

2. Nutrition

Goal

To promote health and reduce chronic disease risk, disease progression, debilitation, and premature death associated with dietary factors and nutritional status among all people in Kentucky.

Overview

Nutrition is essential for growth, development, and maintenance of every individual. Diet has been linked to preventable illness and premature death in the United States and to the nation's economic burden. In Kentucky, dietary factors are associated with four of the ten leading causes of death: coronary heart disease, some types of cancer, strokes, and diabetes mellitus. Dietary factors are also linked to osteoporosis, which is the major underlying cause of bone fractures among the elderly and postmenopausal women in the United States. During the last five years, obesity rates have increased in children, adolescents, and adults in Kentucky. The effects of diets high in fats and sugars and the lack of physical activity contribute to the obesity "epidemic". The economic costs of adult obesity for Kentucky were estimated by Centers for Disease Control and Prevention (CDC) in 2003 to be \$1.163 billion.

Summary of Progress

Objectives 2.1 through 2.3 deal with pediatric and adult obesity, which continue to be on the rise. Legislation, advocacy, and health programs have been activated during the last five years to address obesity, but progress is not expected to impact data for at least a generation. Growth retardation or underweight among low-income children has improved slightly over the last five years. Underweight has improved over the last five years showing a decrease from 6.2 percent in 2000 to 4.0 percent in 2004. Diet related problems such as iron deficiency and meals low in fruits and vegetables continue to be prevalent. The objective for consumption of five fruits and vegetables per day has not been attained during the last five years in Kentucky. Iron deficiency anemia in low income children under the age of five has remained stable at approximately 11 percent from 2000 to 2004.

Progress toward Achieving Each HK 2010 Objective

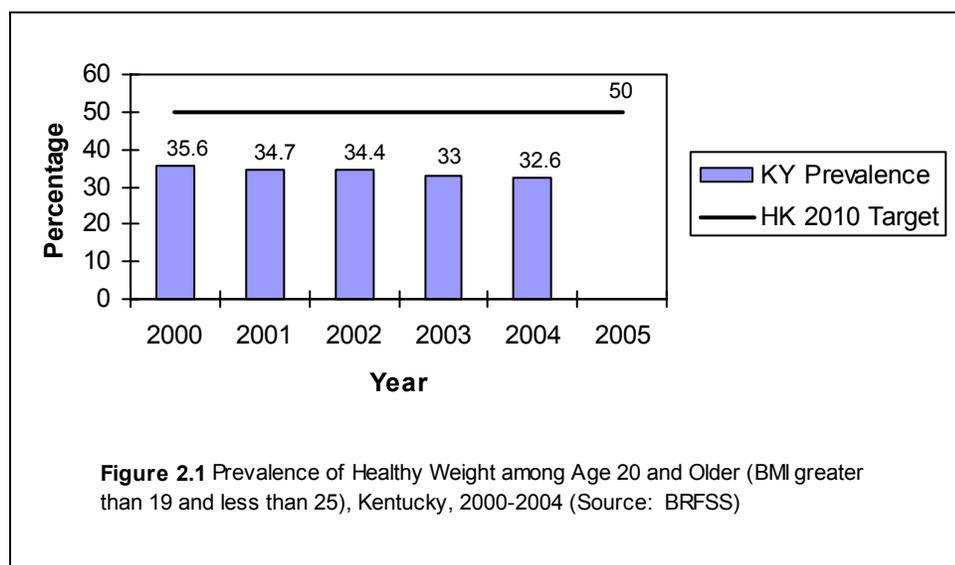
- 2.1. Increase to at least 50 percent the prevalence of healthy weight (defined as a body mass index (BMI) greater than 19.0 and less than 25.0) among all people aged 20 and older.**

Data Source: Behavioral Risk Factor Surveillance System (BRFSS)

Baseline: 35.6 percent in 2000

HK2010 Target: Greater than or equal to 50 percent

Mid-Decade Status: 32.6 percent in 2004



Strategies to Achieve Objective:

- Local health department dietitians, nutritionists, health educators and nurses will provide group education emphasizing healthy habits based upon identified needs in the schools, community, and partnerships.
- Certified Nutritionists/Registered Dietitians will provide Medical Nutrition Therapy (MNT) specifically addressing overweight and obesity, as appropriate. In 2004, the leading diagnosis code for MNT visits were for obesity.
- Continue infrastructure development through the Nutrition, Physical Activity, and Obesity Grant from CDC
- Apply for implementation level funding from CDC for Nutrition, Physical Activity, and Obesity Grant

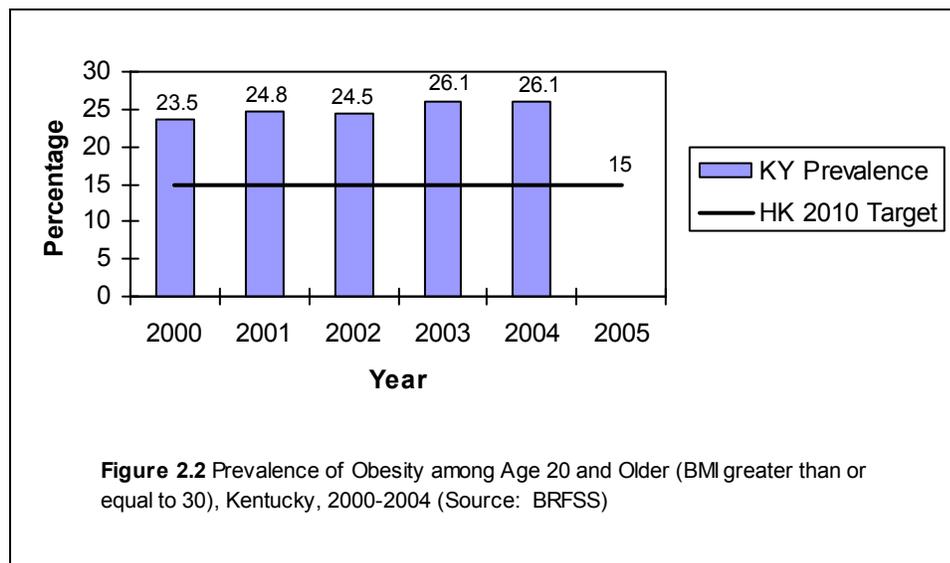
2.2. Reduce to less than 15 percent the prevalence of BMI at or above 30.0 among people aged 20 and older.

Data Source: BRFSS

Baseline: 23.5 percent in 2000

HK 2010 Target: Less than 15 percent

Mid-Decade Status: 26.1 percent in 2004



Strategies to Achieve Objective:

- Provide group education in the community and schools by local health department dietitians, nutritionists, health educators and nurses based upon identified needs, with emphasis on a level of BMI 30 or greater due to the expected higher rates of mortality and morbidity. Partner with community resources to implement evidenced-based nutrition and physical activity programs
- Provide Medical Nutrition Therapy (MNT) by Certified Nutritionists/Registered Dietitians specifically addressing overweight and obesity, as appropriate. In 2004, the leading diagnosis code for MNT visits was for obesity

2.3. Reduce to 5 percent or less the prevalence of overweight and obesity (at or above the sex and age specific 95th percentile of BMI from the revised NCHS/CDC growth charts) in children (aged 1-5 and 6-11) and adolescents (aged 12-19).

Data Source: CDC Pediatric Nutrition Surveillance (PedNSS)
Youth Risk Behavior Surveillance System (YRBSS)

Baseline: No baseline data is available for the 6 -11 age group. In 2000, CDC Pediatric Nutrition Surveillance System (PedNSS) data for Kentucky children on the Kentucky Women Infants and Children Program (WIC) reported 13.5 percent of the children were above the 95th percentile on age-appropriate National Center for Health Statistics (NCHS) and CDC growth charts. In 2001 the YRBSS reported 12.3 percent of high school students were overweight.

HK 2010 Target: Children age less than 5 on WIC, Less than or equal to 5 percent;
Adolescents in High School, less than or equal to 5 percent

Mid-Decade Status: Children age less than 5 on WIC, 17.7 percent in 2003;
Adolescents in high school, 14.6 percent in 2003

Data Needs: Data are needed on children age 1 to 5, other than those on WIC, as well as data on children age 6 to 11.

Strategies to Achieve Objective:

- In 2006, Kentucky will begin pilot-testing the use of the CDC/NCHS growth charts in an automated format. Growth charts are divided into two groups: girls and boys and within the group by age - birth to 36 months and age 2 to 20. Data will be collected on length/height and weight and analyzed according to: at risk for short stature, short stature, at risk for underweight, underweight, at risk for overweight, overweight and BMI for age 2 and older. This pilot-test will begin with WIC infants and children but will advance to collect height and weight on any infant/child/adolescent based upon services that include collection of height and weight (e.g. well child visits, immunizations, etc.). Analysis of the data will be conducted by the CDC through PedNSS.
- Review feeding practices among the WIC population and provide healthy food packages to assist parents/caregivers/guardians in maintaining appropriate weight for height of WIC children. Continue to offer and encourage fat free and 1 percent dairy products through WIC
- Provide Medical Nutrition Therapy specifically addressing overweight and obesity by Certified Nutritionists/Registered Dietitians as appropriate. In 2004, the leading diagnosis code for MNT visits were for obesity.
- Provide counseling appropriate for parents/caregivers/guardians and their perception of the child. The counseling includes information about the importance of physical activity.
- Collaborate with the Division of Nutrition and Health Services staff of the Department of Education to provide training and education in the schools for cafeteria staff, teachers, parents, and administrators concerning healthy meals and the importance of 5 A DAY.
- Collaborate with the Nutrition and Health Services staff to provide healthy meals and snacks and continue promotion of 5 A DAY programs at the summer feeding programs
- Develop community programs through city and county parks, YMCA's, and other recreational sites/facilities to emphasize good health and

nutrition

- Provide healthy menus for kid's meals at Kentucky State Parks including 5 A DAY information
- Expand the CDC Pediatric PedNSS to gather data from local health departments on patients ages 6-20 years

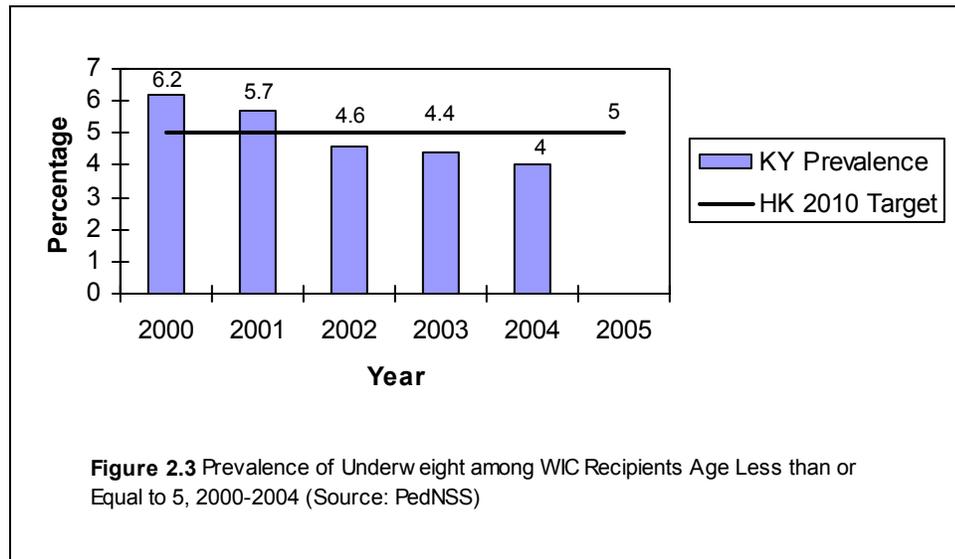
2.4. Maintain reduced growth retardation among low-income children aged 5 and younger to 5 percent or less.

Data Source: PedNSS

Baseline: Underweight in 2000 was 6.2 percent (WIC only data)

HK 2010 Target: 5 percent or less

Mid-Decade Status: 4 percent in 2004 (WIC only data)



Strategies to Achieve Objective:

- Current data sources only address the low income population seen in WIC within Kentucky's health departments. However, the Healthy Kentuckians 2010 Objective is addressing only the low income population and it is expected that most of this population are served by Kentucky's WIC Program. Consequently, there is no plan at this time to gather data outside the WIC Program.
- Continue early prenatal and child entry into WIC services
- Provide maximum food packages or special formula from WIC, as needed for eligible participants to assist in growth and development
- Promote avoidance of smoking, alcohol and drugs in the community and in identified prenatal women to prevent low birth weight and

nutrition

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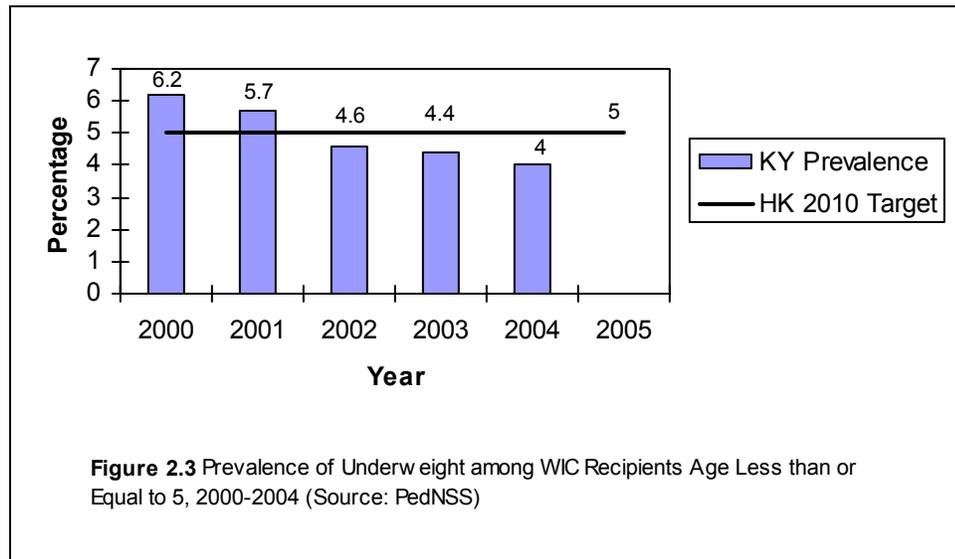
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- Provide maximum food packages or special formula from WIC, as needed for eligible participants to assist in growth and development
- Promote avoidance of smoking, alcohol and drugs in the community and in identified prenatal women to prevent low birth weight and

- prematurity
- Provide education in communities through partnerships to promote healthy growth and development

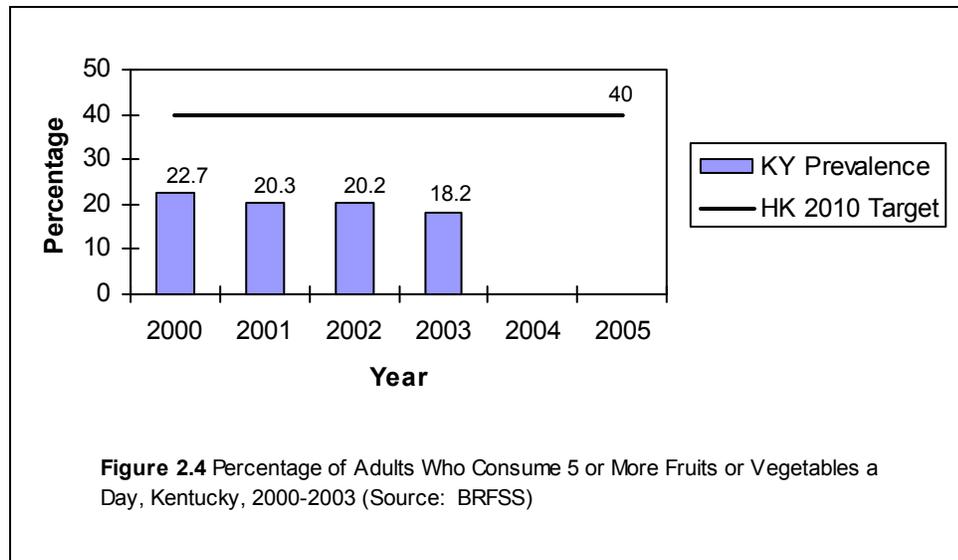
2.5. Increase to at least 40 percent the proportion of people age 2 and older who meet the *Dietary Guidelines'* minimum average daily goal of at least five servings of vegetables and fruits.

Data Source: BRFSS and Youth Risk Behavior Surveillance System (YRBSS)

Baseline: 22.7 percent of adults age 18+ in 2000 (BRFSS); 19.2 percent of 9th through 12th graders in 2001 (YRBSS)

HK2010 Target: At least 40 percent

Mid-Decade Status: 18.2 percent of adults age 18+ in 2003 (BRFSS); 13.2 percent of 9th through 12th graders in 2003 (YRBSS)



Strategies to Achieve Objective:

- Current data sources only address data from age 18 and older through BRFSS and high school students through YRBSS. There is no plan at this time to gather data outside these sources.
- Provide education in communities through partnerships to promote healthy eating and lifestyles
- Continue offering 5 A Day display board with materials for health fairs across Kentucky. Support 5 A DAY activities through nutrition-community funding
- Collaborate with the Division of Nutrition and Health Services staff in

providing training and education in the schools for cafeteria staff, teachers, parents, and administrators concerning healthy eating and lifestyles

- Continue collaboration with the Kentucky Department of Agriculture to highlight 5 A Day through the Kentucky Farmers Market

2.6. Reduce iron deficiency to 7 percent or less among low-income children aged 1 and 2 and to less than 5 percent among low-income children aged 3 and 4. (See Revision)

2.6R. (REVISION) Reduce iron deficiency to 7 percent or less among low-income children less than age 5.

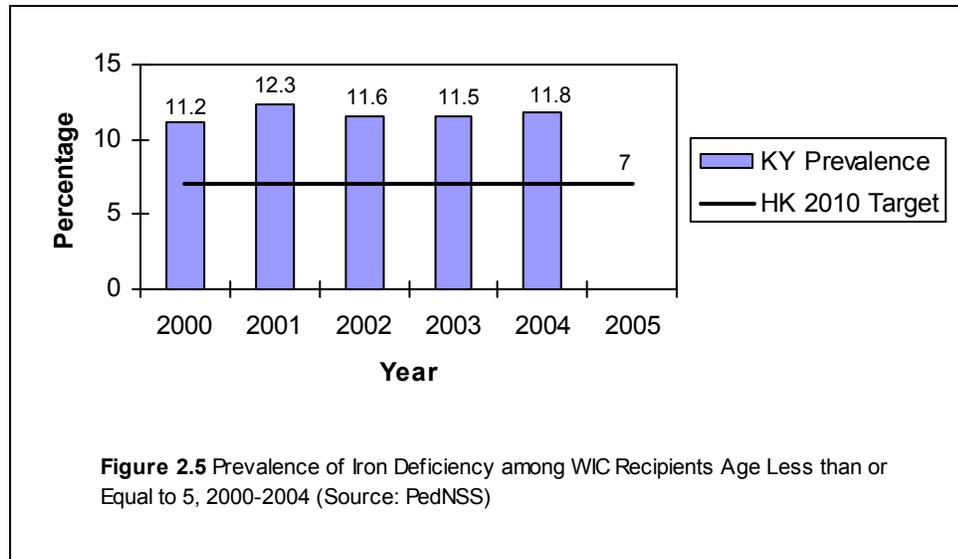
Reason for Revision: Objective is revised to reflect how data are collected on PedNSS.

Data Source: PedNSS

Baseline: 11.2 percent in 2000

HK 2010 Target: 7 percent

Mid-Decade Status: 11.8 percent in 2004 (WIC only age < 5 years)



Strategies to Achieve Objective:

- Current data sources only address the low income population seen in WIC within Kentucky's health departments. However, the Healthy People 2010 Objective is addressing only the low income population and it is expected most of this population are served by WIC in

Kentucky. There is no plan at this time to gather data outside these sources due to the focus of the objective.

- Continue early entry into WIC services (key nutrients in WIC foods are iron and Vitamin C)
- Provide community and individual education concerning the importance of iron-rich and Vitamin C foods
- Encourage the early use of prenatal vitamins and include this information in community prenatal classes

Contributors

- Emma Walters, MS, RD, LD, Nutrition Services Branch, Department for Public Health, Chapter Co-Coordinator
- Elizabeth Fiehler, MS, RD, Nutrition Services Branch, Department for Public Health, Chapter Co-Coordinator
- Fran Hawkins, MS, RD, LD, Manager, Nutrition Services Branch, Department for Public Health
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2. Nutrition – Summary Table

Summary of Objectives for Nutrition	Baseline	HK 2010 Target	Mid-Decade Status	Progress	Data Source
2.1. Increase to at least 50 percent the prevalence of healthy weight (defined as a body mass index (BMI) greater than 19.0 and less than 25.0) among all people aged 20 and older.	35.6% (2000)	≥50%	32.6% (2004)	No	BRFSS
2.2. Reduce to less than 15 percent the prevalence of BMI at or above 30.0 among people aged 20 and older.	23.5% (2000)	<15%	26.1% (2004)	No	BRFSS
2.3. Reduce to 5 percent or less the prevalence of overweight and obesity (at or above the sex and age specific 95 th percentile of BMI from the revised NCHS/CDC growth charts) in children (aged 1-5 and 6-11) and adolescents (aged 12-19).					
Children <5 on WIC	13.5% (2000)	≤5%	17.7% (2003)	No	PedNSS
Adolescents in High School	12.3% (2001)	≤5%	14.6% (2003)	No	YRBSS
2.4. Maintain reduced growth retardation among low-income children aged 5 and younger to 5 percent or less.	6.2% (2000)	≤5%	4% (2004)	Target Achieved	PedNSS
2.5. Increase to at least 40 percent the proportion of people age 2 and older who meet the Dietary Guidelines' minimum average daily goal of at least five servings of vegetables and fruits.					
Adolescents in High School	19.2% (2001)	≥40%	13.2% (2003)	No	YRBSS
Adults Age 18+	22.7% (2000)	≥40%	18.2% (2003)	No	BRFSS
2.6R. Reduce iron deficiency to 7 percent or less among low-income children less than age 5.	11.2% (2000)	≤7%	11.8% (2004)	No	PedNSS

R = Revised objective

- prematurity
- Provide education in communities through partnerships to promote healthy growth and development

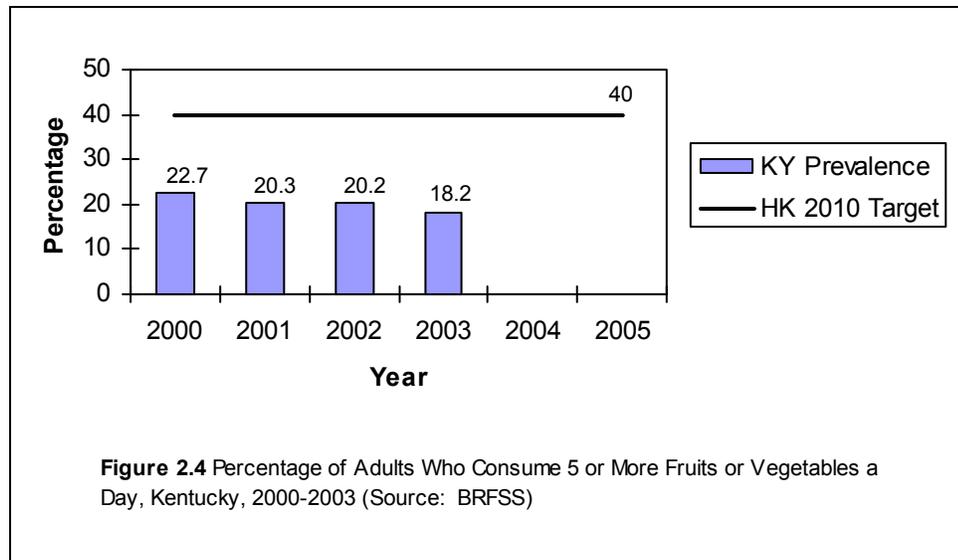
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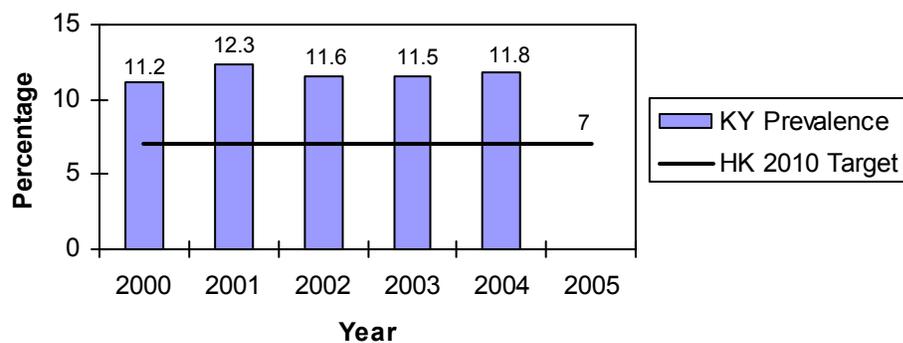


Figure 2.5 Prevalence of Iron Deficiency among WIC Recipients Age Less than or Equal to 5, 2000-2004 (Source: PedNSS)

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