

V(A). Planned Program (Summary)**Program # 4****1. Name of the Planned Program**

Childhood Obesity

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
703	Nutrition Education and Behavior	50%			
724	Healthy Lifestyle	30%			
802	Human Development and Family Well-Being	10%			
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	5%			
806	Youth Development	5%			
	Total	100%			

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Actual	1.9	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
48866	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
48866	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
71048	0	0	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

A variety of activities are being undertaken related to childhood obesity. Adopting a healthy lifestyle and food choices are necessary for individuals to maintain optimal health throughout their lifespan but it is particularly important for youth. Rather than trying to treat obesity after it occurs, strategies to prevent excessive weight gain and decrease sedentary activity are needed. Since eating and activity behaviors are established in childhood, obesity prevention experts suggest initiating strategies early in life. This is the direction Nevada is taking in its "Childhood Obesity" programming.

The various activities of this program are designed to provide health & nutrition educational programming where youth can learn the benefits of a healthy lifestyle and proper food habits which promote health and wellbeing. The benefits of physical activity as part of a healthy life style are included as well. Primarily these activities focus on youth in school and pre-school youth in family settings.

Nutrition education programs are also provided in school classes, after school settings, new parents, low income and other

audiences as well as the general public. Newsletters, publications and other informational materials will be distributed to participants, families, teachers and to professional health educators as well as to the general public through the UNCE website. New curriculum and educational materials are being developed and tested.

Because of the intensive in-school nature of some of these activities, repeated multiple contacts with youth make the number of contacts is high. Use of "train the trainer" concept also make it possible to reach more youth and reporting has also improved.

2. Brief description of the target audience

The primary audience is pre-school youth and youth in elementary school along with their families. A secondary audience is those who teach youth health and nutrition information or care for youth - parents, teachers, child care providers, health educators, etc.

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
Actual	5464	0	75230	0

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

Patent Applications Submitted

Year: 2009

Plan:

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan			
Actual	5	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Percent of preschoolers who would choose a health snack over an unhealthy snack when present a choice.
2	Percent of preschoolers improving physical skills highlighted in the Nevada Pre-K standards.
3	First and second grade students learn healthy food choices and good physical activity choices.
4	Youth learning to make healthy food choices and gaining physical activity through "hands on" school garden based educational programs.
5	American Indian children to 1) increase awareness of and exposure to a variety of vegetables and fruits, including traditional American Indian varieties via classroom nutrition lessons and a school wide fruit tasting event, 2) provide an introduction to plant growing with in-class "gardening" experiences and 3) engage the parents through take home assignments and newsletters.

Outcome #1**1. Outcome Measures**

Percent of preschoolers who would choose a health snack over an unhealthy snack when present a choice.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	{No Data Entered}	0

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Almost one-third of American children are overweight or at risk for overweight, increasing their probability of developing chronic illnesses (Centers for Disease Control 2007). Data from the National Health and Nutrition Examination Survey (NHANES) I (1971-1974) to NHANES 2003-2004 show increase in overweight among preschool-aged children, aged 2-5 years rose from 5.0% to 13.9%. Although similar statistics are unavailable for children in Clark County (Las Vegas), there is no reason to believe the situation here is different.

What has been done

"All for Kids" is an interdisciplinary approach addressing child obesity. Utilizing strategies from maternal/child health and nutrition, exercise physiology and child development, this program encourages preschool children and their families to engender healthy eating habits and being active every day. Cooperative Extension staff provide 24, 30-minute lessons three times a week for eight weeks to preschoolers. Families are engaged in weekly nutrition activities and monthly events to extend the education to the home.

Results

Data from the initial pilot program showed that from 70-80% of children would choose a health snack over an unhealthy snack when present a choice.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle
802	Human Development and Family Well-Being

Outcome #2**1. Outcome Measures**

Percent of preschoolers improving physical skills highlighted in the Nevada Pre-K standards.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	{No Data Entered}	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Physical activity and ability is linked to childhood obesity. Physical activity is one way to help reduce childhood obesity.

What has been done

Physical activity is included along with nutritional education in the "All for Kids" program addressing child obesity. Utilizing strategies from maternal/child health and nutrition, exercise physiology and child development, this program encourages preschool children and their families to engender healthy eating habits and being active every day. Cooperative Extension staff provide 24, 30-minute lessons three times a week for eight weeks to preschoolers. Families are engaged in weekly nutrition activities and monthly events to extend the education to the home.

Results

The results of the pilot demonstrated that before the program children not only could not complete all tests expected upon entry into kindergarten. After the eight week program, however, they improved in all 12 skills greater than 70% except in one which was only 69.2%. Skills tested included spatial movement, motor coordination, endurance and duration.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle
802	Human Development and Family Well-Being

Outcome #3

1. Outcome Measures

First and second grade students learn healthy food choices and good physical activity choices.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	{No Data Entered}	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Positive health habits lead to decreased likelihood of adult obesity and its associated chronic diseases. Individuals (including children) from lower socio-economic status are more likely to be obese or overweight than those of higher socio-economic status.

What has been done

Chefs for Kids (CFK) is a nutrition education program for primary-grade children in "high needs" elementary schools (ES), supported in part by the ACF Chefs of Las Vegas. 'High-needs' schools are defined as those having 50% of students eligible to receive free or reduced price lunches. The program consists of two parts: an intensive, second grade curriculum (Choose Well, Be Well) and a video curriculum (Adventures with Chefs for Kids) aimed at first graders. The first grade curriculum introduces the concept of food groups to children with a five-part program. The weekly second grade program focuses on the origin, use and need for food as well as on physical activity practices that engender lifelong, healthy lifestyles in children to lower their risks for developing obesity and chronic diseases. A variety of teaching methods are used to ensure children in all learning categories will be able to achieve. *All materials are written in English and Spanish.

Results

For the second grade program:

* Of the 1340 students assessed for hand washing skills, 81% responded successfully.

* Of the 1229 assessed for knowledge of active lifestyle activities, 94% were able to list two activities, 5% listed one activity and only 1% of students could not list any.

* Of the 909 students completing food categorization, 82% listed two foods from each food group with no errors and 7% scored 9 out of 10. Only one student was unable to list any foods at all.

* In schools where students attended at least 25 program lessons (79% of participants; n=864), at pre-intervention, 24% of students chose three snacks rated as less healthful; following the intervention, only 6% of students chose three snacks rated as less healthful.

For the first grade program: Of the 2141 evaluated for food categorization, the average score was 89.8%, with 41% identifying all foods, 23% missed only one food and 13% missed 2 foods.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle
802	Human Development and Family Well-Being

Outcome #4**1. Outcome Measures**

Youth learning to make healthy food choices and gaining physical activity through "hands on" school garden based educational programs.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	{No Data Entered}	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Childhood obesity is a recognized public health problem. Today's students are in the first generation whose life span may be less than their parents due to obesity and related diseases. Washoe County students' obesity rate is over 38%, higher than the national average.

What has been done

This program was developed to meet the nutrition needs identified above through the delivery of a garden-based nutrition education curriculum. Spring 2009 "Nutrition in the Garden" classes were conducted with third, fourth and fifth grade students, and fall classes with fourth and fifth grade students at a Washoe County charter school having a high percentage of Hispanic students and a low rate of literacy. The increased obesity and chronic disease risks of these children is heightened by their socioeconomic status and ethnicity. In program year 2009 the formal education component (64 lessons, approximately 21 lessons per grade) was delivered to 71 students for a total of 1,518 contacts. School wide events including a farmers market, summer program and a new parent/teacher garden group resulted in a combined additional 583 contacts. One hundred twenty parents participated - with eight serving as garden volunteers - and the remainder attending out-of-school events. Take home assignments and information flyers provided an additional 540 indirect contacts. The program has been expanded in program year 2010 with third and fifth grade classes at a public elementary school participating.

Results

The program met a key experiential goal of providing exposure to and tasting of over 15 varieties of fresh vegetables and fruits, many of which were grown by the students in the school garden. Knowledge gains were reflected in improvements from pre- to post-testing by fourth and fifth grade students on correct identification of MyPyramid components and by third grade students' ability to categorize fruits and vegetables by color. In assessing health-promoting behaviors, self-reported produce intake increased over the course of the program and 50 percent of students reported a non-significant ($p = .69$) increase in physical activity between pre- and post assessment. However, pedometer data was inconclusive; with one grade each showing a decrease, increase and no change in activity. Post-program teacher interviews provided valuable qualitative data for program content and logistics refinement. Classroom and garden-based activities were appraised positively. The school principal and participating teachers continue to express enthusiastic support for the program.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle
802	Human Development and Family Well-Being

Outcome #5**1. Outcome Measures**

American Indian children to 1) increase awareness of and exposure to a variety of vegetables and fruits, including traditional American Indian varieties via classroom nutrition lessons and a school wide fruit tasting event, 2) provide an introduction to plant growing with in-class "gardening" experiences and 3) engage the parents through take home assignments and newsletters.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	{No Data Entered}	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Of all ethnic groups, American Indian children are at greatest risk for obesity, attendant development of diabetes and other chronic diseases. It is recognized that exposures in youth can help shape food preferences later in life. Awareness of the health benefits of traditional foods, promotion of their consumption and subsistence or supplementary vegetable gardening are methods cited to promote the desired intake of vegetables and fruits recommended in the Dietary Guidelines 2005 and USDA's MyPyramid food guide. In its third year, this program addresses the nutrition needs identified above and that of childhood obesity.

What has been done

The 2009 "Veggies For Kids" education program reached four classes totaling 55 students resulting in 40 hours of nutrition instruction. Including pre- and post-testing, 660 contacts occurred. The two school wide fruit tasting events reached 211 students and 25 teachers. Take home assignments and parent newsletters resulted in 733 indirect contacts.

Results

Pre- and post-test data was collected on 43 students. Preliminary data analysis showed an improvement in recognition and identification of the MyPyramid food groups, with 90 percent of students correctly naming the food groups compared with 49 percent at pre-test; ability to identify selected vegetables increased at post-testing (four of the six vegetables presented were correctly identified by over 75 percent of students); and preference for four of the six vegetables increased somewhat from pre-test (range 19 - 83 percent, mean = 46 percent) to post-test (range 35 - 81 percent, mean = 54 percent). Significance (Pearson's chi-square/Fisher's Exact, $p < .05$) was shown in the following when comparing pre- and post-testing: 1) increased ability to identify and name the Meat and Beans group on the MyPyramid for Kids graphic, 2) increased preference for five of the six vegetables used for pre- and post-testing; 3) increased ability to name four of the six vegetables used for pre- and post-testing; and 4) increased number of students who were willing to sample two of the vegetables not previously tasted. Response to the program from the participating teachers, principals and school food service staff continues to be positive and supportive of continuation.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Other (Grant Funding)

Brief Explanation

In FY08 Nevada had a 6% cut in state budget and a 8% cut in FY09 budget. For FY10 and FY11 a 17% reduction in state budget was mandated. An additional cut of 6.9% for FY10 & FY11 has been announced. This has impacted overall 2009 programming and will have a major impact on overall programming for FY10, FY11 and beyond. However, this particular program has not been negatively impacted at this time although the potential remains.

Grant funding is key to this program. A major \$1Million grant has been received to expand beyond the programming efforts. Grant funding and community resources (volunteer as well as funding) are the major sources of support at this time.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}