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.

Terminology

BRFSS: Behavioral Risk Factor Surveillance System

CDC: Centers for Disease Control and Prevention

Five-A-Day: Five or more servings a day of fruits and vegetables

NCHS: National Center for Health Statistics

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 Type 2 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.

Progress Toward Year 2000 Objectives

2.1 To reduce dietary fat intake to an average of 30 percent of calories or less, and average saturated fat intake to less than 10 percent of calories, among people ages 2 and over. (Relates to *Healthy People 2000* Objective 2.5)

The 1993 Youth Behavior Risk Survey found that 67 percent of males and 63 percent of females ate French fries or potato chips one or more times during the previous day. This same population also reported that 65 percent of males and 56 percent of females ate cookies, doughnuts, pie or cake one or more times during the previous day.

2.2 To increase complex carbohydrate and fiber containing foods in the diets of adults to five or more daily servings for vegetables (including legumes) and fruits, and to six or more daily servings for grain products. (Relates to *Healthy People 2000* Objective 2.6)

The Kentucky Health Interview and Examination Survey from 1993 found 22.5 percent of children ages 1-5 ate 5 A Day, 16,8 percent for children ages 6-11, 17.4 percent for adolescents ages 12-17, 14.2 percent for adults ages 18-44 and 27.2 percent for adults age 45-64.

A review of data from the 1997 and 1998 BRFSS found a decrease within some age groups and an increase within some age groups in consumption of fruits and vegetables noted as follows:

Age Group	Percent consuming 5 or more fruits/vegetables per day	
	1997	1998
18 – 24	16.0%	12.3%
25 – 34	11.8%	13.7%
35 – 44	12.5%	15.1%
45 – 54	16.3%	14.7%
55 – 64	19.8%	17.0%
65+	19.1%	20.8%

2.3 By 2000, decrease salt and sodium intake so at least 65 percent of home meal preparers prepare foods without adding salt, at least 80 percent of people avoid using salt at the table, and at least 40 percent of adults regularly purchase foods modified or lower in sodium. (Relates to *Healthy People 2000* Objective 2.9)

No Kentucky specific data.

2.4 By 2000, increase to at least 75 percent the proportion of primary care providers who provide nutrition assessment and counseling and/or referral to qualified nutritionists or dietitians. (Relates to *Healthy People 2000* Objective 2.21)

No Kentucky specific data.

2.5 By 2000, reduce iron deficiency to less than 3 percent among children aged 1 through 4 and among women of childbearing age. (Relates to *Healthy People 2000* Objective 2.10)

After review of the CDC Pediatric Surveillance data (represents data from the WIC population of children less than age 5) from 1990 through 1998, iron deficiency did decrease during the decade but did not reach the goal of less than 3

percent among women and children. No data are available for women in Kentucky. Available data shown below.

WIC Children 0 through 4 with Iron Deficiency
CDC Pediatric Surveillance Data

Year	Percentage	Year	Percentage
1990	19.9%	1995	16.8%
1991	18.4%	1996	15.8%
1992	18.3%	1997	15.4%
1993	19.6%	1998	12.7%
1994	17.8%		

2.6 By 2000, reduce growth retardation among low-income children aged 5 and younger to less than 10 percent.

After review of the CDC Pediatric Surveillance data (represents data from the WIC population of children less than age 5) from 1990 through 1998, growth retardation among the WIC children was maintained below 3 percent which is below the Year 2000 goal of less than 10 percent. Available data shown as follows:

Growth Retardation among WIC Children 0-4
CDC Pediatric Surveillance Data

Year	Percentage	Year	Percentage
1990	2.7%	1995	2.5%
1991	2.8%	1996	2.4%
1992	2.7%	1997	2.4%
1993	2.7%	1998	2.3%
1994	2.4%		

2.7 To reduce low birth weight among the Kentucky WIC population to an incidence of no more than 8 percent of live births.

After review of the CDC Pediatric Surveillance data (represents data from the WIC population of children less than age 5) from 1990 through 1998, this goal was not attained.

Low Birth Weight in WIC Population 0-4
CDC Pediatric Surveillance Data

Year	Percentage	Year	Percentage
1990	9.1%	1995	8.9%
1991	9.0%	1996	9.1%
1992	8.8%	1997	9.2%
1993	8.8%	1998	9.1%
1994	8.7%		

2.8 By 2000, increase to at least 75 percent the proportion of parents and care givers who use feeding practices that prevent baby bottle tooth decay. **(**Relates to *Healthy People 2000* Objective 2.12)

No Kentucky specific data.

2.9 By 2000, increase to at least 75 percent the proportion of mothers who breastfeed their babies in the early postpartum period and to at least 50 percent the proportion who continue breastfeeding until their babies are 5 to 6 months old. (Relates to *Healthy People 2000* Objective 2.11)

After review of the Kentucky WIC Infant Feeding Survey, this goal was not met. Data provided below.

Kentucky WIC Infant Feeding Survey
Incidence of Breastfeeding

Year	Percentage	Year	Percentage
1990	23%	1994	26%
1991	26%	1995	28%
1992	27%	1996	31%
1993	26.6%	1997	32%

Kentucky WIC Infant Feeding Survey
Duration of Breastfeeding (to 5-6 months)

Year	Percentage	Year	Percentage
1990	8%	1994	14%
1991	4%	1995	19%
1992	2%	1996	16%
1993	16%	1997	15%

2010 Objectives

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.

Baseline: The 1995 – 1997 BRFSS provides prevalence data that 31.8 percent of Kentuckians age 18 and older are overweight. During this reporting of the BRFSS, the BMI was defined differently than the current Year 2010 Objective. A BMI of greater than 27.8 for men and 27.3 for women were the parameters used during 1995-1997.

Target Setting Method: Because of changes in the BMI parameters and having the fastest growing segment of the population above age 65, create and revise the percentage of this objective downward for Kentucky.

Data Source: BRFSS.

Implementation Strategy:

- Local health department health educators, nurses and nutritionist will provide group education emphasizing healthy habits based upon identified needs in the schools and in the community.
- Certified Nutritionists/Registered Dietitians will provide Medical Nutrition Therapy specifically addressing overweight and obesity, as appropriate.
- Partner with appropriate community resources to provide education.
- Conduct community assessments to determine successful interventions.
- Update the BRFSS to include BMI parameters identified in *Healthy People 2010.*

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

Baseline: No Kentucky data are available.

Target Setting Method: *Healthy People 2010* guidelines

Data Source: BRFSS.

Implementation Strategy:

- Provide group education in the community and schools by local health department health educators, nurses, and nutritionists, based upon identified needs, with emphasis on this level of BMI due to the expected higher mortality and morbidity.
- Provide Medical Nutrition Therapy by Certified Nutritionists/Registered Dietitians specifically addressing overweight and obesity, as appropriate.
- Partner with appropriate community resources to provide education emphasizing healthy habits.
- Conduct community assessments to determine successful interventions.
- Develop reporting system to gather data or revise the BRFSS to address the *Healthy People 2010* parameters.

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).

Baseline: No baseline data are available for the two older identified age groups. In 1998, CDC Pediatric Nutrition Surveillance data of Kentucky children on WIC reported 10.5 percent of the children were above the 95th percentile on age-appropriate NCHS growth charts.

Target Setting Method: based on *Healthy People 2010* guidelines

Data Source: CDC Pediatric Nutrition Surveillance

Implementation Strategy:

- Review feeding practices among WIC population and provide healthy food packages to assist parents/caregivers/guardians in maintaining appropriate weight for height of WIC children.
- Increase trained staff capable of providing to the WIC population counseling on obesity.
- Provide medical nutrition Therapy specifically addressing overweight and obesity by Certified Nutritionists/Registered Dietitians as appropriate.
- Provide counseling appropriate to parent/caregiver/guardian perception of the child.
- Assist School and Community Nutrition staff to provide training and education in the schools for cafeteria staff, teachers, parents, and administrators concerning healthy meals.
- Work with summer feeding programs to provide healthy meals and snacks.
- Develop community programs through city and county parks, YMCA's, and other recreational sites/facilities to emphasize good health and nutrition.
- Develop reporting system to gather data.

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

Baseline: The 1998 Pediatric Nutrition Surveillance data report growth retardation among the WIC population as 2.3 percent with the trend being below 3.0 percent for the last eight years.

Target Setting Method: Current data show growth retardation below the national average.

Data Source: Pediatric Nutrition Surveillance

Implementation Strategy:

- Continue early prenatal and child entry into WIC services for education and healthy foods.

- 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.
- Provide education in communities through partnerships to promote healthy growth and development.
- Develop reporting system to gather data from larger segment of the population.

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.

Baseline: The 1998 BRFSS reported only 15.6 percent of people age 18 and older ate fruits and vegetables more than 5 times per day.

Target Setting Method: based on *Healthy People 2010* guidelines

Data Source: BRFSS

Implementation Strategy:

- 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.
- Assist school and community nutrition staff in providing training and education in the schools for cafeteria staff, teachers, parents, administrators concerning healthy eating and lifestyles.
- Develop a media campaign with the Kentucky Department of Agriculture to highlight 5 A Day.

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.

Baseline: The 1998 Pediatric Nutrition Surveillance System reports iron deficiency as 14.1 percent for children aged 1 and 2 and for children aged 3 and 4 as 13.8 percent.

Target Setting Method: based on *Healthy People 2010* guidelines and current data.

Data Source: Pediatric Nutrition Surveillance System.

Implementation Strategy:

- Continue early entry into WIC services for education and healthy foods (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
- Stress the importance of iron during prenatal period through provision of prenatal classes
- Encourage the early use of prenatal vitamins and include this information in community prenatal classes

2.7. (Developmental) **Increase the amount of fiber in the diets/menus of the older adult for preventive health measure to reduce the complications of diabetes, cardiovascular disease and stomach and colon cancers.**

Potential Data Source: see Implementation Strategy below

Implementation Strategy:

- Develop a data system to gather data from *Nutrition Risk Screening Initiative* (tool which identifies nutrition problems in the older population).
- Develop standard menus for nursing homes, long-term care facilities, Meals on Wheels, and Senior Citizen/Aging Programs which will provide more fresh fruits and vegetables and whole grain products.
- Provide community education that emphasizes the importance of fiber in the diet.

2.8. **(**Developmental) **Increase the number of residents in nursing care facilities that are hydrated.**

Potential Data Source: see Implementation Strategy below

Implementation Strategy:

- Work with nursing facilities utilizing *Nutrition Care Alerts* (identification tool that targets older adults at risk of nutrition problems such as dehydration) to provide education and technical assistance on the importance of hydration as needed.
- Develop menu plans/protocols to address fluids provided with meals and snacks.

2.9. (Developmental) **Increase to at least 80 percent the proportion of children and adolescents 6 to 19 years of age whose intake of meals and snacks at school from all sources contributes proportionally to good overall dietary quality.**

Target Setting Method: based on requirements of the USDA School Lunch School Breakfast

Potential Data Source: see Implementation Strategy below

Implementation Strategy:

- With recent implementation of Dietary Guidelines to school meals and snacks and the requirement to decrease fat to 30 percent of total calories, develop data systems to capture dietary quality.
- Gather and analyze dietary quality data.
- Develop training programs for school staff to utilize menus provided in schools as a classroom teaching tool on dietary quality.
- Work with food service personnel to provide healthy cooking techniques.

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