Arizona Nutrition Network
FFY16 Annual Evaluation Report
January 2017
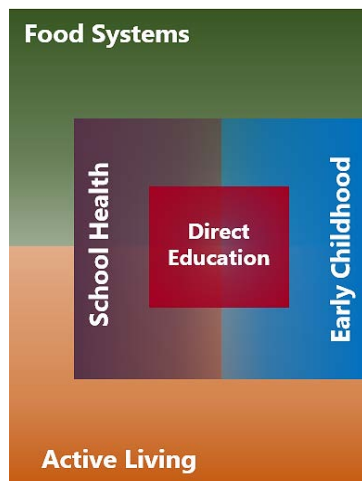

Food Systems

School Health

Direct Education

Early Childhood

Active Living

COLLEGE OF AGRICULTURE & LIFE SCIENCES
Nutritional Sciences
SNAP-Ed Evaluation Team

Champions for Change
Arizona Nutrition Network

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Table of Contents

Executive Summary

The United States Department of Agriculture (USDA) Supplemental Nutrition Assistance Program-Education (SNAP-Ed) provides nutrition education and obesity prevention programming with the goal of increasing the likelihood that SNAP-eligible families will choose healthful diet and physical activity behaviors on a limited budget. Through the Arizona Department of Health Services (ADHS), the Arizona SNAP-Ed program, called the Arizona Nutrition Network, coordinates initiatives with state-level partners and eight local implementing agencies (LIAs) to encourage behavioral outcomes, including increased fruit and vegetable consumption, regular physical activity, and caloric balance throughout the life cycle. This report describes needs and readiness formative evaluation findings from the first year of the Arizona Nutrition Network's current three-year program cycle, as well as behavioral outcomes for adults and youth.

Food Systems. Fostering LIA partnerships with small and larger food retailers showed early success in advancing *Healthy Retail* goals through activities such as in-store demonstrations, recipe distribution, and increased stocking of produce and whole grain foods. *Gardening* represented one of the most popular SNAP-Ed strategies in Arizona. LIAs supported 107 gardens in their target communities, with the majority (76%) located at schools, childcare centers, and community centers. *Farm to Institution* efforts remained in the early stages of development, with the strongest successes in linking activities to on-site gardens and cultivating small farmers to sell their harvest. Support for the *Summer Food Service Program* hewed toward traditional SNAP-Ed activities, including distributing marketing materials, providing educational activities at meal sites, and integrating promotional messages into ongoing nutrition education classes. Five out of five LIAs supporting *Farmers' Markets with SNAP/WIC Access* achieved their goals to establish new markets and/or become certified for SNAP or WIC redemption, reflecting strong momentum with market partners and coalitions.

Active Living. LIAs' capacity-building efforts to implement *Active Living Policy* in their communities included technical assistance to partner sites and local governance

processes, as well as cultivating relationships with compatible groups and coalitions. With the exception of two counties, LIAs who promoted the *Use of Physical Activity Resources* reached five or fewer sites on average in their counties, and averaged under three meetings with site partners over the year. Although many LIAs chose to focus on supporting *Family-Friendly Physical Activity,* the implementation and reach of activities varied widely across counties. The single participating LIA focused on *Point-of-Decision Prompts for Use of Stairs* was able to install prompts at all three intended sites.

School Health. Strategies to enhance school health emphasized support for strong *Local School Wellness Policies (LWPs)*, including *Improving Access to Nutrition Information* and *Comprehensive School Physical Activity Programs*. Key findings from an assessment of partner schools included: 1) nutrition education and LWP evaluation practices are strong relative to national scores, 2) wellness promotion and competitive food standards are on par with national averages, and 3) Comprehensive School Physical Activity Programs and nutrition/school meal standards are weak relative to national scores.

Early Childhood Education. SNAP-Ed initiatives with child care partners supported *Policy Development, Implementation, and Evaluation Consistent with Empower Standards, Improving ECE Capacity for Healthy Eating*, and *Improving ECE Capacity to Provide Physical Activity Opportunities*. Key findings from assessed sites suggested that nutrition practices and environments, food service, and teacher practices regarding physical activity at partner sites were strongest, whereas professional development, family education, ECE policy, and time provided for physical activity scored lower.

Direct Education. *Adults* (N=98) reached by an evaluated SNAP-Ed lesson series showed a significant increase in physical activity behaviors compared with a control group (N=80), but little improvement in healthy eating. *Youth* (N=244) who participated in evaluated lesson series reported significant changes in knowledge of dietary recommendations and lower sugary drink consumption, but little change in physical activity.

Even at this early stage of implementing SNAP-Ed's new three-year program cycle, the evaluation results exploring needs and readiness of LIAs and communities across the state are promising. Recommendations based on the evaluation findings include:

- Increased training and technical assistance for LIAs to build capacity for supporting policy, systems, and environmental (PSE) changes
- Enhancement of site-based partnerships and community coalitions to drive momentum for community-level changes
- Continued integration of direct education with PSE efforts, with an emphasis on coordinated approaches, instructional quality, and expansion of approved curricula
- Ongoing and enhanced collaboration with state-level partners implementing interrelated efforts

Future evaluation efforts will assess outcomes statewide related to SNAP-Ed program interventions at the individual-, site- and community-levels, with the long-term goal of reducing rates of overweight and obesity, chronic disease, and health disparities in Arizona.

Introduction

The United States Department of Agriculture (USDA) Supplemental Nutrition Assistance Program (SNAP) provides monthly food assistance funds to low-income individuals and families who qualify. It supports the food security of low-income Americans as a vital component of the country's social safety net. The SNAP Education (SNAP-Ed) program is a potent supplement to SNAP by providing nutrition education and obesity prevention initiatives in each state with the goal of increasing the likelihood that SNAP-Ed eligible families will choose healthful diet and physical activity behaviors on a limited budget.[1]

SNAP-Ed's program design centers upon an evidence-based systems approach, or Public Health Approach (PHA). The PHA is embodied by Dahlberg and Krug's Socio-Ecological Model (SEM), a framework illustrating the factors which influence individual and community health.[2] According to the SEM, individual behavior, and thus individual health, is shaped by concentric spheres of interpersonal and environmental influence (Figure P-1). Broader levels reflect areas for Policy, Systems and Environmental (PSE) interventions, while interpersonal and individual levels are where direct education (DE) occurs. Behavior change at the individual level becomes more feasible and sustainable as barriers are reduced or removed at other levels. Figure P-1 illustrates how the SEM can be applied to obesity prevention.

Evidence abounds for the cumulative effects of multi-level interventions in obesity prevention.[3-8] The Institute of Medicine (IOM) has performed a comprehensive review of the obesity epidemic in the United States and determined that "a systems approach must be taken when formulating obesity prevention recommendations so as to address the problem from all possible dimensions."[9] Moreover, the IOM includes an examination of income, age, and racial and ethnic disparities and highlights the imperative of programming specific to low-income, minority populations and youth, all of which are characteristic of the SNAP-Ed target audience.
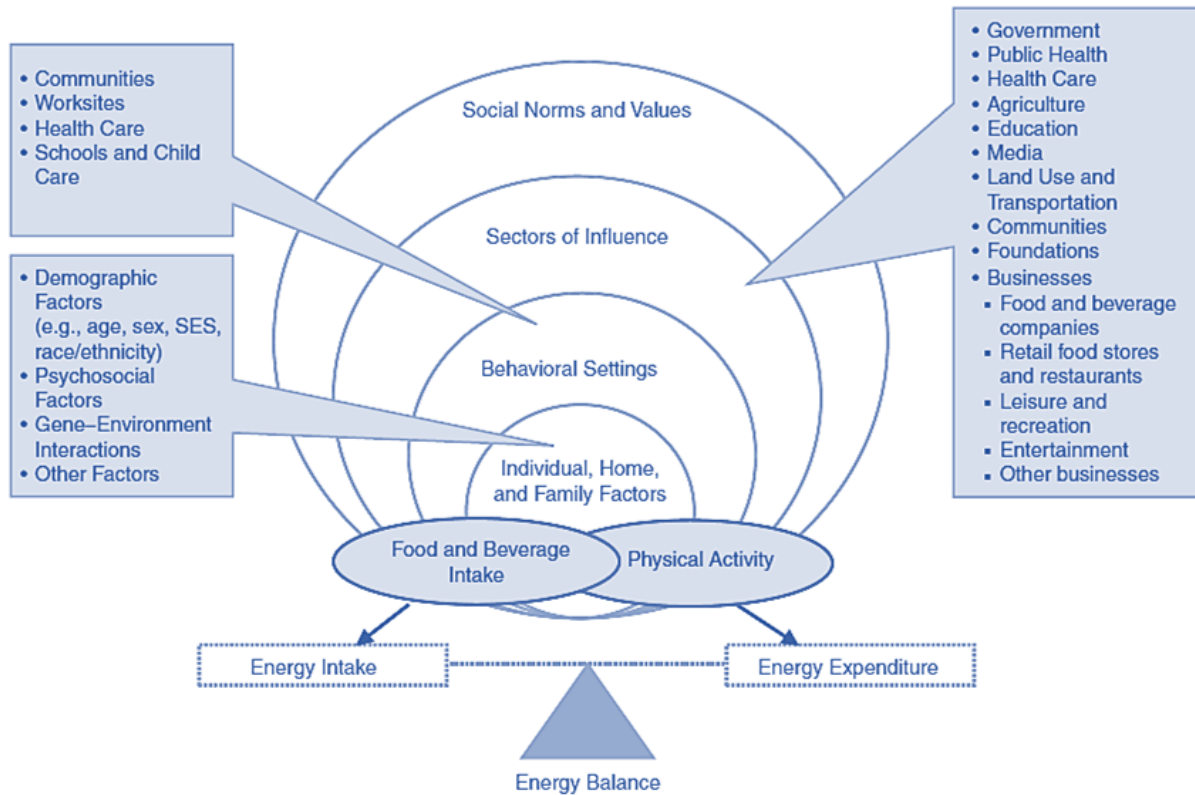
Figure P-1. The Socio-Ecological Model Applied to Obesity Prevention[2]

In Arizona, SNAP-Ed operates out of the Department of Economic Security and Bureau for Nutrition and Physical Activity within the Arizona Department of Health Services (ADHS) by coordinating with state partners and local implementing agencies (LIAs) to seek progress using PHAs in achieving the following behavioral outcomes with SNAP-Ed eligible audiences:

- Make half your plate fruits and vegetables, at least half your grains whole grains, and switch to fat-free or low-fat milk and milk products

- Increase physical activity and reduce time spent in sedentary behaviors as part of a healthy lifestyle

- Maintain appropriate calorie balance during each stage of life—childhood, adolescence, adulthood, pregnancy and breastfeeding, and older age

To that end, SNAP-Ed implements integrated DE, PSE, and social marketing efforts in each of Arizona's 15 counties. The program's key objectives for federal fiscal years 2016-2018 (FFY16-18) include the following strategies in five priority focus areas:

FOOD SYSTEMS
1 Increase availability of **healthy food retail**
2 Encourage participation in **gardens**
3 Start and expand **Farm to Institution** programs
4 Support the **Summer Food Service Program**
5 Encourage use of **farmers' markets with SNAP** and WIC access

ACTIVE LIVING
6 Build capacity to implement **active living policy**
7 Promote participation in and use of area **physical activity resources**
8 Support family-friendly **physical activity opportunities**
9 Use point-of-decision prompts to encourage **use of stairs**

SCHOOL HEALTH
10 Support development, implementation, and evaluation of **Local Wellness Policies**
11 Improve student, teacher, and staff **access to nutrition information**
12 Support **comprehensive school physical activity programming**

EARLY CHILDHOOD
13 Support food and beverage and physical activity PSEs consistent with **Empower**
14 Improve ECE capacity in **nutrition education and healthy meals**
15 Improve ECE capacity to provide **opportunities for physical activity**

DIRECT EDUCATION
16 Provide **healthy eating and active living education** in support of PSE strategies

Eight LIAs were funded statewide to conduct SNAP-Ed's local programming during the three year program cycle: the University of Arizona Cooperative Extension (UA Extension), and seven county health departments. An external evaluation team from the University of Arizona, Department of Nutritional Sciences (Evaluation Team) was also newly contracted to perform process, outcome, and impact evaluations pertaining to SNAP-Ed's integrated PSE and DE efforts and in alignment with the USDA's recently released national Evaluation Framework.[10]

This report explicates the evaluation findings from year one of the multi-year program cycle, and emphasizes needs and assets assessments in all focus areas as well as DE behavioral outcomes for youth and adults.

Even at this early stage of implementing SNAP-Ed's newly prioritized PHA approach, the integration of SNAP-Ed efforts across the state is promising. While this report is presented *by focus area*, which emphasizes progress in each topical PSE area, a few representative examples are included below of how LIAs across Arizona are *linking their DE to PSE work* in order to enhance behavioral outcomes aligned with SNAP-Ed goals.

For example, SNAP-Ed gardens provided a popular way to connect DE and PSEs. In Maricopa County, a series of gardening classes were offered in conjunction with food distribution at the food bank to reach adults with a combination of gardening and DE:

> "On the first Wednesday of each month, a free gardening class is offered to the community at the food bank. Each participant receives information on gardening in the Southwest, a planting calendar, recipes, seeds, and information on SNAP. **SNAP-Ed staff educates participants that they can buy food producing seeds or seedlings with SNAP dollars**. During the second half of the class, clients go to the garden and plant seeds and seedlings in garden beds."

In Yavapai County, SNAP-Ed educators made creative connections to utilize a school garden during the peak growing season and to provide DE to children coming to the school for other reasons:

> "[We] connected with students through the Summer Food Lunch Program and summer school classes at two elementary schools. In June, we created a summer school garden and nutrition club for first graders, **allowing educators to use the garden as a classroom tool during peak production months**. Our educators also cosponsored a garden work day with Food Corps Arizona and with funds from the 21st Century Grant, expanding the garden from two to six beds."

In Pima County, SNAP-Ed staff offered trainings aligned with Empower standards to staff members at early childhood education centers. These trainings reached some sites where the LIA also provided DE to students:

"Staff provided trainings to ECE food service workers, providers, and childcare health consultants (CCHC) from Pima County. During both trainings, techniques for introducing more healthy snacking and menu planning were discussed. The food service training was a skills-based training to make integrating more fruit and vegetables in menus at ECEs an easier change to consider."

LIA staff are concurrently building internal capacity in PSE-DE integration and also communicating SNAP-Ed's newly prioritized PHA approach, as stated by Yuma County SNAP-Ed staff:

"**We make it a point to market our program as a *comprehensive model*** that includes evidence-based multi-session curriculum and interventions along with TA with the goal of accomplishing more large-scale healthy site changes. As a result, existing and potential partners are demonstrating more commitment to our collaboration rather than just wanting a class or two."

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Food Systems

Background

With 26% percent of Arizonans experiencing low food access[1] and 17% reporting food insecurity,[2] access to a variety of affordable, nutritious, and appealing foods is vital to reducing health disparities, a key goal of the SNAP-Ed program. Many of Arizona's rural counties are particularly impacted by low food access, with over 30% of residents in nine rural counties living at least 10 miles from a grocery store.[1] Arizona's SNAP-Ed program has embraced work in the area of food systems in order to improve food security and nutrition among the 18% of adult residents and 25% of children in the state living in poverty.[3]

FS-1. Coordinated Model for Enhancing Community Food Systems[4]

SNAP-Ed's food systems initiatives emphasize creating, implementing, and enhancing policies, systems, and environments (PSEs) at the site and community levels to expand access to healthy food, toward the broader goals of reducing obesity and chronic diseases (Figure FS-1). These activities complement direct education (DE) efforts by increasing the likelihood that individuals will access and consume a variety of appealing and affordable foods encouraged by MyPlate.

Food systems initiatives supported by Arizona SNAP-Ed encompass five distinct yet intersecting strategies:

1. **Healthy Food Retail** in locations such as grocery stores, small stores, farmers' markets, and produce stands. Key efforts in this area include: 1) enhancing the appeal, availability, and/or promotion of healthier food items offered by retailers, 2) increasing the number of retailers who accept SNAP, and 3) cultivating the locally-produced supply chain by incubating new farmers. The USDA has also addressed food retail by modifying its SNAP stocking requirements to include a greater variety and depth of nutritious foods on store shelves.

2. **Gardens,** including those that reach individuals and families in their homes, communities, schools, and child care sites. Gardening opportunities provide participants with the skills and materials to harvest their own foods aligned with MyPlate and learn where food comes from, all while encouraging physical activity and enhancing their communities' surroundings.

3. **Farm to Institution** programs increase the amount of locally-produced foods served at schools, child care sites, and other community settings, while also providing expanded markets for local growers. Arizona SNAP-Ed efforts include partnerships to expand procurement of local ingredients for food service, certifying school gardens for on-site consumption,[5] and integrating efforts with complementary gardening and nutrition education.

4. The **Summer Food Service Program** (SFSP) provides free, federally-funded nutritious meals for low-income children at community-sponsored meal sites when school is out of session. SNAP-Ed's food security emphasis supports the goals of the SFSP by encouraging SNAP-eligible families to participate. Specifically, SNAP-Ed programs engage parents and families throughout the year in DE and PSE efforts, which provide regular opportunities to promote the SFSP. In addition, LIAs foster site-based partnerships and multi-sector coalitions that can be leveraged to encourage participation.

5. Encouraging **Farmers' Markets with SNAP and WIC access**, including supporting the establishment of new farmers' markets and produce stands in SNAP-Ed eligible communities. Complementary SNAP-Ed efforts seek to encourage new and existing markets to become certified for SNAP, WIC, and/or the Farmers' Market Nutrition

Program (FMNP) redemption, and boosting market turnout by families who use these payment methods.

Healthy Food Retail

Methods

Mixed-methods Analysis. In the first year of the multi-year implementation plan, the Evaluation Team assessed the needs and readiness of LIAs and their partners related to healthy retail efforts, including work with retailers and coalitions, as a formative evaluation. This was conducted using qualitative analysis of narrative data, which was collected through the AzNN Semi-Annual Report Narrative (SARN). The NVivo v11.0 software was used for coding and theme analysis. In some cases, LIAs also conducted their own evaluations related to healthy retail; these were analyzed qualitatively for descriptive and thematic findings. Community-level collaborations in healthy retail were analyzed using the Wilder Collaboration Factors Inventory (WCFI) to assess LIAs' community coalitions in this and other strategies (see *SNAP-Ed Coalitions* in the Active Living chapter for complete results), as effective coalition work was anticipated to be imperative for achieving PSE successes in these areas.

Results

Retailer Partnerships. Three LIAs in four counties reported active partnerships with stores in their communities to advance healthy retail initiatives.

LIAs typically reported successes engaging their retail partners in activities that hew closely to SNAP-Ed's traditional mission, by conducting in-store food demonstrations, distributing materials, and in some cases, translating materials into another language. Establishing relationships and building trust with new retail partners by offering these services has been described by LIAs as one way to prepare partners for potential PSE-level changes in the future. In two counties, efforts have expanded to include PSE supports for: 1) increasing the variety and appeal of produce and other healthier foods in stores and 2) coordinating with other community partners to leverage resources in

support of store partnerships. The characteristics of those partnerships are described in Table FS-1.

Table FS-1. Characteristics of Healthy Food Retail Initiatives in FFY16, by County

COUNTY	Retailer Type	No. of Partnerships	Intervention
Apache	Grocery	1	Recipes and in-store recorded messages in Navajo language
Coconino	Grocery	2	In-store food demonstrations and recipes in Navajo language, increased variety and enhanced placement of healthier foods
Maricopa	Corner/ Convenience	1	Promotional materials, increased variety of produce and enhanced placement of healthier foods, in-store event
Navajo	Grocery	1	Recipes and in-store recorded messages in Navajo language

Needs emerged predominantly from retail partnerships that were not as successful. Three LIAs reported struggling to engage store managers in healthy retail efforts. Several LIAs also reported a desire for training on the business aspects of retail operations and SNAP electronic benefits transfer (EBT) certification, in order to be able to speak to retailers' concerns and needs more knowledgably.

The LIAs' internal evaluations described below echo these challenges.

> "The team has been challenged with **getting full buy-in from corner store managers and addressing their concerns related to making sufficient money** while providing healthier options for their community."

Internal Evaluation Results. Contractors engaged in five internally developed needs assessments or environmental scans related to healthy food retail in their communities. Those efforts, with key results, are described in Table FS-2.

Table FS-2. Characteristics of LIAs' Healthy Food Retail Evaluations in FFY16, by County

COUNTY	Assessment Type (No. Completed)	Target Audience or Setting	Key Results
Maricopa	Store Inventory Scan (27)	Small stores in SNAP eligible locations	• 44% of stores stocked frozen vegetables and 5 or more fresh vegetables • Over 1/3 of the stores stocked none of the assessed nutritious items, and only one stocked all 7
Mohave	Store Inventory Scans and Interviews (3)	Small stores and managers in SNAP eligible locations	• One store expressed interest in next steps for EBT certification • Two stores lacked interest in accepting EBT due to stocking requirements and perceived low demand
Pima	Community Map (1)	Convenience stores in SNAP-Ed eligible locations	• Map developed to identify and recruit retailers based on proximity to SNAP-Ed intervention areas
Yavapai	Survey (50)	Residents	• "Produce" or "fresh fruits and vegetables" were the most popular suggestions for enhancing inventory in small stores
	Store Observations and Interviews (6)	Small stores and managers in SNAP-Ed eligible locations	• Two markets had an extensive produce selection, while four markets provided only apples and bananas • Vendors cited the importance of providing produce to their communities due to the closure of a nearby large store • Lack of interest from customers was reported as a barrier to stocking more options

The results suggest varying levels of readiness and need among SNAP-Ed communities and retail partners to address healthy retail. The LIAs have utilized the results of their needs assessments to implement interventions and in some cases, have disseminated the results in order to raise awareness among stakeholders about the needs in their counties. Taken together, the findings suggest that LIAs are deepening their exploration

of the retail environments in their communities, and that there is strong potential to capitalize on the existing readiness among certain retail partners for PSE changes.

Community Coalitions. Four coalitions that address healthy retail in three counties were assessed with the WCFI. Coalition characteristics are described in Table FS-3.

Table FS-3. WCFI Coalition Characteristics in FFY16, by County

COUNTY	No. Coalitions Assessed	No. Sectors Represented[a]	No. Coalition Members	No. Completed WCFIs
Maricopa	2	5	22	6
		5	16	16
Mohave	1	6	32	9
Yavapai	1	7	40	17
ALL COUNTIES	**4**		**110**	**48**

[a] The number of sectors represented in the coalition were identified using sectors identified in the national SNAP-Ed Evaluation Framework:[6] Food Industry, Government, Public Health and Health Care, Education, Community Design, Public Safety, Media, Agriculture, and Commercial Marketing.

Mean WCFI scores for success factors are reported below in Table FS-4. Scores ranged from 1-5, with 5 representing the optimal score.

Table FS-4. Mean WCFI Scores for Healthy Retail Collaborations in Three Arizona Counties, N=4

COUNTY	Total (All Sections)	History of Collaboration	Group Seen as Leader	Favorable Climate	Mutual Respect, Understanding, & Trust	Cross Section of Members	Collaboration in Self-Interest	Ability to Compromise	Shared Stake in Process, & Outcome	Multiple Layers of Decision-making	Flexibility	Development of Clear Roles & Responsibilities	Adaptability	Appropriate Pace of Development	Open & Frequent Communication	Informal Relationships & Communications Links	Concrete, Attainable Goals & Objectives	Shared Vision	Unique Purpose	Sufficient Funds, Staff, Materielas, & Time	Skilled Leadership
Maricopa 1	3.5	3.2	3.8	4.4	3.5	3.2	4.2	3	4	3.1	3.8	2.8	3.5	2.9	3.2	3.9	3.3	3.9	4.3	2.2	3.8
Maricopa 2	3.9	3.6	3.5	4.2	4	3	4.4	3.8	4	3.6	3.9	4	3.6	3.6	4	4.3	4.1	4.1	4.4	2.7	4.2
Mohave	3.9	3.2	3.9	4.2	3.9	3.8	3.8	3.7	4.4	3.6	4	3.8	3.8	3.7	4.1	4.3	4.2	4.2	4.3	3.1	4
Yavapai	3.9	3.7	3.6	4	4	3.7	4.4	3.8	3.9	3.8	4	3.5	3.9	3.9	4	3.8	3.7	3.9	4.1	3.2	4.3
ALL COUNTIES	3.8	3.4	3.7	4.2	3.9	3.4	4.2	3.6	4.1	3.5	3.9	3.5	3.7	3.5	3.8	4.1	3.8	4	4.3	2.8	4.1

Across all coalitions, members rated their collaborations highly for having a *Unique Purpose* (4.3), in considering that there was a *Favorable Political or Social Climate* for their work (4.2), and in the perception that the collaboration was in members' *Self-Interest* (4.2). The findings suggest that coalition members are engaged around common healthy retail goals, which also align with their own organizations' goals. Furthermore, members believe the climate is right in their communities to achieve what they seek to accomplish.

Yet the findings suggest that these coalitions lack adequate resources to accomplish their goals, as well as lacking a collective sense that the agencies involved have a history of successfully solving problems. In addition, members reported lower success scores for including representatives from diverse segments of the community who may be affected by the coalitions' work. The lowest scoring success factors were having *Sufficient Funds, Staff, Materials, and Time* (2.8) to achieve the coalitions' goals, a *History of Collaboration* (3.4), and a *Cross Section of Members* (3.4).

It is notable that the existence of sufficient resources to conduct the work of the coalitions was rated starkly lower than the other WCFI factors. Having insufficient financial resources, staffing, and/or materials to conduct the coalition's work is a significant threat to progress regardless of how highly members rate other aspects of their collaborations.

In response to each coalition's WCFI scores, the Evaluation Team provided recommendations back to the coalitions. Frequent recommendations included exploring creative work-arounds for limited resources, ensuring that coalition members have sufficient context about the coalition's history and past successes, and inviting new members to join from various sectors of the community who may have a stake in what the coalition is trying to accomplish.

From the assessment process itself, the Evaluation Team found that participation in the WCFI was frequently low compared to the number of total coalition members. This suggests that while a larger pool of community representatives may join coalitions, engagement in meetings and correspondence related to coalition business (including participation in the WCFI) may be lower.

The WCFI assessment and results lend important insights into the characteristics of the coalitions that LIAs participate in on behalf of their healthy retail initiatives. While work in coalitions is crucial to achieving community-level healthy retail goals, the likelihood of collective success depends in large part on the strengths and weaknesses of the collaborative venture. The WCFI serves as a measure of well-being for the coalition itself as the agent of change for the collective PSE efforts in which SNAP-Ed is engaged.

County Highlights

Enhancing Availability and Appeal of Healthier Foods in Coconino. The Coconino County Public Health Services District's SNAP-Ed program (Coconino SNAP-Ed) met with the Northern Regional Managers of the Bashas grocery store chain to advance efforts to develop in-store healthy retail initiatives coupled with DE activities. The Coconino SNAP-Ed team was able to generate top-down buy-in for their proposals from the regional managers, which then motivated efforts with in-store managers and employees.

The DE activities coordinated by Coconino SNAP-Ed included food demonstrations in both English and Navajo languages at the Tuba City Bashas store in partnership with Tuba City Regional Health Care. Complementary PSE work included establishing relationships with store staff to modify the pricing and placement of healthier foods.

> "Collaboration with store staff has begun to influence procurement...educating staff has increased availability of whole wheat tortillas, no salt-added canned vegetables, no sugar-added canned fruit, and larger containers of low-fat/non-fat yogurt. Also, individually priced fruit is now available at the deli for purchase, whereas before a shopper had to go stand in a check-out line to get the fruit weighed."

Building on these achievements, the Coconino SNAP-Ed team plans to tackle healthy end-cap marketing, enhanced whole grain inventory, and point of purchase prompts in FFY17.

Cultivating New Farmers in Maricopa. The UA Cooperative Extension, Maricopa (Maricopa Extension) Beginning Farmers' Program has sought to increase the supply of healthy foods in SNAP-Ed eligible communities by cultivating new small farmers. The Maricopa Extension provided a six-week Small Farm Business Planning Series, a two-day introductory workshop for those considering farming, and presentations on Community Supported Agriculture (CSA) Marketing, CSA crop planning, and

How to Run a Successful Farm Stand. The Maricopa Extension also worked in partnership with the Cultivate South Phoenix (CUSP) coalition by providing guidance, technical assistance and workshops to plan and implement their incubator farm and CSA market. In addition, Maricopa Extension oversees an incubator farm, called Phoenix Urban Research Farm (PURF), where beginning growers can access plots and SNAP-accepting farmers' market booths in the community. The Maricopa Extension is also working with small growers on food safety certification and toward the development of an agricultural coop/food hub.

> "Many of the beginning farmers utilizing PURF's resources sell at markets accepting SNAP, WIC, and FMNP…The Maricopa Extension assisted in opening a growers' consignment table at the Ktizo Farmers Market, which already accepts SNAP and sells vegetable seeds to West Phoenix residents."

HEALTHY FOOD RETAIL
KEY FINDINGS & RECOMMENDATIONS

🔑 Fostering LIA partnerships with small and larger retailers shows early success in motivating the advancement of SNAP-Ed healthy retail goals. LIAs may magnify their reach and impact by implementing efforts with regional retailer chains, which have the potential to make larger-scale in-store changes.

🔑 LIAs may benefit from additional trainings on how to respond to retailer perceptions regarding lack of demand for healthier inventory and impacts on the business enterprise. Utilizing complementary approaches, including in-store food demonstrations, tours, and "re-opening" events may encourage patronage by SNAP eligibles and the community at large in support of partner retailers.

🔑 Additional training on how LIAs can support retailer partners in SNAP EBT certification, including the application process and guidelines, may overcome barriers in LIA and retailer knowledge and facilitate the achievement of PSE supports.

Gardens

Methods

Mixed-methods Analysis. Needs and readiness pertaining to gardens among Arizona's LIAs and partner sites were assessed qualitatively as a formative evaluation. Narrative data was collected through the SARNs. The NVivo v11.0 software was used for coding and theme analysis. Additional quantitative data from Semi-Annual Report Tables (SARTs) were analyzed to assess LIAs' progress toward achieving gardening goals, including meetings, technical assistance, and trainings provided.

Results

Gardening represented one of the most popular SNAP-Ed strategies in Arizona. LIAs supported 107 gardens in their target communities (Figure FS-2), with the majority (76%) located at *schools*, *childcare centers*, and *community centers*.

Figure FS-2. SNAP-Ed Supported Gardens in Arizona in FFY16, by Type
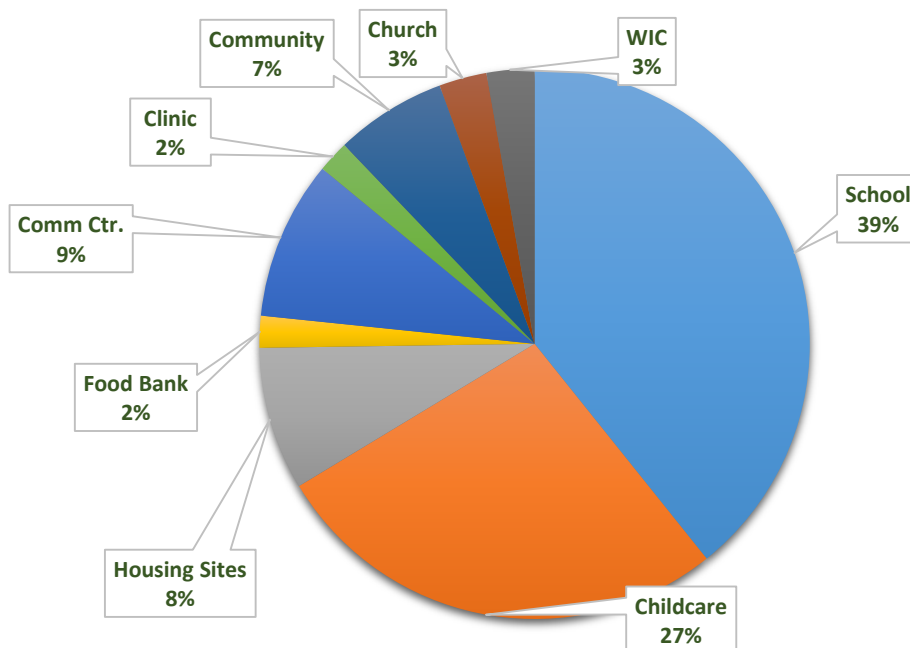
LIA gardening teams were quite successful in partnering with sites seeking garden support. Documented progress by LIAs included 483 reported gardening meetings and technical assistance sessions in 117 communities across 13 counties. LIA staff most often played a coordinating role in their gardening partnerships and reported strengths in such areas as:

- Encouraging the establishment of a garden at sites where other SNAP-Ed programming occurred
- Providing technical assistance and small materials to initiate and/or reinvigorate a garden, as well as training site staff in gardening practices
- Convening other resources and organizational supports to enhance garden efforts
- Teaching gardening education and other curricula, as well as providing food demonstrations from the gardens
- Using a garden's success to encourage the adoption of other PSEs

Gardening site partners were often effective in providing the following supports:

- Leading or contributing to the development of the garden and committing to its sustainability
- Encouraging site staff and other stakeholders to participate in garden efforts
- Allowing other SNAP-Ed site activities that could advance PSEs
- Linking SNAP-Ed to other sites that might be interested in gardening

Nutrition education, food demonstrations, and recipes foster enthusiasm for gardens

Gardens encourage opportunities for nutrition education and physical activity

A theme in garden accomplishments across many LIAs included strong integration with DE. The establishment and maintenance of a new garden often provided the environment conducive to increased nutrition education by LIA staff and site leaders, such as implementation of the Color Me Healthy curriculum at childcare sites, or the use of garden ingredients for food demonstrations.

In other cases, regular DE activities, including curricula taught in schools and afterschool programs, provided the momentum to initiate, expand, or revitalize a garden. Thus, gardens and DE were often reported as being mutually reinforcing (see the Direct Education – Youth chapter).

Attempts at leveraging gardening enthusiasm to address other PSE goals at partner sites met with varying success. Many LIAs reported new opportunities to develop other site-level PSE initiatives with garden partners, including encouraging family-style meal service and Farm to Institution efforts. However, others reported that the establishment of a garden in and of itself was not necessarily sufficient to encourage a partner to consider other PSEs, such as garden-supportive policies.

> "We have been engaged in the process of promoting the adoption of garden support policies…providing TA in their development, including sample policy language, but have not met with success…**There is still much work for us to do to persuade site decision-makers, including schools, to support food gardens through policies**."

Another challenge related to garden sustainability. LIAs reported challenges maintaining gardens once SNAP-Ed staff stepped away from primary leadership. To address this, several LIAs made efforts to identify an on-site champion to continue with day-to-day garden maintenance after SNAP-Ed's initial intervention. Lessons learned included finding a garden champion as the first step in establishing the garden before ground is even broken. In some cases, procuring a written commitment from the site leadership and/or participants to sustain the garden was effective in sustaining efforts.

County Highlight

Informing Development of a Community Gardening Ordinance in Yuma. The Yuma County Public Health Services Department SNAP-Ed program (Yuma SNAP-Ed) engaged in technical assistance and policy advocacy to encourage community gardens in the county. The effort evolved from a Health Impact Assessment that was jointly conducted with the County's Health in Arizona Policy Initiative (HAPI) program, the ADHS, and other partners to consider the potential health impacts of establishing more community gardens. While county zoning guidelines already allowed community gardens, the cost of special use permits was considered prohibitive for high-needs populations.

Through ongoing advocacy with the Planning and Zoning division, the county Board members, and through a public hearing, the Yuma SNAP-Ed staff

> "We met with [the Planning and Zoning division]...We were able to provide more information about the high rate of food insecurity and low food access within our County and the role of community food gardens to address and mitigate these factors. "

provided information about the benefits of community gardens. These included strong potential for such gardens to mitigate the high rate of food insecurity, strengthen social capital and increase self-sufficiency. Yuma SNAP-Ed staff also described the resources in place to address food safety concerns that were raised by the Board.

Thanks in part to Yuma SNAP-Ed's efforts, the community gardening ordinance was unanimously approved on September 6, 2016. Another benefit of Yuma SNAP-Ed's presence during the garden policy discussions has since emerged: the Planning and Zoning division intends to invite Yuma SNAP-Ed to provide input in 2017 on nutrition and physical activity language for the updated Comprehensive Plan.

GARDENS
KEY FINDINGS & RECOMMENDATIONS

🔑 LIAs may benefit from additional peer-led sharing or training on how to support the sustainability of gardens so that SNAP-Ed staff can transfer garden leadership to site champions after a garden's initial establishment.

🔑 While many LIAs have reported success integrating DE and gardening as mutually reinforcing interventions, others have met with less enthusiasm for considering broader PSEs. Peer-led sharing and/or training may offer lessons learned and best practices that can be disseminated statewide.

Farm to Institution

Methods

Mixed-methods Analysis. Needs and readiness pertaining to Farm to Institution (FTI) programs among LIAs and partner sites were assessed qualitatively as a formative evaluation. Narrative data was collected through the SARN. The NVivo v11.0 software was used for coding and theme analysis. Additional quantitative data from the SARTs were analyzed to assess LIAs' progress toward achieving FTI goals with respect to meetings with partners and coalitions, as well as trainings and technical assistance provided.

Results

Five LIAs in four counties elected to work on FTI efforts in FFY16. These efforts are still emergent and show significant variation across the state. Table FT-5 characterizes LIAs' primary efforts in FFY16 to advance their FTI goals.

Qualitative analysis suggests that FTI partnerships are still early in their development. Compared with food systems strategies in which LIAs have been active for years, such as gardening, FTI can present a complex formula for success. Work in this arena may entail building relationships with farmers, communicating with district- and/or school-level food service personnel, conducting training and technical assistance internally and with partners, and becoming familiar with certification standards such as USDA's GroupGAP program. That said, strengths related to readiness at partner sites have been documented. Activities that integrate the consumption of site-harvested foods have been a natural extension of gardening efforts by LIAs, especially with child care partners. Two LIAs reported initiatives to cultivate small farmers, who can contribute to FTI on the supply side by selling their produce to school

Exploring the garden harvest in Maricopa County

districts or other institutions, and in one case, via a SNAP-accepting CSA.

In terms of LIAs' own readiness, LIAs have been moderately successful in meeting with sites and coalitions to advance FTI, having reported 24 meetings with site partners and 48 meetings with coalitions. This suggests that LIAs and partners are in the early stages of planning and implementing their FTI efforts, with many activities occurring at the community level through coalition work.

Table FS-5. Farm to Institution Initiatives in FFY16, by County

COUNTY	Setting	Initiative	Partner(s)
Coconino	School	Initiate a new Farm to School program	Elementary School
Maricopa	Food Bank	Create a SNAP-accepting CSA, donate surplus produce	Farm, Health Care Clinic, Hospital, Food Bank
	Schools	Develop and distribute Farm to School Toolkits	Arizona Department of Education, Arizona Farm Bureau, Local First Arizona, Schools
	Early Childhood	Serve recipes from on-site gardens	Childcare Sites
	Schools	Serve produce procured from local growers or on-site gardens	School Districts, Schools
	Schools	Certify with Grown in Arizona GroupGAP Program	Small Farmers
	Community Center	Serve produce from on-site garden	Co-located food bank pregnancy center
Mohave	Schools	Foster relationship in support of Farm to School	A Small Farmer
Yavapai	Early Childhood and Senior Centers	Encourage FTI programs	UA Cooperative Extension, County Health Department, Food Corps, Farmers' Market, Americorps Vista
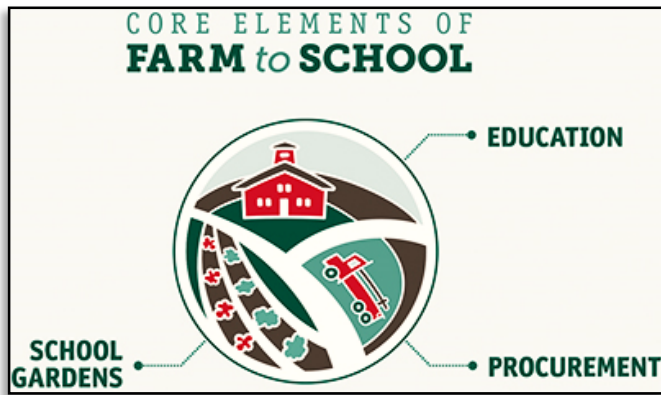
Figure FS-3.The Farm to School model[6] can apply to other SNAP-Ed institutions.

During Food Systems and Evaluation committee meetings, LIA staff have requested clarification regarding the distinction between gardening and FTI programs. While gardening and DE often comprise components of FTI programming,[6] efforts also may include procurement of locally grown foods into food service and other activities. These components are shown in Figure FS-3. Further training for LIAs may be useful on the comprehensive components of FTI, as well as technical assistance to encourage the next steps for success that will build on LIAs' early efforts.

County Highlight

Development of a SNAP-Accepting CSA in Maricopa. One farm-to-food bank success in FFY16 has been the development of a SNAP-accepting CSA at the Honor Health Desert Mission Food Bank, which is a SNAP-Ed subcontractor to the Maricopa County Department of Public Health. SNAP shoppers, as well as employees from Honor Health, John C. Lincoln Medical Center, and the food bank, were able to purchase $25 worth of produce on each CSA distribution day from Crooked Sky Farms. Because the farm was not able to accept SNAP, the food bank coordinated SNAP payments for the CSA shares at their cash registers and the farm was later reimbursed. In addition, CSA shares that were not picked up on distribution days were donated to the food bank. Through the CSA partnership, 1,056 pounds of surplus produce has been donated to the Desert Mission Food Bank in addition to the farm's regular donation of crop surpluses (approximately 36,000 pounds last year).

FARM TO INSTITUTION
KEY FINDINGS & RECOMMENDATIONS

🔑 SNAP-Ed Farm to Institution efforts are in early stages, with strongest success in linking activities with on-site gardens and cultivating small farmers to sell their harvest.

🔑 LIAs could benefit from additional training and technical assistance on the comprehensive FTI strategy and how to progress early efforts with partners and coalitions.

Summer Food Service Program

Methods

Mixed-methods Analysis. Needs and readiness among Arizona's qualifying SFSP sites were assessed as a formative evaluation using mixed methods. A SNAP-Ed SFSP Supports Checklist (Checklist) was created and piloted after a review of the existing literature found a gap in assessments to document SNAP-Ed's specific role in supporting SFSPs. The Evaluation Team sought to develop an assessment tool to evaluate the combined DE and PSE contributions of SNAP-Ed in supporting the SFSP statewide.

An iterative approach was used to develop the Checklist. The process included: 1) review of the existing SFSP evaluation literature, 2) development of a draft Checklist that aligned with the SNAP-Ed Evaluation Framework to assess the SFSP needs, strengths, and challenges experienced by SNAP-Ed agencies, 3) pre-pilot stakeholder review of the Checklist for usability and content validity, 4) SNAP-Ed agency piloting of the Checklist, and 5) post-pilot stakeholder debriefs to gather feedback for future revision.

The Checklist collected quantitative data (as well as qualitative responses to several open-ended questions) about supports provided by SNAP-Ed staff to their selected SFSP sites and districts, including: 1) promotion of meal sites through materials and messaging, 2) DE that was provided during or around meal hours at sites, and 3) other efforts, including kick-off events, media coverage, and coordination with other partners. The Checklist was used as a needs assessment in FFY16 and as a mechanism to understand the readiness of SFSP sites and staff to enhance support in ways that are likely to be effective in increasing meal site participation.

To further understand SFSP needs and readiness, a qualitative inquiry was undertaken using NVivo v11.0 for coding and theme analysis of narrative data related to the SFSP from the SARNs, the Checklist, and from debrief sessions with LIAs who served on the AzNN's Food Systems and Evaluation subcommittees.

The AzNN also developed a new SFSP social marketing and promotion campaign to encourage participation in FFY16, titled "Summer Lunch Buddies." Media and marketing

materials included posters, flyers, post cards, magnets, radio scripts, online ads and images, social media post samples, and web videos. The content and materials were distributed directly to coordinating partners across the state, including ADE sponsor agencies, DES, and WIC offices, as well as to LIAs for dissemination in their counties.

Qualitative findings related to LIAs' experiences using the Checklist and promotional campaign are integrated with the quantitative results below.

Results

Six LIAs in nine counties completed Checklists for the 72 SFSP sites or districts that they supported (Table FS-6).

Table FS-6. Checklists Completed by County for SFSP Sites and Districts

COUNTY	No. Checklists Completed	No. Districts Assessed	No. Sites Assessed
Apache	2	0	2
Coconino	2	2	0
Maricopa	45	10	35
Mohave	1	1	0
Navajo	2	1	1
Pima	6	0	6
Pinal	3	2	1
Yavapai	6	1	5
Yuma	5	4	1
ALL COUNTIES	**72**	**21**	**51**

The LIAs reported that their promotion of SFSP sites through the distribution of materials such as posters, flyers, and magnets was most frequent (provided in at least half of community locations) in the following places: libraries, WIC offices, and after school programs. Conversely, respondents typically provided no promotional materials at locations such as places of worship, farmers' markets, and community gardens (Figure FS-4).

Figure FS-4. Frequency of SFSP Promotion at Community Locations,[a] FFY16
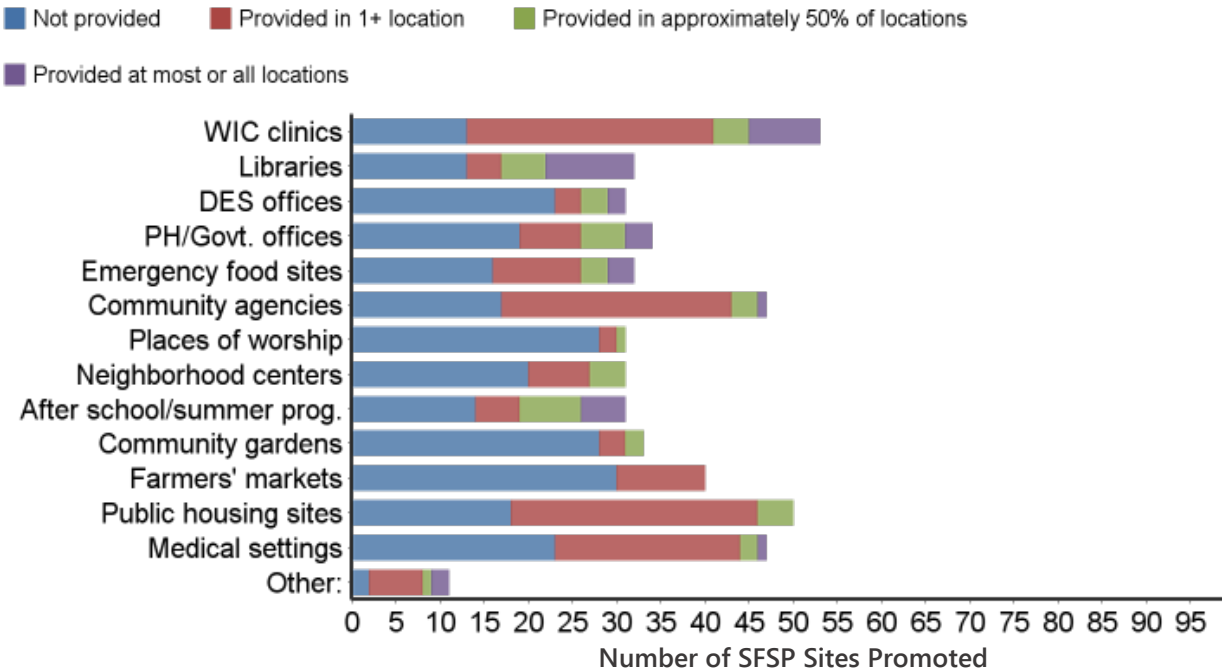
a Locations in "other" include: laundromats, grocery stores, retail shops, a community college, and a local media office.

Targeted promotion of the SFSP to parents at schools and childcare sites was also provided to some degree by LIAs, but was not a prominent feature of their promotional efforts. The most popular activity was sending materials home to parents. These materials were provided at most or all SNAP-Ed participating schools/childcare sites by 58% of respondents (Figure FS-5).

DE by LIA staff before, during, or after meal hours was also reported. While 16% of sites or districts received DE before, during, and/or after meal hours at least once per week, 62% had no activities by SNAP-Ed staff during the summer meal season (Figure FS-6).

Other SFSP supports that were captured by the Checklist included promotional messages by LIA staff to participants during regular community-based DE lessons. This was, in fact, quite common among LIAs, with 82% of respondents reporting that they shared information about the SFSP as a part of their DE. However, LIAs reported limited participation in activities including securing media coverage about SFSP (3% of sites) or participating in SFSP promotional events (10% of sites).

Figure FS-5. Targeted SFSP Marketing to Parents at Schools and Childcare Sites, FFY16
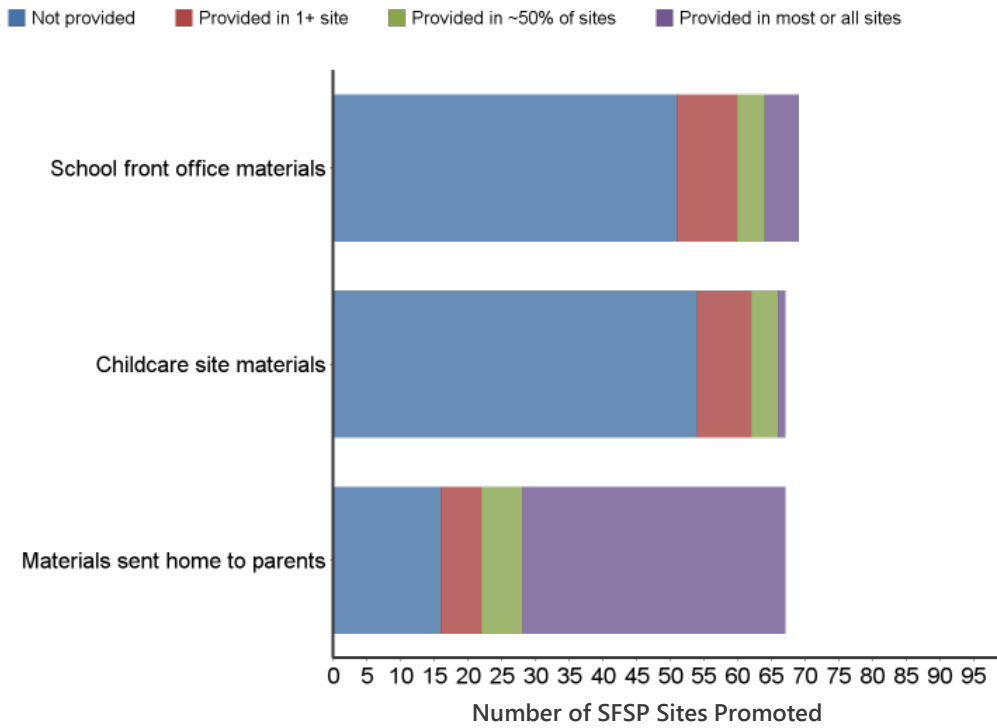
Figure FS-6. Frequency of DE Activities at SFSP Sites, FFY16
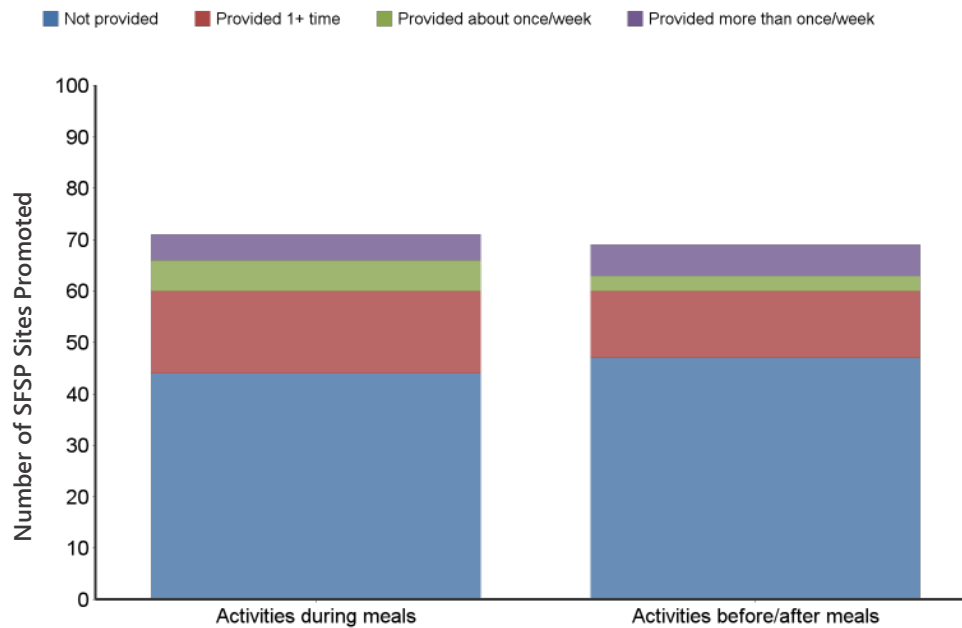
The FFY16 Checklist results suggest that during the first year of implementation, LIAs' SFSP supports were still evolving. LIA strengths hewed toward traditional SNAP-Ed activities, including distributing promotional materials, providing DE during meal hours, and integrating promotional messages into ongoing DE classes. This foundation of familiar activities can establish and build relationships with SFSP partners in anticipation of broader supports in the future.

Less common SFSP interventions reflected a newer understanding of what can be achieved through PSE interventions, such as identifying champions to encourage promotion at targeted locations (such as DES offices), expanding media, social media, and social marketing engagement, and leveraging partnerships for promotional events or innovative efforts. Several LIAs reported that partner school districts chose not to use the branded Summer Lunch Buddies campaign materials, but did disseminate SFSP promotional messages through their social media platforms. Two LIAs in one county also reported promoting the programs on their own social media platforms.

Continued efforts to expand community-level SFSP support, particularly through work with new and existing partner champions and coalitions, may yield enhanced participation beyond that which DE and site-based promotional efforts alone can achieve. In some cases, this is already occurring. One LIA supported breakfast and lunch meal service at multiple community health center locations through a partnership with the center's management and a local food bank.

A specific challenge that LIAs in three counties reported related to encouraging participation in rural areas. For example, the transportation challenges to get children to meal sites during summer months was a reported barrier to participation.

"**Attendance is low at the Summer Feeding Program in Eloy due to the Junior High location, and lack of transportation to this site**. [SNAP-Ed] staff will work with the Food Service Director to discuss ideas on how the district might be able to bring the food to youth in popular locations, such as the county-run swimming pool and local parks."

In several urban communities, LIAs encountered meal sites that did not want to be promoted. This experience seems to run counter to the mandate of SFSP to be open to all unless a site has applied for closed status and suggests a gap in understanding regarding the SFSP application process. Sites that do not want to be promoted complicate LIAs' efforts to properly connect SNAP-Ed families to meal locations that are amenable to receiving them.

Starting efforts too late in the meal season was another challenge reported by multiple LIAs. This challenge encompassed both LIAs' own planning timelines, as well as the delayed release of materials for the statewide Summer Lunch Buddies promotional campaign.

While the Checklist will not be formally collected again until FFY18, several LIAs have expressed interest in using the tool in FFY17 to track their ongoing efforts and contribute to further refinement of the tool. As LIAs continue to add SFSP interventions to their repertoires, Checklist scores are anticipated to rise. SFSP meal participation numbers from SNAP-Ed supported sites have also been collected, with FFY16 as the baseline year (N=560,263). Changes in participation will provide an opportunity to explore potential associations between *SNAP-Ed supports* and *SFSP participation* over time.

County Highlight

Utilizing SFSP Partnerships in Maricopa. The City of Tempe Kid Zone Program (TKZ), an LIA subcontractor to the Maricopa County Department of Public Health providing afterschool and summer programs, collaborated with Tempe Elementary School District's Nutrition Services Department to promote the SFSP through the distribution of promotional materials and communications. Posters, handouts, and e-mail blasts were distributed to families in the district, as well as to eligible community centers in Tempe, reaching over 2,000 families in the Tempe and Kyrene School Districts. The Summer Lunch Buddies campaign materials were also used. TKZ also supported a new SFSP site in the Kyrene School District, with the hope that success at that site will encourage district sponsorship of additional SFSP sites in the future.

SUMMER FOOD SERVICE PROGRAM
KEY FINDINGS & RECOMMENDATIONS

🗝️ Supports for the SFSP relied primarily on traditional SNAP-Ed activities, including distributing promotional materials, providing activities during meal hours, and integrating messages into DE classes.

🗝️ Specific challenges that agencies reported related to encouraging participation in rural areas, encountering meal sites that did not want to be promoted, and starting efforts too late in the summer season.

🗝️ LIAs could benefit from further training and resources on how to identify supportive SFSP partners in their communities, including WIC and DES collaborators, SFSP managers and cross-sector champions who can help build awareness for meal sites.

🗝️ Leveraging LIAs' existing partnerships and collaborations to develop innovative approaches to meal participation may further accelerate progress in increasing SFSP participation. Locations where families already congregate, such as libraries, food banks, places of worship, and community gardens are examples of settings where partnership synergy could support non-traditional methods for SFSP promotion and/or participation.

Farmers' Markets

Methods

Qualitative Analysis. The Evaluation Team assessed the needs and readiness of LIAs and their partners related to farmers' market and EBT efforts as a formative evaluation. Data collected through the SARNs were qualitatively analyzed using NVivo v11.0 software for coding and theme analysis. In some cases, LIAs also conducted their own evaluations to inform their work with farmers' markets; these were analyzed qualitatively for descriptive and thematic findings.

Results

Readiness among farmers' market partners and coalitions suggested strong momentum in five counties to establish new markets and/or become certified for SNAP or WIC redemption. Table FS-7 below summarizes those efforts.

Table FS-7. Farmers' Market Partnerships and Progress in FFY16, by County

COUNTY	Initiative(s)	No. Markets	Progress
Gila	Establish SNAP EBT payment	1	Achieved
Greenlee	Establish WIC payment	1	Achieved
Mohave	Establish new farmers' market	1	Achieved
Pima	Establish SNAP EBT payment	1	Achieved
Yavapai	Establish new farmers' market with SNAP EBT and WIC payment	1	Achieved
	Establish SNAP EBT and WIC payment	2	Meetings with managers to understand and address barriers to certification

Qualitative review uncovered three common themes related to LIAs' own readiness and barriers in this strategy: 1) Engaging with farmers' market partners and coalitions to address needs and barriers to establishing new markets or EBT redemption methods, 2)

Surveying community residents for readiness and barriers to shop at markets, and 3) Seeking to overcome barriers to market use by disseminating information in SNAP-Ed eligible communities to promote market attendance.

In three counties where farmers' market managers have reported barriers, their challenges included a lack of knowledge pertaining to the application and certification process, including how to obtain an EBT machine, as well as challenges in meeting the certification requirements. LIAs have requested further training to be able to provide technical assistance to their market partners on these topics.

"Accepting SNAP or WIC benefits is a significant systems change for a small business and includes changes to accounting record practices. While the relationships with farmer's market managers are strong, [our] **staff need more time and official training from AzNN to become true 'experts' on how to guide managers through the steps of accepting SNAP benefits** at their markets."

LIAs in two counties developed and disseminated questionnaires related to residents' readiness and barriers for shopping at local farmers' markets. Those efforts, with key results, are described in Table FS-8.

Table FS-8. LIA-Developed Questionnaires in FFY16, by County

COUNTY	No. Completed	Topic	Target Audience or Setting	Key Results
Greenlee	78	Barriers to shopping at the farmers' market	SNAP and WIC recipients	• 56% reported never shopping at the market • 50% did not shop there because they could not pay with SNAP • 94% expressed interest in food demonstrations at the market • 77% expressed interest in credit/debit payment methods at the market
Mohave	500+	Creation of a farmers' market	Residents	• 94% reported interest in attending a market • A Saturday all day market was found to be convenient or very convenient for 77% of respondents • Most respondents had a vehicle and did not participate in SNAP or WIC

Through these formative evaluations, LIAs are deepening their understanding of both readiness and need related to residents' use of farmers' markets and EBT needs. LIAs reported using the results to encourage new payment methods with their farmers' market partners, to develop plans for a new market, and to tailor their promotional efforts. Furthermore, LIAs plan to use the results to inform a variety of stakeholders about issues related to food access and availability more broadly, including the coalitions and agencies in which they participate.

Promoting farmers' market attendance in SNAP-Ed eligible communities represents a shift toward addressing the demand side of farmers' markets by conducting outreach with potential customers, primarily through DE efforts. This work stems in part from LIAs' assessment work described above, as well as on-the-ground experiences interacting with SNAP-Ed participants in the course of regular programming.

> "We have come to realize that **many SNAP eligible communities know very little to nothing about farmers' markets** in our county. Everything from payment to location to culture of the market and who the market is intended to serve seems to be obfuscated."

LIAs reported strengths engaging in complementary promotional approaches to address gaps in residents' knowledge about the farmers' markets. The first approach included promoting farmers' markets and EBT use directly with SNAP-Ed participants. Interventions included verbal messages during DE classes, the distribution of written materials such as maps and flyers, and web-based marketing, including the development of an app in one county.

The second promotional intervention most reported by LIAs was training partners who also reach SNAP-eligible audiences, such as DES and WIC staff, about the advantages for their clients to shopping at farmers' markets. Three counties have also expressed a need for a DE farmers' market curricula that can be used to tour markets with SNAP-Ed participants.

In some cases, LIAs appear to be providing DE only to promote farmers' markets in their communities. While this work contributes to raising awareness about farmers' market

locations and accessibility, without complementary efforts to enhance *community-level access* to farmers' markets and EBT, the interventions are more relevant as DE strategies than as PSEs.

Taken together, LIAs' efforts to cultivate farmers' market partners, assess their communities, and promote the benefits of shopping at farmers' markets represent concrete early efforts to enhance healthy food access in SNAP-eligible communities. (Figure FS-7).

Figure FS-7. SNAP-Ed's Coordinated Efforts to Enhance Access to Farmers' Markets and Locally Grown Foods

SNAP-Ed support of farmers' markets has grown meaningfully in the first year of the multi-year work plan, with many LIAs reporting plans to deepen and expand their efforts based on the foundations laid in FFY16.

County Highlights

A New Farmers' Market in Mohave. In FFY16 the two LIAs in
Mohave County, with the UA Cooperative Extension, Mohave
(Mohave Extension) as a lead and the Mohave County Department
of Public Health as a coordinating partner, were successful in
launching a new farmers' market in Kingman. The Mohave Extension
first met with key local government groups and officials to create a
coalition to develop the market, which has since expanded to over
thirty members.

Key partners include the Kingman Economic Development and Marketing Committee,
the Kingman Tourism Department, The UA Master Gardeners, Dig-It Community
Gardens, and Route 66 Rotary Club. The coalition has reached maturity with bylaws,

> "The Mohave Extension is ensuring that a core element of the market keeps SNAP/WIC recipients' interests in the forefront and that access to this market will reach and consider the needs of these populations."

subcommittees, and a statement of
purpose, and the coalition's WFCI scores
suggest that the collaboration benefits from
a strong shared interest in the process and
outcomes of their work, a unique purpose,
and frequent formal and informal
communication between members.

As a result of these collaborative efforts, the Kingman farmers' market received large
attendance to their preview event in August, 2016. The market's opening day during the
following month had more than 1,200 shoppers and 22 vendors in attendance. Social
media and local news coverage, as well as a market interest questionnaire conducted
with residents, were key in getting the word out about the new market.

SNAP Certification of a Farmers' Market in Gila. The Gila County Department of Health and Emergency Management's SNAP-Ed program (Gila SNAP-Ed), in coordination with its subcontractor Pinnacle Prevention, approached the Payson farmer's market managers in FFY16 to encourage certification as a SNAP EBT retailer. The site was already one of the highest redeeming WIC and FMNP markets in the state, suggesting readiness to expand EBT offerings. With Gila SNAP-Ed's technical assistance in guiding the market managers through the application process and connecting them to a grant for free EBT equipment, the market was able to launch their seasonal hours in June, 2016, accepting SNAP, with a redemption total in FFY16 of $1,551.

Integrated efforts pairing PSE activities with indirect and direct education may have also been good for business: by the close of the season, the market had experienced a 16% average daily sales increase. Future efforts will include implementing the Double Up Bucks AZ program, which will allow shoppers to redeem up to $10 in extra purchasing dollars when using SNAP at the market.

"Pinnacle Prevention staff…offered SNAP customers assistance in utilizing SNAP at the market and nutrition education associated with seasonal produce offerings. Technical assistance also included the development of communications and promotional materials that aligned with nutrition education. "

FARMERS' MARKETS
KEY FINDINGS & RECOMMENDATIONS

🔑 LIAs in several counties are leveraging strong momentum to support the establishment of new farmers' markets and EBT payment methods.

🔑 LIAs would benefit from trainings on how they can support EBT certification of farmers' markets.

🔑 LIAs seek additional ways to reduce barriers to farmers' market use among SNAP-Ed participants, such as by offering tours and other approaches at market sites.

🔑 While farmers' market promotional messaging contributes to raising awareness, without complementary approaches to enhance access to farmers' markets at the community level, these interventions are DE strategies.

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Active Living

Background

Obesity is a problem of energy balance,[1] and in Arizona as well as across the nation, sedentary lifestyles are contributing significantly to obesity rates. In 2014, 24.1% of adults and 17.3% of youth in Arizona reported no leisure-time physical activity.[2] Access to recreation and fitness facilities in Arizona is low – statewide, there are just 8.1 such facilities per 100,000 population, compared to a national average of 10.1. Six counties have four or fewer facilities, and three counties have zero per 100,000 population.[3] Furthermore, pedestrian deaths from motor vehicle crashes in Arizona exceed the national average in all but three counties,[4] indicating a less-than-optimal walking environment across much of the state. These statistics reflect high rates of inactivity and poor access to formal and informal physical activity resources and suggest that supporting ongoing active living opportunities in Arizona is vital to reducing rates of overweight and obesity.

Arizona's SNAP-Ed program has embraced work in the area of active living in order to improve physical activity among the 13.3% of families in the state living in poverty.[5] Active living initiatives supported by Arizona SNAP-Ed encompass four distinct yet intersecting strategies:

1. Strengthening **Active Living Policy** at the community level and building the capacity of community organizations to effect change. Key efforts in this area include: 1) understanding the policy landscape and determining where SNAP-Ed efforts can be most effective and 2) building capacity among both SNAP-Ed staff and community partners through trainings and technical assistance to affect active living policy.

2. Promoting participation in and use of local **Physical Activity Resources**. This strategy includes: 1) identifying, promoting, and enhancing free and low-cost physical activity (PA) resources, and 2) building partnerships with parks and trails

organizations and other community organizations to promote and enhance PA resources.

3. Supporting **Family-Friendly Physical Activity Opportunities**. Key efforts in this area include: 1) building partnerships with other organizations invested in active living for families at the community level, such as biking clubs and organizations that promote neighborhood walkability, and 2) increasing capacity among SNAP-Ed staff to plan and/or lead PA event efforts in order to maximize participation by and benefit to SNAP-eligible individuals.

4. Using **Point-of-Decision Prompts to Encourage Use of Stairs**. Point-of-decision (POD) prompts encourage individuals to increase functional activity in small increments throughout the day by choosing stairs over elevators. Prompts such as these in SNAP-Ed settings can support other PSE changes that encourage PA.

Active Living Policy

Methods

Needs and barriers of local implementing agencies (LIAs) in active living policy were formatively evaluated at the *partner site* level using quantitative analysis in Excel of LIA semi-annual report tables (SARTs) and training attendance lists.

At the *community coalition* level, evaluation of needs and barriers included quantitative and qualitative analysis of Wilder Collaboration Factors Inventory (WCFI) results using Excel. See the Deep Dive section later in this chapter for full methodological and analysis approaches for the WCFI.

In addition to the quantitative analysis, qualitative inquiry using text from LIA semi-annual report narratives (SARNs) was conducted using NVivo v.11.0 software for coding and theme analysis. Findings were considered in terms of LIA strengths and challenges regarding programming focused on active living policy.

Results

Active Living Policy Training and Partnership Activity

LIA Staff Training. Statewide training offered by the AzNN focused on the built environment, and while the webinars were sparsely attended, more LIA staff were reached with in-person, interactive workshops (Table AL-1). Although these training opportunities reached a number of LIAs engaged in active living policy work, they came too late in the year to dramatically affect LIAs' plans for FFY16, or shape amendments for FFY17.

Table AL-1. LIA Staff Attendance at Active Living Policy Trainings in FFY16

Training Topic	No. Staff
Who Creates Our Built Environment? *(Webinar)*	9
How to Become a Change Agent for Healthier Environments *(Webinar)*	4
Who You Can Enlist to Assist *(Webinar)*	4
Healthy Community Design *(In-person Workshop, three locations)*	34

Community Reach and Training of Partners. LIAs reached an average of 5.2 partner communities with active living policy work, and most offered just a single training on active living policy in FFY16.   Three counties exceeded their intended community reach, and one county both exceeded intended reach and provided an active living policy training to 75% of their partner communities (Table AL-2).

Community Coalitions

Four coalitions related to active living policy efforts in three counties were assessed using the WCFI for their level of collaboration success factors identified as important to achieving coalition goals. These success factors included items such as *History of*

Table AL-2. Active Living Policy Reach and Partner Trainings, FFY16

COUNTY	No. Communities Reached	% of Communities Reached [a]	No. Sites Trained	No. Trainings
Coconino	1	100%	1	1
Maricopa	9	900%	3	3
Mohave	3	100%	1	1
Navajo	0	0%	0	0
Pima	12	150%	8	7
Yavapai	6	150%	1	1
MEAN, ALL COUNTIES	**5.2**	**233%**	**2**	**1.8**

[a] Percent of communities reached is relative to intended reach provided by the LIA at the start of FFY16

Collaboration or Cooperation in the Community; Appropriate Cross Section of Members; and *Concrete, Attainable Goals and Objectives*. An average score ranging from one to five was calculated from participants' responses for each of the 20 factors. Based on the scores, each factor was categorized as strong (4.0-5.0), moderate (3.0-3.9), or weak (1.0-2.9). Table AL-3 shows the characteristics of these community coalitions, including reported members of the coalition and sectors participating.

Table AL-3: WCFI-Assessed Coalition Characteristics in FFY16, by County

COUNTY	No. Coalitions Assessed	No. Sectors Represented [a]	No. Coalition Members	No. Completed WCFIs
Coconino	1	4	10	10
Maricopa	1	5	22	13
Pima	2	6	12	11
		4	20	6
ALL COUNTIES	**4**		**64**	**40**

[a] The number of sectors represented in the coalition were identified using sectors identified in the national SNAP-Ed Evaluation Framework:[6] Food Industry, Government, Public Health and Health Care, Education, Community Design, Public Safety, Media, Agriculture, and Commercial Marketing.

The summary results in Table AL-4 show section and total means for the WCFI for active living policy-related coalitions. Scores range from 1-5, with 5 representing the optimal score.

Table AL-4. Mean WCFI Scores for Active Living Policy Coalitions in Three Arizona Counties, N=4

COUNTY	Total (All Sections)	History of Collaboration	Group Seen as Leader	Favorable Climate	Mutual Respect, Understanding, & Trust	Cross Section of Members	Collaboration in Self-interest	Ability to Compromise	Shared Stake in Process, & Outcome	Multiple Layers of Decision-making	Flexibility	Development of Clear Roles & Responsibilities	Adaptability	Appropriate Pace of Development	Open & Frequent Communication	Informal Relationships & Communications Links	Concrete, Attainable Goals & Objectives	Shared Vision	Unique Purpose	Sufficient Funds, Staff, Materials & Time	Skilled Leadership
Coconino	3.9	3.5	3.7	4.4	3.9	3.5	4.1	3.8	3.9	3.5	4.1	3.8	3.9	4.1	4.2	4.1	4.3	4.2	4.3	3.1	4.2
Maricopa	3.5	3.3	3.6	4.1	3.9	2.9	4.3	3.2	3.2	3.2	4.0	2.6	3.8	3.1	3.7	4.0	3.3	3.6	4.0	2.3	4.2
Pima 1	3.7	3.9	3.5	4.1	4.3	3.1	4.4	3.8	3.6	3.4	4.0	2.8	3.8	3.6	4.2	4.0	3.4	3.7	3.8	2.5	4.4
Pima 2	3.8	4.0	3.9	3.9	4.1	3.3	4.7	4.2	3.0	3.9	4.4	3.7	3.6	3.7	4.1	4.0	3.7	3.9	4.1	2.7	3.8
ALL COUNTIES	3.7	3.7	3.7	4.1	4.1	3.2	4.4	3.8	3.4	3.5	4.1	3.2	3.8	3.6	4.1	4.0	3.7	3.9	4.1	2.7	4.2

Across the four coalitions represented, the strongest areas related to coalition members' perception that *Collaboration was in Their and Their Organization's Self-interest* (4.4), and also affirming the *Skilled Leadership of the Coalition* (4.2). These findings suggest that coalition members felt working together to address issues related to active living was a useful strategy, and that the right individuals or organizations to lead progress in this area had been recruited.

Weakest areas overall were *Sufficient Funds, Staff, Materials and Time* (2.7), *an Appropriate Cross-section of Members* (3.2), and *Development of Clear Roles and Responsibilities within the Coalition* (3.2). This suggests that while coalition members valued working together on active living issues, there were still some kinks to be worked out to make active living change happen smoothly. To that end, recommendations provided by the Evaluation Team were based on weaker success factors and included:

- ☤ Exploring creative workarounds for limited resources (including money and time).
- ☤ Inviting representatives from diverse segments of the community who may have a stake in what the coalition is trying to accomplish, especially those outside of the active living sector, to participate in the coalition.
- ☤ Creating a directory of coalition members or an inventory of coalition members' specialty areas, and/or resources they could contribute to the coalition.
- ☤ Developing and disseminating a procedure for a straightforward and equitable way that decisions are made by the coalition.

By measuring coalition well-being using the WCFI, the Evaluation Team was able to assess characteristics of coalitions that LIAs participate in to further their active living policy initiatives, as well as gain a sense of participation levels in various coalitions. By analyzing participation in the WCFI across 10 coalitions (four in food systems and six in active living), the Evaluation Team was able to see patterns of coalition member participation that in many cases indicated more members "on paper" than were active, contributing members to the day-to-day work of the coalition.

The WCFI assessment and results lend important insights into the characteristics of the coalitions that LIAs participate in on behalf of their active living policy initiatives. While coalition work is crucial to achieving community-level active living goals, the likelihood of collective success depends in large part on the strengths and weaknesses of the collaborative venture. The WCFI serves as a measure of well-being for the *coalition itself as the agent of change* for the collective PSE efforts in which SNAP-Ed is engaged.

Strengths in Active Living Policy

LIAs in Arizona's most densely populated counties (Maricopa and Pima) have experienced the greatest successes in active living policy, although two LIAs in smaller counties have also made forward progress. These LIAs discussed three main strengths related to active living policy.

Communication and Relationships with Government. Three LIAs found that by participating in activities focused on transportation, such as Health Impact Assessments

> "By participation in these public forums, we continued to make inroads with appropriate organizations and individuals that influence active living policy decisions."

(HIAs) and community fora, they were able to make contact with individuals and groups that foreground active transport and pedestrian issues in their county.

Technical Assistance on Active Living Policy. Technical assistance with site is highlighted by one urban LIA's success in providing personalized technical assistance to partner sites on implementing active living policies at their sites. Another urban-centered LIA had success in communicating with multi-sector stakeholders by providing comments on three general plans, as well as both comments and testimony on one general plan in their county. This same LIA also commented on a city active transportation plan, where they suggested greater outreach to the SNAP-eligible community for plan feedback as well as using health-indicator data to enhance analysis and decision-making.

Relationships and Communication with Active Living Community Groups. In one county, this strength was illustrated by the LIA participating in a coalition whose goals aligned with active living and figuring out where to begin addressing policy. In a second county, relationship development led to the formation of a new coalition focused entirely on improving the pedestrian environment and encouraging walking throughout the county's main population center.

Challenges in Active Living Policy
For active living policy, the following challenges were mentioned by one or more LIAs.

Competing Priorities for Sites. This challenge is common to other focus areas, and active living was no exception.

> "Getting site leaders engaged in creating active living policies has been a challenge ...they would like it to be a priority but **something else comes up and is more important** at the time."

Lack of Infrastructure Funding. Three LIAs raised the problem of producing recommendations or some other deliverable in the policy realm, only to have the suggestions be ignored because of lack of funding for infrastructure improvements. Two LIA comments address this problem and how it dovetails with other active living policy challenges, including building partnerships with government officials, negotiating the political climate in a county, and tackling issues of inequality.

"...Translat[ing] the Walkability report findings into meaningful built-environment changes is a long process, and requires engaging local government officials and planners in multi-year timelines **with very limited funding for projects**."

"Lack of funding continues to be a problem when promoting active living. Cities see the benefit to building infrastructure and parks, **but the active living infrastructure budget is usually the first to be cut**. Political considerations prevent further progress on establishing public transportation, but local cities have low walkability scores. This inevitably hits low-income families the hardest, because they may have only one vehicle. We have a low-medium income [community] but a high cost of living, which compounds issues of income inequality in our county."

County Highlights

Active Living Policy Trainings in Pima County. Through
the two UA Cooperative Extension, Pima (Pima Extension)
units, and in partnership with the local Tucson nonprofit the
Living Streets Alliance (LSA), Pima Extension offered eight
trainings on active living policy in FFY16. Sites that received
this training included:

- 𝕩 Three Tucson neighborhoods
- 𝕩 Two transitional housing sites
- 𝕩 A children's clinic at a local hospital
- 𝕩 A recreation center
- 𝕩 A Native American community center

> "In total, 38 residents participated, providing comments on the walkability map, filling in surveys that identified barriers to walkability, and gave suggestions for improving walkability in South Tucson."

The neighborhood groups received a
structured walkability assessment delivered
by Pima Extension in partnership with the
LSA, which included a walkability workshop
followed by a neighborhood "walk and talk,"
enabling participants to discuss walkability
issues in locations *where they occurred*. The
other sites received more personalized services, focused on incorporating and
sustaining physical activities at the site and making them part of an official site-level
active living policy.

Active Living Policy and PA Resource Promotion in Maricopa County. The Maricopa
County Department of Public Health (Maricopa DPH) is supporting a
combination of grassroots activism to increase PA resources in under-
resourced areas, and also working from the top down to get city and
county plans more focused on active living.

At the *grassroots* level, they are working with a high-need, diverse
elementary school (27 different languages spoken with English,

Spanish, and Somali the most common) located in the Gateway District, an area classified as a *recreational desert* with only 0.02% park land compared with the overall Phoenix average of 1.35%. Drawing on support from school partners and community partners including the City of Phoenix Neighborhood Services department, a local artist, and the Somali Association of Arizona, Maricopa DPH facilitated the creation of a community-created tile mural promoting PA and healthy eating for students, staff, and community. In addition, Maricopa DPH collaborated with partners to create two walking path signs (one at the school and the other nearby) featuring the AZNN's "Put a Little Play into Your Day" social marketing campaign that included a map of two walking paths.
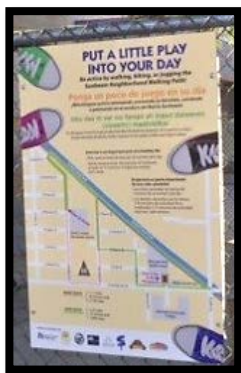
From the *top down*, Maricopa DPH staff have been involved with commenting on and giving testimony during the development of city and county plans. They also provided expertise to a Complete Streets advisory committee and a Shared-Use HIA for a local school district. Finally, they participated in the Maricopa County Active Transportation Plan meeting and drew attention to including low-income voices in plan comments and using health data as part of the basis for decision-making in planning. To solidify their top-down approach, in FFY16, Maricopa DPH hired an urban planner as part of their SNAP-Ed team:

"Hiring someone with urban planning expertise gives Maricopa DPH the advantage of establishing peer-to-peer relationships with municipal planners and the opportunity for future engagement in planning initiatives."

KEY FINDINGS AND RECOMMENDATIONS

🗝 While urban LIAs have found active living policy niches, the AzNN may wish to further clarify the desired direction of active living policy work in Arizona in order to guide all LIA staff in moving toward success in this strategy.

🗝 LIAs could use technical assistance and training related not only to top-down policy change – affecting policy at the level of the city or county, but also in grassroots policy change, working at the level of an individual site.

🗝 Information should be provided to LIAs about sources of funding for infrastructure improvements that may be targeted at lower-income communities; both small and larger grants may be useful in advancing active living policy goals.

Promotion of Physical Activity Resources

Methods

Promotion of PA resources was evaluated at the *partner site level* using quantitative analysis of the SART using Excel. From the SART, the Evaluation Team collected information on process indicators including sites reached and number of planning meetings with partners.

At the *community coalition* level, evaluation included quantitative and qualitative analysis of WCFI results, using Excel. See the Deep Dive section of this chapter for full methodological and analysis approaches for WCFI.

In addition to the quantitative analysis, qualitative inquiry using text from LIA SARNs was conducted using NVivo v.11.0 software for coding and theme analysis. Findings were considered in terms of LIA strengths, areas of improvement, and challenges to beginning and continuing the promotion of PA resources.

Results

Partner Sites

Site Reach and Meetings with Partner Sites. With the exception of two counties, LIAs who selected this strategy reached five or fewer sites to promote PA resources in their counties in FFY16, and averaged just under three meetings with site partners over the FFY16 year (Table AL-5).

Community Coalitions.

Two coalitions related to promotion of PA resource efforts in two counties were assessed using the WCFI for their level of collaboration success factors. Table AL-6 shows the characteristics of these multi-sector coalitions, including reported number of members in the coalition, and sectors participating.

Table AL-5. Indicators for Promotion of PA Resources, FFY16

COUNTY	No. Sites Reached	% of Sites Reached [a]	No. Planning Meetings with PA Partners
Gila	2	100%	12
Graham	1	100%	3
Maricopa	30	143%	144
Mohave	4	100%	2
Pinal	22	92%	31
Santa Cruz	5	167%	10
Yavapai	5	100%	11
MEAN, ALL COUNTIES	9.9	115%	30.4

[a] Percent of sites reached is relative to intended reach provided by the LIA at the start of FFY16

Table AL-6: WCFI-Assessed Coalition Characteristics in FFY16, by County

COUNTY	No. Coalitions Assessed	No. Sectors Represented [a]	No. Coalition Members	No. Completed WCFIs
Maricopa	1	5	14	11
Pinal	1	4	34	7
ALL COUNTIES	2		48	18

[a] The number of sectors represented in the coalition were identified using sectors identified in the national SNAP-Ed Evaluation Framework:[6] Food Industry, Government, Public Health and Health Care, Education, Community Design, Public Safety, Media, Agriculture, and Commercial Marketing.

The summary results in Table AL-7 show section and total means for the WCFI for coalitions assessed where the primary integration with LIA efforts related to PA resources.

COUNTY	Total (All Sections)	History of Collaboration	Group Seen as Leader	Favorable Climate	Mutual Respect, Understanding, & Trust	Cross Section of Members	Collaboration in Self-Interest	Ability to Compromise	Shared Stake in Process, & Outcome	Multiple Layers of Decision-making	Flexibility	Development of Clear Roles & Responsibilities	Adaptability	Appropriate Pace of Development	Open & Frequent Communication	Informal Relationships & Communications Links	Concrete, Attainable Goals & Objectives	Shared Vision	Unique Purpose	Sufficient Funds, Staff, Materials & Time	Skilled Leadership
Maricopa	**3.8**	4.2	3.9	3.8	4.0	3.3	3.9	4.0	3.8	3.4	3.9	3.5	3.5	3.6	4.0	3.9	3.8	3.8	4.0	3.4	4.0
Pinal	**3.8**	4.1	3.6	4.2	4.1	3.4	4.6	4.1	3.7	3.6	4.1	3.4	3.6	3.0	3.7	3.8	3.7	3.8	4.0	2.9	4.1
ALL COUNTIES	3.8	4.2	3.8	4.0	4.1	3.4	4.3	4.1	3.8	3.5	4.0	3.5	3.6	3.3	3.9	3.9	3.8	3.8	4.0	3.2	4.1

Across the two coalitions represented, the strongest areas related to coalition members' perception that *Collaboration was in Their and Their Organization's Self-Interest* (4.3), and also the *History of Collaboration Present in Their Area* (4.2). As with coalitions related to Active Living Policy, coalition members felt the benefits of collaboration, but unlike other Active Living coalitions, members reported a stronger history of collaboration in their area related to Promoting PA Resources.

Weakest areas were *Sufficient Funds, Staff, Materials and Time* (3.2), *An Appropriate Pace of Development for the Coalition* (3.3) and *An Appropriate Cross-Section of Members* (3.4). As with other Active Living coalition members, those working in Promotion of PA Resources felt a lack of material and temporal resources, especially in rural areas.

"Smaller communities have very few local agencies and businesses. Funding is also a big hurdle. Most of the coalitions have people that belong to every committee in their community."

Although coalition members felt they benefitted from the collaboration and were continuing a history of collaboration in their area, they also struggled with how to move the coalition's work forward at an appropriate pace, and making sure all the right people

were at the table. Therefore, Evaluation Team recommendations based on weaker success factors included:

- 🚶 Exploring creative workarounds for limited resources (including money and time).
- 🚶 Developing a strategic plan for the coalition defining priority goals and the objectives needed to achieve them.
- 🚶 Developing a timeline for achieving the coalition's priority goals.
- 🚶 Assigning work to coalition members that aligns with their areas of expertise and capacity to contribute.
- 🚶 Inviting representatives from diverse segments of the community who may have a stake in what the coalition is trying to accomplish, especially those outside of the active living sector, to participate in the coalition.

Strengths in Promotion of PA Resources

In contrast to larger, more populous counties that were more successful in active living *policy*, more rural counties with strong connections and reach had the greatest success in the promotion of PA resources.

For three LIAs, a first step was *identifying PA resources in their communities and promoting them to the SNAP-Ed audience* through flyers, brochures or, in one county, an app. This enabled LIAs to draw on their strengths of contacting individuals through direct education (DE) opportunities and providing resources, as well as take advantage of their reach throughout the county. In some cases, promotional efforts were disseminated through schools; in others, through food banks or other locations where a SNAP-Ed staff member was a familiar face.

Four LIAs showed a strength in *developing partnerships*. One LIA's staff member took a leadership role in the local PA coalition, while others worked with a trail advisory committee, a group of avid bicyclists, and a group of community members interested in creating a volleyball court for community use.

Finally, two LIAs worked to *support PA opportunities that met community needs.* One LIA met with local partners including the Hispanic Council and Community Action Agency to discuss ways they could all support a small city in its walking program, and the other facilitated the creation of a series of basketball clinics for Native youth.

Areas for Improvement in Promotion of PA Resources

In FFY16, LIAs were still exploring their implementation practices around encouraging PA, and seeking creative ways to promote participation in partnerships with other like-minded organizations. Several LIAs identified the active living focus area in general as their weakness. They suggested possible remedies, including hiring additional staff, developing partnerships, and learning more about their communities (i.e., many of the strengths highlighted above) in order to be able to meet community needs related to PA.

> "…We are continuously communicating within the schools so we have a large list of contacts. For active living, **we need to increase our networking** and build our contact list so we can partner with existing programing and meet our Active Living strategies."

Challenges in Promotion of PA Resources

Lack of Infrastructure Funding. LIAs promoting PA resources described the lack of resources available to support suggested infrastructure changes. In addition to a general lack of funding for infrastructure, budget cuts impacting park and trail maintenance and delays in promised construction projects were also reported.

> "**Lack of infrastructure funding to improve park and trail conditions** continues to be a threat to our progress. This limits us in encouraging trail utilization when local trails are not safe or accessible."

"We are the smallest county in Arizona and have limited resources, many staff wear more than one hat, and **there are few likeminded organizations** and/or entities that we can work with."

Small Communities. While smaller communities made it possible for SNAP-Ed staff to better understand the needs of a greater proportion of the community, the flip side of small communities was that they offered a smaller pool of community members and organizations with which to form partnerships.

County Highlight

Supporting Trails in Gila County. In FFY16, Gila County Department of Health and Emergency Management capitalized on their location and a recent HIA in their county to support the development of Pinal Creek trails as a PA resource. Their team has taken the lead with two of the HIA's recommendations: "continuing to foster stakeholder relationships that can contribute to the implementation of the trail" and "identifying the level of community support for construction of the trail." To implement these recommendations, they drew on their long-standing relationship with the Globe/Miami Parks and Trails team, taking part in ongoing meetings with the trail advisory committee. By September 2016, these two HIA recommendations had been implemented. Together with their subcontractor Pinnacle Prevention, the SNAP-Ed team held a National Trails Day event to build awareness of the Pinal Creek Trail efforts and promote other local trails in the Globe/Miami community, in partnership with the Globe Rotary Club and the Globe Public Library. Fifty-four people attended the early morning event to show their support for local trails and participate in family-friendly activities along the trail.

> "With 56% of Gila County land owned by the U.S. Forest Service, Gila Health Services is uniquely positioned to promote participation in our local outdoor physical activity resources."

PROMOTION OF PA RESOURCES
KEY FINDINGS AND RECOMMENDATIONS

☞ For counties that have not documented PA resources *accessible to* SNAP-eligible individuals, performing such an inventory may help them promote existing resources and/or identify gaps. Accessible includes: the resources exist; they are accessible by foot, car, and/or public transportation; they are free or low-cost; and they are physically appealing and culturally relevant.

☞ The AzNN may wish to encourage LIAs to start small, even with a single site or a small group of individuals enthusiastic about the benefits of active living, in order to move forward with change.

☞ The AzNN may wish to encourage LIAs to focus efforts on enhancing PA opportunities for adults and families together, which addresses current gaps in SNAP-Ed PSE programming and supports findings about the benefits of active family time from the adult DE evaluation (see Direct Education chapter).

Family-Friendly Physical Activity

Methods

Supporting family-friendly PA throughout the community, throughout the year was evaluated with a quantitative analysis of the SART and LIA monthly reports using Excel. The Evaluation Team used the SART to collect data on process indicators, including sites reached and the number of planning meetings with partners. From monthly reports, the Evaluation Team collected short term outcome indicators including number of PA opportunities conducted with youth and adults, the reach of those events, and whether the LIA was involved in sponsoring/hosting the event, when such information was available. Monthly report data were filtered by direct and indirect events reaching $\geq$ 20 people that were primarily focused on PA and did not utilize a curriculum.

Qualitative analysis of SARNs was also conducted using NVivo v.11.0 software for coding and theme analysis. Findings were considered in terms of LIA strengths, areas of improvement, and challenges with respect to initiating and sustaining family-friendly PA programming.

Results

Although many LIAs chose to focus on family–friendly PA, its implementation varied widely across counties (Table AL-8). Many LIAs far exceeded their intended reach – in one case, reaching 66 communities when the two LIAs in the county had only planned to reach two communities. However, the number of meetings with partners in support of family-friendly PA varied from five (reaching two communities) to 63 (reaching four communities), indicating a high level of variation in terms of how many contacts equated to "reaching" a community.

Despite the high number of communities reached, it was unclear how reach was defined, and whether that reach extended to adults. To gain more information, the Evaluation Team examined LIA monthly reports (i.e., the SNAP-Ed Education and Administrative Reporting System). LIAs reported 38 DE events that reached 3,169 individuals, with an average of 83 individuals reached per event (range of 20 – 489). Table AL-9 describes the event characteristics.

Table AL-8. Family Friendly PA Events, FFY16

COUNTY	No. Sites Reached	% of Sites Reached [a]	No. Planning Meetings with PA Partners
Apache	0	0%	0
Cochise	6	100%	13
Coconino	16	320%	10
Graham	1	100%	8
La Paz	2	50%	20
Maricopa	66	3300%	59
Mohave	8	133%	16
Navajo	0	0%	0
Pima	4	100%	63
Pinal	5	125%	18
Santa Cruz	2	100%	5
Yavapai	6	100%	13
Yuma	2	67%	7
MEAN, ALL COUNTIES	9.1	346%	17.8

[a] Percent of sites reached is relative to intended reach provided by the LIA at the start of FFY16

Table AL-9. Family Friendly PA Direct Events, FFY16

Setting	No. Events	No. Reaching Adults
Community Center	3	0
Senior Service Center	2	1
Emergency Food Assistance Site	2	2
Library	1	0
Public Housing	1	1
School	28	1
SNAP Office	1	1
ALL EVENTS	38	6

LIAs also reported 37 indirect education events focused on PA that reached an estimated 17,645 individuals. That number is very high due to one city-wide event in a large urban area; without that outlier, the average number of individuals reached per event was 157, with a range of 20 – 670. Because indirect activities rely on an estimation of total participation without demographic counts, the number of adults reached by these efforts is unknown. However, it is notable that of the 37 reported events, 10 were sponsored by SNAP-Ed LIAs and of those 10, seven were walk-to-school days. This suggests that PA-focused events reported as both direct and indirect education tend to focus more on youth than adults as a target audience. This tendency is discussed further under Challenges below.

Strengths in Family-Friendly PA.

Developing Partnerships. LIAs in nearly every county reported partnerships as a strength. Some LIAs relied on previously-developed partnerships (e.g., with schools,

"A 'Hunger Awareness Walk' would help involve more people in serving the nutritional needs of the disadvantaged, and also provide an opportunity for a community-wide physical activity event. **The planning and coordination was shared among the Food Providers Network membership**, with leadership from our office."

food banks, or parks and recreation sites) that they were able to extend into active living partnerships, while others found new partners, including a city food providers network, a regional crisis center, the local government, and a coalition focused on early childhood education. Two LIAs specifically mentioned involvement in PA events that were organized by and benefitted nutrition-related providers, enhancing collaboration across the food-security community within their counties.

Areas for Improvement in Family-Friendly PA

Differing LIA Interpretations. In FFY16, some confusion remained among LIAs about the focus for family-friendly PA. Many LIAs took a more active role in planning community

> "**We have moved away from our focus on event-based activities in this strategy**; we are now providing technical assistance to communities enabling them to take over and/or create their own events."

events, while at least one was moving in the opposite direction, positioning their LIA as a technical assistance resource. LIAs also struggled with accurately reporting family-friendly PA events: Six LIAs in five counties discussed Coordinated Approach to Child Health (CATCH) trainings as an active living strength, rather than reporting CATCH in the more accurate DE or school health focus area. Other items inaccurately reported as active living were Active Neighborhood School Checklists and Safe Routes to School, which are components of Comprehensive School Physical Activity Programs. This could indicate that LIAs are not accurately conceptualizing their active living work, that the Evaluation Team is not providing clear guidance about how activities should be recorded in semi-annual reports, or both.

Challenges in Family-Friendly PA

Partner-related Concerns. These concerns mostly centered on community partners and their actual or potential lack of follow-through. There was also concern about collaborating with the other LIA in one county, and the potential for a recent lawsuit (unrelated to SNAP-Ed) to inhibit one partner's willingness to host family-friendly PA events.

> "There is a level of interest in doing more to encourage community wide PA **but we have struggled with having the community members step up** and take the leadership role, they are quite content to have our staff direct and lead which is counterproductive to the ultimate goals of PSE efforts."

Reaching Adults/Families for Event Participation. Adult outreach was reported as a consistent challenge for LIAs in the DE realm, and such outreach was challenging for PA events as well. Four LIAs in three counties mentioned reaching out to adults and families as a challenge to active living programming, one for specific reasons having to do with what kind of communications it was permissible to send home to parents, but others just expressing the difficulty of reaching busy adults and families.

County Highlight

Event Success in La Paz County. La Paz County is another
county new to offering SNAP-Ed services in FFY16. The
recently hired UA Cooperative Extension, La Paz (La Paz
Extension) staff person put together a collaboration of
relevant agencies, including First Things First, Colorado River
Regional Crisis Services, Colorado River Regional Border
Health, Players Youth Center, and the Colorado River Indian
Tribes (CRIT) Food Distribution Center.

Working with these partners, the staff person created a recurring event to be held in
different regions across La Paz County so that a diversity of communities would have an
opportunity to "Get Out and Play." The first event took place in Parker in August, 2016,
and involved approximately 50 youth and adults, including the La Paz County Attorney.
Participants gathered at a local park to play active games using CATCH resources, and
partner organizations set up tables to provide information and interactive activities,
including a bike blender. Healthy snacks were provided by two partners, and one
provided an incentive item of small Frisbees. The event was publicized via a flyer
distributed throughout the Parker community and by media coverage in the local paper
prior to the event.

> "We created a community-wide family friendly "Get Out & Play Day." This event is
> an opportunity for community members to access a free event that encourages
> physical activity that is accessible to all members of the community. We were able
> to help inspire children and families to put down the electronics, get up and get
> outside together."

FAMILY-FRIENDLY PA
KEY FINDINGS AND RECOMMENDATIONS

🔑 The AzNN may wish to encourage LIAs to reach out to partners who may not have active living as a primary focus, especially in smaller counties. These partners could be organizations that serve the SNAP-Ed population in other ways, such as through provision of food or a focus on early education opportunities who may be willing to take part in active-living focused events.

🔑 The AzNN can provide guidance and technical assistance to LIAs on how to reach out to adults within communities to interest them in participating in PA events alongside their children.

🔑 The AzNN should consider clarifying for LIAs specific types of activities that fall under active living, and explain the state-level goals for family-friendly PA.

Point of Decision Prompts for Use of Stairs

Methods

One LIA selected the strategy to encourage use of stairs with Point of Decision (POD) prompts.

POD prompts for use of stairs was evaluated quantitatively via analysis of the SART using Excel. The Evaluation Team collected information on *process indicators*, including sites reached and number of meetings with site leadership, and *short term outcome indicators,* including number of sites with POD prompts for use of stairs by the end of FFY16.

Results

The participating LIA was able to reach all three intended sites and negotiate the installation of POD prompts for use of stairs.

Table AL-10. POD Prompts for Use of Stairs, FFY16

COUNTY	Sites Reached	No. Meetings with Site Leadership	No. Sites with POD Prompts for Stairs
Yavapai	3	1	3

Deep Dive: SNAP-Ed Coalitions

This deep dive explores the role of community coalitions in supporting SNAP-Ed PSE changes in food systems and active living, and expands upon SNAP-Ed's FFY16 coalition evaluation to consider next steps for synergizing multi-sector efforts in Arizona.

Background

Measuring progress and outcomes for obesity prevention PSE efforts is a relatively new endeavor for SNAP-Ed. LIAs strive to deliver comprehensive public health approaches (PHAs), yet they have not historically had a systematic way to identify, track, or report their PSE accomplishments. Fortunately, the USDA recently released a national SNAP-Ed Evaluation Framework,[6] which elucidates measurement indicators to track progress in achieving PSE goals at multiple levels of the Social Ecological Model (SEM).

SNAP-Ed work in food systems and active living in particular addresses complex, interconnected community systems and sectors, including government, agriculture, community design, education, health care, and media. These efforts necessarily rely upon successful collaborations with partners and coalitions at the local, county, and state levels, especially when representatives from diverse sectors are at the table.[7]
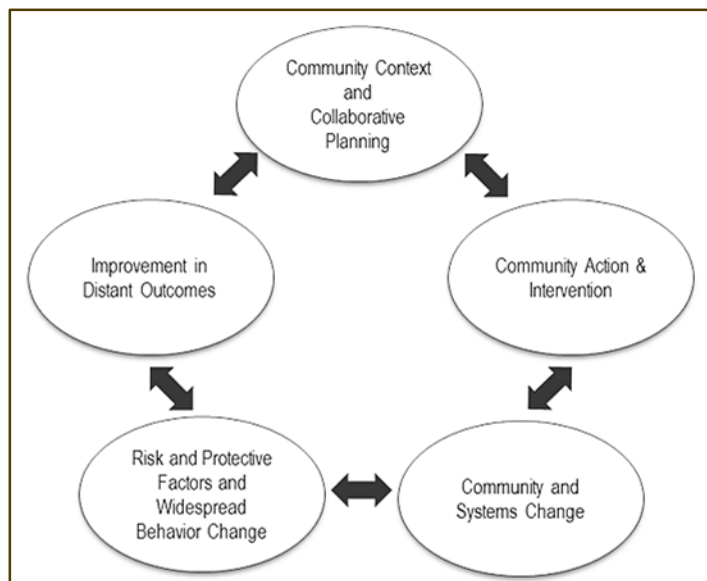
Figure AL-1. Community Health, a Cyclical Process[8]

The Community Health and Development Theory of Change[8] (Figure AL-1) from the Work Group for Community Health and Development at the University of Kansas depicts the iterative and cyclical nature of such efforts.

Collaborative planning, action, change, and ultimately, the improvement of population level SNAP-Ed outcomes, all rely on the capacity of collaborative efforts to plan, make, and sustain changes. In

other words, progress and ultimately, attainment of shared multi-sector PSE goals in a community is predicated on an *effective* coalition, not just the presence of a coalition.

The national Evaluation Framework compels LIAs and state agencies to consider coalition capacity, including multi-sector representation and active engagement, as vital short term indicators for predicting successful PSE changes at the community level. The Framework includes a measurement indicator to track progress in building this capacity: *Multi-Sector Partnerships and Planning* (Figure AL-2).

Figure AL-2. Multi-Sector Partnership Indicator in the National SNAP-Ed Framework[6]

In evaluating multi-sector partnerships, the capacity and vitality of a coalition becomes paramount to understanding the coalition's likelihood of succeeding in changing PSEs at the community level. For example, is the coalition in agreement about what goals they are working towards? Are there enough resources within the coalition to move plans into action? Is the community in which the coalition works at a propitious moment for making the changes proposed?

"The work at the higher policy level regarding food hubs, procurement, and distribution is challenging, takes time and the collaboration of many community partners and agencies. There are many passionate people in our community wanting to see an increase in healthful, affordable, local food options but there are systemic and political challenges that still need to be addressed."

Shifting an evaluative lens to the coalition itself as the unit of measurement allows for the opportunity to measure short term progress toward larger, more complex community-level PSE goals.

Methods

The Evaluation Team selected the WCFI to assess 10 eligible coalitions from six counties in which LIAs participate (Figure AL-3).

The WCFI is a research-tested 40 question assessment tool that allows members of a coalition to anonymously evaluate the strengths and areas for improvement within their collaboration using web- or paper-based questionnaires. The WCFI measures 20 collaboration success factors identified as foundational for goal achievement,[9] such as *History of Collaboration or Cooperation in the Community; Appropriate Cross Section of Members*; and *Concrete, Attainable Goals and Objectives*. An average score ranging from one to five was calculated from participants' responses for each of the 20 factors. Based on the scores, each factor was categorized as strong (4.0-5.0), moderate (3.0-3.9), or weak (1.0-2.9).
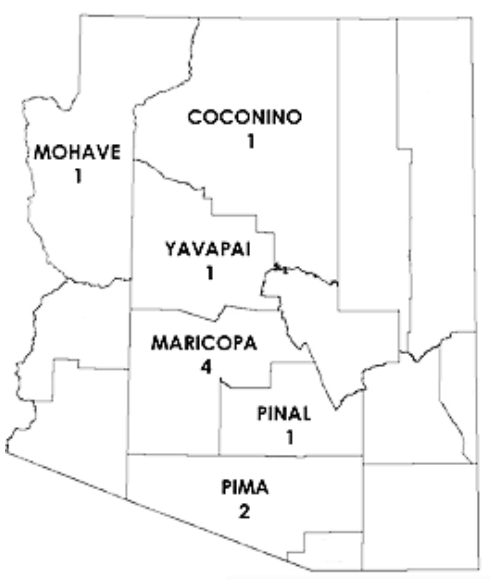
Figure AL-3. Coalitions Assessed using the WCFI, by County

Coalitions that met the following inclusion criteria were assessed: 1) the coalition's mission focused on PSE goals related to the relevant SNAP-Ed strategy, 2) representation from at least five organizations and sectors[6] in the community, including SNAP-Ed, and 2) a coalition age of at least six months.

Based on each coalition's scores, the Evaluation Team returned user-friendly recommendations to the submitting LIA in order to encourage capacity-building within the coalition.

Results

The Evaluation Team found the WCFI assessments revealed important insights into the characteristics of the coalitions that LIAs participate in to achieve their SNAP-Ed PSE goals. These characteristics are summarized in Table AL-11 below:

Table AL-11. WCFI-Assessed Coalition Characteristics in FFY16, by County

COUNTY	No. Coalitions Assessed	No. Sectors Represented[a]	No. Members	No. Completed WCFIs
Coconino	1	4	10	10
Maricopa	4	7	74	46
Mohave	1	6	32	9
Pinal	1	4	34	7
Pima	2	6	32	17
Yavapai	1	7	40	17
ALL COUNTIES	**10**		**222**	**106**

[a] The number of sectors represented in the coalition were identified using sectors identified in the national SNAP-Ed Evaluation Framework:[6] Food Industry, Government, Public Health and Health Care, Education, Community Design, Public Safety, Media, Agriculture, and Commercial Marketing.

The WCFI results found that across 10 SNAP-Ed participating coalitions in six counties, the three strongest success factors were: *Members see collaboration as in their self-interest (4.3), Favorable political and social climate (4.1),* and *Unique purpose (4.1).* See Table AL-12 for full results.

The findings suggest that coalition members are engaged around a common purpose to address food systems and active living PSE changes, which also align with their own organizations' goals. Furthermore, members believe the climate is right in their communities to achieve their coalitions' objectives, and that the collaborations are uniquely positioned to accomplish those changes.

Yet, these coalitions struggle with adequate resources to accomplish those goals, and both the diversity of membership and the development of clear roles and coalition guidelines could be strengthened. The lowest success factors included: *Sufficient funds,*

Table AL-12. WCFI Mean Scores in FFY16, by County

COUNTY	Total (All Sections)	History of Collaboration	Group Seen as Leader	Favorable Climate	Mutual Respect, Understanding, & Trust	Cross Section of Members	Collaboration in Self-interest	Ability to Compromise	Shared Stake in Process, & Outcome	Multiple Layers of Decision-making	Flexibility	Development of Clear Roles & Responsibilities	Adaptability	Appropriate Pace of Development	Open & Frequent Communication	Informal Relationships & Communications Links	Concrete, Attainable Goals & Objectives	Shared Vision	Unique Purpose	Sufficient Funds, Staff, Materials, & Time	Skilled Leadership
Coconino	3.9	3.5	3.7	4.4	3.9	3.5	4.1	3.8	3.9	3.5	4.1	3.8	3.9	4.1	4.2	4.1	4.3	4.2	4.3	3.1	4.2
Maricopa 1	3.5	3.2	3.8	4.4	3.5	3.2	4.2	3.0	4.0	3.1	3.8	2.8	3.5	2.9	3.2	3.9	3.3	3.9	4.3	2.2	3.8
Maricopa 2	3.9	3.6	3.5	4.2	4.0	3.0	4.4	3.8	4.0	3.6	3.9	4.0	3.6	3.6	4.0	4.3	4.1	4.1	4.4	2.7	4.2
Maricopa 3	3.5	3.3	3.6	4.1	3.9	2.9	4.3	3.2	3.2	3.2	4.0	2.6	3.8	3.1	3.7	4.0	3.3	3.6	4.0	2.3	4.2
Maricopa 4	3.8	4.2	3.9	3.8	4.0	3.3	3.9	4.0	3.8	3.4	3.9	3.5	3.5	3.6	4.0	3.9	3.8	3.8	4.0	3.4	4.0
Mohave	3.9	3.2	3.9	4.2	3.9	3.8	3.8	3.7	4.4	3.6	4.0	3.8	3.8	3.7	4.1	4.3	4.2	4.2	4.3	3.1	4.0
Pima 1	3.7	3.9	3.5	4.1	4.3	3.1	4.4	3.8	3.6	3.4	4.0	2.8	3.8	3.6	4.2	4.0	3.4	3.7	3.8	2.5	4.4
Pima 2	3.8	4.0	3.9	3.9	4.1	3.3	4.7	4.2	3.0	3.9	4.4	3.7	3.6	3.7	4.1	4.0	3.7	3.9	4.1	2.7	3.8
Pinal	3.8	4.1	3.6	4.2	4.1	3.4	4.6	4.1	3.7	3.6	4.1	3.4	3.6	3.0	3.7	3.8	3.7	3.8	4.0	2.9	4.1
Yavapai	3.9	3.7	3.6	4.0	4.0	3.7	4.4	3.8	3.9	3.8	4.0	3.5	3.9	3.9	4.0	3.8	3.7	3.9	4.1	3.2	4.3
ALL COUNTIES	3.8	3.7	3.7	4.1	4.0	3.3	4.3	3.7	3.8	3.5	4.0	3.4	3.7	3.5	3.9	4.0	3.8	3.9	4.1	2.8	4.1

Note: Blue indicates a strong score (4.0-5.0), teal a moderate score (3.0-3.9), and orange a weak score (1.0-2.9).

staff, materials, and time (2.8), *Appropriate cross section of members* (3.3) and *Development of clear roles and policy guidelines* (3.4).

Having sufficient resources to achieve the coalitions' goals is important. While community stakeholders appear to recognize the need to come together as a collaborative, a lack of backbone infrastructure, funding, and/or *dedicated time to advance the goals of the coalition itself* is reported as a serious barrier to success.

"The success of this coalition will require significant staff support and program funding. [The coalition] has been actively fundraising and submitting over one million dollars in grants. The group hopes to know by the end of October which funds have been awarded."

Interpretation and Implications

While SNAP-Ed has prioritized the work of coalitions to achieve more than a single LIA might be able to accomplish on their own, the program's state- and federal-level leaders may want to consider how LIAs could further ignite progress in the multi-sector coalitions through SNAP-Ed staffing or other budgetary support. Indeed, a 2012 study of obesity prevention partnerships revealed that funding had a significant positive influence on the ability of funded agencies to collaborate with partners, and enhanced collaboration led to the leveraging of more resources, more policy changes, and the identification of more intervention opportunities.[10]

The Evaluation Team also noted that the number who completed a WCFI was often a small fraction of the total number of coalition members. Open-ended comments provided in the WCFI reflected a frustration by some that only a smaller subset of stakeholders were truly engaged in the work of their coalitions. This suggests that some coalitions may suffer from a lack of committed membership, with the number of members not necessarily reflecting their active participation to advance shared goals.

Furthermore, it is possible that the coalition members who completed a WCFI were likely to be more active stakeholders in general, since questionnaires were distributed during coalition meetings and via email distribution lists. A limitation of the results is the

possibility that less-invested coalition members were underrepresented in the sample. These less-engaged members may have had different perspectives on the coalition, which could have impacted scores. Conversely, members who sustain active participation may have more positive perspectives, which may be overrepresented in the results.

While work in coalitions is crucial to achieving community-level PSE goals, the likelihood of collective success depends in large part on the strengths and weaknesses of the collaborative venture, including the environment, membership characteristics, process and structure, communication, purpose, and resources. The WCFI will be implemented again in FFY18 to explore potential changes in success factor scores over time. Coalitions that report stronger characteristics over time may have an increased likelihood of achieving the SNAP-Ed PSE goals that they set forth.

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School Health

Background

Local School Wellness Policies (LWPs) can considerably influence students' energy balance-related health behaviors (Figure SH-1).[1,2] Since 2006, LWPs have been required for schools participating in federally funded child nutrition programs, and the Healthy, Hunger-Free Kids Act of 2010 enhanced these requirements. By school year 2013-14, 95% of U.S. school districts had adopted LWPs, however the quality of policies varied widely. In July 2016, the USDA responded with an LWP final rule that strengthened content requirements and called for Local Education Agencies (LEAs) to establish sound LWP leadership, conduct triennial assessments, update policies, and keep records.

Even before the new final rule, the FFY16 AzNN SNAP-Ed Evaluation Framework went beyond measuring the mere *existence* of LWPs to assessing the *quality* of written LWPs among Arizona's SNAP-Ed-qualified districts in order to support the development, implementation, and evaluation of LWPs in collaboration with LEAs (AzNN Strategy 10).

Figure SH-1. The Relationship of Local Wellness Policies to Students' Nutrition and Physical Activity

Methods

This FFY16 assessment serves as (1) a formative evaluation of needs and readiness related to LWPs to provide actionable information to the AzNN, Local Implementing Agencies (LIAs), and partner LEAs, and (2) the baseline for an FFY18 outcomes evaluation. In cases where an LIA is working with LWPs as well as promoting access to nutrition information and/or Comprehensive School Physical Activity Programming (CSPAP), the LWP assessment also extends to *written policies* related to that work.

LWP needs and readiness for Arizona's SNAP-Ed qualifying schools and districts were assessed using mixed methods.

Quantitative Analysis. The WellSAT 2.0 tool was used to collect quantitative data related to the quality of written LWPs. LIAs working in school health submitted LWPs from districts (and, in some cases schools) to the Evaluation Team. A minimum of two trained staff from the Evaluation Team scored each LWP independently using the WellSAT 2.0 online assessment. Scorers then met to resolve scoring discrepancies, finalize scores, and generate user-friendly recommendations based upon WellSAT 2.0 findings. Scorecards, recommendations and the Alliance for a Healthier Generation's model wellness policy were provided back to LIAs to share with all districts assessed. At the close of the project, section and total scores for all LWPs were data entered for further analysis: means were calculated for total as well as section scores. These were compared against national averages from a published Bridging the Gap report[3] that used a similar scoring system.

There were limitations to the quantitative analysis. LIAs reported occasional difficulty in obtaining accurate LWPs from districts. Some LWPs originally submitted were found to be outdated and re-scored. Moreover, the Evaluation Team defined LWPs as the policy document *and any supplemental regulations or supporting documents*. There was variation in the number of supporting documents, in particular regulations, submitted by LIAs for scoring. This may indicate that regulations do not exist, but it may also indicate that the document(s) were not located/submitted.

Qualitative Analysis. Qualitative data related to LWPs were collected from Semi-Annual Report Narratives (SARNs) and during two formal debriefing sessions. The

NVivo v10.0 software was used for coding and theme analysis. Needs and opportunities related to school health policies, systems and environments (PSEs) were coded *a priori* to align with WellSAT2.0 categories, with new nodes added for themes that emerged during coding. Grounded (emergent) codes were used for barriers. These results were compared against the quantitative patterns that arose from the WellSAT 2.0 analysis.

Results

Quantitative Results. Seven LIAs collected 77 LWPs across 13 of Arizona's 15 counties (Figure SH-2), including 73 district-level policies and four policies for individual schools. Consequently, LWPs were assessed for approximately one third of all Arizona's school districts.

Mean WellSAT 2.0 scores for comprehensiveness and strength are reported below by county in Tables SH-1 and SH-2, respectively. Comprehensive scores address whether an LWP *addresses* an item, while strength scores address *how well* an LWP addresses an item. Scores range from 0-100, with 100 representing the optimum score.

Across Arizona, the Nutrition Education section scored consistently higher than all other sections. Physical Education and Physical Activity (PEPA) scored relatively low for comprehensiveness across all counties, followed by Wellness Promotion and Marketing. Strength scores for both PEPA and Nutrition Standards for Competitive Foods and Beverages were low in most

Figure SH-2. Number of Local Wellness Policies Scored by County in Arizona, FFY16 (N=77)
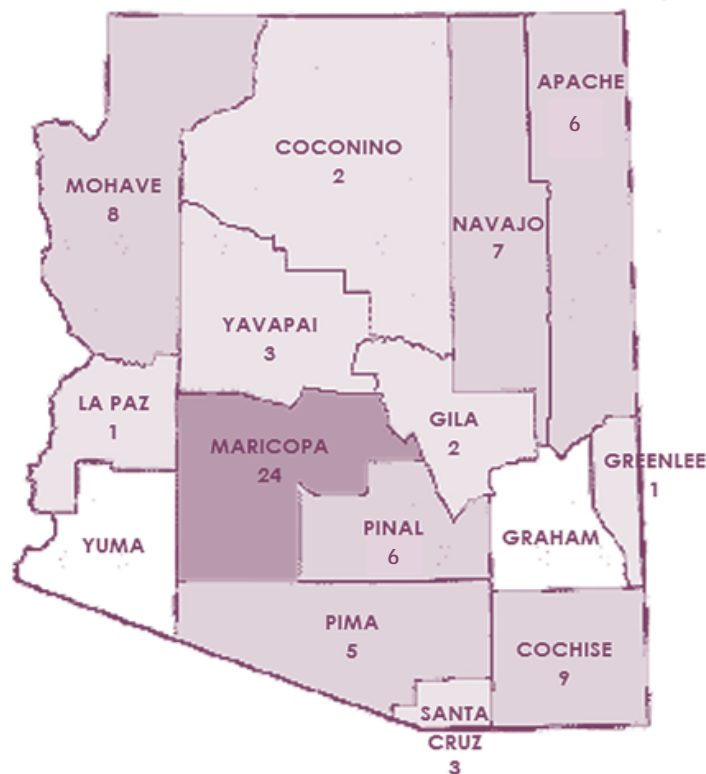
counties. It is important to note that districts within the same county were frequently found to rely upon similar LWP templates. *Roughly half of all LWPs submitted used a version of the Arizona School Boards Association template*, with and without nutrition and physical activity regulations, while only three used the Alliance for a Healthier Generation's model wellness policy. The former scored much lower than the latter.

Table SH-1. Mean WellSAT 2.0 Scores for Comprehensiveness[a] of Local Wellness Policies (LWPs) in 13 Arizona Counties, N=77

County	Total (All Sections)	Nutrition Education	Standards for USDA Child Nutrition Programs & School Meals	Nutrition Standards for Competitive and Other Foods & Beverages	Physical Education & Physical Activity	Wellness Promotion & Marketing	Implementation, Evaluation & Communication
Apache	51	91	38	40	31	40	64
Cochise	61	98	48	63	40	44	72
Coconino	64	100	61	62	57	40	64
Gila	54	100	14	64	45	27	73
Greenlee	54	100	43	9	40	33	100
La Paz	29	86	14	0	10	0	64
Maricopa	54	95	35	58	38	31	68
Mohave	53	96	41	43	38	35	65
Navajo	42	88	23	27	32	22	62
Pima	54	97	37	47	39	39	65
Pinal	68	83	62	80	48	57	79
Santa Cruz	72	100	57	82	63	56	76
Yavapai	49	95	36	36	34	18	65
ALL COUNTIES	55	94	40	53	39	35	69

[a] Comprehensive scores address whether an LWP addresses an item and range from 0 (weakest) to 100 (strongest).

Table SH-2. Mean WellSAT 2.0 Scores for Strength[a] of Local Wellness Policies (LWPs) in 13 Arizona Counties, N=77

County	Total (All Sections)	Nutrition Education	Standards for USDA Child Nutrition Programs & School Meals	Nutrition Standards for Competitive and Other Foods & Beverages	Physical Education & Physical Activity	Wellness Promotion & Marketing	Implementation, Evaluation & Communication
Apache	26	55	24	8	9	24	36
Cochise	34	73	29	18	18	29	37
Coconino	30	59	32	23	16	24	27
Gila	28	100	14	0	5	13	32
Greenlee	21	14	14	9	10	33	45
La Paz	11	29	7	0	0	0	27
Maricopa	26	63	21	15	11	16	32
Mohave	22	38	22	6	11	20	35
Navajo	20	43	11	8	9	16	31
Pima	29	70	24	9	14	23	34
Pinal	42	52	47	28	33	38	52
Santa Cruz	44	100	38	28	31	26	39
Yavapai	24	60	19	9	0	21	38
ALL COUNTIES	28	59	24	14	14	20	36

[a] Strength scores address how well an LWP addresses an item and range from 0 (weakest) to 100 (strongest).

Figure SH-3 shows mean comprehensiveness and strength scores for all Arizona LWPs and provides a comparison of state scores against national averages. It should be noted that national averages were not available for the 2015-16 school year, so the comparison was made using the most recently available data from 2013-14.[3] *Because national scores have gradually increased since 2006-7, it is likely that national scores for 2015-16 would be slightly higher than those shown in Figure SH-3.*

Figure SH-3. A Comparison of Arizona Mean Local Wellness Policy Scores (N=77)[a] with National Averages (N=798)[b], by Section[c]

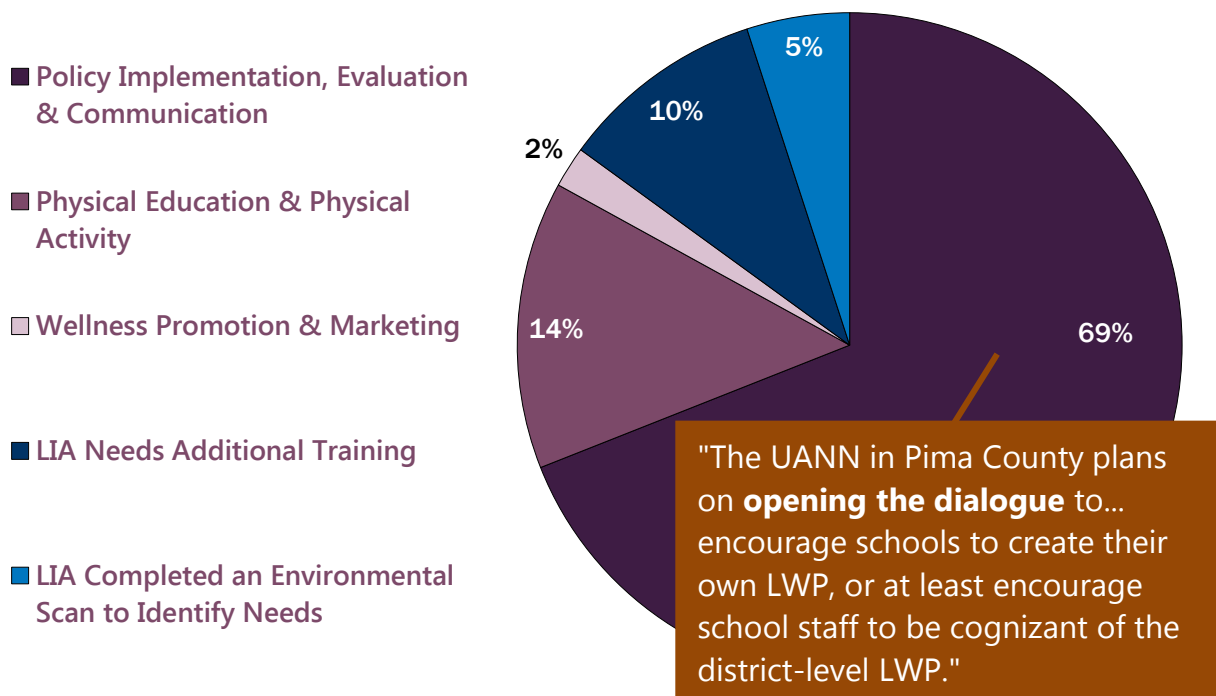Legend: ■ Comprehensiveness - AZ ■ Strength - AZ □ Comprehensiveness - US □ Strength - US
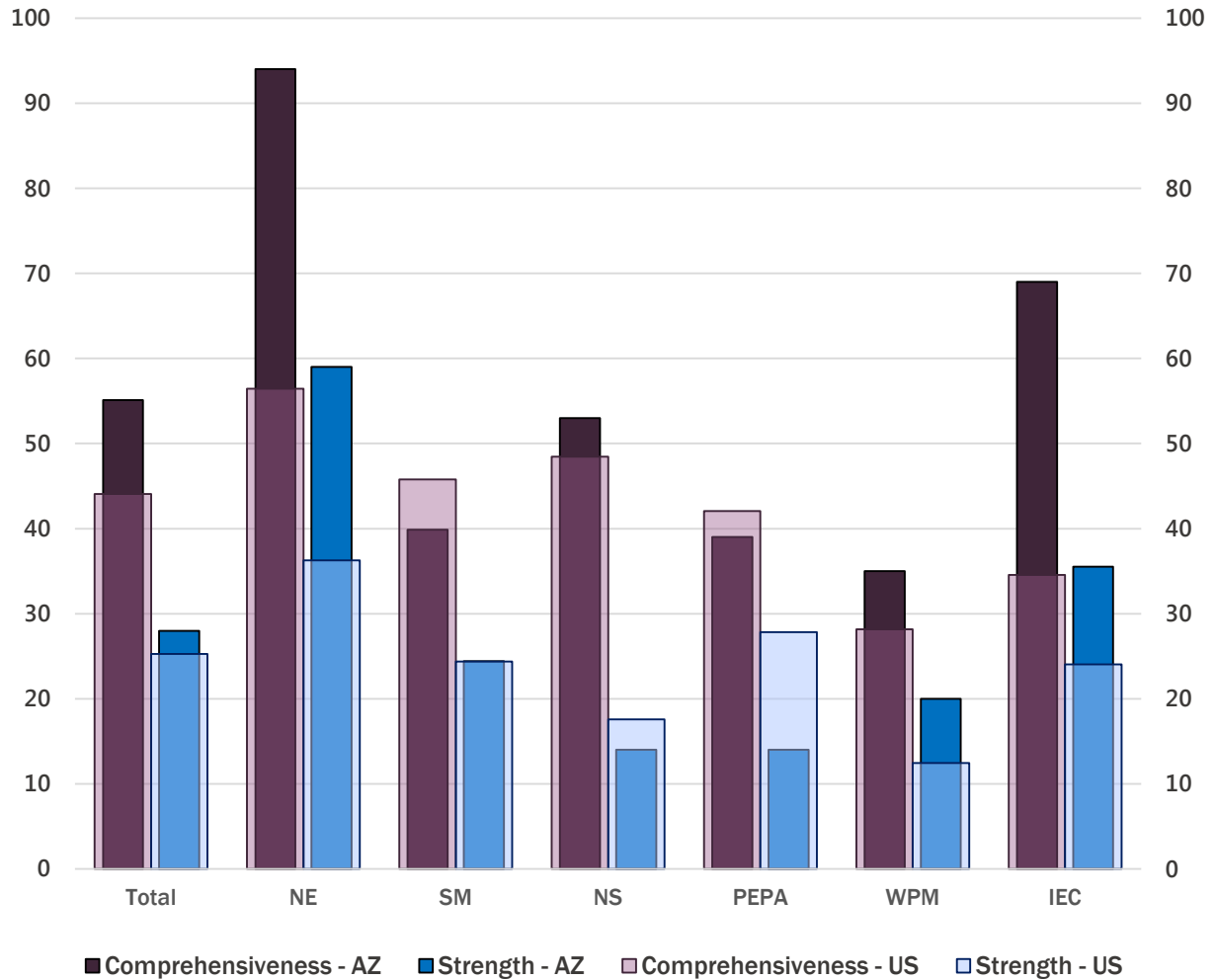
[a] Arizona means were calculated for LWPs collected during the *2015-16* school year. [b] National means were taken from the *2013-14* data provided in: Piekarz E, Schermbeck R, Young SK, et al. *School District Wellness Policies: Evaluating Progress and Potential for Improving Children's Health Eight Years after the Federal Mandate. School Years 2006-07 through 2013-14.* Volume 4. Chicago, IL: Bridging the Gap Program and the National Wellness Policy Study, Institute for Health Research and Policy, University of Illinois at Chicago, 2016. This data reported two distinct means for Physical Education and Physical Activity; two distinct means for Wellness Promotion and Marketing; and three distinct means for Implementation, Evaluation, and Communication. Each set of means were combined here for purposes of visual comparison, only. [c] Section abbreviations are as follows: NE, Nutrition Education; SM, Standards for USDA Child Nutrition Programs & School Meals; NS, Nutrition Standards for Competitive and Other Foods & Beverages; PEPA, Physical Education & Physical Activity; WPM, Wellness Promotion and Marketing; IEC, Implementation, Evaluation & Communication.

Qualitative Results. Figure SH-4 shows the percent of references that LIAs made to *needs* related to each WellSAT2.0 category and any emergent themes. The majority of needs were related to LWP implementation, evaluation, and communication (69% of references), not surprising given the FY16 focus on LWP assessment. No LIAs referenced needs for nutrition education or nutrition standards for school meals or competitive foods, however they did note needs related to PEPA programming at schools (14% of references). Two additional themes that emerged during coding were for more LIA training (10% of references) and the completion of environmental scans conducted internally by LIAs to identify needs (5% of references).

Figure SH-4. References to School Health Needs by SNAP-Ed Local Implementing Agencies (LIAs), N=42

- ■ Policy Implementation, Evaluation & Communication
- ■ Physical Education & Physical Activity
- ☐ Wellness Promotion & Marketing
- ■ LIA Needs Additional Training
- ■ LIA Completed an Environmental Scan to Identify Needs

"The UANN in Pima County plans on **opening the dialogue** to… encourage schools to create their own LWP, or at least encourage school staff to be cognizant of the district-level LWP."
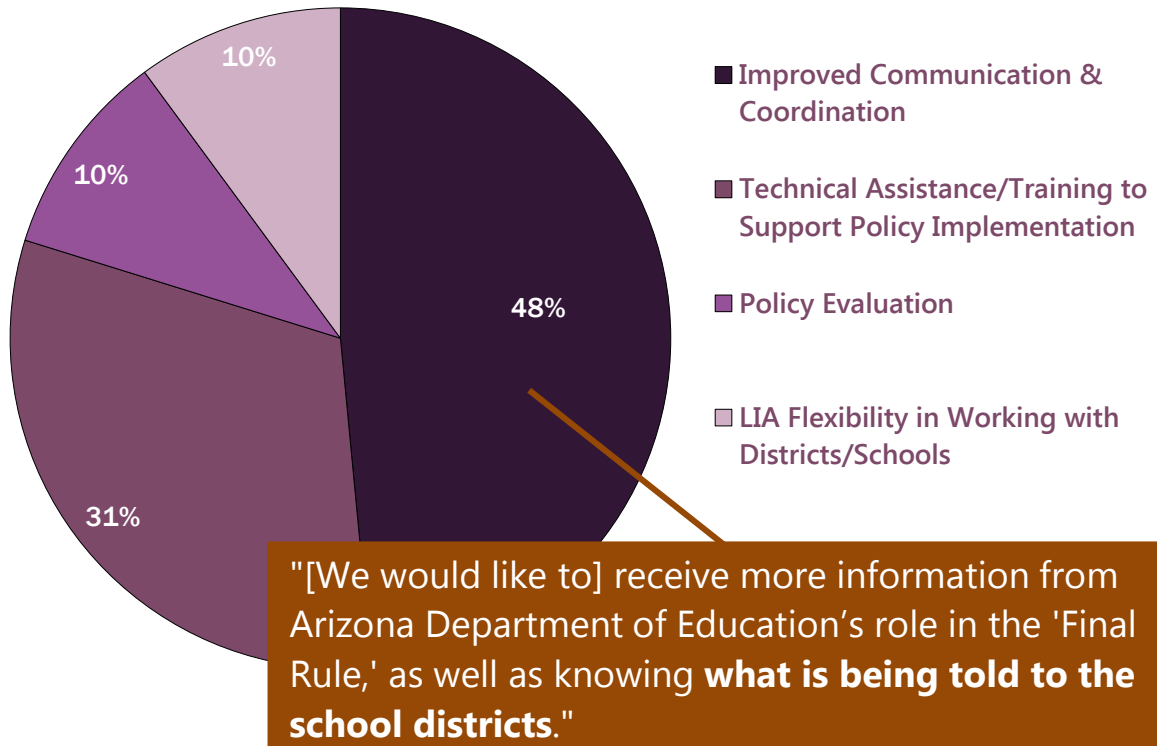
Note: WellSAT 2.0 themes established a priori are shown in purple; emergent themes are shown in blue.

Sub-themes also emerged within the broader LWP implementation, evaluation, and communication node. These are illustrated in Figure SH-5.

Figure SH-5. References to Policy Implementation, Evaluation, and Communication Needs by Local Implementing Agencies (LIAs), N=29

- Improved Communication & Coordination
- Technical Assistance/Training to Support Policy Implementation
- Policy Evaluation
- LIA Flexibility in Working with Districts/Schools

48%

31%

10%

10%

"[We would like to] receive more information from Arizona Department of Education's role in the 'Final Rule,' as well as knowing **what is being told to the school districts**."
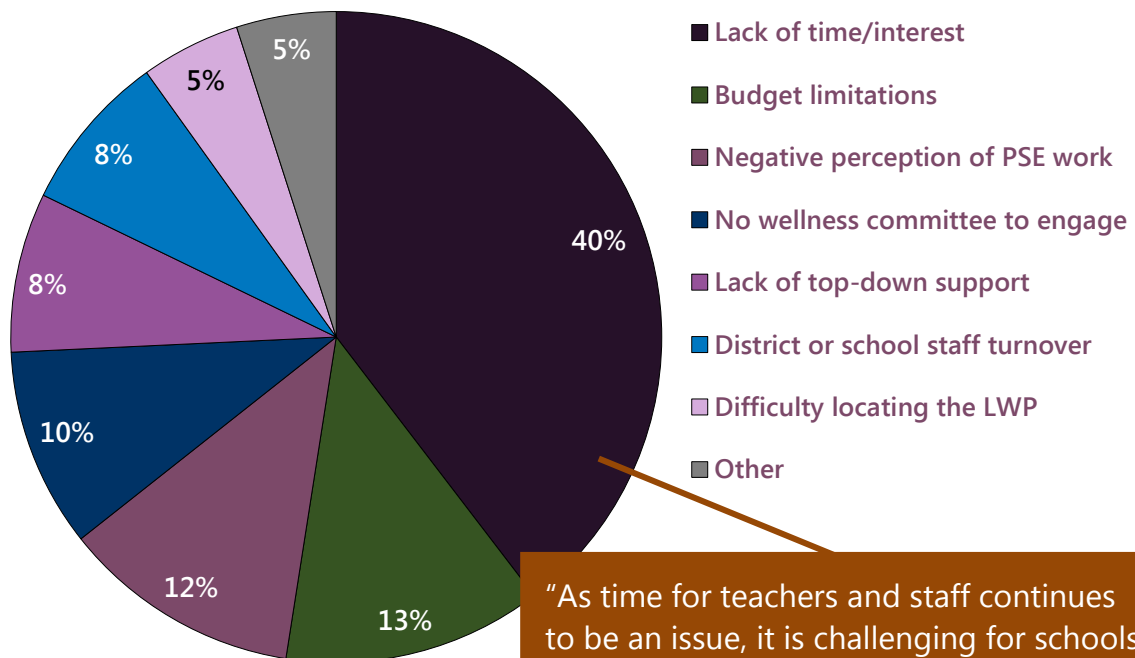
School and district readiness to collaborate with SNAP-Ed agencies was examined in terms of both *barriers and opportunities*. Qualitative data included 93 references to barriers that inhibited collaboration between LIAs and LEAs or schools. The most common obstacle, referenced in 40% of barriers, was a lack of time or interest by districts/schools, usually because of competing demands (Figure SH-6). A lack of funding was also seen as a barrier to promoting school health PSEs (13% of barriers), and LIAs felt inhibited by district or school staff turnover as well as a dearth of top-down support from state and district agencies. The issue of higher-level support is particularly salient for Comprehensive School Physical Activity Programming (CSPAP) in Arizona, where state regulations for PEPA in schools are weak or non-existent according to the 2016 Shape of the Nation State Profile for Arizona.[4] In terms of LWP-specific work, LIAs

felt they were stymied by the absence of wellness committees with which to engage (10% of barriers) and an inability of districts to accurately locate LWPs (5% of barriers). This underscores the importance of having wellness committee leadership for proper LWP development, review, and implementation. Indeed, the new final rule has recognized this need and calls for stronger leadership through active and inclusive committees.

Despite barriers, LIAs have been able to identify existing and emerging opportunities for SNAP-Ed services to schools. Figure SH-7 shows the results of a qualitative analysis of the 238 LIA references to new opportunities to work with schools or districts. Most opportunities (53%) were related to LWP implementation, evaluation, and communication, which is a promising find given the FY16 focus on LWP assessment.

Figure SH-6. Reported Barriers to Collaboration of Local Implementing Agencies (LIAs) with Schools or Districts (N=93)

Legend:
- Lack of time/interest
- Budget limitations
- Negative perception of PSE work
- No wellness committee to engage
- Lack of top-down support
- District or school staff turnover
- Difficulty locating the LWP
- Other

"As time for teachers and staff continues to be an issue, it is challenging for schools to focus on school health holistically."

Encouragingly, LIAs also described opportunities for PEPA programming (18% of references) despite the many perceived barriers and low policy scores in this area.

Figure SH-7. Reported Opportunities for SNAP-Ed Local Implementing Agencies to Support School Health Programming, by Category (N=238)

Legend:
- Implementation, evaluation, communication
- Physical education & physical activity
- Nutrition education
- School meals
- Competitive foods & beverages
- Wellness promotion & marketing
- Other

Pie chart values: 53.00%, 18.00%, 11.00%, 5.00%, 2.00%, 2.00%, 9.00%

"Based on the WellSAT2.0 evaluation results and... recommendations acquired this period, we will work with the district to help them strengthen the LWP language."

In terms of actual opportunities *within* LWP implementation, evaluation, and communication, further coding of the 125 references to these revealed most to have resulted from the WellSAT 2.0 assessment process: 33% of all policy opportunities were related to using findings from the WellSAT 2.0 scorecards, and an additional 17% related to plans for future LWP development or revision. Moreover, LIAs appear to be addressing the need for enhanced communication and collaboration depicted in Figure SH-5: 30% of policy opportunities described those emerging from improved communication and collaboration with wellness committees, and another 6% explicitly addressed new opportunities for communicating with and/or engaging parents, school staff, and the public in the LWP process.

"The [district] approved Local Wellness Policy Plan was disseminated at five Open Houses to **inform parents of the new changes**."

Summary of Findings. When results from the qualitative analysis are considered alongside the state and national WellSAT 2.0 scores, these findings surface for Arizona LWPs in each focus area:

STRONGER

Nutrition Education
- Strong relative to national scores
- Strong relative to other sections
- LIAs *do not* report a need for improvement
- LIAs identify opportunities to provide support

LWP Implementation, Evaluation, & Communication
- Strong relative to national scores
- Somewhat strong relative to other sections
- LIAs *are aware* of need for improvement
- LIAs identify many opportunities to provide support

Comprehensive School Physical Activity Programming (CSPAP), or PEPA
- Weak relative to national scores
- Weak relative to other sections
- LIAs *are aware* of need for improvement
- LIAs identify many opportunities to provide support

Wellness Promotion and Marketing
- Slightly better than national averages
- Weak relative to other sections
- LIAs *infrequently* report a need for improvement
- LIAs report very few opportunities to provide support

Standards for USDA Child Nutrition Programs & School Meals
- Somewhat weak relative to national scores
- Somewhat weak relative to other sections
- LIAs *do not* report a need for improvement
- LIAs report few opportunities to provide support

Competitive and Other Foods & Beverages
- On par with national averages
- Weak relative to other sections (low strength)
- LIAs *do not* report a need for improvement
- LIAs report very few opportunities to provide support

WEAKER

State-level implications of these section strengths and weaknesses are related to interagency communication, LIA trainings on targeted topics, and the development of materials to support LIA efforts:

LWP Implementation, Evaluation, & Communication. The FFY16 SNAP-Ed evaluation focus on LWP assessment appeared to drive school health programming and augment LIA awareness of needs, barriers and opportunities related to LWP implementation, evaluation and communication. Many of the barriers reported by LIAs (competing demands, lack of top-down support, etc.) have the potential to be mediated through enhanced interagency communication and collaboration. A national study of school leaders and wellness advocates[5] found a similar need and listed *"cooperation and collaboration with state agencies, such as the departments of education, agriculture, and health"* among the six factors that contributed to successful LWP implementation. For the AzNN, LIAs have expressly requested enhanced collaboration with the Arizona Department of Education (ADE) on LWP implementation and evaluation. LIAs are keenly interested in knowing:

1. What LWP mandates and/or recommendations are the ADE communicating to LEAs?
2. How, if at all, is the AzNN collaborating with the ADE on the new final rule?

LIAs are also seeking to improve the marketing of SNAP-Ed services related to LWPs. To the extent feasible, we recommend that AzNN develop and/or disseminate materials specific to how SNAP-Ed agencies can help districts with LWPs, especially given that the final rule may pique district interest in such support during FFY17. Other helpful LWP materials that the AzNN may wish to consider developing and/or disseminating are those targeting parents and school-level administrators.

CSPAP. The AzNN has already prioritized PEPA by developing a dedicated strategy 12 for CSPAP. LWPs are currently weak in this area, and though LIAs are acutely aware of the need for programming, they would benefit from:

1. Clear AzNN communication regarding how PEPA efforts are coordinated with the ADE. What CSPAP components does the AzNN encourage LIAs to pursue, and what components does the AzNN ask that they avoid due to this coordination of efforts?

2. FFY17 training in CSPAP that covers its components and how LIAs can support each.

School Meals. While most Arizona school districts participate in federal school meal programs, LWPs should be updated by LEAs to provide greater detail regarding that participation, what the USDA guidelines are, and how districts adhere to them. AzNN training on how to support LWP revisions for school meals would be beneficial to LIAs.

Competitive Foods. Training and support is also needed on how LWPs can integrate nutrition standards for foods and beverages offered *outside* of school meals. This includes foods offered or sold to students during the normal school day, the extended school day, classroom celebrations, and fundraisers. AzNN trainings should consider using materials, tips and fact sheets to help LIAs talk to LEAs about competitive food policies.

Wellness Promotion & Marketing. The Final Rule includes new marketing restrictions for unhealthy foods and beverages, which can spur LEA interest in making LWP improvements to their relatively weak (or non-existent) wellness promotion and marketing standards. Here, too, LIAs would benefit from AzNN training on how written policies can address teacher/staff modeling of healthy behaviors and marketing restrictions on unhealthy foods and beverages.

Given the many potential LWP training topics listed above, the AzNN should consider working with LIAs to determine their top training priorities for LWP topics during FFY17, with implementation of trainings in FFY18.

County Highlights

Breadth and Depth in Maricopa. In FFY16, more LWPs were submitted for Maricopa than for any other Arizona county. To some degree this was expected for the state's most populous county, however the *quality* of Maricopa's LWP-related programming matched the breadth of the LIAs' reach. LIAs providing Strategy 10 services in Maricopa successfully navigated the complexities of working across many, diverse districts during FFY16:

"[S]chool health staff are **working with ADE** to coordinate and leverage resources for SNAP-Ed school districts that will be receiving an NSLP Administrative Review to assist with further development of a **more comprehensive Local Wellness Policy (LWP)** including the WellSAT Score Cards and recommendation summary."

Maricopa County Department of Public Health. LIA staff participated in 70 meetings with school and LEA leadership, provided 145 Strategy 10 trainings, and submitted 13 LWPs. In collaboration with the ADE, they effectively marketed SNAP-Ed services related to LWPs. Staff also attended regular District Wellness Committee (DWC) meetings, completed a county-level environmental scan of LWP assessments by leveraging other funding, and developed an LWP toolkit for districts seeking assistance in meeting federal regulations.

UA Cooperative Extension, Maricopa (Maricopa Extension). Maricopa Extension staff participated in 47 meetings with school and LEA leadership, provided 22 Strategy 10 trainings, and submitted 11 LWPs. They built relationships with district nutrition services by hosting the popular "Build a Rainbow Day at the Salad Bar" events, which led to their participation in wellness committees and the potential to expand future support for LWP review and revision. The ongoing relationship with the Cartwright School District flourished, promoting a coordinated school health approach that has received national recognition.

"**[W]orking with the Roosevelt School District Child Nutrition Services Department**, the UANN Maricopa Coordinated School Health team is **now invited to sit on the Roosevelt School District Wellness Team** and provide resources and technical assistance to the district."
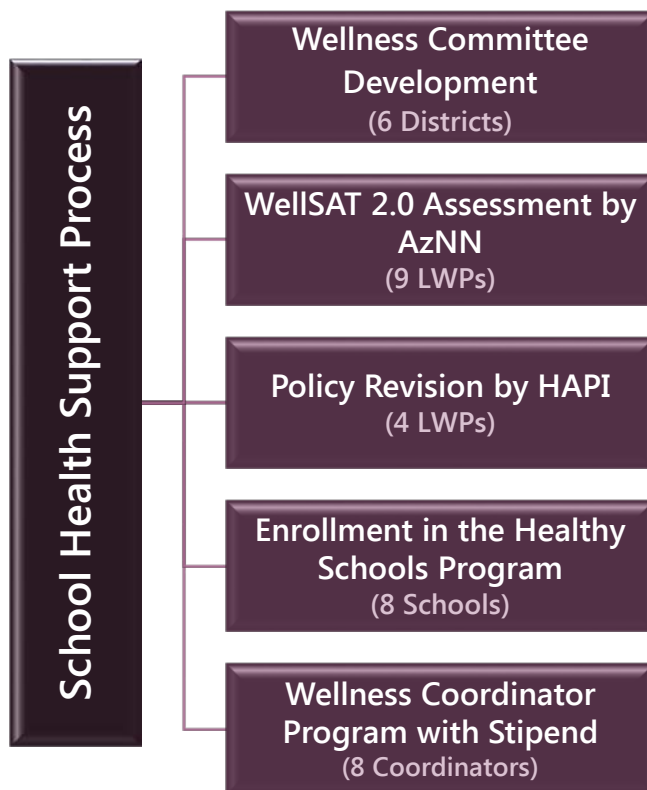
HAPI and Healthy in Cochise. The UA Cooperative Extension, Cochise (Cochise Extension) successfully partnered with the Cochise County Health in Arizona Policy Initiative (HAPI) manager and numerous school districts to achieve resounding success in Strategy 10. Indeed, the HAPI/Cochise Extension's School Health Team championed the completion of the *entire* LWP review and revision process by four districts, including board approval, and it developed a unified School Health Support Process for school districts in the county. This process is detailed below along with successes-to-date in parentheses:

> "Because of the WellSAT feedback and our assistance in LWP revision…Recess is now before lunch…Lunch now has a solid 30 minutes…Jr. High has a "walking club"…Teachers are incorporating more physical activity into their school day."

School Health Support Process

- **Wellness Committee Development**
  (6 Districts)

- **WellSAT 2.0 Assessment by AzNN**
  (9 LWPs)

- **Policy Revision by HAPI**
  (4 LWPs)

- **Enrollment in the Healthy Schools Program**
  (8 Schools)

- **Wellness Coordinator Program with Stipend**
  (8 Coordinators)

The Cochise County HAPI/UANN School Health Team receive the Margaret Mead Award at the September Cochise County Healthy Communities Health Summit

Deep Dive: School Health Partnerships

Semi-annual report data and two WellSAT 2.0 items in the Implementation, Evaluation, and Communication (IEC) section enabled a comprehensive assessment of the existence and quality of SNAP-Ed partnerships with DWCs and other school agencies.

District Wellness Committees (DWCs). DWCs provide leadership in the development, implementation, review, and revision of LWPs that promote nutrition and physical activity in schools. To that end, the Evaluation Team examined WellSAT 2.0 scores for the *existence and quality* of DWCs (WellSAT 2.0 items IEC 1 and IEC 2) for 73 SNAP-Ed-eligible districts. This information was compared against LIA data from semi-annual report tables (SARTs) for the process indicator, "Number of meetings with school and LEA leadership" to better understand LIA engagement with DWCs.
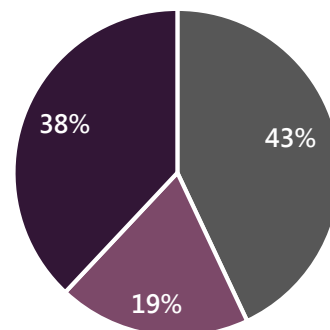
Across Arizona, 58% (42) of the school districts assessed had written LWPs that established a DWC, and 38% (28) of LWPs used language to reflect that the DWC should be active/ongoing (Figure SH-8).

Written LWPs were also examined to see if they required DWCs to have community-wide representation:

Figure SH-8. Percent of Local Wellness Policies that Require District Wellness Committees (DWCs), N = 73

■ No DWC   ■ DWC   ■ Active DWC

📝 Fifty-nine percent (43) mentioned that membership was open to the community.
📝 Thirty percent (22) stated a plan to actively recruit some or all community members.

Overall, 22% of the LWPs had a best practice policy that established ongoing DWCs and actively recruited at least some members of the community. Quality policies did not group by geography and spanned eight of the 13 counties included.

Furthermore, LIA reports suggest that they are engaged with active DWCs as well as other partners. SARTs indicate LIA participation in 447 meetings with school and LEA leadership across the same 13 counties that were assessed using the WellSAT 2.0 (Table SH-3).

Table SH-3. Number of Meetings with School and LEA Leadership Reported by Local Implementing Agencies (LIAs) for FFY16

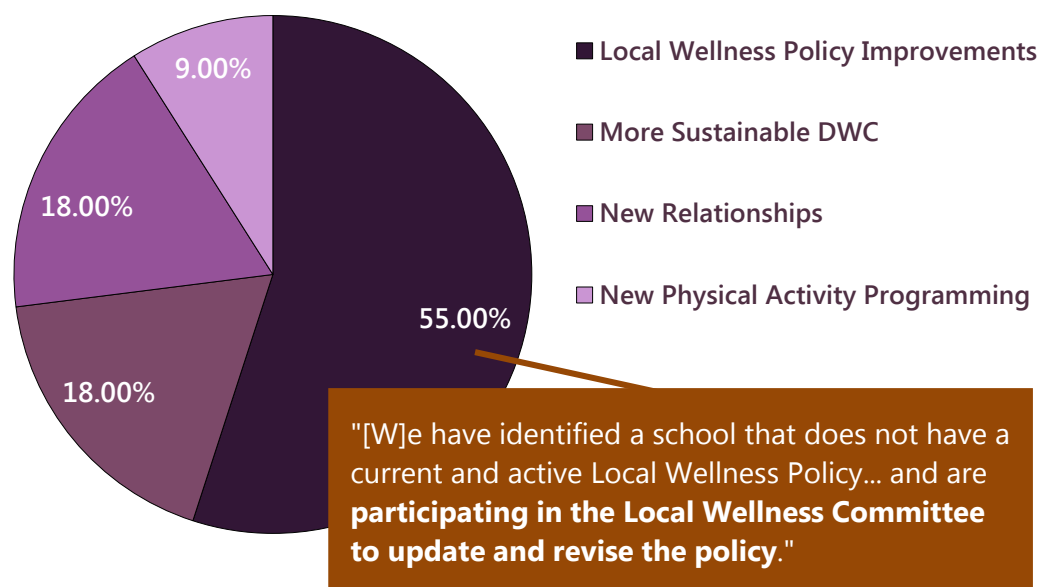| County	# Meetings	Group(s) or Leader(s) Met[a]
Apache	17	DWCs, Other District[b] and School[c] Leaders
Cochise	56	DWCs, SHACs, HAPI[d]
Coconino	20	DWCs, Other District and School Leaders
Gila	12	Not Specified
Greenlee	3	Other School Leaders
La Paz	3	Other District Leaders
Maricopa	117	DWCs, SHACs, Other District and School Leaders
Mohave	3	Not Specified
Navajo	10	Not Specified
Pima	116	DWCs, SHACs, Other School Leaders
Pinal	71	Not Specified
Santa Cruz	14	DWCs, Other District and School Leaders
Yavapai	5	DWCs, SHACs
ALL COUNTIES	**447**	

[a] Meetings reported by LIAs in the semi-annual report tables were grouped for school and LEA leadership. Numbers therefore reflect active LIA participation with both District Wellness Committees (this section) and School Health Advisory Committees (next section). [b] Other District Leaders include county and district superintendents and county and district boards. [c] Other School Leaders include school administrators (e.g. principals), food service managers, and teachers who oversee school wellness. [d] Health in All Policies Initiative (HAPI) meeting (see "Other Partnerships").

Beyond the reported number of LIA meetings with DWCs, qualitative data from SARNs suggest that LIAs are successfully partnering with DWCs. More than a quarter (26%) of all school health partnership references related to ongoing partnerships with DWCs, and all of these references described at least one opportunity that arose out of the partnership. LWP review, revision, and implementation were the most often reported opportunities resulting from partnerships (Figure SH-9).

These opportunities suggest that LIAs have made progress in leveraging their relationships with DWCs to promote LWP improvements and enhance sustainability despite the reported barriers of time constraints on LIAs and district staff.

Figure SH-9. Reported Opportunties from SNAP-Ed Partnerships with District Wellness Committees (DWCs), N=11

- Local Wellness Policy Improvements
- More Sustainable DWC
- New Relationships
- New Physical Activity Programming

9.00%
18.00%
18.00%
55.00%

"[W]e have identified a school that does not have a current and active Local Wellness Policy... and are **participating in the Local Wellness Committee to update and revise the policy**."

Strong DWCs | Strong LWPs

Taken together, the quantitative and qualitative findings suggests that DWCs and LWPs mutually reinforce one another: DWCs tend to focus on LWP improvements, while quality LWPs include written mandates for active and inclusive DWCs.

School Health Advisory Committees (SHACs). SHACs are critical to school-level nutrition and PA programming. While the AzNN Evaluation Team will perform a quantitative assessment of SHACs in FFY17, this year's SARTs revealed that they are already very active with SHACs (Table SH-3). In the SARNs, LIA activities with SHACs were the next most referenced type of school health partnership after DWCs. Five counties reported working with 35 SHACs, with the majority of partnerships focused on

two activities: creating and supporting sustainable SHACs and developing, revising, and implementing school-level wellness policies.

Multiple barriers emerged in narratives related to LIA partnerships with SHACs. Most notably, LIAs reported a lack of community-wide engagement, underscoring the value of LIA support for sustaining active SHACs.

> "Often times we find ourselves at the table with someone from the school that has set up the meeting, and rarely anyone else."

Other Partnerships. Over half (54%) of school health partnerships referenced in narratives described work with groups beyond DWCs and SHACs, including HAPI, school boards, the ADE, and county-specific healthy schools programs. Most partnership activities centered on LWPs and the implementation of new PSE programs in schools.

School Health Partnerships - County Highlights

Partnering to Reach Families in Navajo. Navajo County Public Health Services District partnered with St. Mary's Food Bank to help Holbrook School District start a school-based Food Pantry Program. One mother said:

> "We are not always able to buy fresh fruits and vegetables. As a SNAP mom, I'm thankful for the school pantry program because now we have peaches, pears, peas, beans, tomato sauce, chili beans, peanut butter and rice. Everything that the kids bring home gets used."

Above and Beyond in Pima County. Beyond participating in wellness committees at the district and school levels, the UA Cooperative Extension, Pima hosted quarterly wellness coordinator meetings that acted as a sort of *county*-level wellness committee: each district sent representatives to create a model LWP for dissemination to all districts in the county.

> "Each meeting the group tackles a different section of the model LWP and discusses … language that is both **generalizable to all school districts, yet able to be tailored** to meet local needs."

KEY FINDINGS AND RECOMMENDATIONS

🔑 The FFY16 SNAP-Ed evaluation focus on LWP assessment appeared to drive school health programming and augment LIA awareness of needs and readiness related to LWP implementation, evaluation and communication.

🔑 Robust AzNN-ADE communication and collaboration is critical to accelerating progress in LWP implementation and evaluation.

🔑 LIAs would benefit from having the AzNN develop and/or disseminate materials regarding how SNAP-Ed can support LWPs.

🔑 The AzNN should determine LIA priorities for training topics related to LWP improvements. Needs identified here include CSPAP, school meals, competitive foods and beverages, and wellness promotion and marketing.

🔑 Fostering LIA partnerships with DWCs and SHACs is critical to the advancement of SNAP-Ed in school settings.

References

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5. Agron, P, Berends, V, Ellis, K and Gonzalez, M. School wellness policies: Perceptions, barriers, and needs among school leaders and wellness advocates. *J Sch Health*. 2010; 80:527–535.

Early Childhood

Background

In Arizona in 2014, over a third (37%) of three- and four-year-olds were enrolled in Early Childcare Education programs (ECEs),[1] which can have a profound impact on eating and activity patterns of young children (Figure EC-1).

From 2000 to 2008, childhood obesity rates among Arizona's WIC-enrolled 2 to 4 year olds rose from 11.3% to 15.6%. Data from 2014 showed a moderate decrease to 13.3%.[2] This may indicate a nascent reversal of the obesity trend for the state's very young low-income children, underscoring the importance of obesity prevention programs targeting ECEs to accelerate the decline.

In 2010, the ADHS developed the *Empower Program*, which offers discounted licensing fees for child care facilities that agree to implement 10 wellness standards.[3] Although Empower and the AzNN's SNAP-Ed are distinct programs within the ADHS, the crosswalk provided in Table EC-1 shows elements common to both.
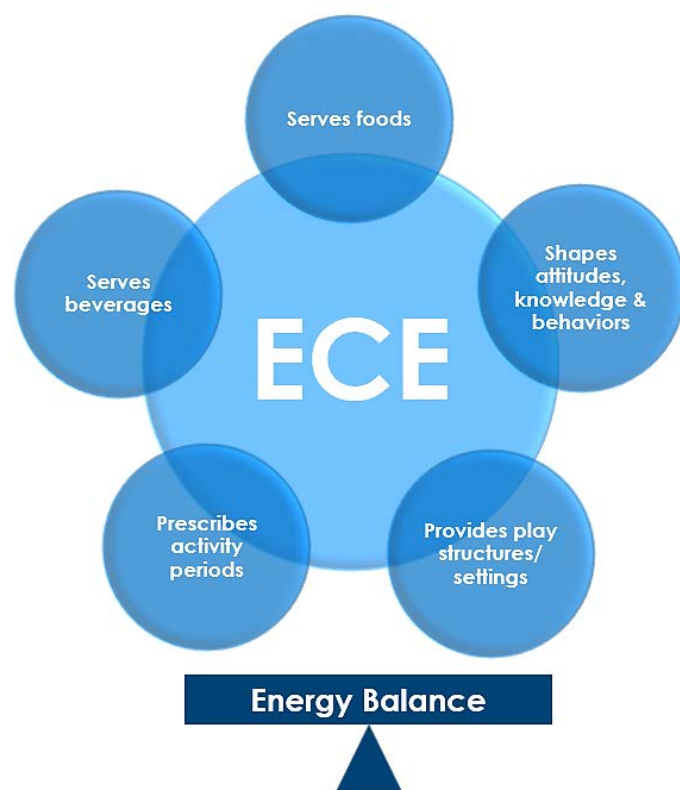
Figure EC-1. The Influence of an Early Childcare Education Program (ECE) on Children's Energy-Balance-Related Development

Table EC-1. Crosswalk of Arizona's Empower and SNAP-Ed Programs

Area of Commonality	Empower Standard(s)	AzNN Strategy(-ies)
Integrates Empower Standards into Arizona's SNAP-Ed interventions	1,3,4,5,6,8	13
Improves *capacity* of ECE staff related to nutrition education & healthy meals	8	14
Supports or requires ECE to serve healthy foods and beverages	4,5	13,14
Supports or requires ECE to serve family-style meals	6	13,14
Improves *capacity* of ECE staff related to physical activity (PA) programming	8	15
Supports or requires ECE to provide PA opportunities	1	13, 15
Supports or requires ECE to limit time spent being sedentary	1	13,15
Supports or requires ECE to provide families with educational materials	1,5,6	13

Arizona's SNAP-Ed programs are intended to support ECE nutrition and physical activity PSEs by reinforcing relevant Empower standards and providing ECEs with technical assistance on how to implement best practices. To be successful, the AzNN and LIAs must understand the needs, barriers, and opportunities experienced by SNAP-Ed-qualifying ECEs in all counties eligible for services.

Methods

This FFY16 assessment serves as: (1) A formative evaluation of ECE needs and readiness to provide actionable information to the AzNN, LIAs, and partner ECE sites, and (2) the baseline for an FFY18 outcomes evaluation. Needs and readiness among Arizona's SNAP-Ed qualifying ECEs were assessed using mixed methods.

Quantitative Analysis. The Go NAP SACC Child Nutrition and Infant & Child Physical Activity instruments were used to collect quantitative data related to ECE practices and policies. LIAs were trained to complete assessments with ECE site representatives, providing technical assistance as needed. Because the Go NAP SACC tools were designed as ECE self-assessments that offer immediate feedback regarding strengths and areas for improvements, individual results were available to LIAs and partner ECEs directly upon completion.

For the state- and county-level analysis, responses from hardcopy assessments were data entered and translated to numerical scores using Likert-scale assignments of 1-4, where 1 = the weakest practice and 4 = the best practice. Data were analyzed using Excel 2013. Section means were calculated as average responses for individual items, excluding items for which there was no response (N/A items), and total means were calculated as the averages for all individual items.

This assessment process had several limitations. Go NAP SACC was designed as an ECE self-assessment. AzNN training was provided to LIAs, not ECE respondents, on how to complete Go NAP SACCs, and LIAs reported variation in: (1) the level of technical assistance that LIAs provided to ECE respondents, (2) respondent familiarity with the tool, (3) respondent concern regarding the implications of reporting weaknesses, and (4) respondent role at the ECE site (e.g., in one county, the director and staff completed distinct Go NAP SACCs, and directors scored ECEs substantially higher than staff). Moreover, some Go NAP SACC sections require reference to standardized materials such as written policies or menus, while other sections require subjective interpretation by respondents.

Qualitative Analysis. To further understand ECE needs and readiness, a qualitative inquiry was undertaken using data from Semi-Annual Report Narratives (SARNs), a formal debrief session with LIAs during an AzNN Early Childhood Subcommittee meeting, and Go NAP SACC cover sheets regarding the assessment experience. NVivo v10.0 software was used for coding and theme analysis. Results were considered in terms of ECE needs and readiness and compared against the quantitative patterns that emerged from the Go NAP SACC analysis as well as findings from a recent Empower Implementation Report.[3]

Results

Quantitative Results. In FFY16, six LIAs worked in 10 counties to complete 68 Go NAP SACCs with 40 ECEs (Table EC-2). While most ECE sites completed both a Child Nutrition and Infant & Child Physical Activity assessment, there were some exceptions. In particular, Cochise County focused on nutrition, while Graham County evaluated physical activity.

Table EC-2. Go NAP SACC Participation in FFY16, by County

COUNTY	No. of Sites Assessed	No. of Go NAP SACCs Collected [a]
Apache	2	4 (2 N, 2 PA)
Cochise	4	4 (4 N, 0 PA)
Graham	4	4 (0 N, 4 PA)
Maricopa	5	10 (5 N, 5 PA)
Mohave	3	6 (3 N, 3 PA)
Navajo	4	7 (4 N, 3 PA)
Pima	10	20 (10 N, 10 PA)
Santa Cruz	2	4 (2 N, 2 PA)
Yavapai	5	7 (3 N, 4 PA)
Yuma	1	2 (1 N, 1 PA)
ALL COUNTIES	**40**	**68 (34 N, 34 PA)**

[a] N = Child Nutrition, PA = Infant and Child Physical Activity

The summary results in Tables EC-3 and EC-4 show section and total means for the Go NAP SACC Child Nutrition and Infant & Child Physical Activity topics, respectively.

Table EC-3. Section and Total Means[a] for Go NAP SACC Child Nutrition Assessments, by County, N=34

County	Foods Provided	Beverages Provided	Feeding Environment	Feeding Practices	Menus & Variety	Ed & Prof Development	Policy	ALL SECTIONS
Apache	3.9	3.8	3.7	3.6	4.0	3.2	3.0	**3.7**
Cochise	3.0	3.6	3.3	3.5	3.4	2.9	2.0	**3.2**
Maricopa	3.6	3.8	3.5	3.6	3.3	3.2	2.8	**3.5**
Mohave	3.3	3.5	3.3	3.6	3.3	2.5	2.0	**3.2**
Navajo	3.7	3.8	3.8	3.7	4.0	3.3	3.5	**3.7**
Pima	3.7	3.7	3.8	3.5	3.8	3.7	3.5	**3.7**
Santa Cruz	3.5	3.8	3.3	3.0	4.0	3.1	2.5	**3.3**
Yavapai	3.3	3.8	3.2	3.0	2.8	2.7	2.0	**3.1**
Yuma	3.6	3.9	2.9	3.3	3.3	2.7	2.5	**3.3**
OVERALL MEAN SCORE	**3.5**	**3.7**	**3.5**	**3.5**	**3.6**	**3.2**	**2.8**	**3.5**

Scores reflect Likert-scale assignments of 1-4, where 1 = weakest practice and 4 = best practice. [a] All means are average responses for individual items and exclude items for which there was no response (N/A items).

Table EC-4. Section and Total Means[a] for Go NAP SACC Infant & Child Physical Activity Assessments, by County, N=34

County	Time Provided	Indoor Play Environment	Teacher Practices	Ed & Prof Development	Policy	ALL SECTIONS
Apache	2.9	3.7	3.6	3.3	3.5	**3.4**
Graham	3.3	3.3	3.7	3.5	3.3	**3.4**
Maricopa	2.5	3.0	3.3	3.1	2.2	**3.0**
Mohave	2.7	3.3	3.3	3.2	3.0	**3.1**
Navajo	2.6	3.3	3.8	3.5	3.7	**3.3**
Pima	2.7	3.8	3.7	3.8	3.5	**3.5**
Santa Cruz	2.9	2.7	3.1	3.4	3.5	**3.1**
Yavapai	3.5	3.2	3.5	3.0	2.5	**3.2**
Yuma	3.0	2.6	3.3	2.3	1.5	**2.6**
OVERALL MEAN SCORE	**2.9**	**3.3**	**3.5**	**3.3**	**3.0**	**3.3**

Scores reflect Likert-scale assignments of 1-4, where 1 = weakest practice and 4 = best practice. [a] All means are average responses for individual items and exclude items for which there was no response (N/A items).

Qualitative Results. Figure EC-2 shows the percent of references that LIAs made to ECE *needs* associated with SNAP-Ed services. The majority of needs (53%) were related to Education (of families) and Professional Development (of staff). One potential explanation is that because LIAs view their role as providing technical assistance and training, they are more likely to notice the need for these services. In particular, LIAs overwhelmingly identified Empower training as the most pressing of all professional development needs (54%), which makes sense given that ECEs are required to provide three hours of annual training on Empower topics to staff in Standard 8.

> "Administrators were familiar with Empower, solely based on the licensure discount, but **not a single individual was specifically familiar with the standards**."

The next most frequently reported needs were related to physical activity and nutrition practices and/or environments. Go NAP SACC scores mirrored this finding, with slightly lower overall means for Infant and Child Physical Activity (3.3) than for Child Nutrition (3.5). Interestingly, the 2014-15 Empower Implementation Report[3] also described lower rates of full compliance for the physical activity Standard 1 (51%) versus the nutrition-rated Standards 4 (68%), 5 (60%), and 6 (62%).

In particular, all physical activity needs described by LIAs related to incorporating more physical activity programming at the site, primarily through _teacher-led_ physical activities, which is a component of Empower Standard 1. No references addressed making alterations to _actual physical structures_, which is not a component of Standard 1.

For nutrition, three of the 11 references to nutrition-related needs were centered on support for farm-to-ECE programming, a distinct AzNN food systems strategy, and another three were focused on family-style dining, which is Empower Standard 6.

Figure EC-2. References to Early Childhood Education Center (ECE) Needs by SNAP-Ed Local Implementing Agencies, N=77

- Education & professional development
- Improvements to physical activity practices and/or environments
- Improvements to nutrition practices and/or environments
- Establishing or improving written policies
- Unspecified

53%
22%
14%
4%
7%

"Directors want their staff to be fully **trained on what Empower is**…"
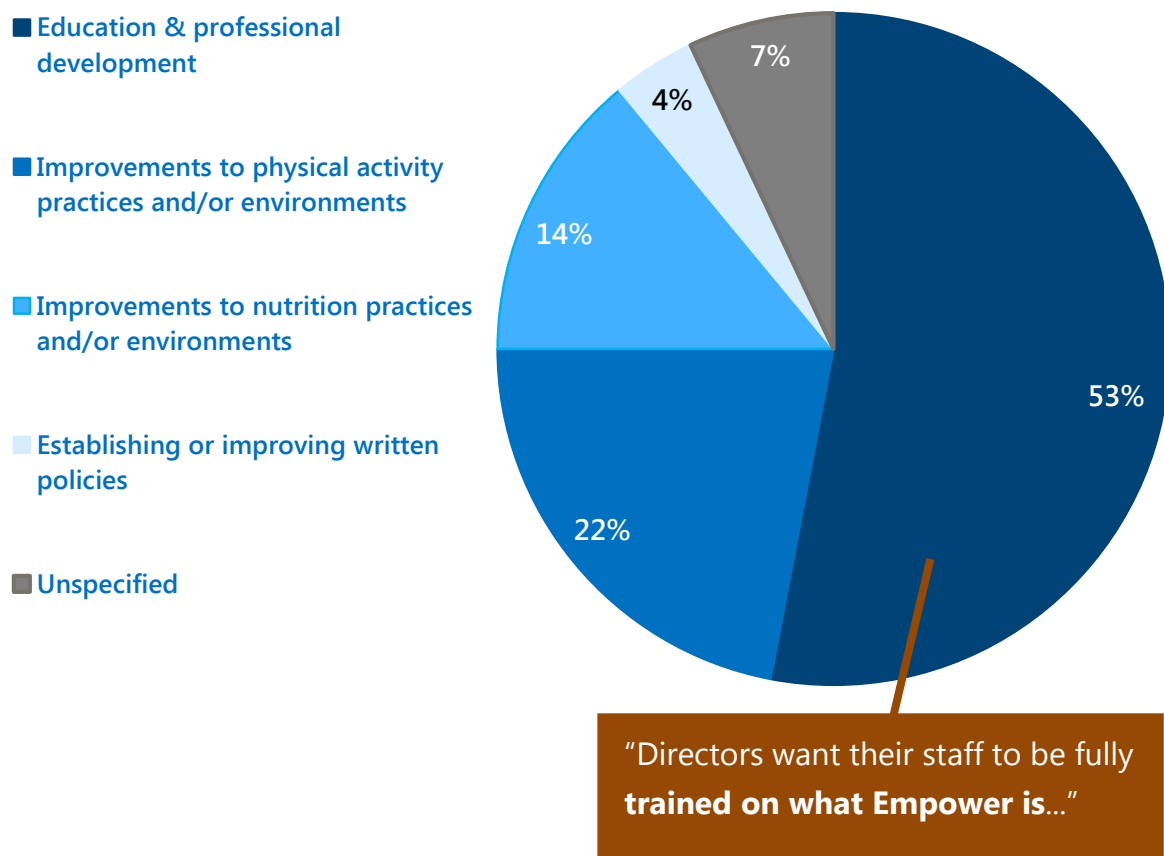
In terms of policies, LIAs only identified a need for improving ECE written policies in 4% of references. However, the mean Go NAP SACC scores for policy sections were relatively low for both nutrition and physical activity (2.8 and 3.0, respectively). In terms of Empower Standards, all standards include components related to written policies, and the Empower Guidebook includes samply policies for ECEs to reference related to each standard.

Encouragingly, LIAs did report using Go NAP SACC assessments as planning tools to address needs. Of the 48 comments related to Go NAP SACC, one third described using results for goal-setting and/or the identification of ECE needs.

> "[The ECE] also completed the Go NAP SACC tool. [The LIA] worked with the center to develop a plan of action that will **address physical activity** policies and practices, and to **improve the family style dining** process."

ECE readiness to collaborate with SNAP-Ed agencies to improve nutrition and physical activity was examined in terms of both *barriers* and *opportunities*. The SARNs included 48 references to barriers that inhibited collaboration between LIAs and ECEs. The most common obstacle was competing demands on the ECEs (Figure EC-3). In fact, competing demands on ECEs were also reported as the primary threat to having ECEs complete the Go NAP SACC assessments.

Figure EC-3. Reported Barriers to Collaboration of Local Implementing Agencies (LIAs) with Early Childhood Education Centers (ECEs), N=48

- ECE has too many competing demands
- ECE staff turnover, closings, or management shift
- LIA staff turnover, limited capacity, or lack of expertise
- Cannot systematically track ECEs

38.00%
27.00%
27.00%
8.00%

> "The [ECE] is **already highly inspected**, required to meet multiple standards and submit numerous detailed reports... they are NAC accredited, ADHS licensed, EMPOWER registered, and a designated First Things First site."

Nonetheless, LIAs have been able to identify existing and emerging opportunities for SNAP-Ed services. Qualitative analysis of the 70 references to *providing new opportunities* to work with ECEs related to three areas:

- The implementation of the Go NAP SACC assessments (33%)
- The development of new or enhanced partnerships (29%)
- Empower-inspired ECE requests for/acceptance of SNAP-Ed support (23%)

In terms of what those actual opportunities were, an analysis of the 79 references to specific opportunities revealed that the most referenced opportunities aligned with identified needs (Figure EC-4): ECE training (25%), physical activity programming (24%), and Empower support (20%). Interestingly, both farm-to-ECE and gardening opportunities are explicitly mentioned by LIAs, thereby highlighting the ECE as a hub where various food systems can collectively influence the eating and activity patterns of the very young.

Figure EC-4. Reported Opportunities for SNAP-Ed Local Implementing Agencies to Support Early Childhood Education Centers (ECEs), N=79

"Trainings on gardening and healthy snacking will continue, as well as the possibility of adding a physical activity training to the menu of services."

- Provide ECE Training — 25.00%
- Promote Physical Activity in ECEs — 24.00%
- Support Empower Program — 20.00%
- Support Gardens — 17.00%
- Support Farm-to-ECE — 6.00%
- Reach Families — 5.00%
- Other — 3.00%
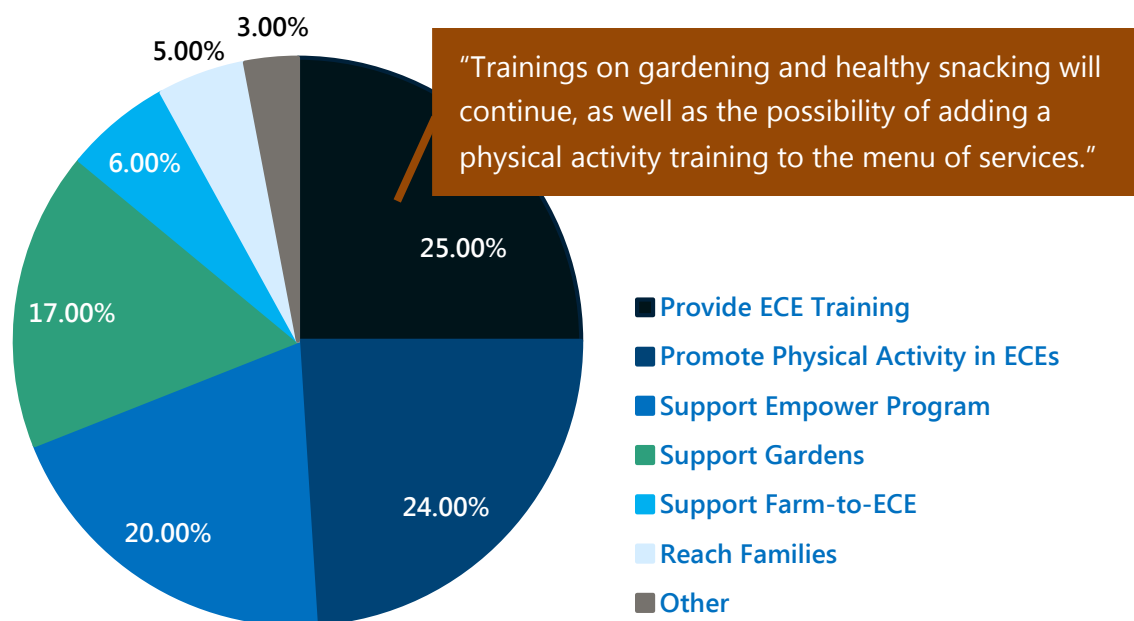
Summary of Findings. When the qualitative results are considered alongside the Go NAP SACC scores and results from the Empower Implementation Report, these findings surface:

STRONGER

WEAKER

Nutrition Practices & Environments

- Scores generally high, with some county exceptions
- Empower-related needs focus on family-style dining (Standard 6)
- Needs *and* opportunities include farm-to-ECE (AzNN Strategy 3)
- Opportunities also include ECE gardens (AzNN Strategy 2)

Menus and Foods & Beverages Served

- Scores generally high, with some county exceptions
- Participation in Empower may drive higher scores
- Most LIAs *do not* report needs regarding foods and drinks served
- No LIAs identified opportunities regarding foods and drinks served

Physical Activity Practices & Environments

- Highest section mean for Teacher Practices, lowest for Time Provided
- Second most frequently reported area of need *and* opportunity by LIAs
- Needs center on teacher-led physical activities (assessed in Time Provided)
- No needs address built environment

Professional Development for ECE Staff

- Weak to moderate scores relative to other sections
- Most frequently reported area of need and opportunity by LIAs
- Strong association of needs and opportunities with Empower training

Family Education

- Weak to moderate scores relative to other sections
- Only 4% of LIA references to need
- Only 5% of references to opportunities
- Weaker component of Empower implementation across standards[3]

ECE Policy

- Weak scores relative to other sections
- LIAs *infrequently* report a need for improvement
- LIAs *do not* report opportunities to provide support

Implications at the state and local levels include those related to interagency communication and trainings as well as AzNN training specific to written ECE policy:

Interagency Collaboration and Coordination. Continued coordination and collaboration of the AzNN and ADHS Empower programs is critical to supporting LIA engagement with ECEs. The main barrier reported by LIAs was competing demands on the ECE, which includes Empower compliance monitoring. The AzNN can provide LIA training to promote understanding among ECEs that SNAP-Ed services actually *support* Empower compliance. To the extent feasible, LIAs may benefit from training on how Go NAP SACC information can be used to complete Empower compliance assessments.

The CDC's Early Care and Education State Indicator Report[5] acknowledges Empower as the Arizona obesity prevention intervention, however there is no state group or task force considered to represent Arizona's ECE obesity prevention efforts. In practice, the ADHS has both Empower and SNAP-Ed programs working in ECE obesity prevention, and the Arizona Department of Education (ADE) also oversees the Child and Adult Care Food Program (CACFP). To the extent possible, coordination of efforts among these agencies can strengthen the state's comprehensive approach to obesity prevention among ECEs. In particular, the CDC reports a lack of obesity prevention in CACFP interventions or trainings, which underscores the importance of collaboration among all three programs. It may also be beneficial to have a centralized system for tracking the existence of ECEs in Arizona that can be shared with LIAs.

Empower Trainings. In FFY16, the AzNN promoted Empower trainings to LIAs. Continuing to encourage FFY17 trainings will help LIAs to sustain momentum in meeting ECE needs. Specifically, LIAs may benefit from trainings targeting the standards noted below (the AzNN may wish to prioritize trainings based upon LIA request).

Standard 1: Physical Activity

- The ADHS[3] reports that ECEs need clarification on definitions of "moderate" and "vigorous" physical activity as well as "screen time" and "sedentary." LIAs should be made aware of this need and trained to provide clarification of terms to ECEs.

- While SNAP-Ed cannot purchase items such as playground equipment, LIAs may not be aware that technical assistance can still be provided to ECEs on how to arrange spaces and equipment to encourage indoor and outdoor play in support of Standard 1.
- LIAs would benefit from training on how to encourage ECEs to provide teacher-led activities.

Standard 4: CACFP

- Most (67.5%) Arizona ECEs have written policies related to CACFP.[3] AzNN trainings on this standard should focus on how LIAs can support CACFP compliance.

Standard 6: Family-Style Meals

- Training should include the elements of family-style meals detailed in the standard, including the practices that staff should engage in with children during meals.
- Training should address contextual variations such as sites where children bring their own meals and snacks or have no opportunity to serve themselves due to the use of pre-packaged items. How do these sites still meet the standard?

Standard 8: Staff Training

- Because LIAs provide training and technical assistance, much of their work with ECEs will address this standard for Empower topics related to nutrition and physical activity. LIA familiarity with this standard can enhance the desirability of SNAP-Ed services to ECEs.

Multiple Standards: Family Education

- ECEs would benefit from technical assistance on how to reach families with information on nutrition and physical activity. To that end, LIA trainings and/or materials focused on family education would be useful. Indeed, some counties have already successfully partnered with Head Start parent groups to provide DE, which may be an excellent reference for LIAs new to this area.

ECE Policy. Quantitative findings reported here indicate a need for improving ECE written policies related to both topics, however LIAs did not report frequent needs or any opportunities related to policies. The AzNN may wish to promote the importance of ECE policy among LIAs with trainings, resources, and via the Early Childhood subcommittee and reference the sample policies in the Empower Guidebook.

County Highlights

Overcoming Barriers in Apache. Apache County is largely rural with one of the lowest population densities in the state (6.4 persons per square mile vs. 56.3 for Arizona).[4] The UA Cooperative Extension, Apache (Apache Extension), is contracted to work with ECEs in Apache, where challenges include competing demands on ECEs, high rates of ECE staff turnover,

> "Due to new center directors and parent advocates we have struggled to be able to provide any support or assistance to the centers."

and limited staff capacity of the Apache Extension.

Nonetheless, the Apache Extension recognized that center directors were interested in Empower trainings and leveraged their ability to provide this training to overcome common barriers:

BARRIERS

- ECE Staff Turnover
- Lack of ECE Time

ECE Needs Empower Training

LIA Hired Former Head Start Teacher

OPPORTUNITIES

> "Having a staff member that truly understands the process and needs of HeadStart has enabled us to make great strides towards accomplishing our goals."

ACCOMPLISHMENTS

LIA Provided Empower Training → LIA Completed CATCH ECE Training → LIA Completed Go NAP SACCs

Cross-Pollinating Strategies in Pima. Pima County has a densely populated metro region[4] with unique challenges arising from the complexity of coordinating SNAP-Ed ECE program delivery through the UA Cooperative Extension, Pima (Pima Extension) Garden Kitchen, the Pima County Health Department subcontractor, and large ECE networks. Despite barriers, the Pima Extension expanded its capacity to support ECEs in FFY16, assessing more ECEs with Go NAP SACC than any other county in Arizona (Table EC-2). Staff participated in at least 23 meetings and five training sessions with ECE leadership this year, reaching 21 sites.

The Pima Extension's ECE efforts are uniquely mature in their comprehensive approach to programming, which combines Food Systems Strategy 2 (Gardens) with Early Childhood Strategies 14 and 15 and Direct Education (DE) Strategy 16. Each strategy has been addressed using practical, behaviorally-focused approaches that were reported to inspire ECE trainees:

> "The food service training was a skills based training to make integrating more fruit and vegetables in menus at ECEs an...easier change to consider. Participants felt that **they learned techniques that would be useful** to them in completing their work at ECEs."

Moreover, Pima Extension's ECE activities were purposefully designed to promote related strategies to *enhance the cumulative effect of PSE and DE programming*:

> "By having a successful garden, teachers are encouraged to talk more about fruit and vegetables."

> "The Garden Kitchen also held a training on Eat, Play, Grow...we were able to supply the curriculum to 8 ECEs."

Gardens

Nutrition Practices

Physical Activity Practices

Direct Education

> "The...training had a particular focus on how to start and maintain a garden at an ECE as well as how to involve the children in outside play utilizing the garden."

KEY FINDINGS AND RECOMMENDATIONS

🔑 The FFY16 Go NAP SACC assessments were successful in identifying ECE needs and providing new opportunities for LIAs to engage with them. But, ECEs also viewed assessments as competing with rather than supporting other demands.

🔑 Continued coordination and collaboration of the AzNN and ADHS Empower programs is critical to supporting LIA engagement with ECEs. Collaboration with the ADE on CACFP elements could also strength statewide efforts.

🔑 LIAs need training specific to Empower Standards regarding physical activity, CACFP, family-style meals, and ECE staff training. The AzNN may wish to prioritize training by LIA interest.

🔑 LIAs need training and resources covering how to support the development of written ECE policies for nutrition and physical activity, and parent education.

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Direct Education - Youth

Background

Between 2004 and 2011, obesity among 10 to 17 year olds in Arizona rose from 12.2% to 19.8%,[1] a trend that underscores the importance of nutrition and physical activity (PA) programming in Arizona schools. Schools are widely recognized for their potential to reach students with wellness-related PSEs as well as direct education (DE) provided in the classroom,[2] and SNAP-Ed requires states to implement individual or group-based nutrition education in conjunction with interventions at other levels of the socio-ecological model to enhance the collective impact of these interventions.[3]
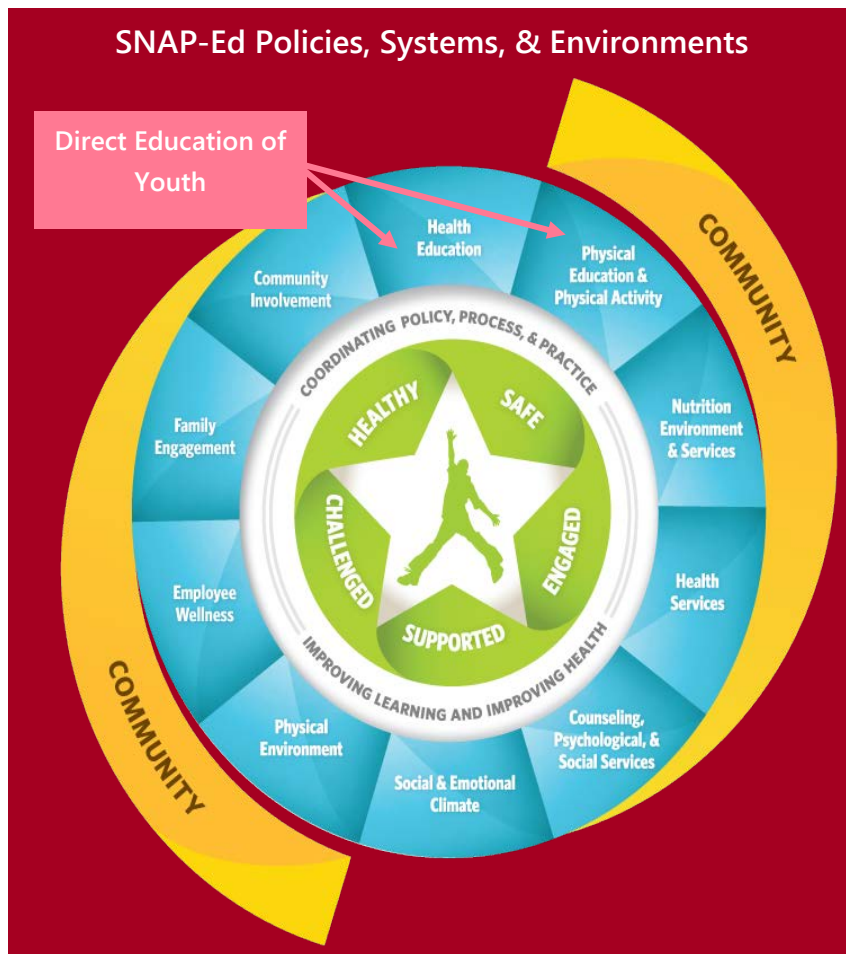
Figure YDE-1. The CDC's Whole School, Whole Community, Whole Child Model[2] Adapted to Show Where SNAP-Ed Fits In

Accordingly, Arizona's SNAP-Ed school-based programming combines PSEs with DE (Figure YDE-1) in an effort to influence students' knowledge, attitudes, and behaviors related to nutrition and PA. Annual assessments of students' eating and activity patterns are key to understanding outcomes related to these efforts.

Methods

This FFY16 evaluation of youth DE serves as both an outcomes assessment of the lessons provided by LIAs *and* a meta-evaluation of the assessment process itself to direct future expansion of youth DE evaluation.

Quantitative Analysis. The Evaluation Team used the validated Kids' Activity and Nutrition Questionnaire (KAN-Q)[5] to assess healthy eating and PA behaviors and knowledge related to national nutrition and PA guidelines[6] among fourth and fifth graders in Arizona. The KAN-Q was administered in pre-post fashion before and after delivery of a nine-lesson series, *Serving Up MyPlate: A Yummy Curriculum*, chosen because it was:

- 🏢 The most popular AzNN-approved curriculum with this age group.
- 🏢 Required to be taught in full by the AzNN, and in the order intended.
- 🏢 Well-aligned with KAN-Q items, with no other assessment built into the curriculum.

There were several limitations to this evaluation. The KAN-Q was recently tested for reliability, and problem questions were identified that may have impacted findings.[5] Specifically, the PA behaviors questions are currently undergoing revision to improve reliability. In addition, the KAN-Q was not available for order by LIAs until the start of December, 2015, which reduced the number of classes that were able to participate in the evaluation. While final numbers exceeded the minimum sample sizes calculated for most items, sample sizes were not met for all items, which inhibits the Evaluation Team's ability to detect significance. Moreover, the KAN-Q uses self-report and is therefore subject to recall bias. While it poses behavioral questions about *yesterday* to enhance recall, those items cannot be assumed to reflect *usual* intake of each respondent; larger sample sizes can more accurately reflect outcomes related to the intervention.

Qualitative Analysis. A qualitative analysis was undertaken to inform the design of future, expanded DE evaluations targeting youth. Semi-annual report narratives (SARNs) were examined to (1) learn more about LIA experience in administering the KAN-Q and (2) better understand general DE programming targeting youth. These two themes were

coded *a priori* using the NVivo v10.0 software, and emergent themes within general youth DE programming were identified.

Results

Quantitative Results.

During the 2015-16 school year, the KAN-Q was completed by 244 students (88 fourth graders and 156 fifth graders) in Coconino (N=51), Pinal (N=64) and Yavapai (N=129) counties. The average age of respondents was 10. The demographics in Figure YDE-2 show that only fourth graders were surveyed in Pinal, and only fifth graders were assessed in Yavapai.

Figure YDE-2. Demographics of FFY16 KAN-Q Respondents, by County (N=244)

Legend: ■ % Female ■ % 4th Graders ■ % Fifth Graders
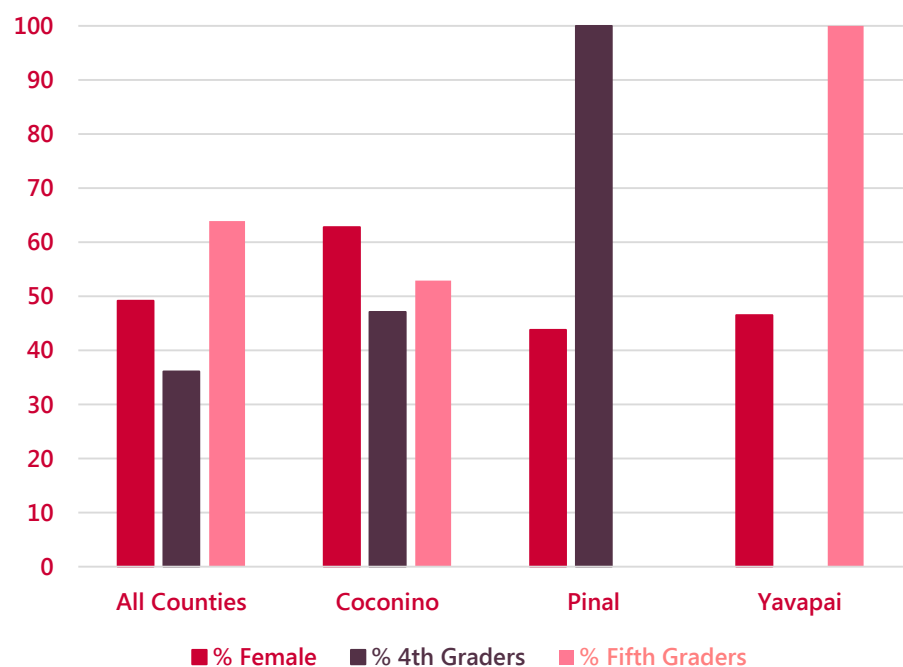
Knowledge results for all questionnaires were generally positive (Figure YDE-3). Students appear to have learned the Dietary Guidelines for Americans for fruit and whole grain consumption as well as the MyPlate message to make half of your plate fruits and vegetables. Also, the increases in knowledge related to type of milk recommended in the Dietary Guidelines and amount of vegetables to consume approached significance, and for fourth graders, vegetable knowledge did increase significantly ($p < 0.05$). When all students were considered, there was no change in learning related to the guideline that kids should get at least 60 minutes of PA each day, however there was a significant increase in fourth graders' knowledge this guideline

(p<0.01). _Note_: changes measured among fourth graders, only, are also changes measured for respondents in Coconino and Pinal counties, only.

Figure YDE-3. Percent of Knowledge Questions Answered Correctly (N=244)
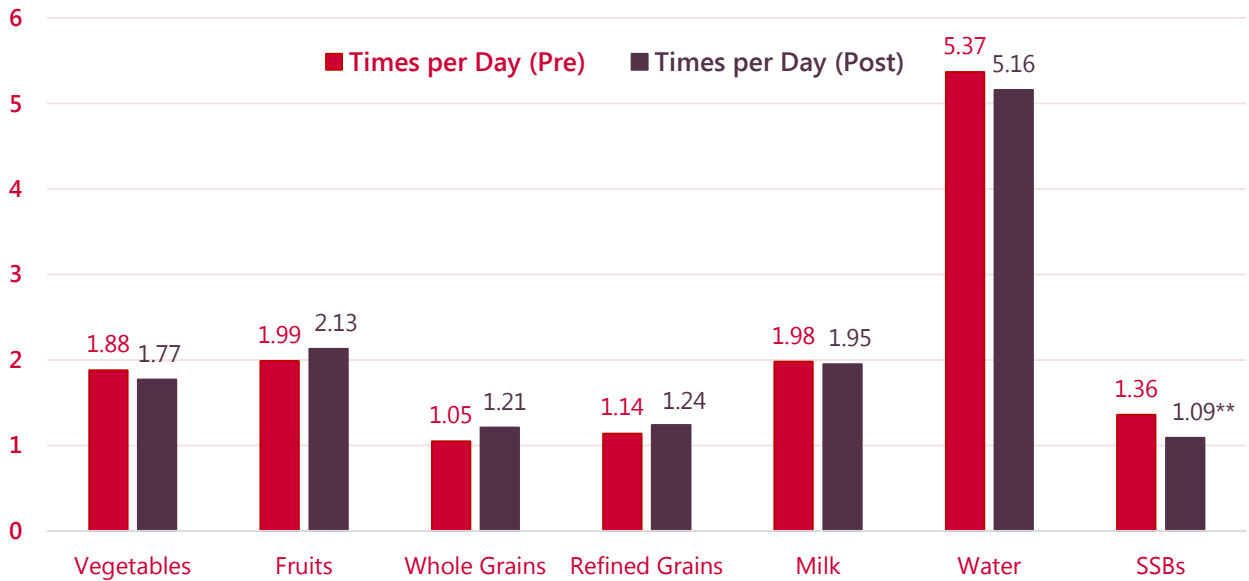

Bar chart showing % Correct (Pre) and % Correct (Post):
- Milk Type: 20.3 (Pre), 26† (Post)
- Vegetables: 23.8 (Pre), 31.2† (Post)
- Fruit: 15.7 (Pre), 26.7** (Post)
- Whole Grains: 18.9 (Pre), 27.8* (Post)
- MyPlate: 42.5 (Pre), 57.3** (Post)
- Physical Activity: 44.4 (Pre), 48 (Post)

Legend: ■ % Correct (Pre) ■ % Correct (Post)
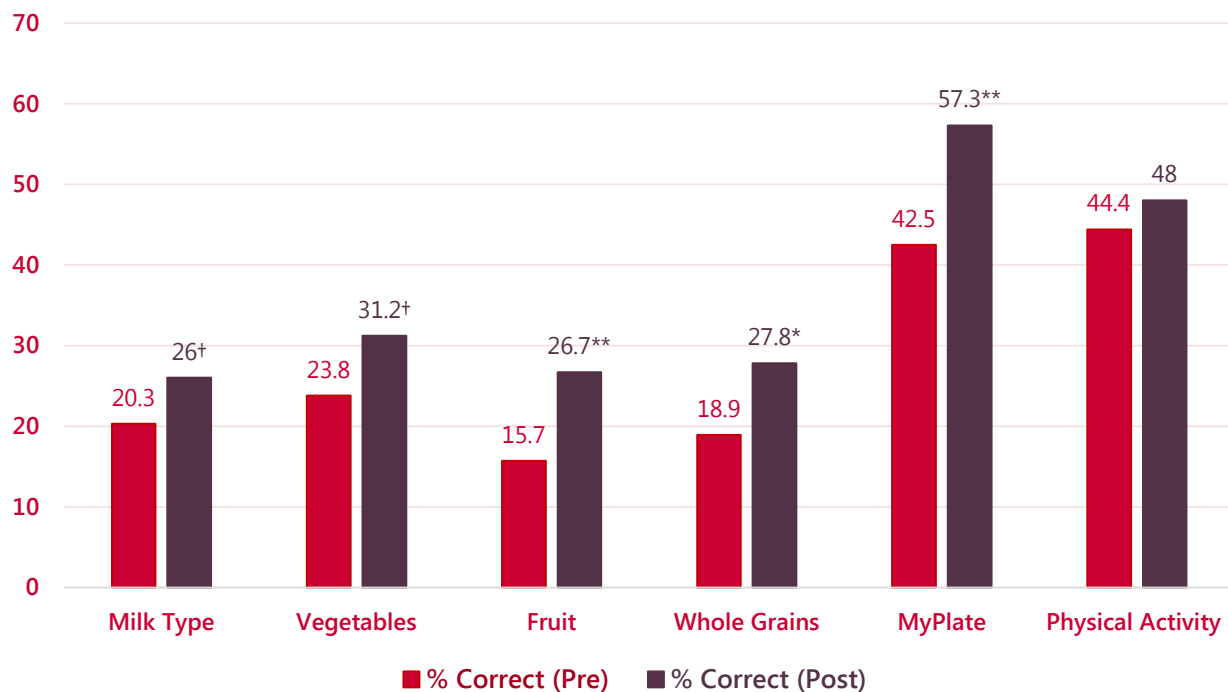
[a] MyPlate = "How much of most kids' plates at meals should be fruits and vegetables?" † Increase showed trend to significance (.05<p<0.10), * increase was significant at p<.05, ** increase was highly significant at p<0.01

Findings for behavior show fewer changes (Figure YDE-4), though some positive results did emerge. Students drank far more water than milk or sugar-sweetened beverages (SSBs), and the number of times students reported drinking SSBs showed a highly significant decrease pre-to post. While there was no significant change in overall _amount_ of milk students drank, there were statistically significant changes in the _type_ of milk consumed (Figure YDE-5), with a significant increase in non-dairy fortified beverages that aligns with the healthy eating pattern promoted in the Dietary Guidelines, which includes fortified soy beverages. Also, the significant decrease in percent of students who were unsure what kind of milk they usually drink may reflect learning; indeed, the percent of students who correctly identified the recommended milk type increased by 5.8% pre to post and approached significance (p=0.05).
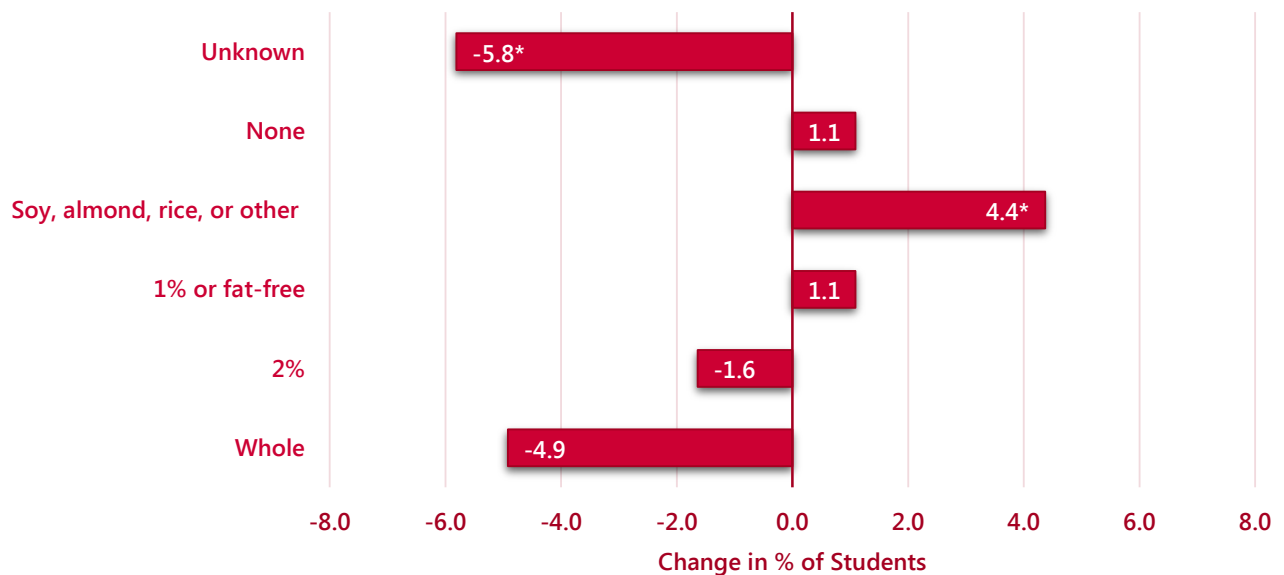
Figure YDE-4. Daily Consumption of Key Dietary Components (N=244)

Legend: ■ Times per Day (Pre)   ■ Times per Day (Post)

Component	Times per Day (Pre)	Times per Day (Post)
Vegetables	1.88	1.77
Fruits	1.99	2.13
Whole Grains	1.05	1.21
Refined Grains	1.14	1.24
Milk	1.98	1.95
Water	5.37	5.16
SSBs	1.36	1.09**

SSBs = sugar- sweetened beverages, ** decrease was highly significant at $p < 0.01$

Figure YDE-5. Change in Type of Milk Usually Consumed, Pre to Post, N=244

Type	Change in % of Students
Unknown	-5.8*
None	1.1
Soy, almond, rice, or other	4.4*
1% or fat-free	1.1
2%	-1.6
Whole	-4.9

Change in % of Students

*Significant at $p < 0.05$

In terms of PA behavior, most KAN-Q items revealed no statistically significant changes. While there was a significant increase in number of minutes spent being active during physical education (PE), this is likely a product of poor question design rather than a positive finding: The KAN-Q framed the question to ask about PE yesterday, which has been determined problematic during reliability testing since most schools offer PE on weekly schedules rather than daily.[5] Nonetheless, when minutes spent in PE were combined with minutes spent being physically active after school, the percent of respondents who met the national guidelines for getting 60 minutes of PA yesterday remained the same, 42.5%, from pre- to post.

When considering the lack of findings for PA behaviors, it should be noted that this KAN-Q subscale was deemed particularly problematic in the recent reliability testing, which may have affected the Evaluation Team's ability to detect change.

Figure YDE-6. Change in Number of Minutes Spent Active, Pre to Post (N=244)
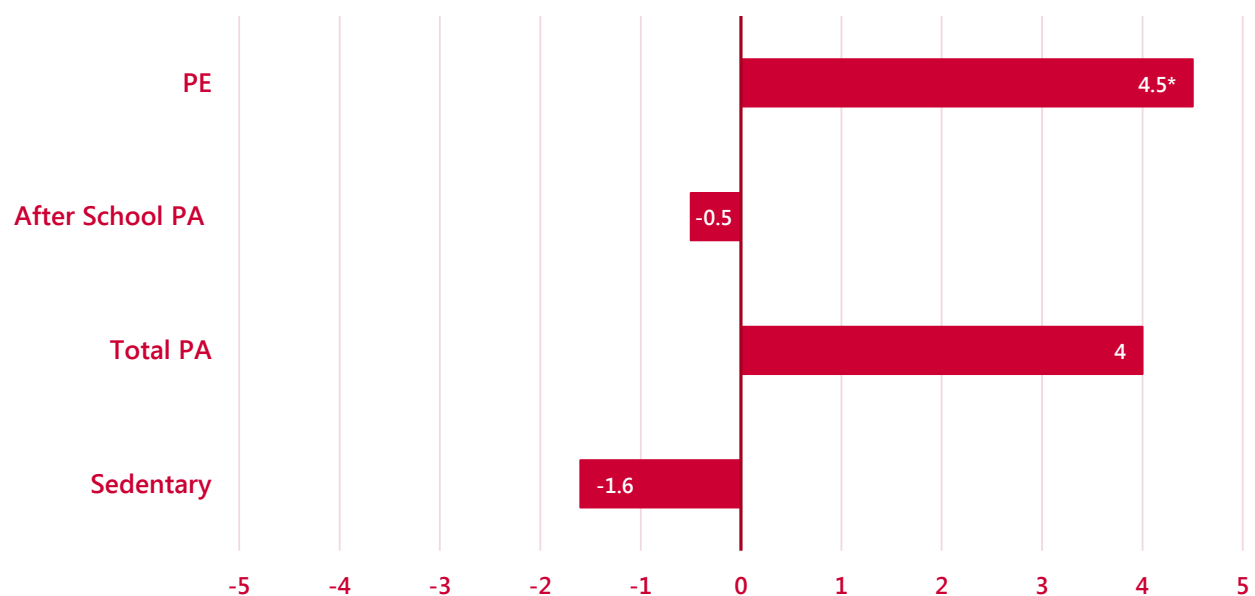
Note: PE=Physical Education, PA=Physical Activity, * Significant at p<0.05

Qualitative Results. Regarding the FFY16 evaluation of youth DE, LIAs focused on: *barriers to participation* because of delayed KAN-Q rollout and alignment with only one curriculum, and *excitement regarding FFY17 participation* in the expanded use of the

"[T]he increase in the number of curricula that are tied to the KAN-Q will increase our chances for being able to proctor the surveys... so that we can better assess the program and our strengths and weaknesses."

KAN-Q. The early enthusiasm for administering the KAN-Q in FFY17 centered on its use with more youth curricula and its availability before the start of the 2016-17 school year, which falls in FFY16. More generally, narratives revealed two curricula, CATCH Kids Club and Serving Up MyPlate, to be the most popular among LIAs (Figure YDE-7).

Given the FFY17 expansion of the KAN-Q with the CATCH Kids Club Basic Concepts series, the Evaluation Team expects higher participation rates in the upcoming year.

Figure YDE-7. Number of LIAs[a] that Report Using K-12 Curriculum in the FFY16 Semi-Annual Report Narratives
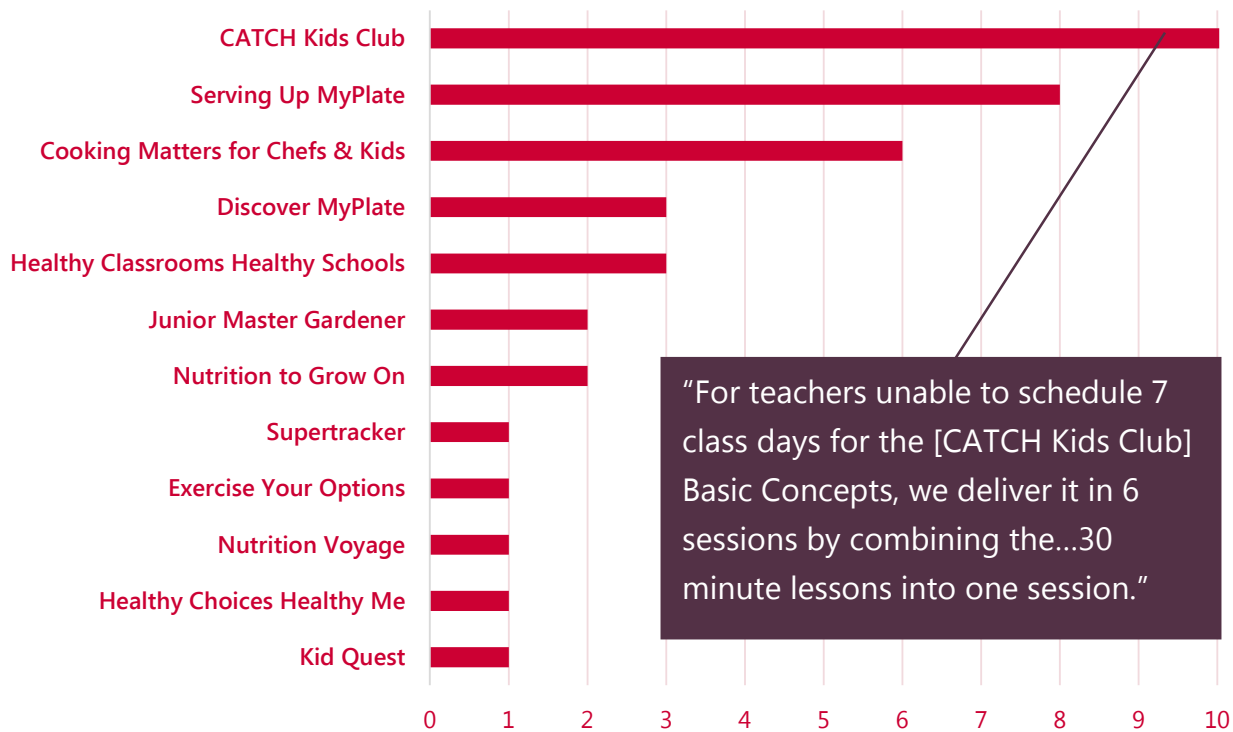
"For teachers unable to schedule 7 class days for the [CATCH Kids Club] Basic Concepts, we deliver it in 6 sessions by combining the...30 minute lessons into one session."

[a] LIAs were defined as individual health departments (N=7) and distinct units within the UA Cooperative Extension (N=12), for a total of 19 LIAs that made narrative reports in FFY16.
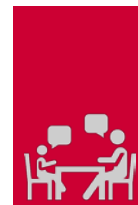
Table YDE-1. LIA Narrative Feedback Regarding AzNN-Approved Curricula in FFY16

Curriculum	Strengths	Weaknesses
CATCH Kids Club	Explicit alignment with Healthy Eating and Physical Activity (HEPA) Standards enhances school interest LIAs use CATCH to deliver DE in conjunction with strategy 12 CSPAP LIAs feel confident using CATCH because of CATCH training	Turnover of CATCH-trained staff can inhibit programming
Serving Up MyPlate	Explicit alignment with HEPA and Common Core Standards enhances teacher interest Students enjoy content and learn new skills	Required number of lessons (9) is high, inhibiting teacher interest and/or ability to schedule the series
Cooking Matters for Chefs and Kids	Behavioral focus (food preparation and tasting) enhances teacher and student interest Flexible in terms of scheduling and working across ages	Other Cooking Matters curricula (e.g. Cooking Matters for Kids) are not AzNN-approved
Healthy Classrooms Healthy Schools		Not explicitly aligned with HEPA/ or Common Core Standards
Junior Master Gardener	LIAs use curriculum to deliver DE in conjunction with strategy 2 (school gardens) and school health strategies 10 and 11. Shorter lessons make scheduling easier	Not available for high school, which needs a gardening curriculum
Supertracker		Requires computer access that is not always available in schools
Healthy Choices Healthy Me	Free	Not enough hands-on learning opportunities
Nutrition Voyage		Required number of lessons (9) is high, inhibiting teacher interest and/or ability to schedule the series
Kid Quest	Includes useful internal assessments for students and teachers	
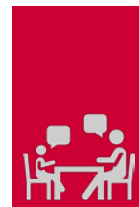
In terms of feedback regarding specific curricula, LIAs described strengths and weaknesses of the AzNN-approved curricula listed in Table YDE-1. LIAs generally reported positive experiences with the CATCH Kids Club curriculum. Serving Up MyPlate references were positive *when the curriculum was able to be implemented*, however the nine-lesson requirement was reported to inhibit successful scheduling. Interestingly, most LIAs did not report difficulty in scheduling the seven-lesson Basic Concept Series required for CATCH Kids Club as the foundational series before flexible scheduling of other CATCH classes. This may be due to the slightly shorter series length, a greater interest in using CATCH, or a lack of LIA awareness regarding the Basic Concept Series requirement. Thus the AzNN may wish to remind LIAs of that requirement to ensure that curriculum guidelines are being followed.

Beyond references to DE evaluation and specific curricula, SARNs described strengths, opportunities and threats related to general DE programming targeting youth. These themes emerged:

Teacher and Student Feedback Revealed Strength of DE Programming. In particular, five LIAs carried out internal assessments. Teacher evaluations found positive teacher perceptions of SNAP-Ed DE, and student post-assessments revealed learning had occurred.

> **"[B]ecause of the nutrition lesson that was provided, I challenged my class** to pick one healthy thing we could do for two weeks... they chose water. I purchased water bottles and we encouraged each other to drink more water. We all drank more water!" *– Teacher comment*

DE Programming was Threatened by Common Barriers. Competing demands on the educational system and lack of top-down support for regular nutrition education in the classroom were reported to limit classroom time. This warrants further investigation, given that written LWPs scored very high for requiring schools to provide nutrition education to students (see School Health chapter): Are schools failing to implement LWPs, or do they implement nutrition education using other avenues? LIAs also described a lack of AzNN-approved curricula that met classroom needs. They called for the AzNN to explore adding curricula with briefer lessons,

shorter series, better alignment with educational standards, and new topics across more age groups. For example, LIAs requested an alternative gardening series for the lengthy Growing Healthy Habits in K-2 and a high school gardening curriculum.

Relationship Building Helped to Expand Opportunities for DE. LIAs described a variety of successful strategies to build relationships with schools and teachers to

> "The program's health educators were…able to attend many of the **beginning of the year teacher meetings** which increased the number of schools participating in direct education."

enhance their ability to deliver DE. These included ways to develop partnerships with tribal communities, use positive experiences with other SNAP-Ed support services to gain classroom access, and reach out to new partners.

Behaviorally-focused DE Reinforced Learning and Generated New DE Opportunities. LIAs, teachers and students valued skill-building components of curricula (e.g. label reading, cooking) as well as food demonstrations and taste tests, which often led to requests for more of the same.

> "Youth have been participating in a series of classes from the Cooking Matters for Chefs and Kids curriculum and have **responded very positively to sampling food** in the lessons. One student even told a UANN educator, **'I don't eat vegetables at home, but I am going to ask my mom to buy some.'"**

DE Opportunities Outside of the School Day were Nurtured. Beyond the normal school day/school year, LIAs were able to reach more children over longer periods of time by scheduling DE during afterschool and summer programs, including 21st Century Grant programs and the Summer Food Service Program (SFSP). The latter aligned well with strategy 4, support of the SFSP.

DE Related to Gardening Strengthened SNAP-Ed Programming. LIAs described frequent DE related to gardening, including lessons delivered in conjunction with strategy 2. LIAs requested more gardening curricula, specifically for high school.

Summary of Findings. Overall, the FFY16 KAN-Q results for the Serving Up MyPlate curriculum suggest that *student outcomes improved for nutrition but not PA*. Key lessons were learned from LIAs' experience with the FFY16 evaluation that have already begun to influence the expanded evaluation of youth DE, and other LIA feedback can help to inform future decisions related to AzNN-approved curricula and DE programming in general.

Nutrition Knowledge and Behaviors

- Students appeared to have learned key messages for MyPlate food groups
- Some positive changes were found for healthy hydration behaviors
- Other short-term indicators like attitudes were not measured; this inhibits interpretation

Physical Activity Knowledge and Behaviors

- Less than half of students reported being active for at least 60 minutes/day
- No notable changes were found for PA knowledge or behaviors
- Findings are difficult to interpret given poor reliability of these scale items

Design of the Youth DE Evaluation

- No LIAs reported problems regarding the KAN-Q administration protocol
- LIAs are enthusiastic about KAN-Q use with more curricula and/or multi-level interventions

AzNN-Approved Curricula

- Explicit alignment of curricula with HEPA and/or Common Core Standards can help LIAs market DE to schools; some districts have their own standards that LIAs should examine
- Changes to approved curricula should consider each lesson's length, the series length, flexibility in delivery guidelines, gaps in curricula for by age group and/or topic, and inclusion of behaviorally-focused elements
- CATCH and Cooking Matters are popular among LIAs and offer additional curricula not currently approved by the AzNN

General DE Programming

- Beyond curricula, food demonstrations and tastings promote school interest and learning
- LIAs are creative in delivering lessons using a variety of afterschool and summer programs. Collecting and sharing common opportunities (e.g., 21st Century Grants) may help expand DE

County Highlights

Learning in Pinal. The UA Cooperative Extension, Pinal (Pinal Extension) submitted 64 matched pre-post assessments from fourth graders. The Serving Up MyPlate series delivered by Pinal Extension staff was associated with a significant increase in student learning related to numerous categories: vegetables, fruits, whole grains, and physical activity (Figure YDE-8).

Figure YDE-8. Percent of Knowledge Questions Correct Among Fourth Graders in Pinal County (N=64)

- ■ % Correct (Pre)   ■ % Correct (Post)
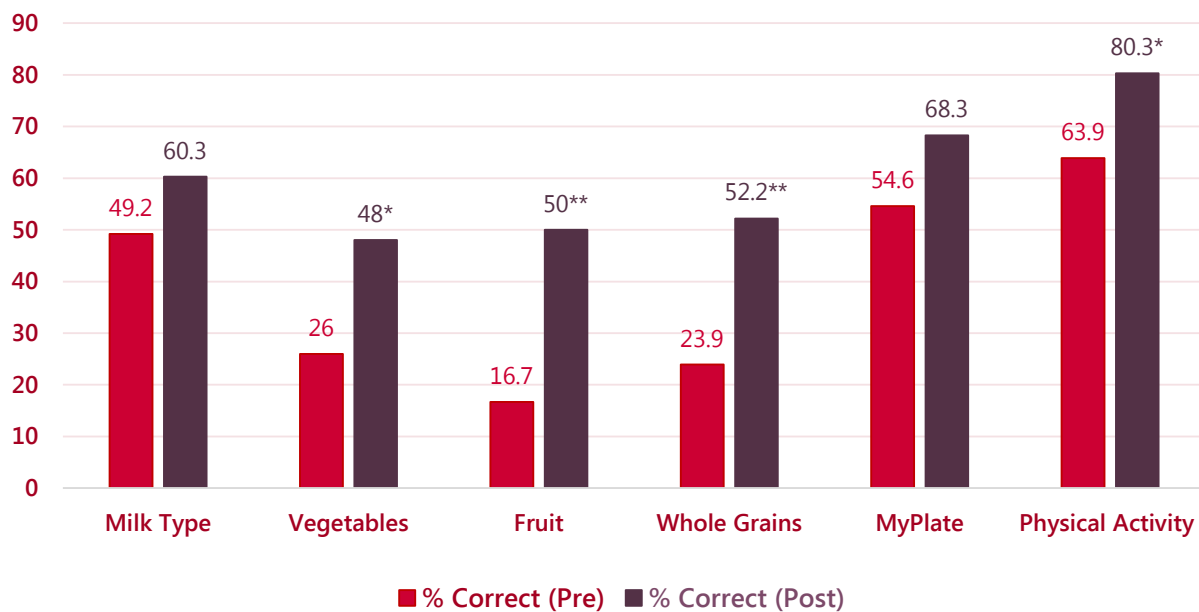
* increase was significant at p<.05, ** increase was highly significant at p<0.01

Healthier Drinks in Yavapai. Yavapai County Community Health Services worked with fifth graders to submit 129 matched pre-post assessments, far more than any other LIA. In addition to a significant increase in learning about milk, findings for Yavapai revealed a highly significant decrease in sugary drink consumption and a significant increase in "soy milk, almond milk, rice milk, or other milk." These results *drove overall findings* and align with Dietary Guidelines for healthy beverages.
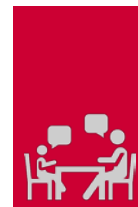
KEY FINDINGS AND RECOMMENDATIONS

🔑 In FFY16, behaviorally-focused DE was broadly and successfully delivered across LIAs in conjunction with PSE-level programming.

🔑 The FFY16 outcomes evaluation of the Serving Up MyPlate curriculum revealed some knowledge gains but little behavior change. The AzNN may wish to consider assessing behavioral *intentions or attitudes* in the KAN-Q to capture shorter-term indicators more likely to change as a result of a DE series.

🔑 The AzNN should also consider revising future evaluations targeting youth to include KAN-Q improvements and expanded KAN-Q use with more interventions.

🔑 The AzNN may wish to consider adding or revising approved curricula, in particular curricula recommended by LIAs (e.g. Cooking Matters for Kids) and those meeting LIA needs for flexibility, shorter length, and unaddressed age groups and topics.

🔑 The AzNN may also consider examining all approved curricula for school-aged youth against HEPA Standards and provide a crosswalk and training to LIAs to help them promote specific curricula to schools.

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5. LeGros, T, Hartz, VL, Jacobs, LE. Reliability of a Kid's Activity and Nutrition Questionnaire for School-Based SNAP-Ed Interventions as Part of a Tiered Development Process. *J of Nutr Ed and Behav.* (2016) Available at: http://dx.doi.org/10.1016/j.jneb.2016.10.003.

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Direct Education - Adult

Background

With an adult obesity rate of 28.4% statewide,[1] nearly 75% of adults reporting inadequate fruit and vegetable consumption across the state,[2] and nearly 19% of adults reporting no leisure-time PA,[3] it is clear that a need remains to reach adults with information about healthy eating and active living. The AzNN has approved seven evidence-based curricula for providing this education to adults in the form of single or series lessons. In FFY16, the Evaluation Team conducted an impact evaluation, which is an assessment of how an intervention affects outcomes, on the four-lesson adult DE curriculum MyPlate for My Family (MPFMF).

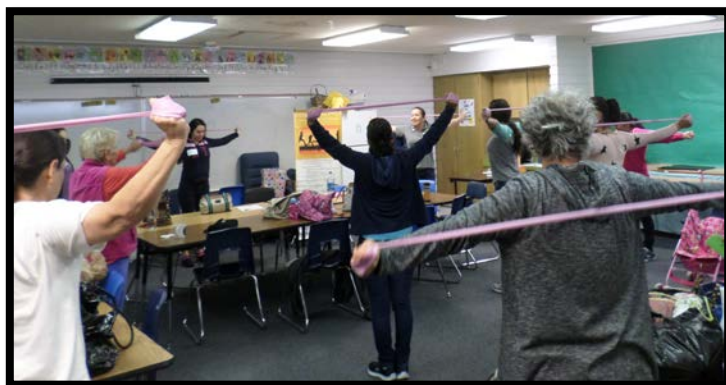The Evaluation Team's primary goal in conducting this adult DE impact evaluation was to determine if the MPFMF four-class series covering nutrition and PA topics delivered by LIAs throughout Arizona changed the behaviors of those receiving the adult curriculum (*intervention group*), compared with a SNAP-eligible *control group* in Arizona. A secondary goal was to explore class participants' experience and applications of the curriculum's educational messages, including attitudes and knowledge.

Figure ADE-1. At a MPFMF Class in Maricopa County, Participants Try Resistance Bands
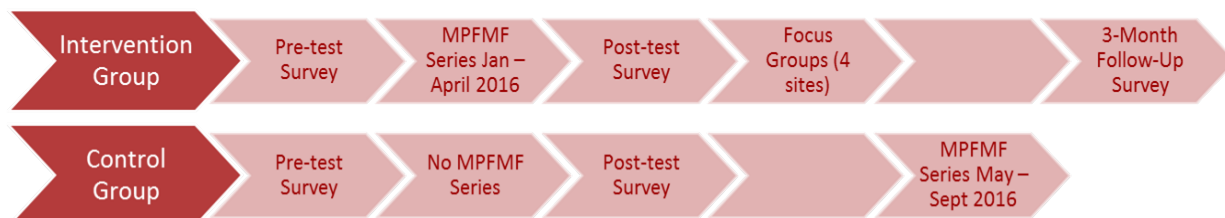
Methods

Intervention vs. Control Groups. Individuals became part of the *intervention group* if they: (1) participated in a MPFMF class series offered by an LIA in Arizona between January and April 2016, and (2) agreed to complete the pre-test survey proctored by an

Evaluation Team member. The Evaluation Team is only aware of two class series that the Team was not available to proctor during this time. Individuals became part of the *control group* by attending a non-DE SNAP-Ed activity happening in a county where there had also been an intervention group. These activities included health fairs, parent nights, a parenting class, an afterschool pickup time at a SNAP-Ed qualified site, and a youth event utilizing parent chaperones. All attendees reached by Evaluation Team proctors at these activities were invited to participate in the control group.

Individuals were *not randomly assigned* to a group. Considering that a goal of SNAP-Ed is to provide DE equitably to all who are eligible, assignment to the control group for this project was based upon the opportunity to participate in a future class series (i.e., delayed intervention), which was preferable because SNAP recipients and eligibles were not denied the intervention.

Figure ADE-2. Design of the Adult DE Impact Evaluation

| Intervention Group | Pre-test Survey | MPFMF Series Jan – April 2016 | Post-test Survey | Focus Groups (4 sites) | 3-Month Follow-Up Survey |
| Control Group | Pre-test Survey | No MPFMF Series | Post-test Survey | MPFMF Series May – Sept 2016 | |

At the start of the adult DE evaluation, there were 18 class series representing 151 individual adult participants in the intervention group. There were eight events where control group participants were recruited, representing 155 individual adult participants in the control group.

Proctors attended each series and administered pre-tests to participants immediately prior to the first lesson. Participants who completed surveys for either the intervention or control group were offered a $10 grocery store gift card as a thank-you for their participation. Figure ADE-3 shows the location of the adult DE evaluation groups, including intervention (indicated by the MyPlate icon) and control (indicated by blue stars) groups.

**Figure ADE-3. Counties Hosting Intervention and Control Groups**
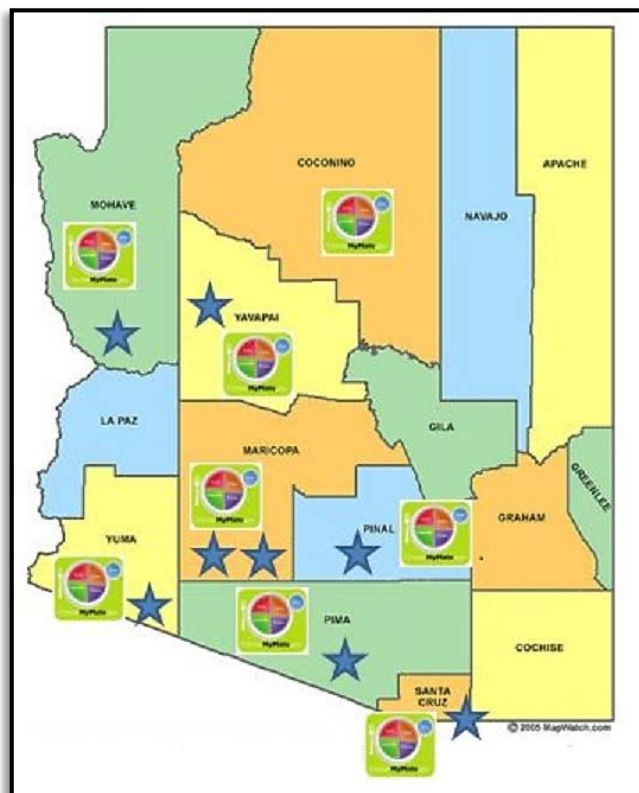
For the intervention group, post-tests were administered immediately following the fourth class. When control group participants completed their first survey, a mailing address was collected to send a follow up survey after four weeks. This periodicity matched the duration of the MPFMF class series for most intervention groups, who attended one class session weekly. After the intervention group completed the post test, Evaluation Team members mailed a follow-up survey to each individual three months later.

At four sites pre-selected to match the project's geographic and linguistic representation (in Coconino, Maricopa, Santa Cruz, and Yavapai counties), participants were offered the opportunity to take part in a focus group to discuss their experiences with the MPFMF classes. Focus group participants received a $10 grocery store gift card as a thank you for their involvement.

At each time point (pre, post, and follow-up), the University of California Cooperative Extension's (UCCE) Food Behavior Checklist (FBC) was used.[4,5] The FBC is a visually-enhanced 16-item self-report checklist that measures eating and shopping behaviors. It has been extensively validated with the low-income population and is available in English and Spanish. For PA behaviors, the UCCE On the Go survey was used,[6] which is a visually-enhanced 20-item questionnaire focusing on self-reported adult PA behaviors in the last seven days. It has been adapted for low-income audiences from the validated International Physical Activity Questionnaire[7] and combines English and Spanish within the same survey.
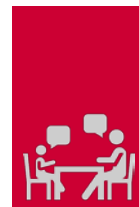
For the focus group, the Evaluation Team developed a focus group guide that addressed participants' perceptions of the MPFMF curriculum (Appendix B).

At the end of the adult DE evaluation, there were 16 class series representing 98 individual adult participants in the intervention group (65% retention rate from pre to post). Of these 98 participants, 21 participated in a focus group after the 4th MPFMF class. The two class series that dropped out had zero participants who attended all four classes. There were eight events where control group participants were recruited, representing 80 individual adult participants in the control group (52% retention rate from pre to post).

After completion of the adult DE evaluation, the Evaluation Team also surveyed participating instructors to gather their perspectives on delivering the MPFMF curriculum (n=10 instructors).
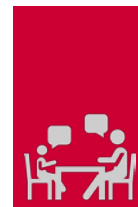
Data Entry and Analysis. Each of the pre and post survey packets, including a demographic cover sheet, the FBC, and the UCCE On the Go survey, were data entered and statistics (frequencies, means) were produced using STATA v.13.1, including statistical tests for significant differences between groups and across time.

Focus groups were recorded with participants' permission and later transcribed. The transcripts were coded thematically using the NVivo v.11.0 software by two coders, and discrepancies in coding were resolved by face-to-face meetings between the two coders, resulting in 13 codes applied to transcripts.

The MPFMF instructor survey was created in the online survey platform Qualtrics by Evaluation Team staff. The survey asked for feedback on class preparation, curriculum implementation, how the curriculum was received by participants, and potential modifications that would enhance participants' learning. Evaluation Team staff summarized responses to the 16 questions.

Results

Demographics. The adult DE impact evaluation reached individuals across eight counties in Arizona, with Maricopa and Santa Cruz providing the most participants. Participation rates are summarized in Table ADE-1.

In the tables that follow, adult DE evaluation participants are identified as:

- *Intervention Group (matched pre-post)*. These participants attended a MPFMF class series and completed pre and post survey packets.
- *Control Group (matched pre-post)*. These participants completed pre and post survey packets four weeks apart with no MPFMF class series in between.
- *Follow-up Group*. These participants are a subset of the Intervention Group who *in addition* completed a follow-up survey packet three months after completing the MPFMF class series.

Table ADE-1. Adult DE Evaluation Participants in FFY16, by County

COUNTY	Intervention Group (matched pre-post)	Control Group (matched pre-post)	Follow-up
Coconino	2	0	2
Maricopa	63	28	40
Mohave	0	5	0
Pima	4	13	2
Pinal	6	8	5
Santa Cruz	13	7	7
Yavapai	7	13	3
Yuma	3	6	0
ALL COUNTIES	**98**	**80**	**59**

The typical participant in the MPFMF class series was female, Hispanic, reported white or undisclosed race, and was aged 30-49. In the control group, age varied more widely due to the type of events (such as health fairs) that attracted all ages. Table ADE-2 presents a demographic summary of the intervention, control, and follow-up groups.

In the MPFMF classes, the vast majority of attendees had children at home, and about one third of the attendees received SNAP benefits. Numbers were slightly lower for children at home in the control group. The percent receiving SNAP benefits was also
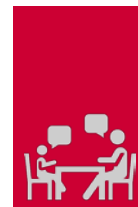
higher for the control group, for unknown reasons. Figure ADE-4 indicates the demographic factors that *differed significantly* between the intervention and control groups.
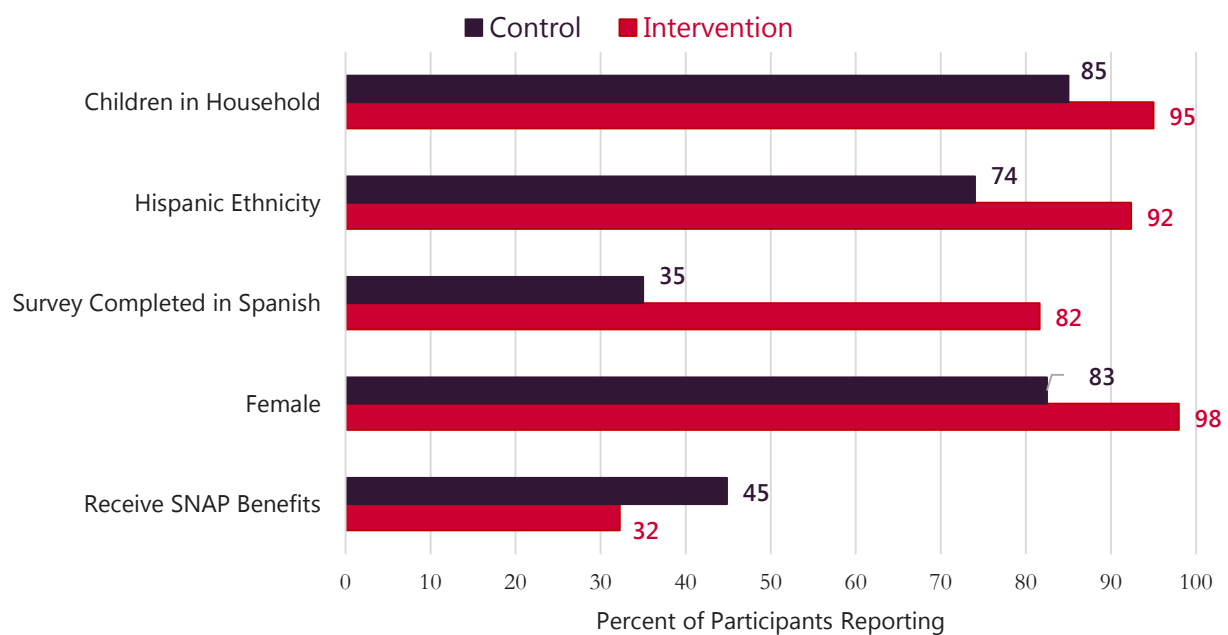
Table ADE-2. Demographics of Intervention, Control, and Follow-up Groups Participating in the Adult Impact Evaluation, FFY16

	Intervention Group (matched pre-post)	Control Group (matched pre-post)	Follow-up Group
% Female	98%	83%	100%
% Hispanic	92%	74%	92%
% Completed Spanish Survey	82%	35%	81%
% White Race	52%	56%	44%
% Undisclosed Race	44%	38%	53%
% Aged 30-49	78%	50%	75%
% Other Age Groups			
18 – 29	15%	19%[a]	15%
50 – 59	4%	9%	7%
60+	3%	15%	3%
% Percent with Children at Home	95%	85%	93%
% Receiving SNAP Benefits	32%	45%	31%

[a]For the control group, 7.5% did not include an age group so the column does not add to 100%.

Figure ADE-4. Significant Demographic Differences between Intervention and Control Groups

Legend: ■ Control ■ Intervention

Demographic	Control	Intervention
Children in Household	85	95
Hispanic Ethnicity	74	92
Survey Completed in Spanish	35	82
Female	83	98
Receive SNAP Benefits	45	32

Percent of Participants Reporting

Healthy Eating Behaviors. While healthy eating behaviors have many dimensions, the MPFMF curriculum focuses on key behavioral outcomes for SNAP-Ed, including:

- Increasing familiarity with MyPlate
- Clarifying proper portion sizes
- Encouraging fruit and vegetable consumption

Fruits and Vegetables. The FBC captures behaviors related to fruit and vegetable consumption, consumption of lean protein, and consumption of sugar-sweetened beverages. Fruit and vegetable consumption behaviors will be presented first in more detail, because the FBC has more questions related to these behaviors, and the Dietary Guidelines for Americans (DGA) have set goals pertaining to them.

Overall, participants in the MPFMF classes increased their fruit consumption, with 62% of participants meeting the DGA goal of 1.5 cups of fruit per day by the three-month

follow-up survey. However there were only modest differences in fruit consumption between the intervention and control groups. For vegetable consumption, cups of vegetables eaten per day was the only behavior that changed significantly, but even with a steady increase in consumption across post and follow-up, only 21% of participants met the DGA goal of 2.5 cups of vegetables per day by the three-month follow-up. Tables ADE-3 and ADE-4 present findings from the intervention group at each time point (pre, post and follow-up) and indicate whether the intervention group differed significantly from the control group at post, or across time. Despite some positive findings, results fell short of the ideal, namely significant positive change within the intervention group across time *and* significant differences in healthy eating from the control group.

Table ADE-3. Fruit Consumption Before and After MPFMF Series, FFY16

BEHAVIOR	Intervention Group			Significant* positive differences between Intervention vs. Control at post?	Did Intervention or Control show more improvement?
	Pre	Post	Follow-up		
Always eat more than one kind of fruit each day	19%	17%	23%*	No	Neither
Always eat fruits or vegetables as snacks	30%	29%†	26%	No	Neither
Consumed citrus fruit or juice during past week	82%	87%	89%	Trend (Intervention)	Intervention
Cups of fruit eaten each day	1.29	1.42*	1.61*	No	Intervention
Met DGA fruit goal[a]	36%	43%	62%	No	Intervention (Trend)

[a] DGA fruit goal: Men All Ages=2 cups/day, Women Ages 18-29=2 cups/day, Women Ages 30+=1.5 cups/day

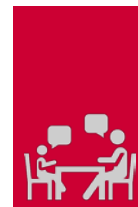† trend to significance .05<p<0.10; *significant at p<.05

Table ADE-4. Vegetable Consumption Before and After MPFMF Series, FFY16

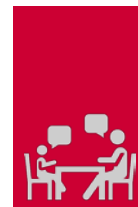| BEHAVIOR	Intervention Group			Significant* positive differences between Intervention vs. Control at post?	Did Intervention or Control show more improvement?
	Pre	Post	Follow-up		
Always eat more than one kind of vegetable each day	27%	20%	28%	No	Neither
Always eat two or more vegetables at your main meal	23%	28%	24%	Yes (Intervention)	Neither
Cups of vegetables eaten each day	1.35	1.47*	1.67*	No	Intervention
Met DGA vegetable goal[a]	15%	18%	21%	No	Neither

[a]DGA vegetable goal: Men Ages 18-50=3 cups/day, Women Ages 18-50=2.5 cups/day; *significant at p<.05

Lean Protein Foods. Table ADE-5 summarizes findings about lean protein foods. Although there was not much change over time in taking the skin off chicken, it was a behavior commonly engaged in by class participants, and they performed this behavior at significantly higher rates than the control group at the post survey. Fish consumption rose across time, and began to diverge from the control group, which could be attributed to the presence of fish recipes in the curriculum.

Table ADE-5. Lean Protein Consumption, Before and After MPFMF Series, FFY16

BEHAVIOR	Intervention Group			Significant* positive differences between Intervention vs. Control at post?	Did Intervention or Control show more improvement?
	Pre	Post	Follow-up		
Always take the skin off chicken	74%	74%	67%	Yes (Intervention)	Neither
Ate fish during the past week	62%	68%	75%†	Trend (Intervention)	Neither

*significant at p<.05, † trend to significance .05<p<0.10

Sugar-Sweetened Beverages. Table ADE-6 shows that, although participants did show a slight decrease in sugary beverage consumption, it was significant only for the fruit drinks category at post (but not follow-up). The intervention group did drink less of both types of beverages than the control group at the time of the post survey.

Table ADE-6. Sugar-Sweetened Beverage Consumption, Before and After MPFMF Series, FFY16

BEHAVIOR	Intervention Group			Significant* positive differences between Intervention vs. Control at post?	Did Intervention or Control show more improvement?
	Pre	Post	Follow-up		
Never drink fruit drinks, sports drinks, or punch	32%	38%*	34%	Yes (Intervention)	Neither
Never drink regular soda	38%	37%	45%	Trend (Intervention)	Neither

*significant at p<.05, † trend to significance .05<p<0.10

Food Resource Management Behaviors. For food resource management, the MPFMF curriculum specifically focuses on:

- Offering tips on saving time and money when food shopping
- Encouraging planning and preparing of healthy meals with help from kids

Table ADE-7 shows that the intervention group's use of the Nutrition Facts label when shopping increased across time, however this change was not significantly different from the control group. Food security also increased for the intervention group, and although the percentage of participants reporting never running out of food did not increase at follow-up, it remained steady. Comparing English and Spanish speakers at baseline, Spanish speakers reported significantly higher levels of food insecurity.

Food security increased in the intervention group and declined in the control group, which suggests that the MPFMP series may have positively influenced food security. Although there was no significant difference in this indicator for intervention vs. control at post, the difference in directionality for the two groups is notable.

Table ADE-7. Food Resource Management Before and After MPFMF Series, FFY16

BEHAVIOR	Intervention Group			Significant* positive differences between Intervention vs. Control at post?	Did Intervention or Control show more improvement?
	Pre	Post	Follow-up		
Always use the Nutrition Facts label when food shopping	14%	16%*	19%*	No	Neither
Never run out of food before the end of the month	16%	25%*	26%	No	Intervention

*significant at p<.05

Physical Activity Behaviors. For physical activity (PA), the MPFMF curriculum focuses on increasing regular physical activity (PA) for adults and their families.

As depicted in Table ADE-8, findings for PA behaviors were generally better than for food behaviors. Intervention group participants increased the number of days they were active, their moderate activity, and their vigorous activity per week across time, and the intervention group generally outperformed the control group on all PA factors at post. Of note, Spanish-speaking participants showed higher activity levels at baseline.

By the three-month follow-up, 74% of MPFMF class participants met the PA Guidelines for Americans (PGA) goal of 150 minutes per week of moderate activity, while 81% met the PGA goal of 75 minutes per week of vigorous activity. In Table ADE-8, median values for PA minutes are reported because the PA distributions are skewed: Many people reported low to moderate numbers, but a few reported very high numbers, thereby increasing the mean values and making the median more representative of how many minutes per week most participants were active.

Table ADE-8. Physical Activity Behaviors Before and After MPFMF Series, FFY16

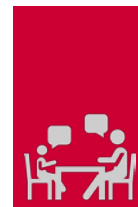| BEHAVIOR	Intervention Group			Significant* positive differences between Intervention vs. Control at post?	Did Intervention or Control show more improvement?
	Pre	Post	Follow-up		
Mean days active per week	3.8	4.3*	4.6*	Yes (Intervention)	Intervention
Median minutes of total moderate activity	115	205*	240	Yes (Intervention)	Intervention
Met PGA moderate activity goal?[a]	46%	68%*	74%*	Trend (Intervention)	Intervention
Median minutes of total vigorous activity	75	135	195*	Yes (Intervention)	Intervention (Trend)
Met PGA vigorous activity goal?	55%	73%*	81%*	Yes (Intervention)	Intervention

[a]PGA guidelines: Adults ages 18-64=150 minutes of moderate exercise or equivalents/week and 75 minutes of vigorous exercise/week; *significant at p<.05; † trend to significance .05<p<0.10

Hours Seated and Sedentary. Although intervention group participants reduced sitting and sedentary time across the four weeks of the class and improved relative to the control group, this change was not maintained at the three-month follow up, as indicated in Table ADE-9.

Table ADE-9. Sitting Behaviors Before and After MPFMF Series, FFY16

BEHAVIOR	Intervention Group			Significant* positive differences between Intervention vs. Control at post?	Did Intervention or Control show more improvement?
	Pre	Post	Follow-up		
Hours spent sitting per week	22.6	19.4*	22.8	Yes (Intervention)	Intervention
Hours spent sedentary (sitting + sitting in transit) per week	27.8	24.3†	26.9	Yes (Intervention)	Intervention

† trend to significance .05<p<0.10; *significant at p<.05

Qualitative Results

Focus Groups: Class Participant Awareness and Attitudes. The focus group participants described key themes related to their participation in the MPFMF series. These included:

- Increased consumption of new foods
- Perceived barriers to serving healthier foods and attempts to overcome them
- Increased involvement of children in food preparation
- Increased vigilance regarding their children's overall food environment

The majority of focus group participants were trying new fruits and/or vegetables thanks to a greater awareness that emerged from the MPFMF class series, but some commented that their children were resisting healthier habits. To combat this, many participants were taking small steps, such as offering juice diluted with water to adjust their children's tastes. The participants also voiced a new awareness that involving family and engaging children while cooking or exercising helped encourage the family to learn healthier habits, and was an enjoyable way to spend family time.

Some participants expressed having difficulty planning/budgeting for meals. The majority of participants commented that they were tired at the end of the day and usually just wanted to prepare something quick for dinner. However, they reported increased awareness of how to make shopping lists and use recipes, which made meals simpler to plan. They also commented on growing awareness about how to read food labels and focus on "what we should look for" (i.e., nutrient content), which was beneficial for meal planning.

"...Definitely carving out time and pre-planning of the week's meals....the hardest part [is] in terms of actually sitting down and mak[ing] a list...So, we have to back up, get in that habit of thinking ahead."

The MPFMF classes made participants aware that some foods contributed little nutritionally to their families' diets, and they could, in fact, have a deleterious effect. Participants also commented that they were becoming more aware that their children

> "We are the ones that take the food to the house, so we are the ones that are sometimes giving poison[a] to our children and we are not realizing it."

[a]SNAP-Ed instructor did not use disparaging messages—participant's perspective only.

consume unhealthy food from other places (schools, etc.) and they needed to be informed about their families' overall dietary intake.

Participants most enjoyed information about portion sizes (Lesson 3: *Vegetables and Fruits – Simple Solutions*), and also about getting children involved in meal preparation (Lesson 1: *MyPlate Family Meals*).

> "I just thought**, hey, that's what we could be doing as a family**. Sit down together, and everybody could be doing something, instead of Mom doing everything...I had a vision, and I saw that as a family, being able to do that. And, what a fun way to make a meal."

Although participants enjoyed learning about portion size, they also expressed challenges with these messages. Some admitted eating too much so as not to waste food, and others were not sure about portion sizes for different types of food and for different-aged family members. Some participants also described different standards for portion sizes for certain family members. For example, husbands who have certain jobs may be afforded larger portion sizes, ("Because he works harder, I can serve him more,") or children who complain or sneak food may wind up with larger portions.

> "On the oversized portions - you get home, and you don't have the pre-plan for the lunch and dinner, you're just sitting down and **you're just hungry and tired and you're just going to have a second helping**. Because, golly, I put leftovers in the fridge, and nobody eats them, and by the end of the week, there's all my leftovers. I might as well have eaten two portions."

> "Many times, my son told me that he is still hungry because the amount is very little. Just eat it, I tell him, try to just eat a banana or apple. And, he does it, but then **I catch him hiding - he is nibbling on more food.**"

Most participants expressed that the themes and messages delivered in the MPFMF curriculum were applicable to their lives. While respondents said these messages might be difficult to put into practice, they were worthwhile goals to pursue. Some mentioned ongoing difficulty in changing to healthier beverages for their families, such as using lower-fat milk and salad dressings, and switching from juice to water.

> "The [lower fat] milk. It is very hard for me…because I have bought it and when I buy it, it stays [in the refrigerator]. I have to throw it in the garbage. It goes bad. My children do not like it, and I have tried to change it, and…no. **They tell me it tastes like water, that it doesn't taste like milk**."

Participants liked hands-on activities and food demonstrations that let them "be part of it, instead of just reading the recipe." They appreciated instructors offering and emphasizing new recipes and different healthy meals. Many participants appreciated that educators answered questions and explained concepts thoroughly, and they also enjoyed being able to share with each other and talk about their own lives and perspectives, rather than just be lectured to.

Some participants said that the class format did not offer enough time to delve into specifics, and they would like to spend more time learning about MyPlate topics. Some also said that they would have liked to learn a little bit more about the food labels and what nutrients they should focus on when shopping.

Instructor Survey: MPFMF Instructor Attitudes and Behaviors. Findings from the instructor survey showed that the majority of the instructors were motivated to teach the MPFMF curriculum because the content, teaching/learning approach, and four-lesson length of the series matched the needs of their audience.

During preparation and implementation of the curriculum, all of the instructors used the MPFMF Instructor Guide, and 90% used the MPFMF handouts. To reinforce lessons, half of the instructors provided the participants with extra handouts such as: 1) exercises to use with resistance bands, 2) recipes, 3) Fun Food News, and 4) handouts on added sugar and whole grains. All instructors provided incentive items to class participants.
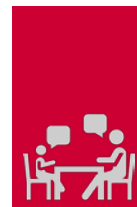
These items supported cooking (e.g., measuring cups and spoons, cutting boards, oven mitts, steamers), PA (e.g., resistance bands, hacky sacks), and reinforced MyPlate concepts (e.g., MyPlate activity books for kids, MyPlate placemats, and portion plates).

> "The main reason for adding the resistance band handout to the lesson was to give participants something they could refer to at home or at work when using their new resistance band. I also had a request during the prior lesson from a mom with a baby for ideas on being physically active at home."

In an effort to make the lessons more interactive, over half of the instructors added activities such as: 1) additional instruction on reading labels, 2) food demonstrations, and 3) PA demonstrations featuring activities such as resistance exercises, Zumba, or indoor PA games.
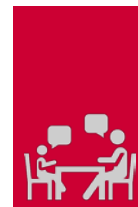
In general, instructors liked the curriculum because of the length of the series, the discussion-based format that encouraged interaction among participants, and the inclusion of practical tips about choosing food, cooking with the family, and recipes.

> "I really liked the fact that **the lessons educated participants on real-life issues**, such as getting your family to eat more fruits and veggies, and how to make family time active time."

Some challenges they confronted were time management within the lesson (depending on class size and dynamic), participant retention throughout the four-part series, lack of context for the lessons (some participants needed more background on MyPlate), the repetitive nature of the curriculum, and issues around motivating people to make and sustain change over time.

Recommended modifications by instructors to enhance participants' learning were:

- Including additional materials (i.e. MyPlate visuals, more information about whole grains, label reading, water/hydration)
- Adding activities that appeal to children, since children were present at many classes
- Access to smart phone apps to aid with grocery shopping
- Potential contact with participants between classes (e.g., sending out a list of agreed upon goals for the week)

County Highlights

Maricopa. The UA Cooperative Extension, Maricopa (Maricopa Extension) excelled in two areas of adult DE. First, they contributed more participants to the adult impact evaluation than any other county. Second, their participation in the evaluation project only represented 17% of the total number of MPFMF classes offered throughout the Maricopa Extension service area in FFY16.

Moreover, both LIAs in the county (Maricopa Extension and the Maricopa County Department of Public Health) recruited control group participants at two events, resulting in 28 control participants. In addition to stellar participation in the intervention and control groups, Maricopa County Extension successfully reached youth, adults, and seniors with DE at the same or nearby sites in order to impact the family unit at multiple points of contact.

> "Every student at Yavapai Elementary [in Maricopa] has participated in a series of three Cooking Matters lessons with exception to kindergarten (one single session) and 5th grade (nine session series). Parents...have participated in the MyPlate for My Family series. Junior Master Gardener lessons have been provided...in support of garden participation. Finally, in support of providing education to the whole community, the Eat Smart Live Strong series was provided at an older adult housing site located a quarter of a mile from Yavapai Elementary."

Santa Cruz. Despite being located in a small county, the Santa Cruz Extension contributed the second-highest number of participants to the adult impact evaluation. Participants from two MPFMF class series joined the intervention arm of the study, with 13 participants completing pre and post-tests, eight taking part in a focus group, and seven completing the three-month follow up. A control group recruited by Santa Cruz Extension also provided seven participants.

Santa Cruz Extension also strives to reach whole families with direct education for youth and parents at the same schools.

> "Santa Cruz Extension has a well-established direct education program in the elementary schools throughout most of the county. The adult program is also showing great potential, generating high interest from local elementary parent liaisons and completion of adult sessions in the spring of 2016."

Yavapai. The Yavapai Extension has tackled an ambitious combination of food systems, early childhood and DE strategies. Staff have built strong relationships with sites and champions as well as with the Yavapai County Community Health Services to ensure that the SNAP-Ed services the two agencies offer are complementary and not competing throughout Yavapai County.

> "As we come to the end of our first year of programming with SNAP-Ed we are looking forward to really mapping out the relationships we've made thus far and reviewing what has worked and what has not. We would like to become the go-to nutrition education provider for the people and organizations we've connected with, and offer a comprehensive and ongoing calendar of offerings."

Graham. Another county new to offering SNAP-Ed services in FFY16, the Graham Extension has reached adults through a consistent presence at the local food bank, Our Neighbors Pantry, and also through events held on the San Carlos Apache tribal lands in the town of Bylas. The senior program coordinator describes the success of her team in encouraging behavior change at these two sites:
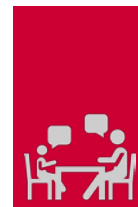
"The cooking demos at 'Our Neighbor's Pantry' are...held monthly and on average 100 families participate. All items needed to reproduce the recipe that was demonstrated are included for all families that receive food that day. Families are then empowered to make the recipe at home; this was very well received by participants at the Pantry."

"A direct education event in Bylas was to have the participants make 'Indian Fry Bread' using the My Native Plate recipe. It was interesting to watch the reaction of the people: many of them were skeptical about the healthy version of one of their favorites. They were all pleasantly surprised that they liked it."

KEY FINDINGS AND RECOMMENDATIONS

☞ More MPFMF participants were able to meet the DGA goals for fruit than for vegetables. The AzNN should consider investigating specific barriers to vegetable consumption in order to enhance DE efforts.

☞ Class participants increased their PA at moderate and vigorous levels at post and follow-up. They also decreased their sitting at post but did not maintain that decrease at follow-up. To help participants maintain reductions in sedentary behavior, LIAs may need to provide materials regarding goal-setting, and they may wish to link DE to PSEs by connecting participants to walking groups or other local PA resources.

☞ Focus group participants enjoyed hands-on activities like food demos and food preparation, and the conversational nature of the MPFMF series. The AzNN and LIAs may want to consider developing recommendations and/or enhancements that focus on participant engagement and quality of instruction.

☞ Focus group participants reported a barrier of their families' disinterest in making healthy changes. LIAs can offer assistance or resources to participants about creating whole-family healthy lifestyle changes.

☞ Spanish speakers reported higher levels of food insecurity compared to English speakers. The AzNN may want to emphasize food security issues in training and technical assistance for LIAs. LIAs should consider how to tailor DE interventions with Spanish-speaking audiences to address the potentially higher levels of food insecurity.

☞ Spanish speakers also reported higher levels of PA at baseline. LIAs should consider how to tailor DE interventions with Spanish-speaking audiences to address *maintenance* as well as *preparation and action* related to PA.

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Appendix A: List of Acronyms

ADE	Arizona Department of Education
ADHS	Arizona Department of Health Services
AzNN	Arizona Nutrition Network
CACFP	Child and Adult Care Food Program
CATCH	Coordinated Approach to Child Health (an AzNN-approved curriculum)
CDC	Centers for Disease Control and Prevention
CSFP	Commodity Supplemental Food Program
CSA	Community Supported Agriculture
CSPAP	Comprehensive School Physical Activity Programming
CUSP	Cultivate South Phoenix Coalition
DE	Direct Education
DES	Department of Economic Security
DWC	School District Wellness Committee
EBT	Electronic Benefit Transfer
ECE	Early Childcare Education
FBC	University of California Cooperative Extension Food Behavior Checklist
FFY	Federal Fiscal Year (October 1st – September 30th)
FMNP	Farmers' Market Nutrition Program
FTI	Farm to Institute
HAPI	Health in Arizona Policy Initiative
HEPA	Healthy Eating and Physical Activity Standards
HIA	Health Impact Assessment
IEC	Implementation, Evaluation, and Communication (part of the WellSAT 2.0)
IOM	Institute of Medicine
KAN-Q	Kids' Activity and Nutrition Questionnaire
LEA	Local Education Agency

LIA	Local Implementing Agency for SNAP-Ed
LSA	Living Streets Alliance
LWP	Local School Wellness Policy
MPFMF	MyPlate for My Family (an AzNN-approved curriculum)
NAP SACC	Nutrition and Physical Activity Self-Assessment for Child Care
PA	Physical Activity
PE	Physical Education
PEPA	Physical Activity and Physical Education
POD	Point of Decision
PHA	Public Health Approach
PSE	Policy, Systems, and Environmental
SARN	Semi-Annual Report Narrative (part of the AzNN Evaluation Framework)
SART	Semi-Annual Report Table (part of the AzNN Evaluation Framework)
SEM	Socio-Ecological Model
SFMNP	Senior Farmers' Market Nutrition Program
SHAC	School Health Advisory Committee
SNAP	Supplemental Nutrition Assistance Program (formerly Food Stamp Program)
SNAP-Ed	Supplemental Nutrition Assistance Program - Education
SFSP	Summer Food Service Program
TKZ	City of Tempe Kid Zone Program
UA	University of Arizona
UCCE	University of California Cooperative Extension
USDA	United States Department of Agriculture
WCFI	Wilder Collaboration Factors Inventory
WIC	Special Nutrition Program for Women, Infants and Children

Appendix B: Focus Group Leaders' Guide

After engaging in an ice-breaker activity, the discussion leader says:

I'm going to talk about each of the four classes just a little bit to refresh your memory of them, and then we're going to talk about what messages and ways of interacting in class were most and least helpful to you in adopting healthier behaviors.

- In Class 1, *MyPlate Family Meals* (Indicate Sheet for Class 1), you talked about the idea of MyPlate and different food groups (Show/Indicate Choose MyPlate graphic), and got some tips on saving time, saving money, and involving kids in preparing family meals.
- In Class 2, *How Much Food & Physical Activity* (Indicate Sheet for Class 2), you talked about planning and preparing healthy meals, getting the right amount of food, and being active.
- In Class 3, *Vegetables and Fruits, Simple Solutions* (Indicate Sheet for Class 3), you talked about trying new fruits and vegetables, getting kids to eat fruits and vegetables, and portion sizes – what is 1 cup of fruit or vegetables.
- In Class 4, *Family Time Active and Fun* (Indicate sheet for Class 4), you talked about ways to get more exercise each week and ways to get kids to exercise.

[Post the cards about the 4 classes up on the flip chart]

1. Of these four classes, was there a class you liked best?

For the next questions, I'm going to ask you to look at a set of cards I've brought along that have some of the messages you may have heard in the classes.

[Lay out the cards; as you lay each one down on the table, say aloud what the message is, for example, "Avoid oversized portions": **Note** that there will be 2 of each card.]

2. What was the most helpful message from the classes that helped you or your family make a successful change to be healthier?

[Allow participants time to choose a card, then move around the table to ask them to talk about their choice.] Possible follow-up questions:

- How did these classes influence you to make that change?
- Do you think you will keep it up? Why or why not?

3. Which message did you struggle with applying to your life? (What was something you did you want to change for yourself or your family, but couldn't?)

   [Allow participants to return their previous card and choose another one]

4. What did you hear/learn that you thought "this will just not work in my life"?

   [Allow participants to return their previous card and choose another one]

Now we are going to talk about some ways instructors and class participants may have interacted during the classes, and which of those ways you found most and least helpful.

[Lay out the cards; as you lay each one down on the table, say aloud what the message is, for example, "Instructor shares information": **Note** that there will be 3 of each card.]

5. Teaching strategies: What was something that worked well in the classes you attended?

   [Allow participants time to choose a card, then move around the table to ask them to talk about their choice.] Possible follow-up question:

   - How did this way of interacting help you?

6. Teaching strategies: What did not work as well, or was there a strategy that was missing?

   [Allow participants to return their previous card and choose another one]

[Closing]: Are there any more comments you would like to make about messages or teaching strategies?

Thank you again for taking part in this discussion. The information you have given to me will really help us to plan stronger programs in Arizona.