United Way of Tucson and Southern Arizona
Carol White Physical Education Program Grant
Annual Report
2009-2010

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Executive Summary

As part of the federal Carol White initiative funded by the US Department of Education, the Carol White program in Tucson, Arizona provided 2,094 students at 20 sites with increased opportunities for physical activity and nutrition education. Staff also worked with parents, schools, and community organizations to increase the long-term program impact. A process and outcome evaluation was conducted to collect data on program implementation and outcomes related to program objectives. The following paragraphs contain a brief summary of process and outcome evaluation findings for each primary program area for year three of grant funding, followed by a summary of progress across years one through three.

Physical Activity

At all 20 Tucson sites, youth participated in afterschool exercise programs using the SPARK curriculum. Seven of those sites also taught the SPARK curriculum in their school's physical education classes. Teachers were provided with comprehensive training in the SPARK curriculum and a curriculum binder for use during class sessions. Most students and teachers reported that they enjoyed participating, though there were some obstacles teachers faced to using the curriculum. Teachers used a variety of strategies to increase student engagement. Overall, these afterschool and physical education programs helped increase the number of moderate to vigorous minutes students completed and encouraged youth interest in physical activity outside of the program. There were, however, differences in the number of minutes completed and available at different sites, as well as differences in the way the SPARK curriculum was incorporated into the existing programs. Overall, students showed an increase in physical fitness levels over the course of the year.

Nutrition

In addition to the physical fitness components, sites worked to increase youth knowledge of nutrition, disease prevention, and other healthy lifestyle choices. Teachers were trained in dietary guidelines, the Food Pyramid, changing food environments and were provided with other information and resources. Program teachers were primarily instructed about these elements in the SPARK Training Nutrition Session and the 2009 Sonoran Alliance for Youth Conference.

Youth at 12 of the sites also received monthly education on these topics through the Arizona Nutrition Network. Teachers were given information on how to teach nutrition to youth participating in their programs, and data suggests they were more conscious of opportunities to do so and did informally communicate this information to youth at some locations. Data suggests that the Carol White program may have contributed to an increased knowledge of nutrition and healthy lifestyle choices for some students.

Parent Involvement

Parent involvement was encouraged through Family Fitness Nights offered at 16 of the sites. Nutrition booths were set up at some pre-planned school events and specific events were hosted to share this information with parents. In some cases, it was challenging to get parents to attend the events and then to fully engage with the nutrition booth and physical activities that were offered. These events were still able to reach over 814 family members with healthy lifestyle information.

School and Community (Infrastructure)

This Tucson-based Carol White program was designed to encourage healthy lifestyle behaviors in youth as part of a community-wide initiative, so in addition to efforts to educate youth and families, United Way worked to build community infrastructure for increased program impact. Teacher education in SPARK, healthy nutrition, evaluation, and federal grant requirements helped increase school capacity in these program areas. As members of the Activate Tucson Initiative and supporters of the Healthy Kids Event, United Way was able to collaborate with other organizations to work toward community-wide change.

In year three, the Tucson Carol White program was able to meet 7 of 10 program objectives. The following are key findings from the year three evaluation:

Program Objectives

- 1,648 students out of 2,094 students (78.7%) were engaged in 150 minutes of moderate to vigorous activity per week.
- 405 of 1,278[1] students (31.7%) reported an increased interest in physical activity.

[1] The total number of students reported is based on the number of students completing pre and post survey data on the survey items used to assess each of the objectives.

- 422 of 1,450 students (29.1%) showed an increase in their aerobic activity levels.
- 1,253 of 1,312 students (95.5%) were able to identify at least five skills needed to maintain a healthy lifestyle.
- 354 of 1,281 students (27.6%) showed increased knowledge in tests on health promotion and disease prevention.
- 822 of 1,371 students (60.0%) were able to distinguish between healthy and unhealthy behaviors at post survey.
- 814 family members were served at 16 Family Fitness Nights.
- 40 staff were trained in SPARK and in the 2005 Dietary Guidelines and new Food Guide Pyramid.
- The Project Manager, or a representative, attended Activate Tucson Initiative meetings during project year three
- United Way helped to sponsor the 2010 Healthy Kids Event.

Overall Evaluation Findings

Overall, youth and teachers seemed to enjoy the program and teachers felt that elements of the SPARK curriculum were beneficial additions to their existing programs. Youth outcome data suggests the program did increase the moderate/vigorous activity that students completed. Youth outcomes also suggest that some youth did gain in knowledge of nutrition and disease prevention, through the nutrition component. However, all youth did not receive a large dosage of nutrition information (except those in the Arizona Nutrition Network) which may have limited how much they learned in this area. Family Fitness Nights encouraged parents to engage in the Carol White programs with their children and provided some opportunities for them to learn about physical fitness and nutrition. However, many parents did not attend or engage in Family Fitness Nights and thus did not receive this information. The nutrition and Family Fitness Night components did contribute to making this a comprehensive community program. Youth, parent, and community outcomes suggest that each year over 2,000 people were involved, and likely benefitted, in some way, from the Carol White program. In addition, it appears many sites have the capacity to continue to use elements of the Carol White program to benefit additional students, parents, and community members after funding ends.

Program Recommendations

Based on these findings, the following recommendations are offered for programs to consider after the funding ends and in future program efforts. A more detailed exploration of these recommendations can be found in the report's *Discussion* section.

- Consider utilizing a consistent nutrition and healthy lifestyle curriculum.
- Continue to incorporate elements of the Carol White program in existing physical education and afterschool programs.
- Pursue additional funding to continue the work of the Carol White program at the youth, parent, and community level.
- Consider the lessons learned from this Carol White program when pursuing future grant opportunities.

Background

Obesity is now considered a major health crisis. Over the last two decades, the percentage of adults in the United States who are overweight or obese has more than doubled. In 2007, at least 25% of adults in 30 states were overweight. In Arizona, the rate exceeded 25% for the first time in 2007 (Robert Wood Johnson, 2009). Research suggests that it is during childhood when many people begin to develop behaviors with food and with physical activity that affect their weight and overall health for life. Youth who are overweight by the age of 8 are 80% more likely to become overweight or obese adults (National Association for Sport and Physical Education, 2006). In the past 30 years, the percentage of American children ages 12-19 who are overweight has more than tripled (National Center for Health Statistics, 2009). One in three children ages 2-19 is now considered overweight or obese (Ogden, et.al. 2010).

To address this crisis, President Obama has created The White House Task Force on Childhood Obesity. In May 2010, this task force provided a report to President Obama on "Solving the Problem of Childhood Obesity within a Generation." This report acknowledges that multi-sectoral approaches are needed to address childhood obesity. The five general recommendations made for addressing this problem include: 1) getting children a healthy start on life; 2) empowering parents and caregivers; 3) providing healthy food in schools; 4) improving access to healthy, affordable food; and 5) getting children more physically active.

These recommendations suggest the need for community-wide efforts that involve youth, parents, schools, and local organizations. Helping youth to engage in physical activity and learn nutrition information is an important component of community-wide efforts. Youth engaged in these activities often experience lasting health benefits, along with other benefits, such as improved overall academic performance (California Center for Public Health Advocacy, 2002). A community-wide approach to helping youth attain lasting benefits from healthy lifestyle choices, adhering to national and state standards in these areas, serves as the basis for the Carol White Physical Education Program (See *Appendix A* for a more comprehensive national perspective on adult/youth physical activity and health and *Appendix B* for national and state standards).

Program Overview

The United Way of Tucson and Southern Arizona (United Way) received a grant from the Carol M. White Physical Education Program (PEP) initiative to support local efforts to develop and implement physical education programs for K-12 youth in Tucson, Arizona. This grant, issued by the United States Department of Education,[2] is aimed at increasing opportunities for students to learn the value of regular physical activity and good nutrition as components of a healthy lifestyle. The primary objectives are to encourage youth to meet state standards in physical education and to help students increase their physical activity.

The United Way proposed to leverage the resources of Tucson's afterschool community to help local youth in grades 3 through 6 improve in these components of a healthy lifestyle. The grant requires students to work toward the federal GPRA levels of 150 minutes of moderate to vigorous exercise per week and to strive to meet other state standards. United Way's program design includes parent involvement and program sustainability.

In year three (FY09-10), the United Way worked with four community programs to implement the local Carol White plan:

- Child & Family Resources Happy Hours Program;
- Community Extension Programs;
- Tanque Verde Extended Care Program; and
- Flowing Wells Extension Program.

Existing afterschool programs and physical education classes at 20 Pima County sites utilized the grant resources under the direction of the United Way and these four partner programs (see *Appendix C* for a complete list of sites and partner organizations). These existing afterschool/ physical education programs varied in purpose, duration, and participant demographics.

The SPARK physical education curriculum was implemented at all sites as the primary means of increasing children's physical activity. Training, materials, and support were offered to program staff as they incorporated this curriculum into their existing activity structure.

[2] *Grant #: Q215F070051*

Nutrition trainings offered by the USDA or qualified nutrition consultants were designed to help program staff educate youth on additional components of a healthy lifestyle.

The program is designed to improve the physical activity levels and knowledge of healthy lifestyle choices in youth at the 20 sites. Fitness and health gains, however, are viewed by this program as systemic. In other words, the involvement of the parents, school, and community are required for long-term, significant change. Program components were designed to involve these different constituents in changing physical activity levels and healthy lifestyle behaviors of youth involved in the program.

Evaluation Overview

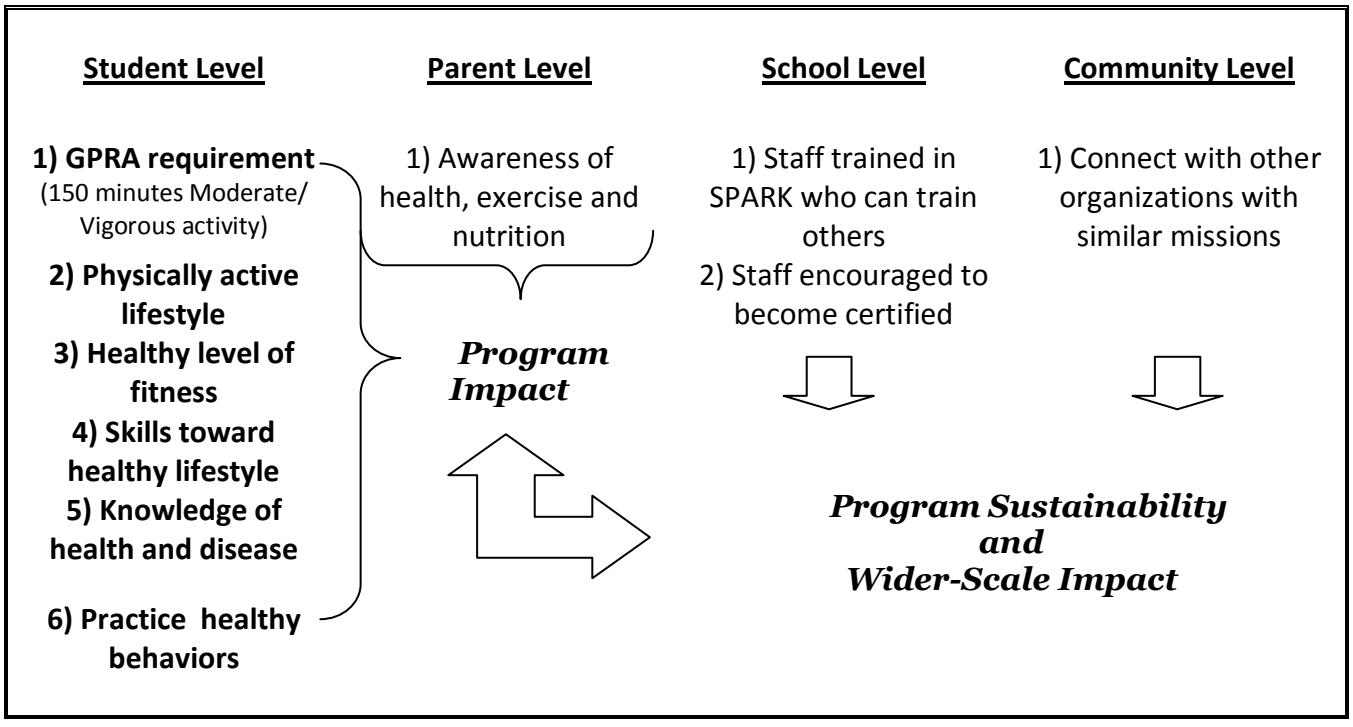
LeCroy & Milligan Associates, Inc. was contracted by the United Way of Tucson and Southern Arizona to conduct the program evaluation of the local Carol White program.

The goal of the evaluation is to provide a detailed analysis of the following items:

- Implementation of services;
- Length and intensity of physical activity components;
- Student attendance and intensity of physical fitness participation;
- Healthy-lifestyle and nutrition knowledge/behaviors in students;
- Parental awareness of healthy-lifestyle components; and
- Steps taken toward building school-based program infrastructure.

The evaluation is designed to assess the program as a community initiative: a program working with schools, parents, and the community to make positive changes in the lifestyles of youth. A logic model (*Exhibit 1*) was designed to facilitate the evaluation of the program and to help community partners understand the connection between program elements and desired outcomes.

Exhibit 1: Program Objective Logic Model



The program targeted interventions at the student and parent levels to have the most direct impact on outcomes, and as a result, the evaluation focused more heavily on these levels of analysis. Program components designed to work at the school and community level were also monitored to assess progress toward community-wide, long-term change. A more detailed discussion of the evaluation components is included in this report's *Methodology* section.

Process Evaluation

In addition to providing a brief summary of evaluation progress and participant demographics, the process evaluation is designed to assess how the program was implemented. Data was gathered around seven questions to inform this section of the evaluation:

1) How are program sites implementing the SPARK curriculum?
2) What obstacles are they facing in using the SPARK curriculum in their programs?
3) How are moderate and vigorous activity typically defined? How are standard fitness components measured?
4) How are students being taught about nutrition and healthy lifestyle components? Who is doing the training? What materials are being used?
5) How are the program sites striving for increased parental awareness of the importance of a healthy lifestyle and physical activity?
6) What program components are building infrastructure?
7) What efforts have been taken to ensure program sustainability?[3]

Outcome Evaluation

The outcome evaluation looks at progress made toward specific program goals and objectives established for the grant. As shown in *Exhibit 2*, there are 3 main goals: Goal A includes all the objectives established for youth participating in the program; Goal B lists the objectives for parents involved in the program; and Goal C includes the objectives for school and community level (infrastructure) change.

[3] This process evaluation question on sustainability was added during year three of this Carol White program.

Exhibit 2: Program Goals and Objectives

GOAL A*-The implementation of a standards-based afterschool physical activity program to help students meet the GPRA Performance Measure and the AZ Comprehensive Standards.*
Objective 1: Students will meet the GPRA performance measure and be engaged in 150 minutes of moderate to vigorous physical activity per week. In Year 3: 70% of students will be engaged in 150 minutes of moderate to vigorous activity per week.
Objective 2: Students will demonstrate a physically active lifestyle. In Year 3: 50% will report increased interest in physical activity.
Objective 3: Students achieve and maintain a health-enhancing level of physical fitness. In Year 3: 60% of students will increase their aerobic activity.
Objective 4: Students will develop behavioral skills needed to maintain a healthy lifestyle. In Year 3: 70% of students will be able to identify at least 5 skills to maintain a healthy lifestyle.
Objective 5: Students comprehend concepts related to health promotion and disease prevention. In Year 3: 70% will show increased knowledge in tests on health promotion and disease prevention.
Objective 6: Students will demonstrate ability to practice health-enhancing behaviors. In Year 3: 60% will be able to distinguish between healthy and unhealthy behaviors.
GOAL B*-The active and meaningful inclusion of parents in the effort to promote lifetime physical fitness in children.*
Objective 1: Parents will learn and participate in opportunities for physical activity and good nutrition through Family Fitness Nights. These will raise awareness of the connection between health, exercise, and nutrition. In Year 3: 300 family members will be served at Family Fitness Nights. 15 Family Fitness Nights will be hosted at the sites.
GOAL C*- Systemic and sustainable reform in afterschool fitness options.*
Objective 1: Staff Training that builds upon and incorporates the infrastructure of existing afterschool programs will be offered. In Year 3: 12 staff will be trained in SPARK and in 2005 Dietary Guidelines and the new Food Guide Pyramid.
Objective 2: Twenty-five afterschool staff will be given scholarships to Pima Community College in order to help them move towards certification. Year 3: 10 staff will receive scholarships to attend approved classes.*
Objective 3: Build connections with existing organizations that are addressing child health and fitness in order to help maintain the coalition beyond the life of the grant and further our goals community-wide. In Year 3: The Project Manager or another representative from the coalition will be serving on the PE Committee of the Healthy Tucson Initiative.
Objective 4: Reach out to other community groups with shared goals. Co-sponsor the YMCA of Metropolitan Tucson's annual Healthy Kids Event.
**Objective removed as of October 5, 2007 due to funding constraints.*

Methodology

Measures

Data were collected at all four levels for which there was anticipated program impact: student, parent, school, and community.

The interventions at the student level were evaluated by analyzing 4 measures: Student Intensity & Implementation surveys and Personal Best Day Cards, which are completed by teachers, and Student Activity Logs and Health and Lifestyle Surveys, which youth completed themselves (see *Appendix D* for a more detailed list of these evaluation measures).

The interventions at the parent, school, and community levels were evaluated by reviewing data from sections of the Intensity & Implementation survey, as well as through site observations, review of the Program Manager's site observation notes, attendance sheets, meeting notes, interviews with key program staff, and event materials and briefings. These measures were also used for a majority of the process evaluation.

Data Collection Schedule

Student level outcome data was primarily collected at four different time points each year (see *Exhibit 3*).[4] Teachers were given a calendar with specific weeks during these months when data should be collected, and they received training and additional tools on how to complete the evaluation requirements. After each collection, data was provided to LeCroy & Milligan Associates for analysis and inclusion in summary reports provided to the United Way. Evaluation of parent, school, and community level outcomes, as well as process evaluation components took place throughout each program year.

[4] It should be noted that during year one, the Student Activity Log was not added until the spring data collections and the Personal Best Day Cards were completed monthly.

Exhibit 3: Student Outcome Data Collection Schedule

Data Collection Month	Outcome Measures Conducted	
October	-Intensity & Implementation 1	-Health and Lifestyle Pre-surveys
	-Student Activity Log 1	-Personal Best Day Cards
November or December	-Intensity & Implementation 2	
	-Student Activity Log 2	
January	-Intensity & Implementation 3	
	-Student Activity Log 3	
March or April	-Intensity & Implementation 4	-Health and Lifestyle Post-surveys
	-Student Activity Log 4	-Personal Best Day Cards

Analysis Techniques

Survey data for this report were entered by a trained data management team. Data were reviewed to identify and address any missing data or significant data entry errors. Analyses, including descriptive statistics and comparisons by group, were then conducted using the Statistical Package for the Social Sciences (SPSS). Tests of statistical significance or other more advanced statistical techniques were not used for this evaluation.

Process Evaluation

This section provides findings and discussion of the implementation of the Tucson-based, Carol White program for year three. After a brief summary of evaluation progress and program demographics, findings for each of the six process evaluation questions are presented in detail. A summary of the process evaluation findings and implications across all three years of the Carol White program is also provided.

Evaluation Year Progress

Most steps in the planning, data entry, and data analysis of this program occurred as scheduled for year three. There were some challenges with acquiring complete data from all sites in a timely manner. A comprehensive data entry checklist was used to determine what data was missing so that it could be acquired promptly. Ongoing communication with program staff at meetings, via phone and email, and at the scheduled trainings and events helped to facilitate these processes. Data cleaning techniques were used to handle missing data that could not be easily obtained from sites. Some missing data during the second data collection could not be obtained or estimated, and so several classes could not be included in the full analyses. The *Discussion* section includes additional information on limitations of this evaluation.

Program Implementation[5]

- Data were collected from **71 teachers at 20 schools** in Pima County.
- **Teachers taught 117 classes to a total of 2,094 students**.
- **104 of the 117 classes were taught in schools in the Flowing Wells District** including: Centennial (20), Hendricks (16), Walter Douglas (15), Laguna (17), Richardson (12), Davis (18), and Robles/Altar Valley (3). These schools implement the SPARK program in their physical education as well as their afterschool programs.

Process Results

The following sections detail the findings for the six primary process evaluation questions.

[5] These program implementation numbers are based on the March 2010 data collection. Numbers vary slightly across year 3 data collections.

1) SPARK Implementation-- How are program sites implementing the SPARK curriculum?

KEY FINDINGS:

- *Teachers were trained in the SPARK curriculum and provided with strategies for implementing it in their classes. Teachers found the trainings helpful though somewhat repetitive.*
- *Program staff and teachers were generally satisfied with SPARK curriculum. SPARK curriculum activities, or other physical activities, were usually included as one of several program components.*
- *Program content, structure, and location varied across sites.*
- *According to teachers, most students seemed to be engaged, challenged, and having fun in the program. Teachers used many different strategies to engage students who were not always interested in participating.*

Curriculum Background

A primary component of the Carol White program was the implementation of the Sports, Play, and Active Recreation for Kids (SPARK) curriculum. The SPARK curriculum, which was first designed in 1989, has been revised over the years to meet changing National Association of Sport and Physical Education (NASPE) guidelines and Arizona Physical Education Standards for grades 3-6 (see *Appendix B* for a summary of these standards). These standards serve as the foundation for most of the objectives of the local Carol White program. The primary objectives of SPARK are to help students:

1) Enjoy and seek out physical activity;
2) Develop and maintain acceptable levels of physical fitness;
3) Develop a variety of basic movement and manipulative skills so they will experience success and feel comfortable during present and future physical activity pursuits; and
4) Develop the ability to get along with others in movement environments.

The SPARK curriculum is designed to be modified based on different types of physical education scenarios, including the physical education teaching experience of the instructor and the quantity of physical education being taught. SPARK accounts for the fact that, while ideally schools can offer students daily physical education by a

qualified instructor, this is often not the case. The program is designed to allow for different class period lengths. In addition to instructions for specific physical activities, the curriculum includes some information on topics such as organizing a class session, maintaining appropriate behavior, suggestions for team-teaching, building social skills, and inclusion of all youth.

SPARK Trainings

On October 3, 2009, Carol White teachers participated in a day long SPARK training which included instruction in the SPARK philosophy, background, and vision for a healthy lifestyle. The trainings emphasized the importance of physical activity at a moderate/vigorous level (see *Process Evaluation Section 3: Definitions and Components* for more information on what is considered moderate/vigorous activity), ways to increase this activity among all youth, and how to make it a fun experience. At the training, teachers were reminded of the SPARK BASICS, which is an acronym reminding teachers of the core components of a SPARK class session:

The SPARK BASICS

- **B**oundaries/routine
- **A**ctivity from the get-go
- **S**top/start signals
- **I**nvolvement by all
- **C**oncise instructional cues
- **S**upervision

The SPARK trainings included hands-on instruction in a range of the activities included in the SPARK curriculum, along with tips for using them in the classroom. SPARK activities often incorporate healthy lifestyle information; for example, some dances include lyrics or sayings with nutrition or motivational information. An example of an activity that was included at the training this year was a game to teach students about encouraging each other. Participants paired up to play rock-paper-scissors. Whoever lost became the cheerleader for their partner, and the winner played another person. Eventually the games resulted in two people who were cheered for by two large groups of their classmates. Encouragement was emphasized over winning.

At the training, the SPARK trainer included some information on completing the Personal Best Cards efficiently and accurately with large groups. In previous years, this was identified as a challenge by some teachers. The teachers practiced how to effectively complete these cards by practicing in pairs, counting for each other, and modeling correct form for the activities. Teachers shared some of the strategies they have used for completing the cards including: emphasizing doing them correctly over just getting a high number on each skill, and immediately reporting to their teacher the number of each skill completed by their partner.

During the SPARK training, the teachers discussed goals that afterschool leaders should have for their programs. Some of the ideas suggested by the SPARK trainer and/or brainstormed by teachers included the following:

- Engage in M/V activity at least 50% of the time;
- Make activities enjoyable and safe;
- Include opportunities to practice skills and be physically active;
- Promote even more physical activity;
- Promote teamwork and confidence;
- Build social skills and communication; and
- Find new interests by introducing new activities, sports, and skills.

Teachers were then asked to discuss how they felt their SPARK programs were going. A few of the topics mentioned included: challenges working with large numbers of youth (and appropriate youth to staff ratios); whether dodge ball is a suitable activity; limited use of dances; and challenges with equipment wearing out. A few strategies for class organization and management were discussed, and key points to the SPARK curriculum and philosophy were reviewed.

According to the Program Partners, the SPARK training was helpful for teachers and the trainer was very enthusiastic. One Partner noted that the training was a nice opportunity for afterschool and physical education teachers to work together. However, the Program Partners agreed that the trainings were repetitive for teachers who had attended in previous years. They wished that new information and materials were provided at these trainings, or that they could send different people to each training.

Program Activities

The SPARK curriculum includes a range of activity categories that teachers can incorporate into their programs. These categories include warm-up/cool-down, physical activity games, sports, other activities, muscular strength/conditioning, SPARK Extra activities, and dances. According to teachers at the Tucson sites, warm-up/cool-down, sports, and physical activity games were the most common activities done during the data collection weeks throughout the year. Muscular strength/ conditioning was also frequently included as part of the class. SPARK extra activities, other activities, and dances were the activities used least frequently. *Exhibit 4* highlights the frequency with which each of these activity categories was implemented across year three of the Carol White program.

Exhibit 4: Comparative Frequency of Activities by Category

Frequency Provided	***CATEGORIES OF ACTIVITIES***		
MOST ↓ **LEAST**	-Warm-up/cool-down	-Sports	-Physical activity games
	-Muscular Strength/Conditioning		
	-SPARK Extra Activities	-Other activities	-Dances

Overall, project staff felt that the SPARK curriculum and binder with materials were strengths of the Carol White program. The curriculum provided details on exactly how to complete activities, and strongly encouraged fulfilling the requirements for moderate/vigorous physical activity. Program Partners generally expressed positive feedback for the SPARK curriculum, and felt that it had become part of the recreation culture at many sites. According to the Program Partners, it was particularly nice to have the curriculum for new staff or substitute teachers to quickly learn and use.

According to Program Partners, the amount teachers use the SPARK curriculum varies by teacher and site. Some teachers use the SPARK curriculum exactly, some modify it and then use it, and others do not use it as much. Teachers who modified the curriculum typically did so to adjust for different age ranges or to fit with the equipment they had available. Some project staff noted that the afterschool programs appeared to be using the SPARK binder more frequently than physical education teachers.

Supplemental Resources

In year 3 of the Carol White program, program sites were provided with supplemental online resources as well as access to additional physical activity equipment. Participants were encouraged to access online SPARK curriculum resources and trainings made available through their website (www.sparkpe.org). These resources included an online monthly newsletter. The Project Manager also provided a link to the U.S. Department of Health and Human Services *2008 Physical Activity Guidelines for Americans* and the *2008 Physical Activity Guidelines for Americans Toolkit* (http://www.health.gov/ paguidelines/). Handbooks, information, and posters regarding the physical activity guidelines for adults and youth are available free through this website. This resource was mentioned to Program Partners at the January Partners' meeting. Carol White sites were also eligible for Wii consoles through other United Way funding sources. In addition, sites were able to request replacement SPARK equipment or other physical activity equipment, and these materials were distributed equitably across the sites by the United Way Project Manager. The degree to which sites took advantage of these resources and equipment, and used them to supplement their regular SPARK activities, is unknown.

Program Implementation

The following paragraphs provide a broad perspective on the implementation of the Carol White program. The information provided should not be considered a comprehensive summary of all program elements across sites. There is significant variation across sites in most of the elements described. In addition, observations are based on limited visits to the site by the Program Manager and Program Evaluator and, thus, may not be representative of the daily implementation of all programs.

Facilities and Staffing-Carol White sites had very different types of locations available for their programs, including playgrounds, fields, cafeterias, buildings, basketball courts, gymnasiums, and other facilities. Access to indoor facilities varied by site. The faculty student ratio varied by site, ranging from 1:5 to 1:31 across the sites that were observed. Many locations had more than one staff person present.

*SPARK-M*ost sites appeared to be using the SPARK curriculum as a component of their programs. Most sites incorporated the equipment and activities, though they may not always have identified them as SPARK. Often SPARK was one part of a program in which other components also took place each day, such as snack and homework, or other physical activities not from the SPARK curriculum. Physical activity was frequently at a moderate/vigorous level, though some less intense activity was observed to be included in the exercise time. Warm-up exercises were often included in the program sessions.

Teacher and Student Interaction and Engagement-Most of the interaction between teachers and youth and between youth themselves could be described as positive. Some teachers faced challenges with keeping and maintaining all students' attention, however, many employed strategies to help keep their focus. For example, one teacher was observed using very quick instruction, verbal cues, and a whistle to maintain the youths' attention. Most teachers offered encouragement, instruction and supervision and some engaged in the activities with their youth. Youth were observed to be listening well and fully engaged in many of the programs visited. Youth were observed cheering each other on during activities and often appeared to be having fun.

Teacher Satisfaction

Generally, teachers were satisfied or very satisfied with the SPARK program's effectiveness at increasing student activity levels. Approximately 92% of teachers who responded to this item reported that they were satisfied or very satisfied with the program by the end of the year, with only 8% of teachers responding they were somewhat or very dissatisfied with the program. During the other three data collections, 79%, 68%, and 88% of teachers reported that they were satisfied or very satisfied with the program. It is unknown why this number declined during the second data collection. Most teachers seemed to like the SPARK curriculum and the structured activities it provided to supplement their existing programs.

Student Engagement and Experience

Throughout the year, most teachers reported that their students seemed to be engaged, challenged, and having fun in the program. At each data collection this year, teachers were asked to describe some of the efforts they took to engage students in their classes. The following quotes highlight some of the key themes that emerged:

> *"Most of the classes are engaged and having fun. If they are not interested in the activity, I try to give alternative activities to keep them active."*
>
> *"90% of my students are always eager. For those students who are not eager, seeing a teacher or another student enjoy the game usually gets those students involved."*
>
> *"Most of the kids love the activities. I get kids to participate by playing games everyone can be successful in."*
>
> *"All students are engaged, some just need more breaks than others when it gets real intense."*
>
> *"All are engaged, and if they are not, we talk about having a healthy life style."*
>
> *"Most students are challenged, engaged and having fun. Positive incentives, verbal praises and self-confidence boosts are used to engage students who are not always interested in participating."*

Exhibit 5 provides a more detailed list of efforts teachers took to engage students throughout the year. These efforts are sorted into the categories of motivation, variation, and inclusion-related approaches.

Exhibit 5: Ways that Teachers Encourage Engagement

Motivation	Encourage and praise the students for participating. Positive reinforcement.
	Have friends encourage each other to participate.
	Make the games and activities fun.
	Encourage youth to focus on doing their own personal best, and not worry about what others are doing.
	Encourage students to at least try an activity before deciding to give up.
	Encourage the students to relate fitness to their daily lives.
	Use prizes as an incentive.
	Give students opportunities to be successful.
	Empower students by giving them leadership roles.
	Encourage students to notice that other students are having fun.
	Challenge students to beat the teacher at a game or activity.
	Talk with students about being physically active.
Variation	Modify the activities when youth are tired, so they can continue participating.
	Modify the activities to meet different needs and interests. Allow the students to suggest modifications.
	Try out new games to keep youth interested.
	Give youth different options (active alternatives).
	Allow students to do light intensity activity for a little while.
	Alternate different activities.
	Encourage students to learn and practice new skills.
	Give students breaks when they need them.
Inclusion	Ask the students to help with the activity. For example, ask students to lead the warm-up or cool down, explain one of the games, or be captain.
	Have older students help with leadership.
	Have staff pair up with students who are hesitant to participate. Teacher participation encourages student participation.
	Involve the parents.
	Involve everyone in the games. Make sure everyone gets a turn.
	Ask youth what activities they want to do.
	Do activities at multiple levels of difficulty so everyone can participate.
	Encourage students to at least watch or take a non-physically active role in the game (such as score-keeper) if they refuse to play.
	Target some activities toward different age groups.

Students independently reported that they enjoyed the program and learned a lot from participating. *Exhibit 6* includes a few quotes highlighting what they liked and learned from the Carol White program. Site observations by the Project Manager and Program Evaluator support the finding that most youth were engaged and enjoyed the Carol White program.

Exhibit 6: What Students Liked and Learned in the Carol White Program

What students said they liked…	What students said they learned…
We learned different activities in a fun way and get to live a healthy lifestyle.	*I learned how important it is to drink milk as well as other things.*
It's fun, you get healthier every time.	*How to dance good.*
I can let myself run, jump & do anything to keep me healthy.	*To eat healthy, have fun and meet new people.*
I like that we get to exercise a lot. And that we get to have snacks.	*I learned that being healthy and active will improve your life.*
I like the healthy people that let us be healthy.	*How to shoot a basketball.*
I like P.E. because it gets my energy out.	*To get along with people.*
That we play outside and get stronger.	*Proper push ups and sit ups.*
I like the fact that we can make friends, and play active games like medic and dodgeball.	*I should never eat bad things like candy all the time.*
I like the leaders and I like this program because I make a lot of new friends.	*To stay healthy, improve my skills and work with others.*
I like getting ready for the track and field day.	*I learned to make my own games & learn skills.*
I liked that we got to show that we are smart by circling the good things you should eat, drink and do.	*I learned which foot to jump off of when jumping over the hurdles.*
I liked track, soccer, basketball, hurtles, long jump and high jump.	*I learned to use teamwork and play some different games.*
I like when I get my heart pumping fast.	*That I can do anything.*
I like playing games that involve partners & groups. If it ended I would be sad because P.E. gets me active.	*There are many opportunities to help us stay healthy.*
It tells us what we can do to stay healthy. Basketball is healthy.	*If I set a goal to beat my other goal, I can accomplish the goal.*
You get to have fun when you exercise.	*You've got to practice to be better at something.*
I liked spending time with my friends & doing the games with them & I love to be healthy.	*I learned to never give up.*
You lose weight.	*I have learned to play new sports and set goals.*
Sit ups help your stomach be stronger.	*If you play a lot you can be healthy.*
We get to play cool exercises and soccer.	*It's ok if you're not first, as long as you had fun.*
This program had a lot of movement.	*I should improve in my fitness.*
It brightens my day.	*I learned how to stretch & drink more water.*

Physical Education Classes vs. Afterschool Programs

The Flowing Wells District, which includes Centennial, Homer Davis, Hendricks, Laguna, Richardson, Walter Douglas, and Robles schools, implemented the Carol White program in their 3rd-6th grade physical education classes as well as in their afterschool programs. Thus, all youth who were in the afterschool programs in these schools were also receiving physical education through the Carol White program. The other districts participating in the Carol White program only offered it in their afterschool programs.

The physical education teachers in the Flowing Wells School District worked with significantly more students than the teachers in the afterschool programs. The physical education teachers in this district described the quantity of paperwork and completing Personal Best Days Cards as major challenges with the number of youth they served. Afterschool programs have more activities, including homework and arts/crafts, that often are done during each class. They compete with other afterschool activities, must allow for students to arrive late and leave early, and may serve multiple age ranges simultaneously. These factors can sometimes make it challenging to have sufficient time for completion of moderate/vigorous activity. Despite these challenges, according to Program Partners, most physical education teachers and afterschool teachers are supportive of the program. Many feel that it is now a part of their recreation culture, and something they do everyday. They appreciate the flexibility of the program and feel that it encourages more physical activity. The Program Partners reported that SPARK is a good enrichment activity to their existing programs and enhanced what physical education teachers and program staff were already doing.

2) SPARK Obstacles--What obstacles did teachers face using the SPARK curriculum in their programs?

KEY FINDINGS:

- *While most teachers reported no major obstacles in the implementation of the SPARK program, a few obstacles were noted in the following areas: time/scheduling constraints, access to appropriate facilities/equipment, variation in attendance and program arrival/departure, group size and age range, and paperwork.*

Most teachers reported few obstacles to the implementation of the SPARK program. The primary obstacles that some teachers did report were time/scheduling constraints, access to appropriate facilities/equipment, variation in attendance and program arrival/departure, group size and age range, and paperwork. More information on these obstacles is included below:

Exhibit 7: Teachers' Identified Obstacles

Scheduling Constraints/Time Limitations

Some teachers stated it was difficult to schedule time for SPARK around other program activities, such as homework and arts/crafts. Scheduling around school events (i.e. assemblies) and other school classes (which often take priority) was noted as a challenge. Several teachers also noted that the SPARK program itself takes time from other physical activities.

Facilities/Equipment

Some teachers struggle with having to share physical activity space. Availability/ access to facilities during hot weather was also noted. Several teachers explained that they are not satisfied with the quality of the equipment: specifically that many of the balls lose air and do not hold up well with use.

Variation in Attendance and Program Arrival/Departure

Teachers described variation in student attendance as an obstacle at some sites. In addition, students arrive late or leave early from the program, hampering the teachers' ability to run a fluid class. It is challenging when parents do not have a set time they are required to pick up their youth.

Group Size and Age Range

Teachers noted that the SPARK curriculum is sometimes difficult to implement with different size groups and with different age ranges. Some teachers mentioned having too few students for activities, while others mentioned having too many to work with effectively.

Paperwork

Some programs reported that completing paperwork was taking away from active time in the program or that they did not have time to complete it. They noted a lot of paperwork was required for this program.

The SPARK instructor provided methods for addressing some of these obstacles during the fall training. See *Process Evaluation Question 1: SPARK Implementation* for more information on the SPARK training sessions.

3) Definitions and Fitness Components--How are moderate and vigorous activity typically defined? How are standard fitness components measured?

KEY FINDINGS:

- *Teachers were provided with standard and accepted definitions of moderate/vigorous activity as well as ways to explain these concepts to youth.*
- *Detailed instructions were provided for completion of fitness tests, but some sites may have conducted them differently because of the large number of students they had participating in their programs.*

In the evaluation training guide and at staff trainings, teachers were instructed that moderate and vigorous (M/V) activities are defined as follows.

Moderate: *There is an increase in breathing and heart rate. Students can still comfortably talk while doing this activity.*

Vigorous: *Heart rate and breathing are significantly increased. Students are too out of breath to carry on a conversation.*

These definitions are based on the federal Government Performance and Results Act (GPRA) of 1993, as well as the Centers for Disease Control and Prevention Talk Test (2008). The Talk Test was used in addition to the GPRA as it is a simpler way of explaining to youth in the target age range what types of activities can be included as M/V activity.

The Personal Best Day Cards were used to collect information on versions of three standard fitness tests used by the SPARK curriculum. These tests are the one-minute sit-up, thirty-second push-up, and 9-minute jog/walk. The SPARK curriculum offers detailed instructions on how to administer these tests as part of the exercise program. However, it offers several variations on how to do each of the activities, primarily to adjust to individual fitness abilities. For consistency in data collection across sites, teachers were provided with the following additional specifications and asked to only record the activities when done accordingly.

<u>Thirty-second push-up test:</u>

Number of push-ups a participant can do in thirty seconds with his/her knees on the ground and back straight. The elbows should bend to a 45-degree angle on the down motion and return to straight on the up motion (though elbows should not lock).

One-minute sit-up test:

Number of sit-ups a participant can do in one minute with his/her knees bent, feet flat on the floor, and arms across the chest. The participant should come to a fully upright, sitting position (where their arms touch their thighs) and then return their head to the floor. A second person should hold the feet of the participant who is testing.

9-minute jog/walk test:

Place cones 50 yards apart in a loop or course that participants can follow. Record the number of cones (50 yard distances) that each participant passes in 9 minutes.

Program teachers were asked to try to conduct the tests with small enough groups to record or at least monitor the results for each participant. However, reports from program staff suggest this was not feasible for many of the larger sites. These sites often paired students up and had them record the information for each other. There may be significant discrepancies in how youth are completing the fitness tests across sites and data collection periods.

4) Nutrition Components--How are students being taught about nutrition and other healthy lifestyle components? Who is doing the training? What materials are being used?

KEY FINDINGS:

- *Program teachers were taught about nutrition and healthy lifestyle components at the SPARK Training Nutrition Session and the 2009 SAY Conference. These trainings included discussion of Dietary Guidelines, the Food Pyramid, changing food environments, and resources and tools available, along with other topics.*
- *Sites participating in the Arizona Nutrition Network received additional monthly trainings for youth participants on nutrition and disease prevention and resources for teachers.*
- *Teachers were encouraged to teach nutrition and disease prevention to youth participating in their programs. Teachers sometimes incorporated this information informally, around other class components. Teachers were more aware of opportunities to do so than they were in years one and two.*

SPARK Training Nutrition Session

The SPARK training October 3, 2009, included a nutrition component. In addition to learning about the SPARK philosophy, background, and vision for a healthy lifestyle (as described in the *Process Question 1* section of this report) teachers learned about the 2005 Dietary Guidelines and the Food Guide Pyramid, as well as other nutrition-related information for teachers to share with youth in their programs.

SAY conference

Teachers were educated about nutrition and healthy lifestyle choices at the January 30, 2010 Sonoran Alliance for Youth (SAY) Conference on Health, Fitness, and Nutrition. The session on Nutrition, Health, and Fitness was recommended for all Carol White staff in attendance at the conference (and was mandatory in previous program years). This session was conducted by the United Way Nutrition staff and focused on promoting healthy eating and physical activity in afterschool settings. Some information on incorporating this information with youth was also presented. The following four objectives were established for this session:

- Identify key issues that are affecting the healthy outcomes of youth and adolescents;
- Understand our role in reversing these negative health trends by promoting key health elements;
- Examine other major programs and sectors in supporting out-of-school time health promoting programs; and
- Explore tools and materials to support the development and sustainability of achieving healthy lifestyles in our afterschool efforts.

In addition to discussing the above topics, the United Way staff reviewed some resources available online including: the USDA Team Nutrition materials (www.teamnutrition.usda.gov); Recharge kits available from the National Football League (www.actionforhealthykids.org/recharge); and the Media-Smart Youth program curriculum available from the National Institute of Child Health and Human Development (www.nichd.nih.gov/msy/). They also discussed an example of an innovative school project in Berkeley, California, called the Edible Schoolyard, where students participate in all aspects of tending to crops and using the food produced.

It is important to note that, as this session was not mandatory for Carol White teachers, it is unknown how many decided to participate. Thus, some staff may not have received the above mentioned information and resources.

Arizona Nutrition Network

Twelve of the 20 schools receiving Carol White program funding qualified for the USDA Arizona Nutrition Network Program (AZNN). For a school to qualify, over 50% of the student population must be eligible to receive a free or reduced price lunch. While funded by the USDA, the AZNN program was closely linked to the Carol White program in qualifying schools. The same United Way staff were involved with both programs, and both programs had similar nutrition goals. At all the schools, the United Way Nutrition Educators worked with teachers to provide nutrition information that integrates with the SPARK curriculum. Handouts and materials on nutrition were provided to teachers at most sites. United Way staff also attended and staffed a nutrition booth at Family Fitness Nights for all sites. (See *Process Evaluation Section 5: Parental Awareness* for more information on their role in Family Fitness Nights).

United Way staff provided additional handouts and a monthly session on health and nutrition in the AZNN schools, thus, youth in these schools had greater exposure to this information. The monthly session usually included a 10-15 minute lecture with the youth, then either a food demonstration or an activity relevant to the lecture content. According to the Nutrition Educator, teachers would often watch what they did with the youth during the monthly lesson and could then use that in their own lessons. In addition, teachers at AZNN sites could request specific topics be covered during these sessions or request additional support from the United Way nutrition experts. The staff at the Happy Hours program had a supplemental meeting where the Nutrition Educator was able to provide additional nutrition information and resources.

Classroom Incorporation

Teachers were encouraged to incorporate nutrition information and disease prevention into their classes as part of the Carol White program. Teachers in the AZNN were encouraged to use information from the sessions conducted by the United Way Nutrition Educator at the monthly sessions that were offered in their programs. In addition, teachers received some instruction on how to share nutrition information with youth at the SAY conference.

According to the Program Partners, nutrition and disease prevention was incorporated into their programs through informal discussion and activities, such as healthy snacks, cooking, and hand-washing, rather than through structured lessons. One Program Partner noted that they did not feel that their program was doing a good job of including healthy lifestyle information in their classes.

When compared to years one and two, however, the Program Partners noted that the teachers were more aware that the program was supposed to include this type of information (that is, that the grant had other components besides physical activity). They were more likely to try and find ways to include nutrition in their class sessions. According to a Program Partner, one way this nutrition programming was implemented was on bad weather days when they needed an alternative to going outside. In addition, one Partner noted that there was more acknowledgement from teachers that they should not bring unhealthy foods to eat in front of the youth.

One Program Partner noted that: "teachers are now more aware of opportunities to discuss nutrition in their programs."

5) Parental Awareness--How are the program sites striving for increased parental awareness of the importance of healthy lifestyle and physical activity?

KEY FINDINGS:

- *Family Fitness Nights are the primary means the program has established for promoting parental knowledge of nutrition and healthy lifestyle behaviors.*
- *There was no clear consensus from United Way staff and Program Partners on the effectiveness of Family Fitness Nights at increasing parental awareness of nutrition and healthy lifestyles. Multiple benefits and limitations were noted.*
- *The primary strengths of the Family Fitness Nights this year were that they involved some parents in the program, brought youth and families together, encouraged collaboration and changes at sites, and they were fun.*
- *The primary challenges of the Family Fitness Nights included getting parents to attend and engage, and scheduling the events at suitable times and across multiple sites.*

Family Fitness Nights

Family Fitness Nights were the primary means the program used to promote parental knowledge of nutrition and healthy lifestyle behaviors. All sites were required to host or collaborate on an event, in which nutrition educators from the United Way worked with program staff to staff a nutrition booth and other activities. The events were designed for both youth and parental involvement. A "Family Fitness Night Planning Tips Sheet" was provided to program staff at the fall SPARK training to assist them in the planning process.

Activities

The Family Fitness Nights varied across the different sites, but most shared the following components: physical fitness activities, games/activities to encourage participation, a nutrition booth set up by the United Way staff, and healthy snack options. Some sites also had dances, obstacle courses, talent shows, raffles and/or a chiropractic booth. Many sites utilized the SPARK curriculum, offering one or more activities in which youth and parents could participate. Larger events, such as the Flowing Wells Fit Fest, had numerous physical activity options available simultaneously, such as tennis, football, volleyball, running, Wii sport, jumping castle, obstacle course, baseball, Frisbee golf, dodge ball, rock climbing, a weight room, and games for younger youth.

Engagement

According to the Program Partners, the amount of engagement from parents and youth varied by site. They noted that more youth were typically engaged than parents. Parents sometimes seemed to enjoy partnering up with their youth for an activity or watching their children in talent shows. Based on limited observation by the Program Evaluator, parents did seem to enjoy playing some sports and activities with their youth at larger events. However, they were more frequently observed watching their youth engaged in activities. Program staff and Partners noted that parents were not very involved at some sites.

> *"The youth were almost always fully engaged—they had lots of energy and enthusiasm."*
> *~Program Partner*

Nutrition Booth and Information Provided

According to the United Way Nutrition staff, the nutrition booth typically included a bell-pepper taste test and related-information (such as where they were grown, recipes, etc.) as well as an activity with the food pyramid and other nutrition-related materials. According to a site observation by the program evaluator at the Flowing Wells Family Fit Fest, the food pyramid activity involved a large food pyramid laid out on the ground. United Way Nutrition and Program staff asked the youth to put plastic food items in the correct sections of this food pyramid. Variations of this activity included asking the youth what each of the different colors of the food pyramid represented. In addition, youth were asked which types of foods they liked from each category.

> *"What vegetables do you like?" asked a United Way staff member. "I really just like broccoli," said the youth as she placed the plastic broccoli on the correct section of the food pyramid.*

In addition to the food pyramid activity, the nutrition booth at the Family Fit Fest at Flowing Wells focused on hydration (instead of the bell-pepper taste test). The hydration booth focused on the sugar content of different beverages, the importance of drinking water, and ways to determine if you are hydrated. A "goody-bag" was provided which included information on beverages, USDA Fun Food News, snacks, seasonal fruits and vegetables, other healthy lifestyle games and information, as well as a description of exercises you can do with a Dynaband (which was included in the "goody-bag"). Other items included in some "goody bags" were fold-up Frisbees, pens, a magnet where you can post which type of physical activity you are going to do for the day, recipe cards, and growth charts.

Strengths/Weaknesses

The following exhibit highlights the year 3 Family Fitness Nights strengths and weaknesses noted by the Program Partners and United Way Nutrition Educators and Project Manager. The main strengths that were noted include: events involved some parents in the program, they brought youth and families together, they encouraged change and collaboration at sites, they were fun, and they had other benefits. The primary challenges noted include: getting parents to attend and engage, scheduling events around parents' schedules and at multiple sites, and other challenges.

Exhibit 8: Strengths and Weaknesses of Family Fitness Nights (FFNs)

Strengths	Weaknesses
FFNs involved some parents in the program: • *A strength was having a night for families.* • *We did have about 80 adults attend, which is incredible.* • *They were a way that parents were involved in the program.* • *Some sites did have parents involved and engaged.*	**It was challenging to get parents to attend and engage in FFNs:** • *FFNs generally weren't very well attended.* • *It took a lot of marketing, prize offerings, and getting youth involved to attract families.* • *It was challenging to get participation in physical activities during FFNs.* • *There was minimal engagement from parents at the FFNs.* • *Sites were not required to work hard to have parents attend.* • *Parents were not really there at some sites or did not seem too interested.*
FFNs brought youth and families together: • *They were a great way to get families together for physical activity instead of food or TV, which was more the norm for many families.* • *They brought together kids as a cohesive group.*	**It was challenging to determine the best times to schedule FFNs:** • *Parents were on their way home from work, and so they still needed to worry about making dinner, doing homework, etc.* • *Accommodating parents' schedules to get attendance was challenging.*
FFN's encouraged changes and collaboration at sites: • *They encouraged site directors to think about how to share physical activities with parents.* • *They brought together the entire school district community.* • *They brought all the PE teachers together.*	**FFNs have other challenges:** • *It is a challenge finding healthy food options for snacks/meals.* • *The events depend a lot on the leadership of the sites to be effective and engaging.*
FFNs were fun: • *Parents who came had a blast.* • *Staff were really enthusiastic—and parents could see it and enjoyed it.*	
FFNs have other benefits: • *They offer good food.*	

Effectiveness

United Way staff and Program Partners were asked whether they thought that the Family Fitness Nights were effective at increasing parent knowledge of healthy lifestyle choices. There was not a consensus on this question. Some felt that the events were helpful, but that they would have been better if more parents had attended. Others noted that they were more helpful as a method for parents to see what their youth were doing or for observing program staff as role models. Some felt that the events were quite helpful and that youth and parents were engaged. One note made by United Way staff was that the effectiveness of the events may vary depending on the leadership of the sites and how active the site leaders are at inviting and engaging parents. United Way staff and Program Partners acknowledged that many factors come in to play when trying to involve parents, including how busy parents typically are with many activities and responsibilities.

> *"I think Family Fitness Nights were very helpful for the parents who came, however, I wish they could have been more well-attended." ~Program Partner*

5) ***School and Community Infrastructure—What program components are building infrastructure?***

KEY FINDINGS:

- *Staff training, through SPARK training, and participation in the SAY Conference, were the primary ways the program worked to build infrastructure. Curriculum materials and supplemental equipment also helped to build infrastructure.*
- *The program worked toward building community-wide infrastructure through involvement in the Activate Tucson Initiative and Healthy Kids Day.*

Training

Staff training was included as a program element to help build school level infrastructure. Participation in the SPARK trainings and SAY conference, along with provision of the SPARK curriculum materials (and supplemental resources), provided teachers with information on physical activity and nutrition guidelines. Teachers were encouraged to adopt healthy behaviors and be more health conscious themselves, which could help increase the sustainability of the program.

The evaluation section of the fall SPARK training included a brief review of the goals/objectives of the Carol White program, including the Government Performance Results Act (GPRA), and a review of key year two findings. This information provided teachers with a broader context for the work they are doing. The evaluation training also included background information on the purpose for conducting the evaluation and instructions on how to use the specific measures. Teachers can continue to incorporate this information and the skills they have developed in future classes.

Community Involvement

The local Carol White program worked toward building a long-term, community-wide infrastructure to support physical activity and lifestyle behaviors of its members. Two program objectives included: building connections with community organizations working in this area, and contributing to community healthy lifestyle goals.

Activate Tucson Initiative

The program worked to build connections with community organizations through participation in the Activate Tucson Initiative. This community coalition is considered a "clearinghouse" of valuable information on local, best healthy lifestyle practices and shared resources, and is dedicated to making Tucson "one of the healthiest communities in America." Some of the partner organizations include the University of Arizona's Center for Physical Activity and Nutrition, the Pima County Department of Natural Resources, Parks and Recreation, the YMCA of Metropolitan Tucson, the Office of the Mayor of Tucson, the Center for Health Equality, Tucson Sport Magazine, HealthNet, and the Pima County Department of Transportation.

Healthy Kids Day

The program worked toward community-wide goals related to physical activity and healthy lifestyle choices through involvement in the 18th Annual Healthy Kids Day event held on April 18, 2010. Local YMCA's, as well as Pima County libraries, sponsored this event, which included nutrition-related games, a family obstacle course, a climbing wall, a tidal wave slide, a basketball shot, family exercise activities and healthy snacks. It is part of a national YMCA initiative to help Americans improve their health and wellness. About 45 businesses were there with booths, games, and giveaways.

7) *Sustainability— What efforts have been taken to ensure program sustainability?*

KEY FINDINGS:

- *Some elements of the Carol White program will likely continue after the Carol White funding ends, including the curriculum, activities, time for physical activity, and some evaluation activities. This will likely vary by site.*
- *Carol White components have been incorporated into many physical education and afterschool programs.*
- *Some sites have additional funding available, or are pursuing other funding options, to allow for the continuation of Carol White program activities after the current grant ends.*
- *Important lessons were learned regarding parent and family involvement, the importance of physical activity, role modeling healthy behaviors, designing and implementing the nutrition component, working with program staff, and the benefits of evaluation that can be incorporated in future program efforts.*

Program sustainability was considered one of the long-term goals of the Carol White program. As this is the third and final year of the Carol White program, questions were added to the process evaluation in order to assess progress toward this goal. The following is a summary of key findings from the Program Partners, United Way Nutrition Educators and Program Manager, regarding sustainability of the program. Lessons learned are included as they can help to inform future program efforts in this area.

Exhibit 9: Carol White Sustainability*

After the funding ends Carol White program some sites may continue to:

- Use the Curriculum
- Use Personal Best Days
- Allot time for physical activity
- Use the SPARK activities/games
- Use the SPARK equipment
- Evaluate whether or not youth are being active

In order to ensure that the SPARK curriculum will continue to be implemented, sites have:

- Integrated SPARK as part of their overall program.
- Observed that state licensing of afterschool programs encourages a healthy lifestyle/physical activity curriculum, which will encourage them to continue to use SPARK.

Program Partners have identified the following ways of continuing to fund physical education and nutrition activities at their sites:

- Some Partners do not require additional funding to keep using the SPARK program.
- Some Program Partners have other funds they can use to support the program.
- Other Partners have applied for (or intend to apply) for other grants.

Some of the lessons learned from this program and evaluation(sorted by theme) include:

Parental Involvement/Events

- It is important to involve parents (and the whole family) in youth programs.
- It is challenging to get parents to attend and engage.
- For purposes of scheduling, it helps to spread events (such as Family Fitness nights) across the whole year.

Curriculum/Engagement

- It is important for afterschool programs to work hard at engaging kids in physical activity.
- Recreation is an important part of the everyday curriculum for youth.

Nutrition

- It is important for adult staff to eat healthy since they are role models for the kids.
- A full nutrition component needs to be available at all sites.

Evaluation

- Evaluation can be challenging.
- Evaluation can help encourage staff/youth to think in new ways (i.e. time actually spent on moderate/vigorous activity), practice observation, and set goals. It can also make staff feel like part of a larger effort.

General

- It is important to know all your partners to make sure they are committed to the goals of a grant and to know how to communicate with them.
- Explore ways to minimize staff turnover during a project.
- The general purpose of the Carol White grant and its objectives were good.

*Note: findings have been summarized for clarity and should not be considered direct quotes.

Three Year Process Evaluation Summary and Implications

The following exhibit summarizes the process evaluation findings and implications across all three years of the project. The findings are detailed by process evaluation question.

Exhibit 10: Implications of the Three Year Process Evaluation for the Outcome Study

Carol White Process Evaluation Question	Synthesis of Findings and Implications for the Carol White Outcome Evaluation
1) How are program sites implementing the SPARK curriculum?	The SPARK curriculum was implemented across most Carol Whites by teachers who had been trained in the program. Many different activities were utilized. Participants and teachers seemed to enjoy and express satisfaction with the SPARK program. The variation in implementation across sites limits the generalizability and reliability of the outcome evaluation findings.
2) What obstacles are they facing in using the SPARK curriculum in their programs?	A few obstacles were noted in the implementation of the SPARK program during the three years of the project including: time/scheduling constraints, program management, access to appropriate facilities/ equipment, variation in attendance and program arrival/departure, maintaining activity levels and interest for all ages and abilities, and challenges with evaluation paperwork. Program and evaluation-related challenges may have impacted some teacher's ability to fully implement the program. However, most teachers did not report major obstacles or suggest they were unable to implement the SPARK curriculum.
3) How are moderate and vigorous activity typically defined? How are fitness components measured?	Standard definitions for moderate and vigorous activity were used across all three years of the project. Definitions were also provided for fitness tests employed in the program and evaluation. Teachers were informed of all these definitions at yearly trainings. Thus, related outcomes (Objective 1: GPRA and Objective 3: Physical Fitness) should have been evaluated similarly across sites. However, it is unknown to what degree teachers fully understood the definitions provided or utilized them in their programs and evaluations.
4) How are students being taught about nutrition and healthy lifestyle components? Who is doing the training? What materials are being used?	Teachers received some information through trainings on nutrition and healthy lifestyles each year. Sites participating in the Arizona Nutrition Network received additional monthly trainings for youth on nutrition and disease prevention, and resources for teachers. Teachers were encouraged to teach nutrition and disease prevention to youth in their programs, and may have done so more in the second and third years of the grant. The amount of nutrition content youth actually received (dosage) likely varied greatly across sites, however, which should be considered in review of findings for outcome evaluation Objectives 2, 4, 5, and 6. Arizona Nutrition Network schools were often analyzed separately in the outcome evaluation to account for some of this variation in dosage.

Carol White Process Evaluation Question	Synthesis of Findings and Implications for the Carol White Outcome Evaluation
5) How are the program sites striving for increased parental awareness of the importance of a healthy lifestyle and physical activity?	Family Fitness nights are the primary means the program established for promoting parental knowledge of nutrition and healthy lifestyle behaviors. Events were a way to involve parents and offered some benefits, including providing resources and information to parents, however, challenges with scheduling and attendance/engagement limited their effectiveness at some locations. Many parents of youth in the Carol White programs did not attend these events and so likely received little information about the importance of a healthy lifestyle and physical activity. It is unknown to what degree parents who did attend benefitted from the information, though some were interested and engaged.
6) What program components are building infrastructure?	Staff training through SPARK trainings and participation in the SAY conference, was the primary way the program worked to build infrastructure. The program also worked toward building community-wide infrastructure through involvement in the Activate Tucson Initiative. Staff participated in these trainings and organizations throughout the Carol White grant, though the degree of their involvement is unknown.
7) What efforts have been taken to ensure program sustainability?*	Elements of the Carol White program have likely been incorporated into existing physical education and afterschool programs, and so will be continued after this funding ends. The components and degree of utilization will likely vary by site. Important lessons learned from this project can help inform additional funding, which some sites may pursue.
*Process evaluation question added during the final year of this Carol White program.	

Outcome Evaluation

The following sections describe the findings from the outcome evaluation of the Tucson-based Carol White program according to the program's stated goals and objectives.

GOAL A*: The implementation of a standards-based afterschool physical activity program to help students meet the GPRA Performance Measure and the AZ Comprehensive Standards.*

This section describes progress made toward the six program objectives under Goal A, which are related to youth physical activity, fitness, and knowledge of nutrition and healthy lifestyle skills.

Objective One: GPRA

Students will meet the GPRA performance measure by being engaged in 150 minutes of moderate to vigorous physical activity per week. In Year 3: 70% of students will be engaged in 150 minutes of moderate to vigorous activity per week.

KEY FINDINGS:

- *Out of 2,094 students, 239 students (11.4%) met the GPRA requirement through their participation in the program alone. Few programs had enough minutes available for students to meet the GPRA through participation in the program alone.*
- *Overall, 1,648 students (78.7%) met the GPRA requirement of at least 150 minutes of M/V activity for the week by the end of the year, after including activities students were engaged in outside of the program itself.*
- *There are substantial differences between sites, and between physical education classes and afterschool programs, in the number of M/V minutes completed and available during the classes and minutes completed outside of the program.*

A goal of the program is to increase the number of students meeting the federal GPRA requirement of 150 minutes of moderate to vigorous (M/V) exercise per week (see *Process Results Section 3* for definitions of moderate to vigorous activity). This exercise can take place in physical education classes, afterschool programs, organized athletics, or in unstructured play. The following sections describe the GPRA findings for the March 2010 data collection. Findings are presented by the number of M/V

minutes completed *in* the program, *outside* of the program, and *overall*. Findings are then broken down into site level data, and key GPRA data are also organized by physical education program versus afterschool program. Key GPRA findings are then compared with data across all four data collection time points in year three. Outcome findings across all three years of the program are reported in the *Three Year Outcome Evaluation Summary* section of this report.

March 2010 Moderate to Vigorous (M/V) Exercise-- IN THE PROGRAM

In order to evaluate the amount of M/V level activity completed in the program, teachers were first asked to record the length of the whole class period each day of the collection week. Findings show that the average number of class minutes available to each student per week was 111. This number includes the total minutes of both light and M/V intensity activities for the week.

The SPARK curriculum encourages teachers to maximize the M/V activities in which students are engaged during the course of a class period. In considering their class period, teachers were asked to document what percentage each day was spent doing M/V intensity level activities. The average percent of class time that was spent on M/V exercise was 79%. Thus, about a fifth of the class period was usually spent on light intensity activities.

Based on this information, it was calculated that the average number of M/V minutes available to each student per week was 95 minutes. This means that each student who was in attendance, and who participated in every moderate/vigorous activity that was offered, would have been able to complete an average of 95 M/V minutes per week.

Out of the 2,094 students for whom Intensity & Implementation (I&I) survey data were provided, 403 had the opportunity to meet the GPRA requirement of 150 minutes M/V intensity activity through the program alone. This means that 19.2% of all students had the opportunity to complete 150 minutes of M/V exercise per week in class.

Of those 403 students who had the opportunity to complete 150 minutes of M/V exercise per week, 239 students (59.3%) were able to complete it. Thus, out of the 2,094 students for whom there were data, 239 students (11.4%) met the GPRA requirement through their participation in the program alone. The average number of M/V minutes that a student actually completed through the program alone was 76 min/per week.

March 2010 Moderate to Vigorous (M/V) Exercise-- OUTSIDE OF THE PROGRAM

Students were asked to fill out Activity Logs in order to track the M/V activity they were engaged in outside of the program. The students were asked to record only activities done at a M/V intensity level (see *Process Results Section 3* for information regarding how these were defined for children).

At each data collection period, students were instructed to fill in a star on the Activity Log for every 10 minutes of M/V activity that they completed each day, for a week. There were six stars available each day, for a maximum total of 420 M/V minutes that could be completed for the entire collection week. The average number of M/V minutes that students reported on their Activity Logs was 244. Approximately 25% of students (523) reported having completed all 420 minutes possible during the collection week.

March 2010 Moderate to Vigorous (M/V) Exercise—OVERALL

Analysis of data from the I&I surveys, in conjunction with the Activity Logs, allows for a full measure of the GPRA requirement. The total number of M/V minutes completed in the program (from the I&I surveys) and outside of the program (from the Student Activity Logs) was determined for each student. Students completed an average of 320 total M/V minutes during the collection week. The number of students who completed at least 150 minutes of M/V activity was 1,648. Thus, 79% of students met the GPRA requirement of at least 150 minutes of M/V activity for the week.

Exhibit 11 highlights all key findings toward the GPRA requirement for the March 2010 data collection.

Exhibit 11: March 2010 M/V Activity Key Findings*

Data Category	Variable	March 2010 Finding
Class Statistics	Average Total Minutes	111 minutes
	Average Percent of Class that was M/V Activity	79 percent
	Average Number of M/V Minutes Available to Each Student for Week	95 minutes
In-Class GPRA	Average Number of M/V Minutes Completed for Week	76 minutes
	Number of Students with 150 Minutes of M/V Activity Available	403 students
	Number of Students Completing 150 Minutes of M/V Activity	239 students
	Percent of Students Meeting GPRA	**11.4%**
Outside of Class GPRA	Average Number of M/V Minutes that were Completed	244 minutes
Overall GPRA	Average Number of M/V Minutes Completed	320 minutes
	Number of Students Meeting GPRA	1,648 students
	Percent Meeting GPRA	**78.7%**
***Based on a full week of data collection.**		

March 2010 Moderate to Vigorous (M/V) Exercise—BY SCHOOL

Appendix E provides a comprehensive table of findings toward the GPRA objective by school. In general, the schools in the Flowing Wells School District had fewer average class minutes available for the program. The Flowing Wells' programs serve a significantly larger number of students through their school physical education programs. Across the sites, few programs had many students with 150 minutes of M/V activity time available to them. Sites varied in the percent of class that was M/V activity, ranging from 46% to 89% M/V activity.

Appendix F provides a breakdown by school of the key data used in determining progress toward the *overall* GPRA objective. This exhibit includes data from the I&I surveys as well as the Student Activity logs from the final data collection in March 2010. The primary findings are that major differences existed in the average number of M/V minutes students reported on their Activity Logs across sites, ranging from an average of 164 to 350 minutes. The average number of minutes that students participated in M/V activity in the program ranged from 37 to 294 minutes across sites. There was no clear trend between number of in-program and number of out-of-program minutes completed. Please see the *Discussion* section for additional information regarding the interpretation of these findings.

March 2009 Moderate to Vigorous (M/V) Exercise—BY PHYSICAL EDUCATION VERSUS AFTERSCHOOL PROGRAM

The Flowing Wells District, which includes Centennial, Homer Davis, Hendricks, Laguna, Richardson, Walter Douglas, and Robles, implemented the Carol White program in both their physical education classes as well as their afterschool program. Seventy-five percent of the students participating in the Carol White program were doing so only in the physical education classes offered in the Flowing Wells District. These students were not in afterschool Carol White classes.

The following table (*Exhibit 12*) breaks down the findings from the final GPRA data collection period in March 2010 by youth who were participating in physical education programs only, and those who were in a Carol White afterschool program. Students in the Flowing Wells School District who were in both a physical education and an afterschool program were included in the latter grouping.

Exhibit 12: March 2010 GPRA Data by Physical Education and Afterschool Programs

	Number of students participating in at least one Carol White program (P.E. and/or afterschool)	Average number of class minutes available IN PROGRAM (I&I data)	Average number of M/V minutes students participated **IN PROGRAM** *(I&I Survey data)*	Average number of M/V minutes students participated **OUT OF PROGRAM** (*Student Log*)	Average number of M/V minutes students participated **TOTAL** *(I&I and Log)*	Percent of students who completed at least 150 minutes of M/V activity for week **>GPRA<**
Students in Carol White Physical Education Programs ONLY (includes students who are only in Carol White program through participation in Flowing Wells District P.E. classes)	1593	71	52	240	292	**73.8%**
Students in Carol White Afterschool Programs (includes students from all sites who are in Carol White afterschool programs; students may also be in a Carol White P.E. class)	501	204	118	252	369	**87.3%**
Totals	2094	111	76	244	320	**79.0%**

As the table indicates, students in the afterschool programs had a higher number of class minutes available to them compared with students who received the program as part of their school's physical education classes only, with 71 and 204 average minutes available, respectively. Students in afterschool programs were able to complete an average of 66 more M/V minutes in the program than students who participated in physical education classes only. It is important to note that students in afterschool programs in the Flowing Wells District did also participate in physical education classes, which likely contributed to the number of minutes these students completed per week. The number of out-of-program minutes reported was similar for students in both afterschool and physical education-only groups. Due to the higher number of M/V minutes completed by students in afterschool programs overall, more of these students were able to meet the overall GPRA requirement. Approximately 87% of students in afterschool programs and 74% of students in physical education programs met the GPRA benchmark.

Moderate to Vigorous (M/V) Exercise-ACROSS YEAR

Exhibit 13 includes information on the numbers used in measuring progress toward the GPRA requirement across the year. The average number of program minutes per student remained relatively steady over the course of the year, with a slight increase during the third data collection. The average percent of class time that was M/V activity remained close to 80% throughout the year, ranging from 77% to 83% of class time. The average number of M/V minutes completed in the program remained relatively steady, near 80 M/V minutes, with the greatest increase seen during the third collection. The percent of students meeting the GPRA requirement in the program alone ranged from 11.4% to 13.9%. It is unknown why this number was lowest during the fourth data collection. However, these numbers are still several percentage points above the average of approximately 7% observed during year two. The percent of students meeting the GPRA overall ranged from 78% to 81% during the year, with 79% meeting the requirement at collection four. These averages are similar, though slightly higher, than those in year two.

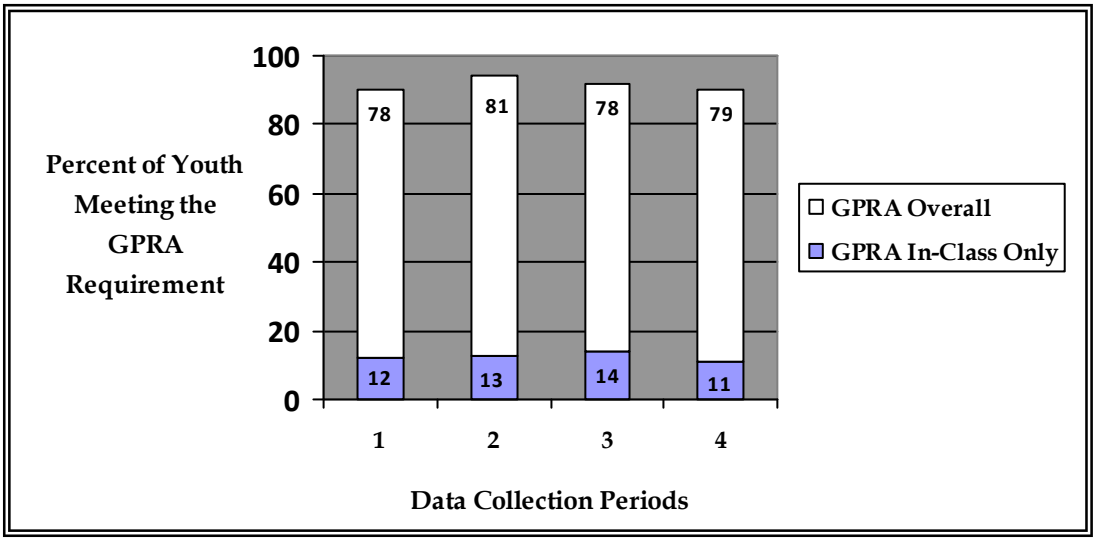
Exhibit 13: GPRA Data Across Year Three

	Collection 1: Oct. 2009	Collection 2: Nov. 2009*	Collection 3: Jan. 2010	Collection 4: March 2010
Number of Students Participating in Program (for whom there is data)	2,131	2,138	2,149	2,094
Average Number of IN PROGRAM Minutes	116	119	138	111
Average Percent of Class Time that was M/V Activity	83%	81%	77%	79%
Average Number of M/V Minutes Completed IN PROGRAM	80	78	89	76
Average Number of M/V Minutes Completed OUTSIDE of PROGRAM	230	241	233	244
Average Number of M/V Minutes Students Participated OVERALL	310	320	321	320
Percent of Students Meeting the GPRA Requirement IN PROGRAM ONLY	**12.1%**	**13.1%**	**13.9%**	**11.4%**
Percent of Students Meeting the GPRA Requirement OVERALL	**78%**	**81%**	**78%**	**79%**

*There were some missing data issues during this collection. All students were included in the count of program participants, but some students could not be included in the calculations for the GPRA.

Exhibit 14 highlights the percentage of students meeting the GPRA requirement through participation in the program alone as compared to meeting the GPRA requirement including minutes completed outside of the program.

Exhibit 14: Percent of Students Meeting the GPRA Requirement In Class and Overall



Objective Two: Active Lifestyle

Students will demonstrate a physically active lifestyle. In Year 3: 50% will report increased interest in physical activity.

KEY FINDING:

- *Of 1,278 students, 405 (31.7%) showed an increased interest in physical activity.*

Students were asked to report their interest in five different types of physical activity, including "I like to be very active," "I like to exercise," "I like to play sports," "I like to play active games," and "I like to play outside." Examples were provided for each category. Students were asked to check whether they liked to do each "not at all," "a little bit," or "a lot." A scale was used to combine these into one "interest in physical activity" variable which was compared for each student from pre- to post-survey. Of the 1,278 students for whom there was matched pre-survey and post-survey information for this item,[6] 405 students (31.7%) showed an increased interest in physical activity after completing the Carol White program at their site.

[6] All analyses that were conducted using the Health and Lifestyle Surveys are only based on youth for whom there is matched pre-survey and post-survey data for the item. See the *Discussion* Section for information on limitations to matching of youth pre and post data.

Objective Three: Physical Fitness

Students achieve and maintain a health-enhancing level of physical fitness. In Year 3: 60% of students will increase their aerobic activity.

KEY FINDINGS:

- *422 of the 1450 students (29.1%) for whom there were data showed an increase in aerobic activity levels, with improvements on all three fitness tests.*
- *Another 535 students (36.9%) showed improvement in two of the three fitness tests.*
- *A total of 1,320 students (91%) showed improvement in at least one of three fitness tests.*

Personal Best Day Cards were used to track student aerobic activity improvement across the year on one-minute sit-up, thirty-second push-up, and 9-minute jog/walk tests. The following table (*Exhibit 15*) highlights the results from the baseline test in October 2009 and the final data collection time point in March 2010. These numbers are compared to national standards from "FitnessGram"[7] for the age range served in this program. Average student scores fell in the standard range for the age group served in the program.

Exhibit 15: Fitness Test Data at Baseline and Final Collection Compared to "Fitness Gram" National Standards

	Sit-Ups	Push-Ups	Laps
Standard Range for Age Group	12-40[8]	7-25	---[9]
Average Carol White Number in October 2009	26	18	17
Average Carol White Number in March 2010	29	22	18
% of Carol White Students Showing Positive Change	59.3%	63.6%	48.4%

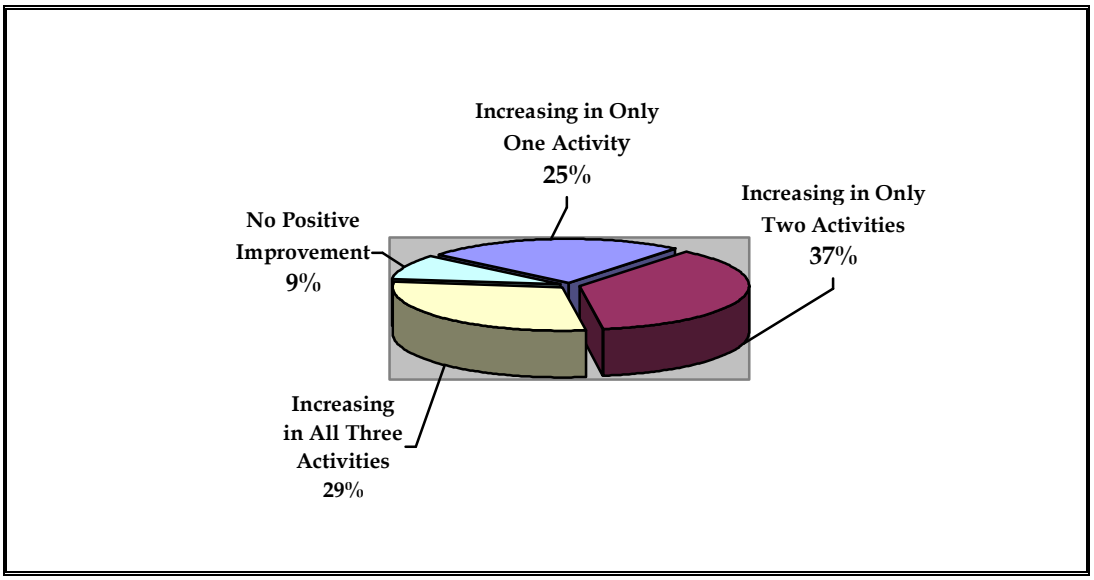
[7] FitnessGram available online http://data1.cde.ca.gov/Dataquest/PhysFitness/appendix1.htm. Numbers are based on range provided for males and females in the approximate age groups served in the program. It is unknown the degree to which these fitness tests are conducted to the same specifications as those in this program/evaluation. Range serves only as a rough estimate for purposes of comparison.

[8] Standard available was for curl-ups not sit-ups, so standard may vary.

[9] Not available for distance specified in this evaluation.

Approximately fifty to sixty percent of youth improved in each of these three aerobic activities. The three tests were then combined to show overall changes in aerobic activity. *Exhibit 16* highlights the overall aerobic activity findings.

Exhibit 16: Percent of Students Showing Aerobic Improvement by Number of Activities



Thus, 422 of the 1450 students (29.1%) for whom there were data in all three fitness categories showed an increase in aerobic activity levels, with improvements on all three tests. Another 535 students (36.9%) showed improvement in two of the three fitness tests. A total of 1,320 students (91%) showed improvement in at least one of three fitness tests.

Objective Four: Healthy Lifestyle Skills

Students will develop behavioral skills needed to maintain a healthy lifestyle. In Year 3: 70% of students will be able to identify at least 5 skills to maintain a healthy lifestyle.

KEY FINDING:

- *1,253 students (95.5%) were able to identify at least 5 skills to maintain a healthy lifestyle.*

An eight item scale was added to the Health and Lifestyle survey in year two to capture progress toward this objective. Students were asked to mark "true" or "false" to statements beginning with: "Being physically active on most days would help me…"

The eight statements that follow describe behavioral skills considered important to maintaining a healthy lifestyle.[10]

Being physically active on most days would help me:

1) Decide what physical activities I like best.
2) Feel good about my own fitness abilities.
3) Improve at the physical activities I choose to do often.
4) Improve the skills I need to be physically active.
5) Enjoy physical activity more.
6) Set goals to get better at a physical activity or skill.
7) See my own improvement in physical fitness.
8) Live a healthy lifestyle.

Due to the complexity of these concepts, all items were written to be "true" statements. At post-survey, 70.5% of the 1,312 students who completed this question set at post-survey correctly responded to all 8 items. A total of 1,253 students who completed this question set marked at least 5 of these 8 items correctly. Thus, 95.5% of responding students were able to correctly identify at least 5 skills needed to maintain a healthy lifestyle by the end of the year.

Objective Five: Health and Disease Concepts

Students comprehend concepts related to health promotion and disease prevention. In Year 3: 70% will show increased knowledge in tests on health promotion and disease prevention.

KEY FINDING:

- *354 of 1,281 students (27.6%) showed increased knowledge of health promotion and disease prevention from baseline to post-survey.*

On the Health and Lifestyle survey, students were asked at baseline and then on the post- survey to respond to the following statements on the positive health benefits of a healthy lifestyle. The first statement read: "If I exercise, eat healthy, and keep my weight down, I may not get_____ when I get older." Four multiple choice answers were provided which included: a) diabetes, b) heart disease, c) high blood pressure, and d) all of the above. At pre-survey, 61.5% of students responded correctly to this item. At post-survey, 66.4% responded correctly.

[10] Behavioral skill items were based on the Arizona Department of Education Comprehensive Health Standard 7 that specifies objectives for "students to develop behavioral skills essential to maintaining a physically active lifestyle." (www.azed.gov/standards/health/PhyStd7.asp). SPARK curriculum concepts were also incorporated.

Students were also provided with a series of five true/false statements about health promotion and disease prevention:

-*To stay healthy, it is important to exercise.*

-If I weigh too much, I am more likely to get health problems when I am older.

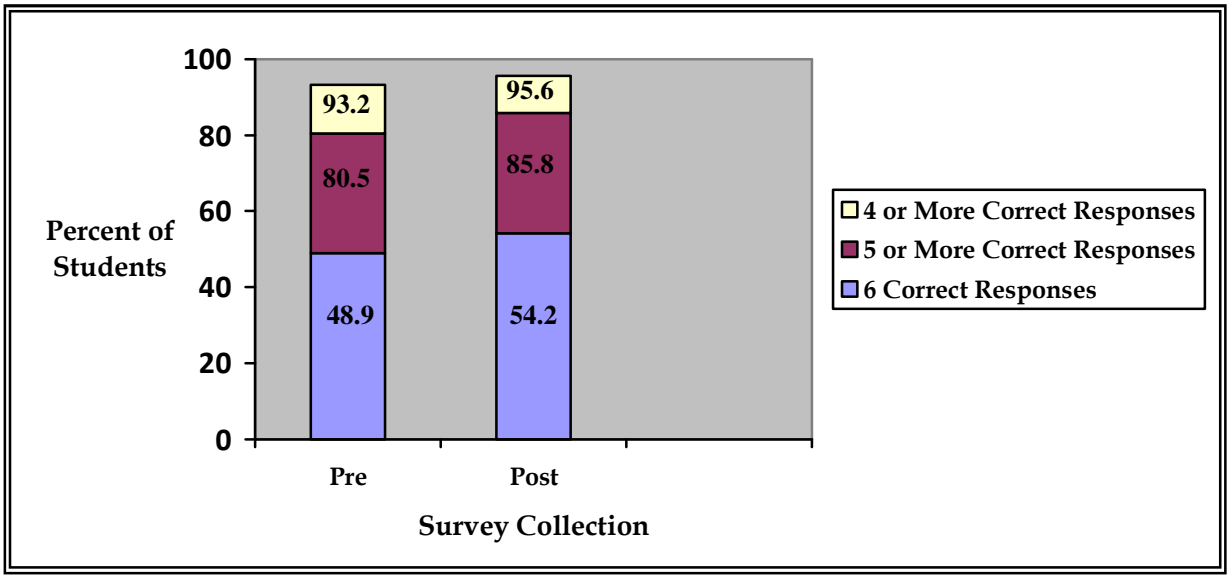
-Drinking soda or Kool-Aid is as healthy as drinking water.

-Low fat dairy products like milk and yogurt are bad for me.

-It is important to get enough sleep.

These five items were then calculated into a single score that was analyzed at baseline and post-survey. The score also included a sixth item, the above described, multiple choice question on health benefits ("*If I exercise, eat healthy, and keep my weight down, I may not get_____ when I get older.*"). At pre- survey, 80.5% of students got at least five of the possible six responses correct. At post survey, 85.8% of students got at least five of the possible six correct. Overall, 354 of 1,281 students (27.6%) showed increased knowledge of health promotion and disease prevention from baseline to post-survey. These findings are summarized in *Exhibit 17*.

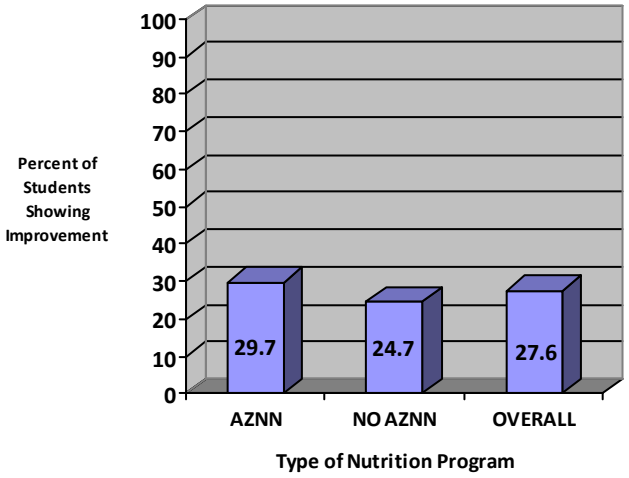
Exhibit 17: Knowledge of Health Promotion and Disease Prevention



Health promotion and disease prevention knowledge were compared for students who were in a school participating in the Arizona Nutrition Network (AZNN) and students in schools that were not, as there were likely differences in nutrition/health dosage between these types of sites.

Of the 743 students who were in schools that participated in the Arizona Nutrition Network programs and for whom there were data, 29.7% showed increased knowledge of health promotion and disease prevention from baseline to post-survey. In contrast, of the 538 students who were not in schools participating in the Arizona Nutrition Network programs, and for whom there were data, only 24.7% of students showed increased knowledge of health promotion and disease prevention from baseline to post-survey. *Exhibit 18* highlights these findings.

Exhibit 18: Improvement in Knowledge of Health Promotion and Disease Prevention by AZNN Involvement



Objective Six: Health-Enhancing Behaviors

Students will demonstrate ability to practice health-enhancing behaviors. In Year 3: 60% will be able to distinguish between healthy and unhealthy behaviors.

KEY FINDING:

- *60.0% (822 of 1,371 students) were able to correctly distinguish between healthy and unhealthy behaviors.*

On the pre/post Health and Lifestyle survey, students were asked to circle which of twenty foods and activities would "help you be healthy." Pictures of different fruits, vegetables, and sports were provided as the healthy options. Four unhealthy foods and behaviors were included: smoking, fast food, watching television, and candy. At post-survey, 82.6% of students chose the correct response on at least 19 of the 20 items, with 60.0% (822 of 1,371 students for whom there were data) correctly distinguishing between all healthy and unhealthy behaviors included.

Students at schools without the Arizona Nutrition Network program scored slightly higher on these items, with 83.8% correctly identifying at least 19 of the twenty items, in comparison to 82.0% of students at schools receiving this program.

GOAL B*: *The active and meaningful inclusion of parents in the effort to promote lifetime physical fitness in children

This section addresses progress made toward Goal B, which is about inclusion of parents in the physical fitness and healthy lifestyle objectives.

Objective One: Family Fitness Nights
Parents will learn and participate in opportunities for physical activity and good nutrition through Family Fitness Nights. These events will raise awareness of the connection between health, exercise, and nutrition. In Year 3: 300 family members will be served at Family Fitness Nights. 15 Family Fitness Nights will be hosted at the sites.

KEY FINDINGS:

- *16 Family Fitness Nights were held at sites over the course of the year.*
- *The total number of family members served was approximately 814.*

Exhibit 19 shows the events that were hosted, dates, and the approximate number of adults and children served. Multiple schools participated in the events at Flowing Wells as well as the Rio Vista Rodeo Day.

Exhibit 19: Family Fitness Night Dates and Approximate Attendance

Family Fitness Event Site	Date of Event	# Attendees
Blenman	11/25/09	19
Whitmore	3/30/10	9
Sewell	10/9/09	28
Booth-Fickett	10/27/09	11
Jefferson Park	11/12/09	13
Robles	3/11/10	23
Rio Vista	5/6/10	24
Rio Vista Rodeo Day	2/26/10	105
Holoway	5/12/10	87
Walker	9/4/10	35
Flowing Wells	4/10/10	286
Tanque Verde	3/10/10	117

Family Fitness Event Site	Date of Event	# Attendees
Donaldson	4/27/10	21
Coronado	4/28/10	16
Brichta	4/26/10	8
Henry	12/17/10	12
Total	**16**	**814**

GOAL C*: *Systemic and sustainable reform in afterschool fitness options

The following section addresses progress made toward Goal C which includes long-term change in afterschool programs. This goal includes teacher training and education, as well as community level involvement, to help promote long-term, community-wide change in physical fitness and healthy lifestyles.

Objective One: Training

Staff Training that builds upon and incorporates the infrastructure of existing afterschool programs will be offered. In Year 3: 40 staff will be trained in SPARK and all new staff will be trained in 2005 Dietary Guidelines and the new Food Guide Pyramid.

KEY FINDINGS:

- *40 staff were trained at the SPARK training this year.*
- *40 staff (including all new staff) where trained on the 2005 Dietary Guidelines and new Food Guide Pyramid.*

Objective Two: Scholarships

Twenty-five afterschool staff will be given scholarships to Pima Community College in order to help them move towards certification. Year 3: 10 staff will receive scholarships to attend approved classes

This objective was originally included in the grant, but removed at the beginning of year one upon request of the U.S. Department of Education.

Objective Three: Activate Tucson Initiative

Build connections with existing organizations that are addressing child health and fitness in order to help maintain the coalition beyond the life of the grant and further our goals community-wide. In Year 3: The Project Manager or another representative from the coalition will be serving on the Activate Tucson Initiative.

KEY FINDING:

- *The Project Manager, or Director, attended all Activate Tucson Initiative meetings during 2009-2010.*

Objective Four: Healthy Kids Event

Reach out to other community groups with shared goals. Co-sponsor the YMCA of Metropolitan Tucson's annual Healthy Kids Event.

KEY FINDINGS:

- *United Way helped to sponsor and publicize the Healthy Kids Event beginning on Saturday, April 18, 2010, with events occurring at YMCA branches and public libraries throughout the following week.*

Three Year Outcome Evaluation Summary

The following exhibit includes a summary of all key outcome objectives findings for Carol White grant years one through three. It is important to note that different students are enrolled in the program each year, which may explain some differences observed across years. The *Discussion* section includes additional information about limitations of the data.

Exhibit 20: Three Year Summary of March Outcome Data

Objective	Performance Measure	Year One Outcome (March 2008)	Year Two Outcome (March 2009)	Year Three Outcome (March 2010)
Goal A- Youth Physical Activity and Healthy Lifestyles				
Objective 1: Students will meet the GPRA performance measure and be engaged in 150 minutes of M/V activity	Percent of students engaged in 150 minutes of M/V activity per week IN PROGRAM	9.0%	7.7%	11.4%
	Percent of students engaged in 150 minutes of M/V activity per week OVERALL (in program AND out of program)	88.9%	77.0%	78.7%
Objective 2: Students will demonstrate a physically active lifestyle	Percent of students reporting increased interest in physical activity	36.2%	31.8%	31.7%
Objective 3: Students will achieve and maintain a health-enhancing level of physical fitness	Percent of students reporting increased aerobic ability (all three categories)	34.8%	33.5%	29.1%
Objective 4: Students will develop behavioral skills needed to maintain a healthy lifestyle.	Percent of students able to identify at least 5 skills needed to maintain a healthy lifestyle	—	96.4%	95.5%
Objective 5: Students comprehend concepts related to health promotion/ disease prevention	Percent of students showing increased knowledge on tests of health promotion and disease prevention	35.1%	33.0%	27.6%

Objective	Performance Measure	Year One Outcome (March 2008)	Year Two Outcome (March 2009)	Year Three Outcome (March 2010)
Objective 6: Students will demonstrate the ability to practice health-enhancing behaviors.	Percent of students able to distinguish between healthy and unhealthy behaviors	60.5%	58.0%	60.0%
Goal B-Parental Involvement				
Objective 1: Family Fitness Nights	Number of family members served at Family Fitness Nights	961	1,028	814
	Number of Family Fitness Nights hosted	13	13	16
Goal C- School and Community Infrastructure				
Objective 1: Training	Number of staff trained in the SPARK active recreation model	58	59	40
	Number of staff trained in 2005 Dietary Guidelines	63	70	40
Objective 2: Scholarships	Number of staff receiving scholarships	NA	NA	NA
Objective 3: Connect with organizations	Project Manager serves on Activate Tucson Initiative	Yes	Yes	Yes
Objective 4: Reach out to community groups	Co-sponsor Healthy Kids event that will serve approximately 5,000 families	Yes	Yes	Yes

Discussion

Findings from the process and outcome evaluation suggest that the Tucson-based, Carol White Physical Education program met many of the goals and objectives established for year three (FY 09-10).

Outcome Objectives: Year Three

Seven of the ten objectives the program established for year three were met. These included three youth objectives: the GPRA objective (A1), the healthy lifestyle skills objective (A4), and the health-enhancing behaviors objective (A6). The program met the parent involvement objective regarding Family Fitness Nights (B1) and all three infrastructure objectives: training (C1), participation in the Activate Tucson Initiative (C3), and Co-sponsoring the Healthy Kids Event (C4).

Three youth objectives were not fully met. Only 31.7% of youth showed increased interest in physical activity instead of the 50% proposed (A2). Only 29.1% of youth increased their aerobic activity level instead of the 60% proposed (A3). This measure is based on improvement in all three aerobic tests. However, it should be noted that 91% of students showed at least some aerobic improvement, as measured by improvement in at least one aerobic activity. Finally, only 27.6% of youth showed increased knowledge in tests on health promotion and disease prevention instead of the 70% proposed (A5). *Appendix G* includes a table showing which objectives were met, the measures and item numbers used, and the key findings.

Process Objectives: Year Three

The process evaluation suggests many strengths of the Carol White program. United Way staff, Program Partners, teachers, and youth participants noted benefits of the SPARK curriculum/activities, the trainings conducted, the nutrition components, and the Family Fitness Nights that were offered. Findings suggest that elements of the Carol White program have been incorporated into program activities and will be sustained after the current funding ends. The primary limitations noted were variation in the dosage of nutrition and disease prevention information youth received and attendance/engagement of parents at Family Fitness Nights.

Three Year Findings

The process and outcome evaluation conducted each year of the Carol White program assessed progress across several different youth, parent, and community objectives.

Overall, youth and teachers seemed to enjoy the program and teachers felt that elements of the SPARK curriculum were beneficial additions to their existing programs. Youth outcome data suggests the program did increase the moderate/ vigorous activity that students completed. The nutrition component and Family Fitness Nights appear to be the weakest program elements, as all youth did not receive a large dosage of nutrition information (except those in the Arizona Nutrition Network) and many parents did not attend or engage in Family Fitness Nights and thus did not receive this information either. Youth outcomes suggest that some youth did gain in knowledge of nutrition and disease prevention. Thus, as part of a comprehensive community program, the information that was provided through these components to many youth and parents should still be considered beneficial. Youth, parent, and community outcomes suggest that each year over 2,000 people were involved, and likely benefitted, in some way from the Carol White program. In addition, it appears many programs have the capacity to continue to use elements of the program to benefit additional students, parents, and community members after funding ends.

Study Limitations

Evaluation findings should be interpreted within the context of the following limitations:

First, since surveys were primarily completed by teachers, there could be self-serving bias in the number of minutes being reported per student or inaccuracies with correctly reporting these minutes, particularly among those teachers serving larger numbers of students in a time-constrained environment. Efforts were made to simplify data collection measures and teachers were encouraged to complete them accurately.

In addition, data collection tools which relied on students to self-report their knowledge attitudes, beliefs, or behaviors are prone to the "social desirability bias," where study participants feel compelled to behave in a way that satisfies the expectations of being in the study, or in this case being a student under the watchful eye of their teacher. The evaluation team identified the number of students that filled out every star on the self-reported, Student-Activity Log as a means of estimating the degree of this limitation. A related limitation is that students may have been unclear about which physical activity was to be included on their self-reported measures, possibly resulting in a duplicate count of in-program and out-of-program minutes.

Also, several of the measures used were not piloted prior to this Carol White evaluation, and may not capture all the data required to fully evaluate program objectives. Data suggests that there may be a ceiling effect, with a high percent of students responding correctly at pre-survey, limiting the amount of change observed from pre to post program. Many of the youth objectives were written as a percent of students demonstrating an increase from pre to post program, which is particularly challenging to observe if a ceiling effect is present. Despite knowledge of some of these limitations at the start of year two, the project team agreed to make only minimal changes to these tools in an effort to retain some consistency across the 3 years of the project.

There are some limitations to the data cleaning and analyses that were conducted. While sites were encouraged to provide complete data, and efforts were taken to obtain full surveys that were missing, there was some missing data that still had to be accounted for in the cleaning process. In some instances, specific survey items that were missing had to be estimated based on other data completed by the same teacher. In addition, the data cleaning process requires combining data for students who are in both physical education and afterschool program classes at schools in the Flowing Wells district. This combination process is done based on school and student first/last name, but without birth-date or other identifying information, so some students with common names may be combined. This process was improved in year three to increase accuracy of the minutes that are reported for these students. Changes were minor, but should be considered a limitation of comparisons made between data in year three and previous program years.

Recommendations

Based on the process and outcome evaluation findings, the following recommendations are offered for consideration for programs continuing to use Carol White program elements or in similar grants in the future.

Program Recommendations

1) **Consider utilizing a consistent nutrition and healthy lifestyle curriculum.** Carol White sites that did not receive the Arizona Nutrition Network program did not typically offer formal teaching on nutrition or healthy lifestyles. Teachers shared some information through informal discussion. Use of a curriculum might help to supplement the existing information that is being taught and aid teachers in this process. Future grants might consider requiring/offering a consistent curriculum across sites if nutrition is still proposed as a main objective of the program.

2) **Continue to incorporate elements of the Carol White program in existing physical education and afterschool programs.** Program Partners noted that many of their sites have incorporated the SPARK curriculum and other elements of the Carol White program into their existing classes. Consider encouraging the continuation of these components, for example by having teachers train new staff in SPARK, by reviewing the curriculum binder and keeping it accessible in programs, and by continuing to find ways to incorporate nutrition education and parent involvement in programs.

3) **Pursue additional funding to continue the work of the Carol White program at the youth, parent, and community level.** The Carol White program had an impact on many participants in the areas of physical activity and knowledge of nutrition and healthy lifestyle behaviors, however continued efforts are required. High obesity rates among youth suggest the continued need for physical activity programs in schools that encourage moderate to vigorous physical activity and physical fitness in a way that youth enjoy. Obesity is a complex problem, requiring the continued involvement of parents, schools, and the community to help address it.

4) **Consider the lessons learned from this Carol White program when pursuing future grant opportunities.**
Program Partners and United Way staff detailed some lessons learned from this program and evaluation which should be considered when applying for future funding. Lessons learned pertained to parent and family involvement, the importance of physical activity, role modeling healthy behaviors, the nutrition component, working with program staff, and the benefits of evaluation. See the Exhibit on Carol White Sustainability on page 38 for a detailed list of lessons learned that should be considered for future projects.

Data Collection Recommendations

1) **Ensure that comprehensive data collection trainings are provided at the start of each project year.**
Trainings were provided at the start of each year for the Carol White project, and staff noted that these were important for them to be able to complete the evaluation measures. Extra time should be allotted for the training in year one to allow time for review and practice with new measures and discussion of timelines and processes.

2) **Use existing survey tools or pilot new measures prior to use in the evaluation.**
There were some concerns that the data collection measures used for assessment of youth knowledge of health and lifestyle behaviors for Carol White, may have had a ceiling effect, with a high percent of students reporting correctly at pre-survey. In future projects, if possible, time and resources should be allotted for piloting and refinement of measures and processes prior to program implementation.

3) **Review the evaluation requirements of the grant and the proposed methods of evaluation to ensure feasibility with the staff/financial resources available.**
The federal reporting requirements for Carol White funding required significant time and energy from program and evaluation staff. Carol White sites serving a high number of youth, particularly those implementing the program in physical education classes, particularly noted that completing all of the evaluation paperwork required was a challenge. For future efforts, consider whether the data collection requirements are feasible with the staffing and resources available, or whether the program scope should be reconsidered in order to ensure a thorough evaluation can be conducted. For example, consider whether a program or its evaluation could be limited to just during school physical education classes or to afterschool programs only, or whether sampling could be used.

Conclusion

Healthy lifestyle choices are an important issue in the Tucson community and across the country, as obesity rates and associated health risks continue to increase. American lifestyles do not always encourage the best balance of energy expenditure and energy consumption. People begin to develop habits affecting this energy balance early in life. Healthy, active youth are more likely to become healthy, active adults, particularly if they have the support of parents, teachers, and the community of which they are a part.

The Carol White program in Tucson established student, parent, school, and community-wide objectives in an effort to increase physical activity and knowledge of healthy lifestyle behaviors in youth. Through physical education classes and afterschool programs using the SPARK curriculum, the Carol White program was able to contribute to increased physical activity levels of youth at the Tucson sites being served. Progress was made toward national and state standards in physical activity. Nutrition program components offered teachers and youth important information regarding healthy lifestyle choices. The involvement of parents was encouraged, recognizing that the development of youth interest in physical activity and healthy eating must also take place in the home. Teacher education and collaborative efforts with other community organizations helped to extend the longevity and breadth of program efforts on this important issue. Elements of the Carol White program are likely to be sustained in existing physical education classes and afterschool programs across Tucson. Lessons learned from this project can help to inform future efforts to continue the important work of this Carol White program.

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Appendix A: National Perspective on Youth Physical Activity and Health

Maintaining a healthy body requires a balance of energy coming into the body, as food, and energy that is being expended through physical activity. It is challenging in modern society to maintain this balance. Many aspects of American culture make it such that, for many people, it is easier to consume food than it is to burn off that energy. Modern transportation allows people to live farther than walking distance from the resources they require. Technology has increased the means of both recreation and types of daily employment that do not require physical activity. Food is readily available in an infinite variety, and virtually no energy is required to obtain it. Many of the foods that are available are high in fat and calories. (American Council for Fitness and Nutrition, 2004) These are just a few of the factors contributing to a growing epidemic of obesity in this country.

Nationwide over 60% of adults, or over 177 million people, are either overweight or obese (Grunbaum, et al., 2003). Obese is often defined as having a Body Mass Index (BMI) of 30 or higher, while overweight is considered as having a BMI higher than 25, but lower than 30.[11] In Arizona, over 21.1% of adults are obese while over 31.5% are currently overweight (Grunbaum, et al, 2003). Research has shown that being overweight or obese puts you at greater risk for cancer, coronary heart disease, congestive heart failure, high blood pressure and cholesterol, and Type II diabetes. In addition, the obese or overweight are more likely to have psychological disorders, such as depression, eating disorders, distorted body image, and low self esteem (California Center for Public Health Advocacy, 2002).

Many of these problems begin in youth. It is during the childhood years, that one begins to develop a relationship with food and with physical activity. Being overweight at a young age greatly increases one's risk of becoming an overweight or obese adult and for acquiring one of the associated health risks. For example, youth who are overweight by the age of 8 are 80% more likely to become overweight or obese adults, according to the National Association for Sport and Physical Education (2006) Shape of the Nation Report. The percentage of young people who are overweight has more than tripled since 1980 (Hedley, et al. 2004). Nationally, roughly 14.8% of children age 10-17 are overweight, and 12.2% of children in the same range are overweight in Arizona (U.S. Department of Health and Human Services, 2005).

Along with cultural factors such as the availability of high fat and calorie foods, and increased involvement in sedentary activities like television and internet, choices made in schools may also have had an affect on youth physical fitness. The national push toward standardized testing has increased the focus on core subjects, like math and science, at the expense of physical education and nutrition education.

[11] BMI numbers estimate whether a person is at an appropriate weight based on their height.

The percentage of students who attended a daily physical education class has dropped from 42 percent in 1991 to 28 percent in 2003 (Centers for Disease Control and Prevention, 2004). About one in four children do not get any physical education in school. In Arizona, only 16.2% of high school students report exercising at least an hour a day, ranking them the worst in the nation on this indicator. The national average is not much better, at 17.1% (Centers for Disease Control and Prevention, 2010). In addition, most youth do not get the recommended 50 hours of nutrition and health education each year, with the nationwide average being only 13 hours (Position of the American Dietetic Association et al., 2003).

It has also been shown that students who are not given the opportunity to exercise at school do not tend to compensate for this by increasing their activity levels at home (Dale, D., Corbin, C., & Dale, K., 2000). Almost one quarter of children ages 9-13 were found to not engage in any free time physical activity (Centers for Disease Control and Prevention, 2003). Another study of 10-16 year olds found that on average children spend only 12.6 minutes per day overall engaged in vigorous physical activity. Among children in 9th-12th grades, 27.8% in Arizona and 62.6% nationally do not get the recommended 150 minutes of moderate/vigorous activity per week. (Action for Healthy Kids, 2005).

However, physical education and nutrition has been shown to have important effects on youth. According to the 1996 Surgeon General's report, participation in physical activity during childhood and adolescence helps control weight (U.S. Department of Health and Human Services, 1996). Three of the primary health benefits associated with adequate childhood physical education include a) the direct improvement of childhood health status and quality of life b) the direct improvement of future adult health status by preventing or delaying the onset of many chronic diseases, and c) an increased likelihood of maintaining an active lifestyle as an adult (Boreham & Riddoch, 2001).

In addition, physical activity in adolescence has been associated with increased psychological well-being, reduced anxiety and stress levels, and an increase in positive health behaviors such as consumption of fruits/vegetables, and a reduced likelihood of smoking and drug use (Pate, Trost, Levin, & Dowda, 2000). Not only do physical education and nutrition classes increase the activity youth engage in and help shape healthy lifestyle behaviors, some evidence also suggests they improve overall academic performance (California Center for Public Health Advocacy, 2002).

Appendix B: National and State Standards and Recommendations

The following standards and recommendations help guide efforts currently being made to improve the physical activity and healthy lifestyle behaviors of youth.

National Standards

The National Association of Sport and Physical Education has identified six standards for a physically educated person (2004):

Standard 1: *Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.*

Standard 2: *Demonstrates understanding of movement concepts, principles, strategies, and tactics as they apply to the learning and performance of physical activities.*

Standard 3: *Participates regularly in physical activity.*

Standard 4: *Achieves and maintains a health-enhancing level of fitness.*

Standard 5: *Exhibits responsible personal and social behavior that respects self and others in physical activity settings.*

Standard 6: *Values physical activity for health, enjoyment, challenging, self-expression, and/ or social interaction.*

Arizona Standards

The Arizona Department of Education Physical Activity Standards (2007) are as follows:

Standard One: *Students demonstrate proficiency and the achievement of higher order cognitive skills necessary to enhance motor skills*.

Standard Two: *Students comprehend basic physical activity principles and concepts that enable them to make decisions, solve problems and to become self-directed lifelong learners who are informed physical activity consumers.*

Standard Three: *Students exhibit a physically active lifestyle.*

Standard Four: *Students achieve and maintain a health-enhancing level of physical fitness*.

Standard Five: *Students develop self-initiated behaviors that promote effective personal and social interactions in physical activity settings.*

Standard Six: *Students demonstrate understanding and respect for differences among people in physical activity settings.*

Standard Seven: *Students develop behavioral skills (self-management skills) essential to maintaining a physically active lifestyle*.

Community Recommendations

The *Tipping the Nation* report by the American Council for Fitness and Nutrition (2004) made recommendations for what different sectors of society can do to improve the balance of energy expenditure and consumption. They suggest that families, schools, and communities can help create an environment that supports healthy eating and physical activity among children and adults. School programs, access to safe community recreation facilities, and education about the importance of maintaining an energy balance are all considered important to overall improvement in health and fitness nationwide (see the *Tipping the Nation* report for a detailed list of recommendations). According to the U.S. Surgeon General's *Call to Action* report (2001), partnerships, at the organizational, industrial, state, and community levels are needed to address this important health concern.

Appendix C: Carol White Physical Education Program and Site List

Program	Elementary School
Tanque Verde Extended Care Program	Tanque Verde
Flowing Wells Extension Program (Y.E.S)	Centennial
	Homer Davis
	Hendricks
	Laguna
	Richardson
	Walter Douglas
	Robles/Altar Valley
Child & Family Resources (Happy Hours Program)	Blenman
	Booth
	Brichta
	Henry
	Jefferson Park
	Sewell
	Whitmore
Community Extension Programs (Before and After School)	Coronado
	Walker
	Donaldson
	Rio Vista
	Holaway

Appendix D: Youth Data Collection Measures

The following is a brief overview of the purpose and use of the data collection measures designed for youth participating in the Carol White program. Teachers were instructed in the use of these measures at the fall trainings and through the guidance of the community organization partner working in their school.

Intensity and Implementation (I&I) Survey

The I&I survey was primarily designed to capture information on the amount of moderate and vigorous physical activity completed by students in each class for a week. Each program teacher was asked to complete the Intensity and Implementation Survey during four separate weeks of the school year. Each day during the week, the teacher was asked to describe the physical activities they conducted in their class and the intensity level of those activities. The teacher also estimated the percent of the class period they spent doing light intensity activities and the percent spent doing moderate or vigorous activities (*see Process Evaluation Section* for detailed definitions of activity intensity levels). The teacher then recorded, along with attendance information, whether each student participated in the moderate and vigorous activities for the day. On Friday of the collection week, the teachers responded to additional questions about the implementation and effectiveness of the SPARK program.

Health and Lifestyle Survey

Teachers were responsible for administering a short survey to students twice during the school year in order to obtain information on their knowledge of nutrition, healthy lifestyle choices, physical fitness, disease prevention and behavioral skills needed to maintain a healthy lifestyle. The Health and Lifestyle survey was designed to gather information on what choices students were making in their own lives related to these areas. The survey was administered once at the beginning (pre) and once near the end of the school year (post).

Personal Best Day Cards

Results of three fitness tests (one-minute sit-up, thirty-second push-up, and 9-minute jog/walk) were recorded twice during the school year on individual Personal Best Day cards (in October and March) for purposes of this evaluation. Teachers were encouraged to conduct and record the results of these fitness tests on a monthly basis to increase student progress in these areas throughout the year. This measure was designed to track student improvement in aerobic physical fitness.

Student Activity Logs

Student Activity logs were designed for youth to record how many ten minute increments of M/V activity they did each day, OUTSIDE of the program. The increments completed were indicated by filling in stars. Students were asked to fill in these logs for a full week (the collection week), and then the stars were totaled. The log was designed to be appropriate to the target student age range and included instructions and activities for teachers to use to train the youth in its completion.

Appendix E: In-Program Data By School March 2010

IN PROGRAM Data By School: March 2010 **Program/ School**	Number of students participating in at least one Carol White program (P.E. and/or afterschool)	Average total class minutes per week	Average percent of class that is M/V	Average number of M/V minutes available to each student	Number of students with 150 M/V minutes available	Percent of students with 150 minutes of M/V available	Percent of students who had 150 minutes of M/V available who completed it	**GPRA:** Percent of all participants at each site who completed 150 minutes of M/V	Average number of M/V minutes students participated
Child & Family Resources (Happy Hours)									
Blenman	14	180	46.3	83	0	0.0	0.0	0.0	44
Booth	8	180	56.3	101	0	0.0	0.0	0.0	37
Brichta	18	195	82.5	161	18	100.0	38.9	38.9	109
Henry	15	480	85.0	399	15	100.0	73.3	73.3	294
Jefferson Park	8	155	70.0	113	0	0.0	0.0	0.0	71
Sewell	7	270	79.0	214	7	100.0	71.4	71.4	161
Whitmore	15	150	88.8	133	0	0.0	0.0	0.0	114
Community Extensions (Before/After School)									
Coronado	24	203	82.0	159	24	100.0	45.8	45.8	114
Donaldson	42	285	71.0	206	42	100.0	47.6	47.6	140
Holaway	15	205	75.0	153	15	100.0	73.3	73.3	137
Rio Vista	16	270	50.0	135	0	0.0	0.0	0.0	84
Walker	41	300	79.0	233	41	100.0	73.2	73.2	191

IN PROGRAM Data By School: March 2010 **Program/ School**	Number of students participating in at least one Carol White program (P.E. and/or afterschool)	Average total class minutes per week	Average percent of class that is M/V	Average number of M/V minutes available to each student	Number of students with 150 M/V minutes available	Percent of students with 150 minutes of M/V available	Percent of students who had 150 minutes of M/V available who completed it	**GPRA:** Percent of all participants at each site who completed 150 minutes of M/V	Average number of M/V minutes students participated
Flowing Wells Extension (Y.E.S.)									
Centennial	298	82	87.9	79	51	17.1	70.6	12.1	66
Hendricks	290	103	74.0	62	14	4.8	78.6	3.8	58
Homer Davis Elementary	298	107	83.1	74	31	10.4	64.5	6.7	48
Laguna	284	116	89.5	140	72	25.4	90.3	22.9	126
Richardson	240	110	82.0	94	34	14.2	20.6	3.3	75
Robles/ Altar Valley	60	125	86.1	106	0	0.0	0.0	0.0	101
Walter Douglas	362	44	61.0	48	0	0.0	0.0	0.0	39
Tanque Verde Extended Care									
Tanque Verde	39	255	76.0	185	39	100.0	12.8	12.8	89
Total/Overall	**2,094**	**111**	**79%**	**95**	**403**	**19.2%**	**59.3%**	**11.4%**	**76**

Appendix F: Key March 2010 GPRA Data BY SCHOOL

Program/ School	Number of students participating in at least one Carol White program (P.E. and/or afterschool)	Average number of M/V minutes students participated **IN PROGRAM** *(I&I Survey data)*	Average number of M/V minutes students participated **OUT OF PROGRAM** (*Student Log*)	Average number of M/V minutes students participated **TOTAL** *(I&I and Log)*	Percent of students who completed at least 150 minutes of M/V activity for week **>GPRA<**
Child & Family Resources (Happy Hours)					
Blenman	14	44	164	207	50.0
Booth	8	37	260	297	75.0
Brichta	18	109	228	337	77.8
Henry	15	294	249	543	93.3
Jefferson Park	8	71	189	260	87.5
Sewell	7	161	350	511	100.0
Whitmore	15	114	170	285	66.7
Community Extensions (Before/After School)					
Coronado	24	114	216	330	95.8
Donaldson	42	140	171	311	69.0
Holaway	15	137	296	433	100.0
Rio Vista	16	84	330	414	100.0
Walker	41	191	152	343	97.6
Flowing Wells Extension (Y.E.S.)					
Centennial	298	66	264	330	80.9
Hendricks	290	58	269	327	79.0
Homer Davis Elementary	298	48	266	314	73.8
Laguna	284	126	265	390	80.3
Richardson	240	75	225	301	76.7
Robles/ Altar Valley	60	101	277	378	88.3
Walter Douglas	362	39	198	238	74.6
Tanque Verde Extended Care					
Tanque Verde	39	89	272	361	89.7
Total/Overall	**2,094**	**76**	**244**	**320**	**78.7**

Appendix G: Overview of Program Objective Findings

Goals/Objectives	Year Three	Measurement Tool and Item Number(s)	Key Findings	Objective Met?
Goal A-Youth Physical Activity and Healthy Lifestyles				
Objective 1-GPRA	70% of students engaged 150 min M/V a week	I&I Survey (#1-10 and attendance) Student Activity Log (all) Overall, By School, PE/Afterschool Breakdown	78.7%	Yes
Objective 2-Active Lifestyle	50% students increased interest in physical activity	HL Survey (pre/post #12)	31.7%	No
Objective 3-Physical Fitness	60% will increase their aerobic activity	PBD (all, compared Oct to March)	29.1%	No
Objective 4-Healthy Lifestyle Skills	70% of students will be able to identify at least 5 skills needed to maintain a healthy lifestyle	HL Survey (#13-NEW)	95.5%	Yes
Objective 5-Health and Disease Concepts	70% of students will show increased knowledge in tests on health promotion and disease prevention	HL Surveys (pre/post, # 9 separate, then combine #9 &11) Overall, then breakdown by yes AZNN and no AZNN	27.6%	No
Objective 6- Health-Enhancing Behaviors	60% of students will be able to distinguish between health and unhealthy behaviors	HL Surveys (#10 post only)	60.0%	Yes
Goal B-Parental Involvement				
Objective 1-Family Fitness Nights	300 family members will be served at Family Fitness Nights	Attendance sheets or materials	814 family members	Yes

Goals/Objectives	Year Three	Measurement Tool and Item Number(s)	Key Findings	Objective Met?
	15 Family Fitness Nights will be hosted at sites	Record from UW of events hosted	16	Yes
Goal C-School and Community Infrastructure				
Objective 1- Training	12 staff trained in the SPARK active recreation model	Attendance sheets (SPARK trainings)	40 staff trained	Yes
	All remaining staff trained in 2005 Dietary Guidelines/Food Guide Pyramid	Attendance sheet (SAY conference)	40 staff trained	Yes
Objective 2- Scholarships	10 staff will receive scholarships	Not included in program	N/A	N/A
Objective 3- Connect with Organizations	Project Manager serve on Activate Tucson Initiative	Record from UW of attendance	Attended some meetings	Yes
Objective 4- Reach out to Community Groups	Co-sponsor Healthy Kids Event	Record of involvement with event	Co-sponsored	Yes