

Background

This study examines the trends in the prevalence of overweight among WIC children during the 1990s. The study is based on data collected by the biennial WIC Participant and Program Characteristics Studies (1992, 1994, 1996, and 1998). Overweight prevalence among WIC children is measured according to the revised growth charts, released by the National Center for Health Statistics (NCHS) in May 2000. WIC is the Special Supplemental Nutrition Program for Women, Infants, and Children. This Federal program is administered by USDA and provides supplemental foods, nutrition education, and health care referrals to pregnant and postpartum women, infants, and children up to age 5 who are income eligible and at nutritional risk. WIC regulations require anthropometric measurements (height or length, and weight) be taken and recorded as part of determining nutritional risk for all enrollees, and these data are regularly reported in the biennial WIC Participant and Program Characteristics Studies.

In May 2000, the National Center for Health Statistics (NCHS) released revised growth charts to replace the original NCHS growth charts developed in the 1970s. The revised growth charts are based on national survey data and improved statistical procedures. The revised charts overcome the shortcomings of the original charts, particularly with regard to measuring the growth of children from birth through 24 months.

This report provides a bridge for the WIC community between the old and revised NCHS growth charts. The revised growth charts are applied to WIC data from PC92, PC94, PC96, and PC98. The report compares the distributions of WIC children according to the original and revised charts, and examines the trends in

overweight prevalence among WIC children according to the revised growth charts.

Findings

Impact of Growth Chart Revision

According to NCHS, the impact of the growth chart revision varies by age group. For children age 6 and over, the main difference between the original and revised charts is that the revised charts are based on more recent (and thus heavier) reference populations. As a result, application of the revised charts for children age 6 and over results in lower estimates of overweight prevalence.

For children under age 6 -which includes the WIC population - the original charts suffered from discontinuity at age 24 months because national survey data were not available for children under 24 months. The revised charts, however, use national survey data (and more recent data) for all ages and eliminate the discontinuity in the original charts. The difference between the original and revised charts varies along the distribution of length and stature. The revised charts result in higher estimates of overweight for shorter children and lower estimates of overweight for taller children, with the difference for taller children more apparent for girls than boys (CDC, 2000). In 1998, 3.8 million children (age 13 to 59 months) were enrolled in WIC. In that year, overweight prevalence among WIC children (measured by weight-for-height), was 12.4 percent according to the original NCHS growth charts, and 13.2 percent according to the revised NCHS growth charts. The impact of the chart revision differs for boys and girls, with overweight prevalence increasing among boys (from 11.5 to 13.9 percent) and decreasing among girls (from 13.3 to 12.6 percent).

Trends in Overweight Among WIC Children

Reexamination of overweight prevalence among WIC children, using the NCHS revised growth charts, shows that 11 percent of WIC children were overweight in 1992 and 13.2 percent were overweight in 1998. Overweight prevalence rose 20 percent over this six-year period.

Overweight prevalence among boys exceeded overweight prevalence in girls by 1.3 percentage points in both 1992 and 1998. For boys, overweight prevalence increased from 11.6 to 13.9 percent over the 6-year period (a 19.8 percent rise in prevalence); for girls, overweight prevalence increased from 10.3 to 12.4 percent over the 6-year period (a 22.3 percent rise in prevalence). The percent of WIC children measured overweight decreases with age; in 1998, the percents overweight among one-, two-, three-, and four-year olds were 15.6, 14.2, 11.1, and 9.9 respectively.

Overweight prevalence among WIC children varies by racial/ethnic group, with Hispanic and Native American children having the highest rates of overweight prevalence (16.4 and 18.6 percent, respectively, in 1998). From 1992 to 1998, blacks had the smallest increase in overweight prevalence (0.9 percentage point) and Hispanics had the largest increase (2.0 percentage points). In relative terms, however, the increased prevalence for white children, from 9.2 to 11.1 percent, was a 20.7 percent increase over the 6-year period and the greatest relative increase among racial/ethnic groups.

Geographic differences in overweight prevalence have narrowed over time. In 1992, the Northeast and Western regions had the highest rates of overweight prevalence; but these regions experienced the smallest growth in overweight prevalence between 1992 and 1998. On a State-by-State basis, the percent of WIC children who were overweight in the median State in 1992 was 10 percent; by 1998, more than 10 percent of WIC children were overweight in all but 5 States.

Prevalence and Co-occurrence of Nutrition Risks in Overweight Children

While overweight status is a nutritional risk that qualifies low-income children for WIC enrollment, it is clear from WIC data that overweight WIC children have health concerns that are more complicated than simple excess weight. The majority of overweight WIC children (88.9 percent) have nutrition risks in addition to overweight status.

Aside from being overweight, overweight WIC children are similar to other WIC children in that their most common nutrition risks are inadequate or inappropriate nutrient intake and low hematocrit or hemoglobin. Overweight children, however, are more likely to have multiple nutrition risks, compared to other WIC children: 79.1 percent of overweight WIC children have two or three nutrition risks, while only 48.2 percent of other children have two or three risks.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all of its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, political beliefs, genetic information, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.)

Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write: USDA, Director, Office of Adjudication, 1400 Independence Avenue, SW, Washington, DC 20250-9410; or call (866) 632-9992 (Toll-free Customer Service), (800) 877-8339 (Local or Federal relay), or (866) 377-8642 (Relay voice users) or (800) 845-6136 (Spanish Federal-relay). USDA is an equal opportunity provider and employer.