level or better.
Source: NHANES-III, 1988-94.

pounds) for higher-income infants (figure 32 and table. D-88). Reported mean birthweights for children showed similar between-group differences.

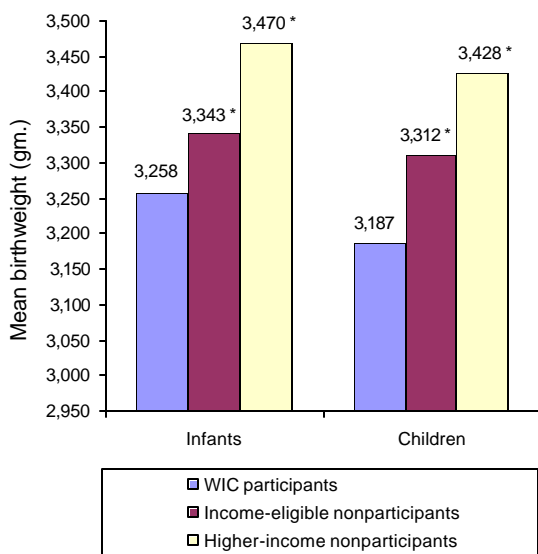
WIC infants and children were also more likely than infants and children in either of the nonpar-

Figure 31 - Percent of infants and children whose mothers smoked during pregnancy



*Statistically significant difference from WIC participants at the .05 level or better.
Source: NHANES-III, 1988-94.

Figure 32 - Reported mean birthweight of infants and children



*Statistically significant difference from WIC participants at the .05 level or better.
Source: NHANES-III, 1988-94.

participant groups to have been low birthweight (less than 2,500 gm. or 5.5 pounds) (figure 33 and table D-89). According to reported birthweights, the prevalence of low birthweight among WIC infants was twice that of income-eligible infants and three times that of higher-income infants (12% vs. 6% and 4%). A comparable pattern was noted for children, but the between-group disparities were smaller (12% vs. 8% and 5%).

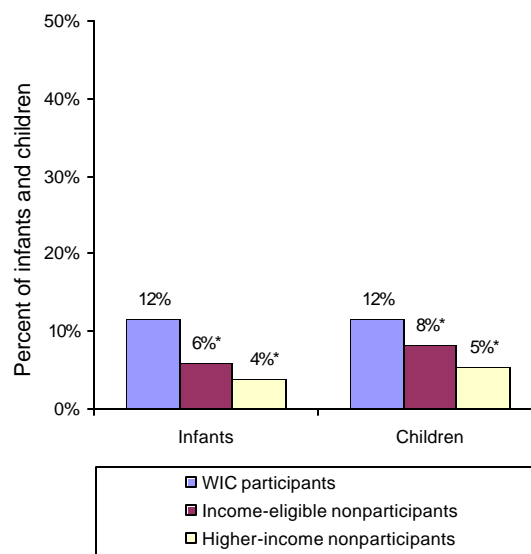
These results are not surprising, given that low birthweight is a nutritional risk criteria used to establish program eligibility. Moreover, low birthweight infants may stay on WIC longer than normal weight infants because they tend to have more problems.

There were no statistically significant between-group differences in the prevalence of very-low birthweight (less than 1,500 gm. or 3.3 pounds) (table D-90).

Neonatal Intensive Care Stays

Approximately 11 percent of all infants and 1-4-year-old children were reportedly hospitalized in

Figure 33 - Percent of infants and children born low birthweight, based on reported birthweight



*Statistically significant difference from WIC participants at the .05 level or better.
Source: NHANES-III, 1988-94.

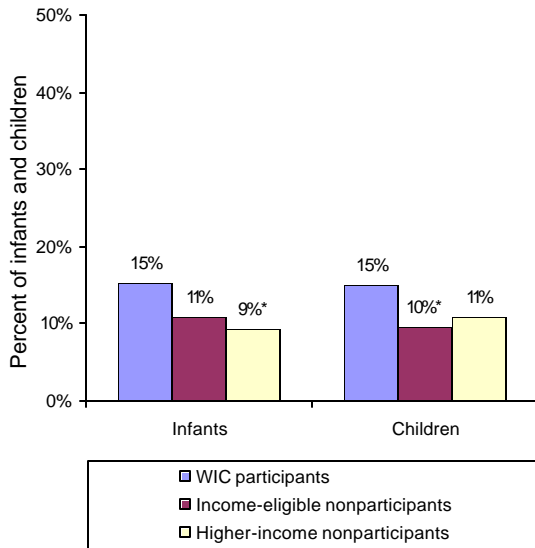
neonatal intensive care units (NICUs) at the time of their birth (table D-91). The reported prevalence of NICU stays was greater for WIC infants and children than for infants and children in either of the nonparticipant groups (15% vs. 10% and 11%). Although this general pattern was observed for both infants and children, the between-group differences were not consistently significant (figure 34).

Health Status of Children and Infants

This section presents data on a number of measures of child health and well being. For children, topics include weight status, growth retardation (stunted linear growth), iron status, hospitalizations since birth, accidents, injuries, and poisonings requiring medical attention, chronic respiratory conditions, and lead poisoning.² For infants, data availability was limited to information on hospitalizations since birth, accidents, injuries and poisonings requiring

²Caregivers were also asked whether children had several other health conditions, including high cholesterol, diabetes, and high blood pressure. However, because the percentages of children reported to have any of these conditions were very low, the data were not tabulated for this report.

Figure 34 - Percent of infants and children receiving neonatal intensive care



*Statistically significant difference from WIC participants at the .05 level or better.
Source: NHANES-III, 1988-94.

medical attention, and chronic respiratory conditions. The data presented are drawn from both physical examinations and interviews with parents/caregivers.

Weight Status of Children

The prevalence of overweight and obesity in the U.S. has increased dramatically since the first Health Examination Survey (a precursor to the present NHANES survey) was conducted in 1963-65 (Flegal et al., 1998). This is especially true for children and adolescents, for whom the prevalence of overweight has more than doubled (Troiano and Flegal, 1998).

Healthy People 2010 includes goals to decrease the proportion of children who are overweight. Classifying children as overweight is fundamentally different from classifying adults as overweight (Cole, 2001). Adults have traditionally been categorized on the basis of life insurance mortality data and data relating weight status to morbidity and mortality (Troiano and Flegal, 1998). Such criteria cannot be used to define overweight in childhood, however,

because childhood mortality is not associated with weight and weight-related morbidity in childhood is too low to define meaningful cutoffs (Barlow and Dietz, 1998). Therefore, the approach used to classify children as overweight relies on comparing children's weights and heights to appropriate reference populations.

A series of growth charts has been developed by the CDC for different anthropometric measures and different age groups (Kuczmarski et al., 2002). Three different growth charts can be used to assess weight status in very young children: the BMI-for-age chart (designed for ages 2 and over), the weight-for-length chart (birth through 3 years), and the weight-for-height chart (2-5 years). Because this analysis included children between 1 and 4 years of age, the weight-for-length and weight-for-height charts were used. These two charts are parallel in the overlapping ages of 24-36 months so that, within this age group, recumbent length and standing height (when used with the appropriate chart) yield the same percentile.³

In assessing weight status among children, use of the word "obesity" is avoided because of potential negative connotations (CDC, 2003). Instead, assessment of weight status focuses on the prevalence of overweight (defined as weight-for-height at or above the 95th percentile), the prevalence of being at risk of overweight (defined as weight-for-height between the 85th and 95th percentiles), and the prevalence of underweight (defined as weight-for-height below the 5th percentile) (see appendix B). Overweight and underweight are included in the nutritional risk criteria recommended by the IOM for qualifying children for WIC participation; these criteria were in widespread use at the

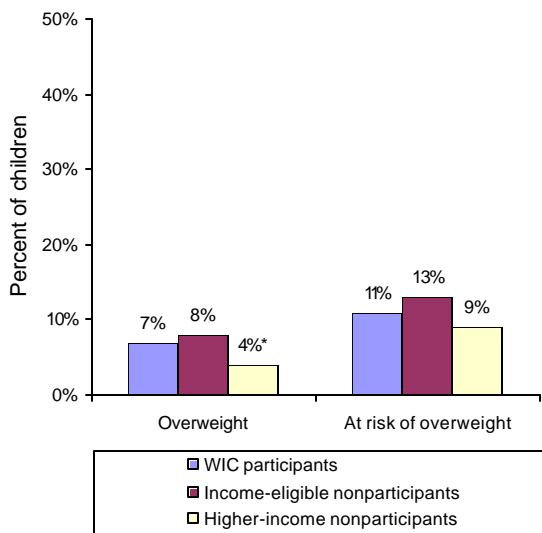
³In children under 2 years of age, recumbent length rather than standing height is used to assess stature. For ease in discussion, the term "weight-for-height" is used in this chapter to refer to the appropriate use of either the weight-for-length or weight-for-height charts.

time NHANES-III data were collected (IOM, 1996).

Among 1-4-year-old children, there was no significant difference between WIC participants and income-eligible nonparticipants in the prevalence of overweight (7-8%) (figure 35 and table D-92). However, WIC children were significantly more likely to be overweight than higher-income children (7% vs. 4%). There were no differences between WIC participants and either group of nonparticipants in the percentage of children at risk of overweight (11%, overall).

WIC children were significantly more likely than income-eligible children to be underweight (table D-92). Seven percent of WIC children were underweight, compared with 3 percent of income-eligible children. There was no significant difference between WIC children and higher-income children in the prevalence of underweight.

Figure 35 - Percent of children overweight and at risk of overweight



*Statistically significant difference from WIC participants at the .05 level or better.
Source: NHANES-III, 1988-94.

Growth Retardation Among 2-4-year-old Children

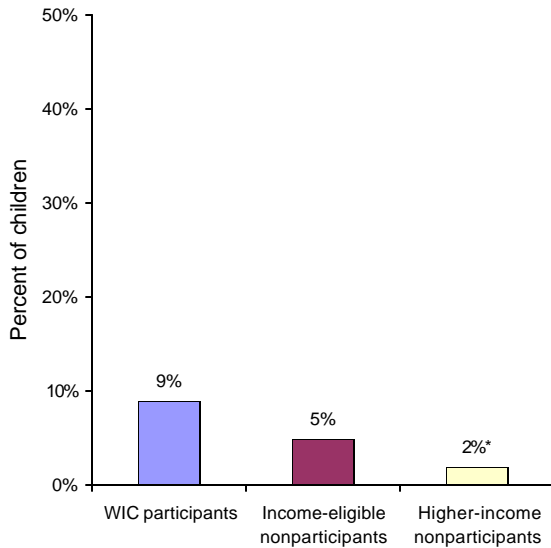
Young children are susceptible to growth problems that can affect stature. Retardation of linear growth in preschool children may reflect inadequate maternal weight gain or other prenatal problems, dietary inadequacy, infectious or chronic disease, or poor healthcare (U.S. DHHS, 2000a). The *Healthy People 2010* objectives include a goal to decrease the prevalence of (linear) growth retardation among low-income children under the age of 5. Retarded growth is defined as height-for-age below the 5th percentile on the CDC height-for-age growth charts (U.S. DHHS, 2000a). This condition (commonly referred to as short stature) is among the nutritional risk criteria recommended by the IOM for determining WIC eligibility and was in common use at the time the NHANES-III data were collected (IOM, 1996). Because the height-for-age growth chart is designed for children 2 to 5 years of age, tabulations related to growth retardation are limited to 2-4-year-olds.

Overall, the prevalence of growth retardation among 2-4-year-old children was relatively low, at about 4 percent (table D-93). WIC children had a greater prevalence of growth retardation than either group of nonparticipant children (9% vs. 5% and 2%); however, only the difference between WIC children and higher-income children was statistically significant (figure 36).

Prevalence of Iron Deficiency, Iron-Deficiency Anemia, and Anemia Among Children

Iron deficiency is the most common known form of nutritional deficiency (CDC, 1998). Iron deficiency can lead to developmental delays, behavioral problems, and decreases in verbal learning and memory, and can affect immune function, energy metabolism, and work performance (U.S. DHHS, 2000a, CDC, 1998, and Looker et al., 1997). The prevalence of iron

Figure 36 - Percent of 2-4-year-old children with growth retardation



*Statistically significant difference from WIC participants at the .05 level or better.
Source: NHANES-III, 1988-94.

deficiency has decreased dramatically over the past three decades, in part because of increased iron intake among infants and young children and the influence of the WIC program (Yip et al., 1987). Nonetheless, iron deficiency remains a problem for young children, particularly those who are low-income. *Healthy People 2010* includes a goal to decrease the prevalence of iron deficiency among preschool children (ages 1 to 4) (U.S. DHHS, 2000a).

The terms anemia, iron deficiency, and iron-deficiency anemia are often used interchangeably, but are not equivalent (U.S. DHHS, 2000a). Although iron deficiency can contribute to anemia, anemia can also be caused by other factors, including other nutrient deficiencies, infection, inflammation, and hereditary anemias. When the prevalence of iron deficiency is high, anemia is a good predictor of iron deficiency. However, when the prevalence of iron deficiency is low, the majority of anemia is due to other causes (U.S. DHHS, 2000a).

This analysis assessed the prevalence of iron deficiency using the criterion defined in *Healthy People 2010* (U.S. DHHS, 2000a). This criterion defines iron deficiency as abnormal results on two or more of the following measures of iron status: serum transferrin saturation, erythrocyte protoporphyrin, and serum ferritin. Iron-deficiency anemia was defined as documented iron deficiency (as defined above) *plus* abnormally low hemoglobin (Looker et al., 1997). Cutoff values used in the analysis are shown in appendix B. The analysis sample was limited to children with data for all relevant variables.

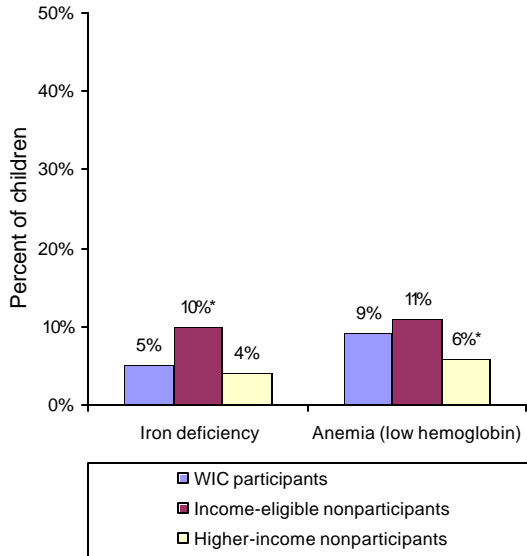
Anemia, defined on the basis of low hemoglobin or hematocrit, was used as a nutrition risk criterion by a majority of WIC State agencies at the time the NHANES-III data were collected (IOM, 1996).

Overall, the prevalence of iron deficiency among 1-4-year-old children was about 6 percent (table D-94).⁴ Prevalence was greatest among 1-year-olds (13%) and was substantially lower for older children (statistical significance of age-based differences not tested).

WIC children were significantly less likely than income-eligible children to be iron deficient (figure 37). In fact, income-eligible children were twice as likely as WIC children to be iron deficient (10% vs. 5%). This difference was largely concentrated among 3-year-olds (table D-94). WIC children in this age-specific cohort were also less likely to be iron deficient than higher-income children. But, overall, there was no significant difference between WIC children and higher-income children in the prevalence of iron deficiency.

⁴Results for each of the three measures of iron status considered in defining iron deficiency (serum ferritin, free erythrocyte protoporphyrin, and transferrin saturation) are presented in tables D-96 to D-98.

Figure 37 - Percent of children with iron deficiency and percent with anemia/low hemoglobin



*Statistically significant difference from WIC participants at the .05 level or better.
Source: NHANES-III, 1988-94.

Iron-deficiency anemia was observed in about 2 percent of 1-4-year-old children, overall (table D-98). Because of low prevalence, the point estimates for most subgroups are unreliable. However, it is clear that the prevalence of iron-deficiency anemia, like the prevalence of iron deficiency, was greatest among 1-year-olds. The data also indicate that WIC children were significantly more likely than higher-income children to have iron-deficiency anemia, although this was a relatively uncommon finding for all children, particularly those older than 2.

The prevalence of anemia, defined on the basis of low hemoglobin or hematocrit, was substantially greater than the prevalence of iron-deficiency anemia, as assessed in this analysis. (As noted previously, low hemoglobin levels may be caused by factors unrelated to iron status, including infection, inflammation, deficiencies of other nutrients (unlikely with this age group), and hereditary anemias). Eight percent of all children between the ages of 1 and 4 had low levels of hemoglobin and 7 percent had low hematocrits (tables D-99 and D-100). The prevalence of

anemia generally decreased with age; however, differences between 1-year-olds and other age groups were not as dramatic as the differences observed for iron deficiency (statistical significance of age-based differences not tested).

WIC children were no more or less likely than income-eligible nonparticipant children to have anemia, based on a low level of hemoglobin (figure 37). In comparison with higher-income children, however, WIC children were more likely to be anemic (9% vs. 6%).

Hospitalizations Since Birth

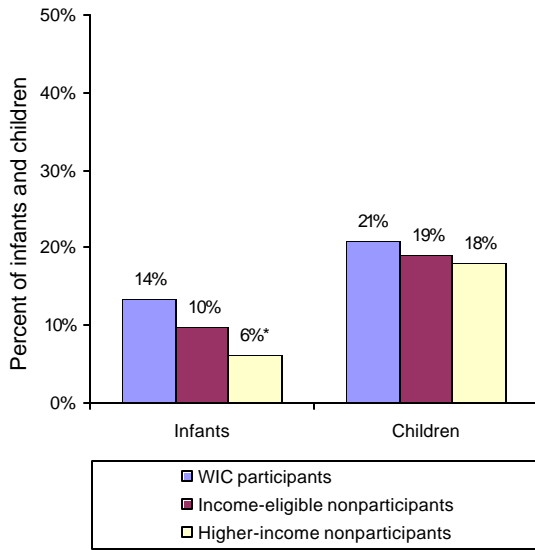
Overall, 17 percent of infants and 1-4-year-old children were hospitalized at least one time since birth (table D-101). WIC infants were significantly more likely to have been hospitalized than higher-income infants (14% vs. 6%) (figure 38). The difference in rates of hospitalization for WIC infants and income-eligible infants was not significant (14% vs. 10%).

The percent of children with hospitalizations since birth is a cumulative measure that increases with age. By the time children were 1 year of age, the difference between WIC participants and higher-income nonparticipants observed among infants had narrowed significantly. At that point, WIC children had a hospitalization rate of 19 percent, compared with 17 percent for higher-income children, and the difference was not statistically significant (table D-101). Similarly for 2-, 3-, and 4-year-olds and for children overall, there were no significant differences between WIC participants and either group of nonparticipants in the percent of children with one or more hospitalizations since birth.

Accidents, Injuries, and Poisonings Requiring Medical Attention

Parents and caregivers were asked whether infants or children had experienced, anytime

Figure 38 - Percent of infants and children with at least one hospitalization since birth



*Statistically significant difference from WIC participants at the .05 level or better.
Source: NHANES-III, 1988-94.

during the preceding 12 months, an accident, injury, or poisoning that was serious enough to require medical attention. Overall, 10 percent of infants and 1-4-year-old children had at least one such experience (table D-102). Not surprisingly, the percentage of children experiencing such medical emergencies was substantially greater than the percentage of infants (12% vs. 2%) (statistical significance of age-based difference not tested). No significant differences were observed between WIC participants and either group of nonparticipants on this measure.

Chronic Respiratory Conditions

Parents and caregivers were asked whether a health professional had ever told them that their infant or child had asthma, chronic bronchitis, or hay fever. The reported prevalence of all of these conditions was relatively low, overall (tables D-103 – D-105).

The only significant difference noted between WIC participants and nonparticipants, overall, was in the reported prevalence of asthma. WIC participants were significantly more likely than

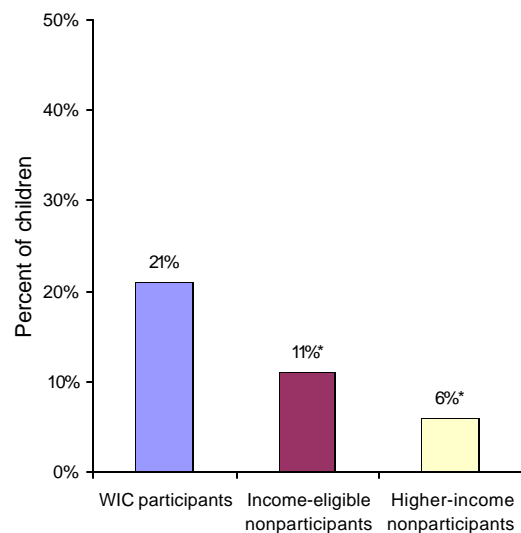
higher-income nonparticipants to have reported asthma (7% vs. 4%). This difference was observed for both infants and children.

Lead Poisoning Among Children

The NHANES-III interview asked parents and caregivers whether children had been screened for lead poisoning. Caregivers of children who had been screened were asked whether the results indicated that the child had “high lead or lead poisoning.”

Overall, 10 percent of 1-4-year-old children had reportedly been screened for lead poisoning (table D-106). Children participating in WIC were significantly more likely than either group of nonparticipating children to have been screened (figure 39). In fact, WIC children were almost twice as likely as income-eligible children and 3.5 times as likely as higher-income children to have been screened for lead poisoning (21% vs. 11% and 6%). This pattern was observed for each age-specific cohort (table D-106).

Figure 39 - Percent of children ever screened for lead poisoning



*Statistically significant difference from WIC participants at the .05 level or better.
Source: NHANES-III, 1988-94.

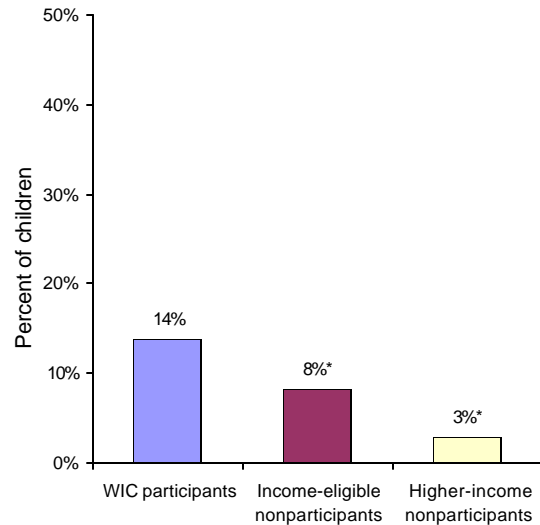
According to caregiver reports, the percentage of children found to have lead poisoning at any point in time was very low, less than 1 percent overall (table D-107). Nonetheless, the percentage of WIC children reported to have been diagnosed with lead poisoning was significantly greater than the percentage of higher-income children (the point estimate for higher-income children is statistically unreliable).

Based on NHANES-III laboratory tests and CDC-defined standards for elevated blood lead levels, the actual prevalence of lead poisoning was substantially greater than reported by caregivers. Overall, 7 percent of children were found to have blood lead levels indicative of lead poisoning (table D-108). Moreover, the prevalence of high blood lead levels was significantly greater for WIC children than for either group of nonparticipating children (figure 40). Fourteen percent of WIC children had abnormally high blood lead levels. Comparable statistics for nonparticipant children were 8 percent for income-eligible children 3 percent for higher-income children. Lead poisoning was being used as a nutritional risk criteria for WIC at the time NHANES-III data were collected.

The problem of lead poisoning has been declining sharply in recent years. Between NHANES-II (1976-80) and the first phase of NHANES-III (1988-91), the overall prevalence of lead poisoning in the population as a whole decreased from 77.8 percent to 4.4 percent (CDC, 1997). Between Phase I (1988-91) and Phase II (1991-94) of NHANES-III, the overall prevalence of high blood lead levels continued to decline, with percentage point decreases generally being greater among groups with the highest prevalence of elevated lead levels during Phase I (CDC, 1997).

Tables D-109 and D-110 present data on the prevalence of elevated blood lead levels among 1-4-year-old children in Phase I and Phase II of

Figure 40 - Percent of children with high blood lead levels



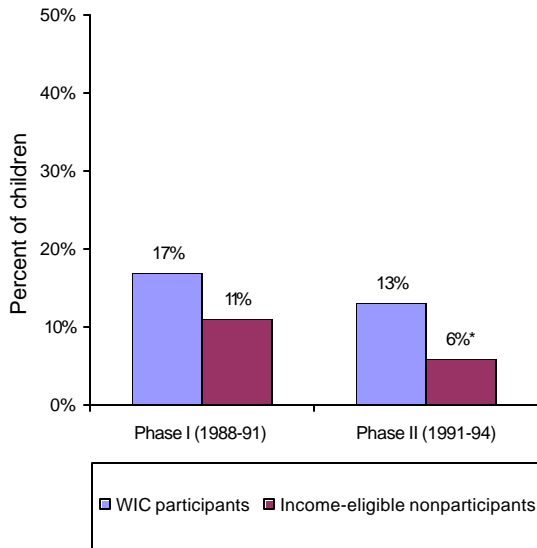
*Statistically significant difference from WIC participants at the .05 level or better.
Source: NHANES-III, 1988-94.

NHANES-III. (The data reported in table D-108 and figure 40 reflect the complete NHANES-III sample). The overall prevalence of elevated blood lead levels in this group of children decreased from 8.9 percent in Phase I to 5.2 percent in Phase II, a decrease of 42 percent.

Figure 41 illustrates the decrease in the prevalence of high blood lead levels over the period of the NHANES-III data collection for WIC children and income-eligible nonparticipant children. The decrease for WIC children was approximately 23 percent, from a prevalence of about 17 percent in Phase I to about 13 percent in Phase II. The decrease for income-eligible children was approximately 45 percent (from about 11% to about 6%). The decrease for higher-income children can not be determined reliably because the point estimate for higher-income children in Phase II is statistically unreliable (table D-110).

Because of declining prevalence over time, the Phase II data offer the most representative data on lead poisoning available from NHANES-III.

Figure 41 - Percent of children with high blood lead levels: NHANES-III, Phase I and II



*Statistically significant difference from WIC participants at the .05 level or better.

Note: Point estimate for higher-income nonparticipants in Phase II is statistically unreliable.

Source: NHANES-III, 1988-94.

These data indicate that WIC children were significantly more likely than either group of nonparticipating children to have lead poisoning. About 13 percent of WIC children had elevated blood lead levels, compared with 6 percent of income-eligible children. The difference between WIC children and higher-income children was also statistically significant. However, as noted, the point estimate for higher-income children is statistically unreliable.

Dental Health

All NHANES-III respondents 2 years of age and older received a dental exam as part of the physical examination component. In this exam, all decayed, missing, and filled teeth were charted.

Overall, pregnant and postpartum women had an average of 8.6 missing, decayed, or filled teeth (table D-111). WIC women and income-eligible women had comparable numbers of missing, decayed, and filled teeth. In comparison with

higher-income women, however, WIC women had fewer teeth that were missing, decayed, or filled.⁵

Children 2 to 4 years of age had, on average, about one missing, decayed, or filled tooth. Differences between groups were small, but the difference between WIC children and higher-income children was statistically significant, overall and for each of the age-specific cohorts except 3-year-olds.

Visits to a Dentist or Dental Hygienist

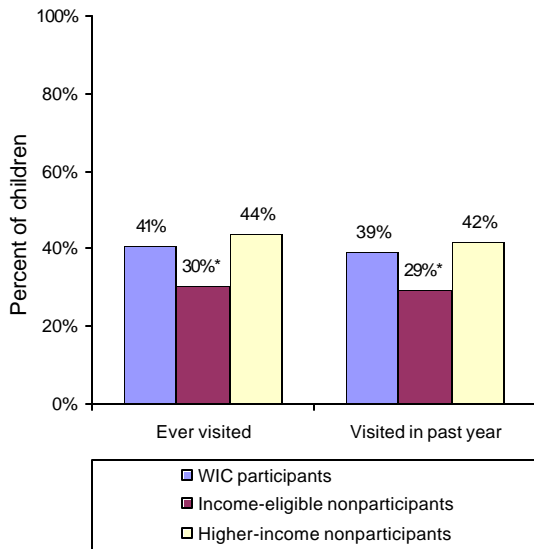
Overall, close to 100 percent of pregnant and postpartum women reported visiting a dentist or dental hygienist at least once in their lifetime (table D-112). Sixty-three percent reported visiting a dental health professional in the past year (table D-113). There were no statistically significant differences between WIC women and either group of nonparticipating women in these health practices.

Among children 2-4 years old, 38 percent visited a dental health professional at least once and 36 percent visited a dental health professional in the past year (tables D-112 and D-113). WIC children were no more or less likely to have had dental care visits than higher-income children. However, WIC children were significantly more likely than income-eligible children to have visited a dental health practitioner (figure 42). Forty-one percent of WIC children visited a

⁵It was not possible, for this report, to examine the difference between the dental health status of WIC women and higher-income women in more detail. The NHANES-III exam file does not provide separate totals for decayed, missing, and filled teeth. Nor does it provide information on these characteristics for each tooth. Rather, the file provides separate variables that describe the status of four different surfaces for each tooth. These detailed data can be used in future analyses to elucidate the underlying cause of the difference observed between the two groups of women. For example, higher-income women may have more *filled* teeth than WIC women. This may indicate attention to caries detected by x-ray—rather than those causing pain or clearly visible on the exterior of a tooth—resulting from higher quality dental care.

dental health professional at least once in their lives. In contrast, only 30 percent of income-eligible children had had a dental care visit. A comparable pattern was noted for reported dental visits during the past year (39% vs. 29%).

Figure 42 - Percent of children who have visited a dentist or dental hygienist



*Statistically significant difference from WIC participants at the .05 level or better.
Source: NHANES-III, 1988-94.