

**V(A). Planned Program (Summary)**

**Program # 5**

**1. Name of the Planned Program**

Childhood Obesity

Reporting on this Program

**V(B). Program Knowledge Area(s)**

**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
702	Requirements and Function of Nutrients and Other Food Components	20%	20%	50%	0%
703	Nutrition Education and Behavior	30%	30%	30%	50%
724	Healthy Lifestyle	50%	50%	20%	50%
	<b>Total</b>	100%	100%	100%	100%

**V(C). Planned Program (Inputs)**

**1. Actual amount of FTE/SYs expended this Program**

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	35.0	3.0	12.0	3.0
Actual Paid Professional	24.0	11.0	1.0	3.0
Actual Volunteer	82.0	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
535630	536515	68970	142650
1862 Matching	1890 Matching	1862 Matching	1890 Matching
535630	499431	68970	63192
1862 All Other	1890 All Other	1862 All Other	1890 All Other
4123370	29883	535285	0

**V(D). Planned Program (Activity)**

## 1. Brief description of the Activity

The Childhood Obesity Planned Program will provide science-based educational and experiential learning opportunities that focus on children, but actively engage an array of audiences--regardless of gender, income, age or race/ethnicity--because of the influence that these groups in society have on the health and well-being of themselves and their children. Programs developed and provided by NC Cooperative Extension in the area of healthy weight for children and adults is part of the larger initiative Eat Smart, Move More North Carolina. As a founding member of the movement, our programs are part of a larger effort to educate and change environments so that all North Carolinians have the opportunity to eat smart and move more. Important program activities include: **EFNEP**, the Expanded Food and Nutrition Education Program, is a federally funded educational program administered in North Carolina through NC State University and NC A & T State University. For more than three decades, EFNEP has been helping limited resource youth and families with children learn how to eat healthier meals and snacks, stretch their food dollars and reduce the risk of food-borne illnesses. The Supplemental Nutrition Assistance Program-Education (**SNAP-Ed**) serves limited resource families across North Carolina to assist those eligible for food assistance to eat smart and move more. SNAP-Ed works to help participants make healthy choices within a limited budget and choose physically active lifestyles. NC State University's SNAP-Ed Program is Steps to Health, which works with preschoolers, kindergarteners, 2nd grade students, 3rd grade students, and high school students. **Color Me Healthy** is a program developed to reach limited resource children ages four and five. Color Me Healthy uses color, music, and exploration of the senses to teach children that healthy food and physical activity are fun. Agents train child care providers in the use of the program in their setting. **Faithful Families Eating Smart and Moving More** is a program that helps faith communities in North Carolina make and sustain changes that promote healthy eating and physical activity. **Eat Smart, Move More Weigh Less (ESMMWL)** is a weight-management program for adults. This 15-week evidence-based program includes strategies proven to work to achieve and maintain a healthy weight and encourages small changes that can be sustained over time. The program includes a family component to influence the eating and physical activity of all family members. **Cook Smart, Eat Smart** is a program that teaches simple, basic cooking for teens and adults. Eating more meals at home is an important strategy for eating a healthy diet. Cook Smart, Eat Smart provides hands on education on how to plan, shop, fix and eat healthy family meals. In addition to the methods mentioned earlier, social media tools will be used by researchers as a means of helping to reinforce information about healthy eating and physical activity behaviors among adolescents.

## 2. Brief description of the target audience

Intended audiences include children of all ages, youth, their adult family members, child-care providers, Head Start workers, food banks, food stamp and WIC recipients and community coalitions. No time is more critical than childhood to promote healthy eating and sound health practices. Children do not consume sufficient fruits or vegetables and have diets that are low in fiber and higher in fat than recommended. Children need quality nutrition education to help positively influence their food choices. For nutrition education efforts to be effective, they must also include parents and care givers. Helping families make informed decisions about their nutrition will help ensure that North Carolina's children grow to reach their full mental and physical potential. Overweight in children continues to rise. Treatment of overweight and obesity is difficult. Prevention of overweight and obesity in children is essential to address this issue. Demographic changes in the state's population continue to impact nutrition and health issues. The fastest growing age group is the 65 years and older segment, and the elderly have disproportionate risk of malnutrition and poverty, as well as poor overall health, and in many cases they are either care-givers or influence the care of children. Because of the influence that adults have with different age groups, and because of their own health concerns, healthy nutrition and well-being educational programs are important for adults as well. Programs addressed to young adults and middle-aged consumers will continue to impact the health of the population as it ages, but including children as well. Women are employed outside the home in greater numbers, and many of them are among the

working poor. Over 80% of women who had school-aged children were working outside the home; 67% of women with the youngest child under six years were in the labor force. For working parents with very limited resources, lack of after-school and summer programs for youth is a major concern, as it relates to nutrition, health, and obesity as well as other developmental needs of children.

### 3. How was eXtension used?

The Families Food and fitness CoP of eXtension offers frequently asked questions, articles, online learning activities, and interactive tools on families, food and fitness topics.

The Families Food and Fitness CoP's vision is to become a source of research-based information for families as they work to eat smart, move more and achieve a healthy weight.

The Families Food and Fitness CoP provides education and skills to help families make informed decisions about healthy eating and physical activity by providing them with evidence (science/research)-based information and learning opportunities through eXtension.

Families Food and Fitness is organized around three goals:

- Improved diets;
- Increased physical activity; and
- Maintenance of body weight in a healthy range and avoidance of excess weight gain.

The website content is focused on 6 key behaviors that have been identified in the literature to be associated with maintaining and achieving a healthy body weight:

1. Move more everyday
2. Tame the tube
3. Control portion size
4. Enjoy more fruits and vegetables
5. Prepare more meals at home
6. Re-think your drink

### V(E). Planned Program (Outputs)

#### 1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	339363	353822	23952	0

#### 2. Number of Patent Applications Submitted (Standard Research Output)

##### Patent Applications Submitted

Year: 2012  
 Actual: 0

##### Patents listed

### 3. Publications (Standard General Output Measure)

#### Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	2	13	15

#### V(F). State Defined Outputs

##### Output Target

##### Output #1

###### Output Measure

- Non-degree credit group activities conducted on Foods and Nutrition and Childhood Obesity Education

Year	Actual
2012	4412

##### Output #2

###### Output Measure

- Targeted audiences participate in workshops on Food, Nutrition and Childhood Obesity

Year	Actual
2012	30666

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Program participants increase knowledge that will promote a healthier diet
2	Program participants increase skills that will promote a healthier diet
3	Education program participants make one or more positive dietary changes
4	Program participant decrease body weight
5	Program participants decrease blood pressure
6	Program participants increase physical activity
7	Program participants increase their fruit and vegetable consumption by at least one serving

**Outcome #1**

**1. Outcome Measures**

Program participants increase knowledge that will promote a healthier diet

Not Reporting on this Outcome Measure

**Outcome #2**

**1. Outcome Measures**

Program participants increase skills that will promote a healthier diet

Not Reporting on this Outcome Measure

**Outcome #3**

**1. Outcome Measures**

Education program participants make one or more positive dietary changes

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension
- 1862 Research
- 1890 Research

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2012	46618

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

The importance of promoting nutrition and wellness throughout life has been clearly established. Dietary factors are associated with 5 of 10 leading causes of death in North Carolina and the United States. Programs that provide consumers with research-based information on healthy eating are imperative to increase their knowledge of the importance of making changes in their

dietary patterns to optimize health. Further, consumers need knowledge as to how to go about making these changes based on their lifestyle and environments.

**What has been done**

NC Cooperative Extension has used multiple strategies to increase the knowledge of participants in healthy eating. Agents have conducted workshops and demonstrations in a variety of settings including after school, faith community, work site and others. Media were used to effectively disseminate a clear message about healthy eating to even more citizens.

**Results**

More than 46,600 North Carolinian's who participated in programs conducted by NC Cooperative Extension made at least one positive dietary change. Changes include increased consumption of fruits and vegetables, increased breakfast consumption, decreased fat consumption, increased dairy consumption and change in portion sizes to better match dietary recommendations of myplate.gov. All of these behaviors reduce the risk of chronic diseases including heart disease, stroke and some forms of cancer. Also, these dietary behaviors are related to an increased likelihood of achieving and maintaining a healthy weight.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
702	Requirements and Function of Nutrients and Other Food Components
703	Nutrition Education and Behavior
724	Healthy Lifestyle

**Outcome #4**

**1. Outcome Measures**

Program participant decrease body weight

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension
- 1862 Research
- 1890 Research

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2012	3159

### 3c. Qualitative Outcome or Impact Statement

#### Issue (Who cares and Why)

Overweight and obesity issues are of critical importance to the public's health. Overweight and obesity increases the risk of many chronic conditions, including sleep apnea, arthritis, type 2 diabetes, heart disease, and some forms of cancer. In addition, the economic toll of overweight and obesity in North Carolina reaches billions of dollars each year in health care costs and loss of productivity.

#### What has been done

NC Cooperative Extension, in partnership with the NC Division of Public Health, offers the Eat Smart, Move More, Weigh Less program. Eat Smart, Move More, Weigh Less is a 15-week weight management program that offers dietary, physical activity, and lifestyle strategies that are consistent with a healthy weight. Participants plan, track and live mindfully in addition to eating healthy and being physically active.

#### Results

Over 3100 North Carolina citizens reduced their BMI. The Eat Smart, Move More Weigh Less was in its fourth full year of implementation in 2012. Most participants set a healthy weight loss goal at the beginning of the program (some participants enroll to learn about healthy eating and physical activity and do not need to lose weight).

### 4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle

### Outcome #5

#### 1. Outcome Measures

Program participants decrease blood pressure

#### 2. Associated Institution Types

- 1862 Extension
- 1890 Extension

#### 3a. Outcome Type:

Change in Condition Outcome Measure

#### 3b. Quantitative Outcome

Year	Actual
2012	1185

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

High blood pressure increases risk for heart disease and stroke.

**What has been done**

Several programs conducted by NC Cooperative Extension promote eating and physical activity patterns that have been shown to decrease blood pressure.

**Results**

Over 1100 participants decreased blood pressure as a result of participating in programs conducted by NC Cooperative Extension. Many other participants adopted physical activity or healthy eating behaviors that can positively affect blood pressure.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
703	Nutrition Education and Behavior
724	Healthy Lifestyle

**Outcome #6**

**1. Outcome Measures**

Program participants increase physical activity

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension
- 1862 Research
- 1890 Research

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2012	35441

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Many North Carolinians are not active on a regular basis. Few are active to the level

recommended by the Dietary Guidelines for Americans. Physical activity is widely accepted as a positive behavior for optimal health and can decrease the risk of heart disease, stroke, and high blood pressure. Physical activity also helps with weight control.

**What has been done**

NC Cooperative Extension encourages both moderate and vigorous physical activity in several lifestyle management programs. Participants are educated about recommended levels of physical activity and develop skills that can help them become physically active for life.

**Results**

More than 35,000 participants increased their physical activity. While this is the first step, the next step is to encourage participants to meet or exceed the minimum of 30 minutes of activity on most days.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
703	Nutrition Education and Behavior
724	Healthy Lifestyle

**Outcome #7**

**1. Outcome Measures**

Program participants increase their fruit and vegetable consumption by at least one serving

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension
- 1862 Research
- 1890 Research

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2012	14681

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Fruit and vegetable consumption is a critical component of a healthy diet. Increased fruit and vegetable consumption alone has been shown to be effective in decreasing fat and calories while

increasing fiber and critical nutrients. Fruit and vegetable consumption is associated with an increased intake of phytonutrients that have been shown to decrease the risk of heart disease and certain forms of cancer.

#### **What has been done**

Many programs and media campaigns across North Carolina focus on fruit and vegetable consumption. In addition to educational programs that include fruit and vegetable consumption as a healthy behavior that should be adopted, we also encourage community gardens, home gardening, and home food preservation.

#### **Results**

More than 14,500 participants across North Carolina their fruit and vegetable consumption by at least one serving.

EFNEP (Expanded Food and Nutrition Education Program) audiences increased their fruit and vegetable consumption. Results indicate that of 5130 families enrolled in EFNEP 56% of participants increased their fruit consumption and 51% increased their vegetable consumption. Of the 251 pregnant teens or parenting teens that were enrolled in 4-H EFNEP participant, 58% increased their fruit consumption and 58% increased their vegetable consumption.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
702	Requirements and Function of Nutrients and Other Food Components
703	Nutrition Education and Behavior
724	Healthy Lifestyle

#### **V(H). Planned Program (External Factors)**

##### **External factors which affected outcomes**

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

##### **Brief Explanation**

Many factors affect individuals' decisions and abilities to practice positive behaviors with respect to healthy eating and physical activity. These factors include the physical and social environment of families, communities, and organizations; the policies, practices, and norms within the social and work settings; and access to reliable information. Lasting changes in healthy behaviors require physical environments and social systems that support positive lifestyle habits. In order for individuals (adults and children) to make positive lifestyle changes with respect to healthy eating and physical activity, changes need to be made in the surrounding organizational, community, social, and physical

environment. Without these changes, successful health behavior change is difficult to achieve and sustain. Confidence in adopting and maintaining a behavior may be strengthened when the physical and social environment supports the new behavior. Policy and environmental interventions can improve the health of all people, not just small groups of motivated or high-risk individuals. NC Cooperative Extension continues to work using the multilevel model or socioecological model for behavior change. It is within that context that we provide education to participants while working at the county and state level to make systems, policy, and environmental changes. These changes are systemic and societal, thus do not happen quickly. Slow changes in policy and environments that support healthy eating and physical activity continue to challenge our ability to make improvements in eating and physical activity patterns.

## **V(I). Planned Program (Evaluation Studies)**

### **Evaluation Results**

In 2012, 14681 adults and 23952 youth increased their fruit and vegetable consumption, 35441 participants increased their physical activity, 3159 participants reduced their BMI, 1185 adults reduce their blood pressure, 578 adults improve their blood glucose (A1c) level, 581 adults reduced their cholesterol, and 7985 participants consumed less sodium in their diet. Those individuals who make healthy food choices and are physically active are more likely to achieve and maintain a healthy weight and reduce incidence of chronic disease. Ultimately, this will lead to a reduction in health care costs, increased longevity, greater productivity and improved quality of life.

### **Key Items of Evaluation**

Eat Smart, Move More, Weigh Less (ESMMWL) is a weight-management program that uses research-based strategies for weight loss/weight maintenance. This 15-week program informs, empowers and motivates participants to live mindfully as they make choices about eating and physical activity. The program provides opportunities for participants to track their progress and keep a journal of healthy eating and physical activity behaviors.