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Obesity and Overweight Status in Minnesota WIC Children

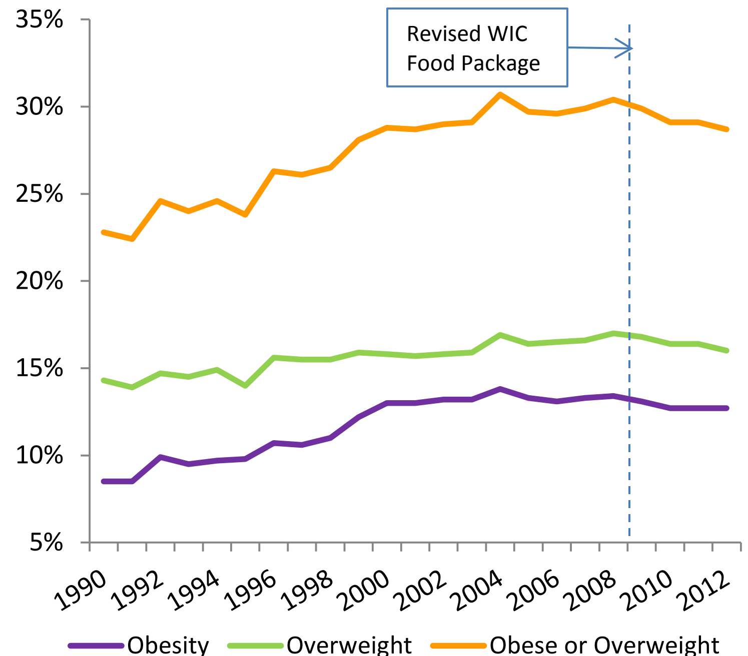
The prevalence of overweight and obesity status in children and adolescents has increased nationwide in recent decades, highlighting the need for public health initiatives focused on prevention of overweight and obesity.

Childhood obesity* has both immediate and long lasting effects on the child. Obese children are more likely to have asthma, joint problems, high blood pressure, GERD (heartburn), obstructive sleep apnea, and high cholesterol. Obese or overweight children are more likely to become overweight adults.[1]

Obesity in adults is associated with many chronic health conditions including cardiovascular disease, diabetes and certain cancers.[1] The medical care costs associated with obesity in the United States in 2008 totaled is estimated at $147 billion.[2]

The WIC Program serves low and moderate-income pregnant and breastfeeding women, infants, and children up to age five. WIC serves populations that are at higher risk for obesity than the general population.

Figure 1. Obesity, Overweight in MN WIC Children ages 2-5 years[3]



Prevalence in Minnesota WIC Children

- Obesity in Minnesota WIC children has decreased from a peak of 13.8% in 2004 to 12.7% in 2012. (Figure 1).
- Overweight prevalence (not including obesity) in Minnesota WIC children decreased by 5.3% from 16.9% in 2004 to 16.0 % in 2012. (Figure 1).
- In 2012, approximately 20,000 of the 70,000 Minnesota WIC children ages 2 to 5 years were either obese or overweight and 9,000 were obese.[3]
- In 2012, the Minnesota WIC child obesity rate of 12.7% was above the 2020 Healthy People objectives for obesity in childhood of 9.6%.[4]

Minnesota WIC Promotes Healthy Weight

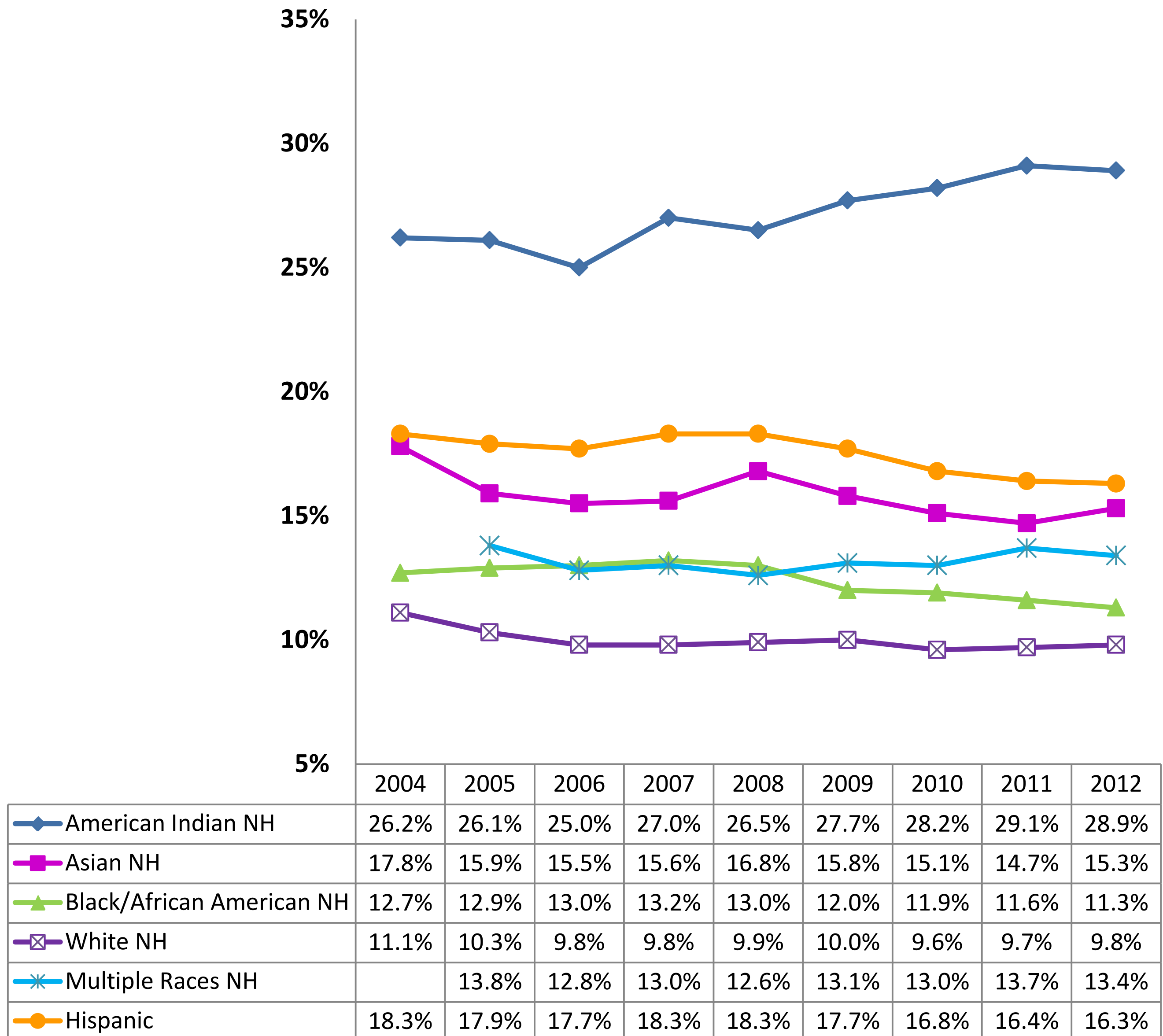
WIC promotes a healthy weight for both mother and child through these services:

- Individualized nutrition assessments and counseling on how to help children eat a healthy diet;
- Providing a more nutritious food package in 2009 to include low fat milk, whole grains, and fruits and vegetables;
- Monitoring appropriate weight gain and growth;
- Encouraging families to be physically active and to limit screen time for television, computers, and video games;
- Referrals to community nutrition and physical activity resources; and
- Promoting exclusive breastfeeding for the first six months of life and breastfeeding with healthy foods for the first year of life.

* Children ages two years and older whose BMI-for-age (weight/height^2) is at the 95th percentile or greater are "obese" and those whose BMI is at or above the 85th but less than the 95th percentiles are considered "overweight" or "at risk for obesity."

Obesity by Race and Ethnicity in Minnesota WIC Children

Figure 2. Obesity in Minnesota WIC Children Ages 2 to 5 years by Race/Ethnicity[3]

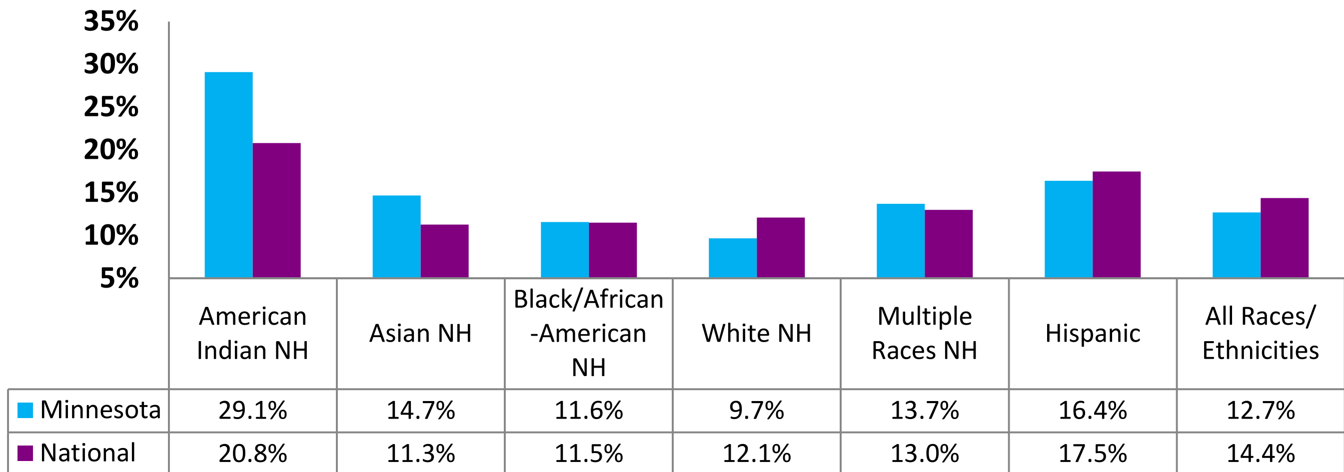


	2004	2005	2006	2007	2008	2009	2010	2011	2012
American Indian NH	26.2%	26.1%	25.0%	27.0%	26.5%	27.7%	28.2%	29.1%	28.9%
Asian NH	17.8%	15.9%	15.5%	15.6%	16.8%	15.8%	15.1%	14.7%	15.3%
Black/African American NH	12.7%	12.9%	13.0%	13.2%	13.0%	12.0%	11.9%	11.6%	11.3%
White NH	11.1%	10.3%	9.8%	9.8%	9.9%	10.0%	9.6%	9.7%	9.8%
Multiple Races NH		13.8%	12.8%	13.0%	12.6%	13.1%	13.0%	13.7%	13.4%
Hispanic	18.3%	17.9%	17.7%	18.3%	18.3%	17.7%	16.8%	16.4%	16.3%

NH = Non-Hispanic   Multiple races were not measured until 2005. Child race/ethnicity is self-identified by WIC parents.

- Minnesota WIC child obesity rates have declined since 2004 in most race/ethnicity groups.
- In 2012, the obesity rate for White Non-Hispanic (NH) children of 9.8% approached the Healthy People 2020 objective of 9.6%.[4]
- There are significant racial and ethnic disparities in obesity prevalence among Minnesota WIC children.
- Rates in American Indian children rose until 2011 and declined slightly in 2012. In 2012, the rate of obesity in American Indian children of 28.9% was over three times the Healthy People 2020 objective of 9.6[4] (Figure 2) and over twice the rate for all race/ethnicity groups combined, 12.7% (Figure 3).
- The rate of obesity in Hispanic children decreased, but is 1.7 times the Healthy People 2020 objective[4] (Figure 2).

Figure 3. Obesity in Children Ages 2 to 5 years by Race/Ethnicity For Minnesota WIC and National PEDNSS Data for 2011[3,5]



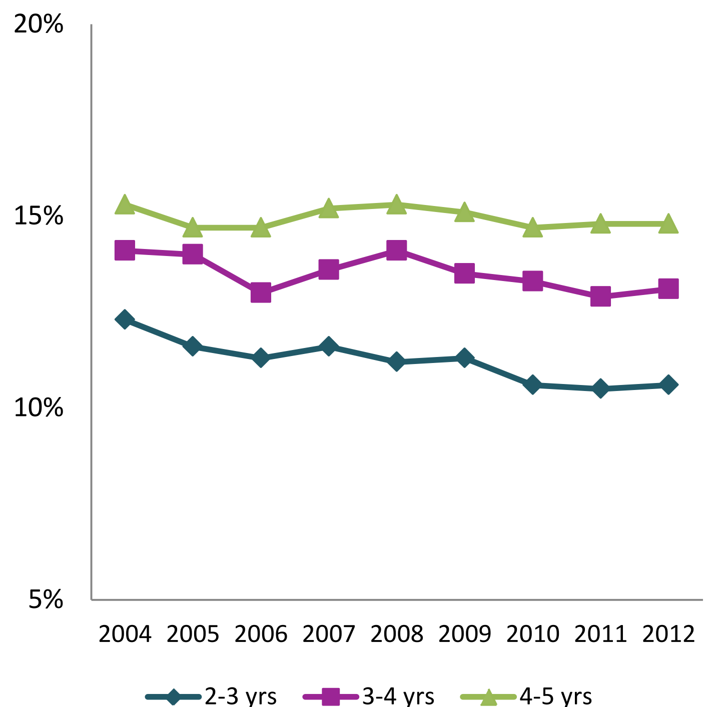
	American Indian NH	Asian NH	Black/African -American NH	White NH	Multiple Races NH	Hispanic	All Races/ Ethnicities
Minnesota	29.1%	14.7%	11.6%	9.7%	13.7%	16.4%	12.7%
National	20.8%	11.3%	11.5%	12.1%	13.0%	17.5%	14.4%

- Minnesota has lower rates of obesity for combined races/ethnicities compared to national rates (Figure 3).
- The Minnesota American Indian obesity rate (29.1) was 40% higher than the national rate (20.8). The obesity rate (14.7) in Minnesota Asian children, many of whom were Hmong, was 30% higher than the national rate (11.3). (Figure 3).

Obesity by Age Group

- Rates of obesity decreased from 2004 to 2012 in children aged 2 to 3 years (12.3 compared to 10.6) and children aged 3 to 4 years (14.1 compared to 13.1). (Figure 4).
- Obesity emerged to a greater extent at age four (Figure 4). Children ages 4 to 5 years had an obesity rate 1.5 times the Healthy People 2020 goal (14.8 compared to 9.6).
- Obesity in childhood is predictive of obesity in adulthood. [1]

Figure 4. Obesity by Age Group in Minnesota WIC Children[3]



References

1. Centers for Disease Control and Prevention. Childhood overweight and obesity. http://www.cdc.gov/obesity/childhood/index.html last accessed 4/30/2013.
2. Finklestein EA, Trogdon JG, Cohen JW, Dietz W. Annual medical spending attributable to obesity: Payer-and service-specific estimates. *Health Affairs* 2009; 28(5):w822-w831.
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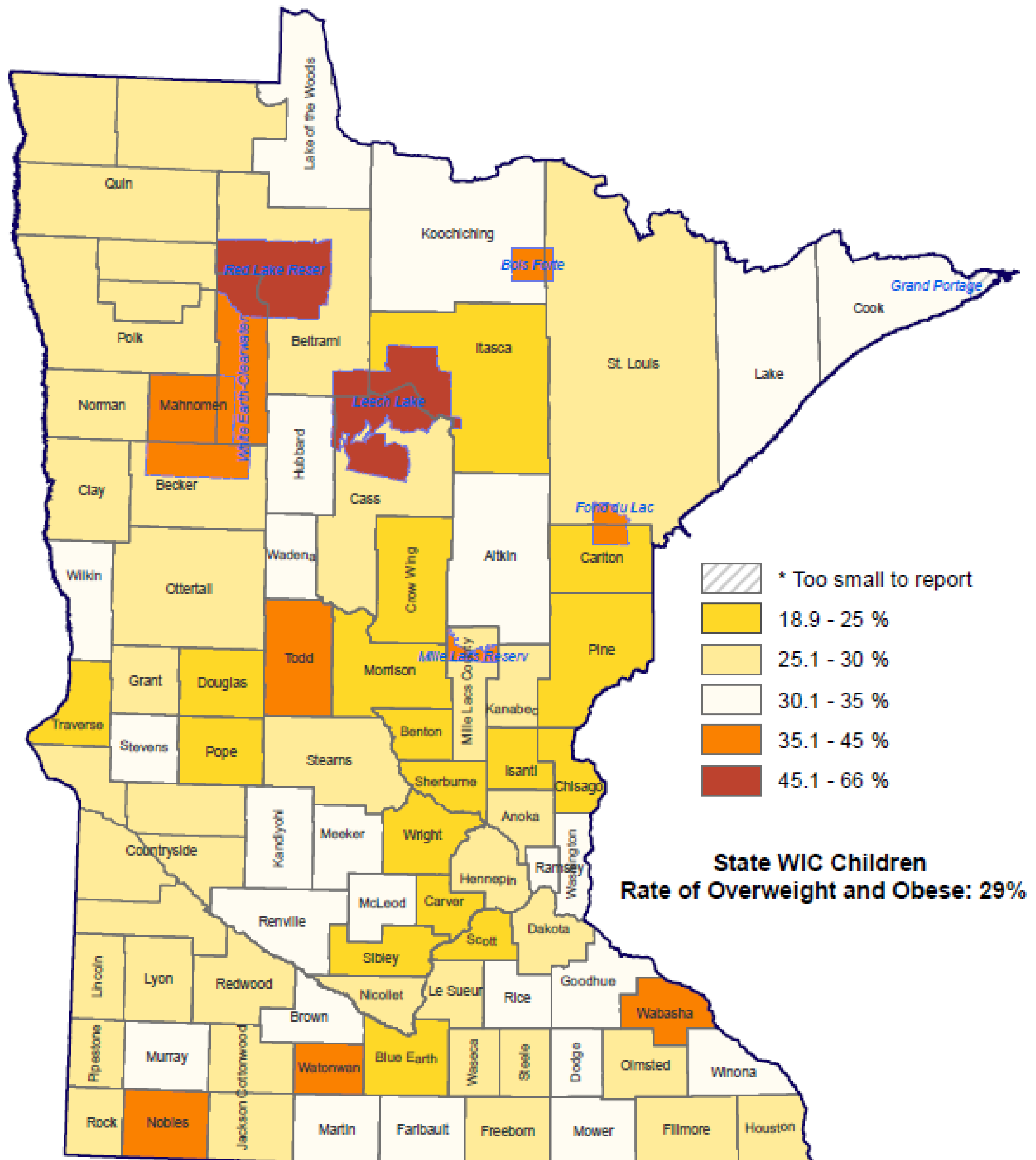
5. Centers for Disease Control and Prevention. Pediatric Nutrition Surveillance System. State Tables. Statewide data-Summary of demographic and health indicators, including statewide trend data. http://www.health.state.mn.us/divs/fh/wic/localagency/infosystem/pednss/2010statewide.pdf last accessed 4/30/2013.

Obesity and Overweight Status in Children Aged 2-5 years Participating in MN-WIC, June 2012



Child Overweight Status and Obesity: BMI ≥85th percentile for age

MINNESOTA WOMEN, INFANTS & CHILDREN NUTRITION PROGRAM

For more information, contact:
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Data collected in WIC clinics in geographic areas shown.