



# FY19 Evaluation Report



COLLEGE OF AGRICULTURE & LIFE SCIENCES  
Nutritional Sciences

# Local Implementing Agencies



This report was prepared by the AZ Health Zone State Evaluation Team, operating out of the University of Arizona Department of Nutritional Sciences. Quotes have been de-identified and may have been edited for clarity. Suggested citation: Jacobs L, LeGros T, Orzech K. AZ Health Zone FFY19 Annual Evaluation Report. January 2020. Available from: <https://nutritioneval.arizona.edu/results>

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## List of Acronyms

<b>ACT-GO</b>	Active Living Assessment	<b>PA</b>	Physical Activity
<b>ADE</b>	Arizona Department of Education	<b>PARA</b>	Physical Activity Resource Assessment
<b>ADHS</b>	Arizona Department of Health Services	<b>PE</b>	Physical Education
<b>CATCH</b>	Coordinated Approach To Child Health	<b>PSE</b>	Policy, Systems, & Environment
<b>CPC</b>	Child Parent Centers	<b>SARN</b>	Semi-Annual Report Narrative
<b>CSA</b>	Community-Supported Agriculture	<b>SEEDS</b>	SNAP-Ed Electronic Data System
<b>DE</b>	Direct Education	<b>SET</b>	AZ Health Zone State Evaluation Team
<b>DES</b>	Department of Economic Security	<b>SFMNP</b>	Senior Farmers' Market Nutrition Program
<b>EBT</b>	Electronic Benefit Transfer	<b>SFSP</b>	Summer Food Service Program
<b>ECE</b>	Early Childcare Education	<b>SHAC</b>	School Health Advisory Committee
<b>EBHA</b>	Eat Healthy, Be Active curriculum	<b>SIT</b>	AZ Health Zone State Implementation Team
<b>FY</b>	Fiscal Year (Oct 1st – Sept 30th)	<b>SMART</b>	Specific, Measurable, Achievable, Relevant, Time-Bound
<b>FTI</b>	Farm to Institution	<b>SNAP</b>	Supplemental Nutrition Assistance Program
<b>HSP</b>	Healthy Schools Program	<b>SNAP-Ed</b>	Supplemental Nutrition Assistance Program-Education
<b>KAN-Q</b>	Kids' Activity & Nutrition Questionnaire	<b>STORE</b>	Store Opportunities in the Retail Environment
<b>LIA</b>	Local Implementing Agency	<b>TA</b>	Technical Assistance
<b>LWP</b>	Local Wellness Policy	<b>UA</b>	University of Arizona
<b>MCDPH</b>	Maricopa County Department of Public Health	<b>USDA</b>	United States Department of Agriculture
<b>MPFMF</b>	MyPlate for My Family curriculum	<b>WellSAT</b>	Wellness School Assessment Test
<b>NHSAC</b>	National Healthy Schools Assessment Checklist	<b>WIC</b>	Special Nutrition Program for Women, Infants & Children

# Executive Summary

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The AZ Health Zone SNAP-Ed program coordinates statewide activities with Local Implementing Agencies (LIAs) to reduce health disparities in communities where economic resources are limited. A primary goal is to increase the likelihood that individuals and families will engage in healthful behaviors through a combination of policy, systems, and environment (PSE) approaches and educational outreach. This report describes results from the fourth year of the AZ Health Zone's five-year program cycle.

**Food Systems.** Fourteen small stores and one grocery store were assessed biennially (N=15) and saw some improvements in healthy retail supports in their stores. For small stores, the **Fruits and Vegetables product category had a statistically significant improvement, as did Appeal**, which measures the use of product placements to encourage healthy product purchasing.

**Active Living.** Parks and other sites receiving the Physical Activity Resource Assessment (PARA) across two years (N=37) showed slight decreases in total scores, although the **Incivilities category improved**. The new ACT-GO evaluation explored six LIAs' organizing and leadership efforts to impact policies and revealed facilitators and barriers to active living policy progress.

**School Health.** After receiving a combination of direct education and PSE interventions during the school year, 3<sup>rd</sup> through 8<sup>th</sup> graders (N=1,777) showed statistically significant **increases in fruit, whole grain, and lower fat dairy intake, and in physical activity**. As in the previous year, physical activity gains were more pronounced for girls than for boys. School health implementation was also assessed across two years (N=70 schools) and showed statistically significant improvements in total mean scores as well as mean scores for three categories: *Nutrition Services, Health & Physical Education, and Employee Wellness*.

**Early Childhood.** There was a **42% increase in the number of ECE sites that received PSE supports**, from 60 in FY17 to 104 in FY19. Alternatively, the ratio of meetings and trainings per site *decreased* from 3.4 to 2.8 over two years, which suggests a slight dip in the number of repeated contacts that LIAs had with individual ECEs.

**Direct Education.** After completing a lesson series, adult participants (N=166) reported statistically significant **increases in both moderate and vigorous physical activity, and fruit and vegetable consumption, while sugary beverage consumption decreased**. Spanish speakers' behaviors improved more than English speakers' behaviors.

The Fiscal Year 2019 (FY19) results suggest that the AZ Health Zone continues to make measurable progress toward the program's goal of reducing health disparities through a combination of community- and individual- level approaches. As the AZ Health Zone closes out the current program cycle in FY20, these short- and medium-term outcomes offer evidence for the strongest areas of continued intervention, as well as potential areas for new program directions.

# Introduction

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The USDA’s Supplemental Nutrition Assistance Program Education ([SNAP-Ed](#)) provides community-based initiatives, including nutrition education, in each state to reduce health disparities by increasing the likelihood that SNAP-eligible families will choose healthful diet and physical activity behaviors on a limited budget.

SNAP-Ed’s program design centers upon an evidence-based systems approach that integrates direct educational outreach (DE) with the implementation of policy, system, and environment (PSE) approaches where people live, learn, eat, shop, and play to make the healthy choice the easy choice. Social marketing is the third intervention strategy reaching SNAP-Ed eligible communities with targeted media campaigns and materials.

In Arizona, SNAP-Ed operates as the [AZ Health Zone](#) to coordinate implementation of the program’s goals with state partners and local implementing agencies (LIAs) in each of Arizona’s 15 counties.



[Evaluation of the SNAP-Ed program](#) is carried out externally by the University of Arizona Department of Nutritional Sciences. This FY19 evaluation report describes findings from the fourth year of the AZ Health Zone’s five-year program cycle, in alignment with the national [SNAP-Ed Evaluation Framework](#). The outcome indicators from the SNAP-Ed Evaluation Framework are highlighted in gray and bracketed throughout the report (e.g., [MT1]).

The AZ Health Zone State Evaluation Team uses these **EVALUATION STANDARDS** to inform each phase of the SNAP-Ed evaluation:

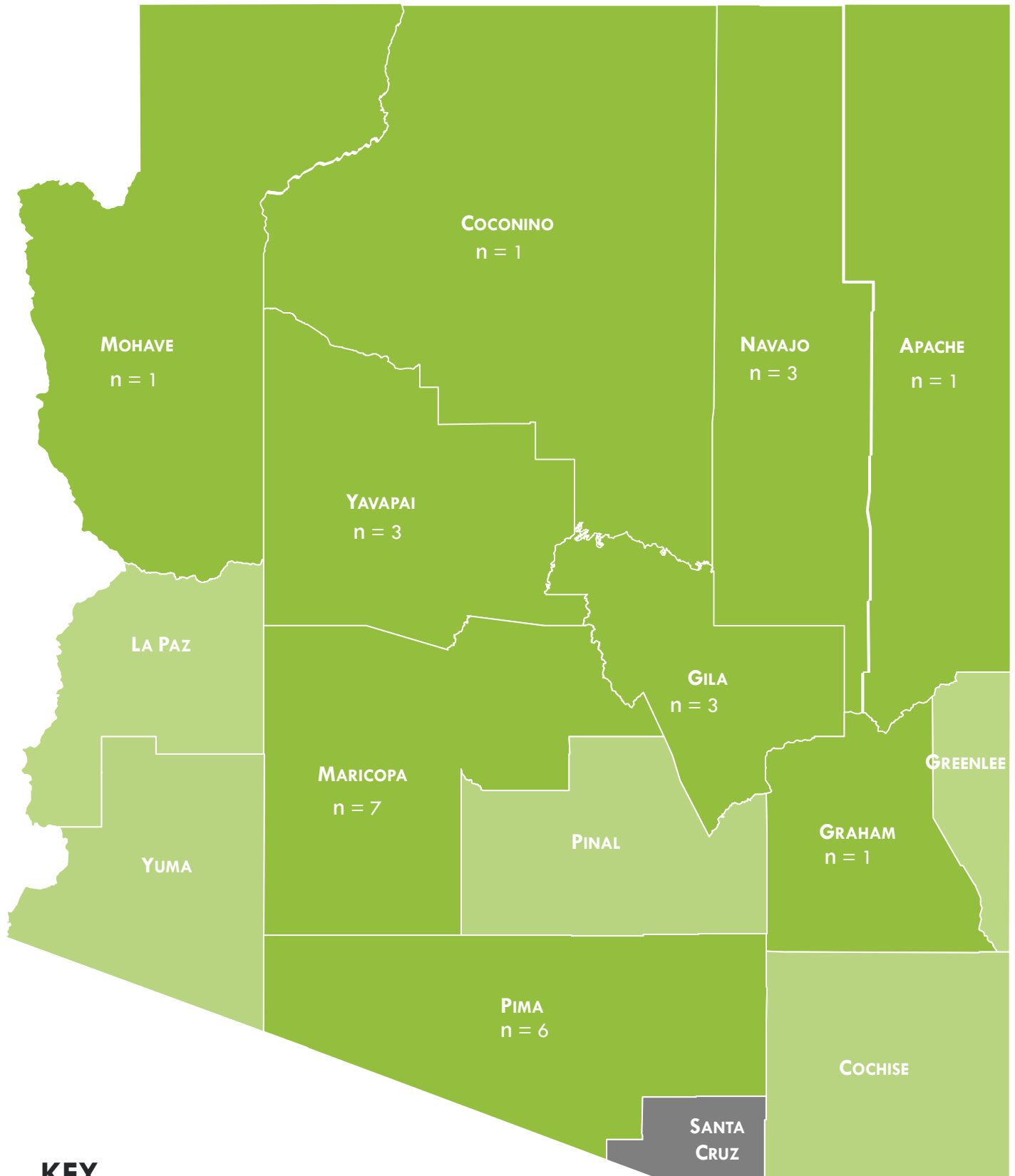
**Feasibility.** Design evaluations that are practical and realistic to implement.

**Utility.** Be responsive to stakeholders and provide meaningful products.

**Accuracy.** Use evidence-based methods and tools whenever possible.

**Propriety.** Design and conduct clear, transparent, and fair evaluations—always consider equity.

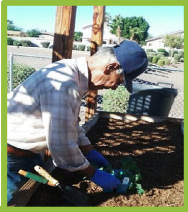
**Consistency.** Perform measurement of SNAP-Ed indicators across time.



**KEY**

- = Participated in the FY19 STORE evaluation (n = number of assessments)
- = Worked in the Food Systems focus area
- = Did not work in the Food Systems focus area

# Food Systems



Valle del Desierto Garden, Yuma

## AZ Health Zone Food Systems Strategies

-  Increase the availability of healthy food retail
-  Encourage participation in gardens
-  Start and expand Farm to Institution programs
-  Support the Summer Food Service Program
-  Encourage the use of farmers' markets with SNAP and WIC access

## Evaluating Food Systems

The AZ Health Zone evaluated Food Systems programming using quantitative and qualitative methods. Our data sources included Arizona’s SNAP-Ed Electronic Data System (SEEDS), and SNAP-Ed Local Implementing Agencies’ (LIAs) Semi-Annual Narrative Reports (SARNs). In Healthy Retail, we present two-year outcomes for *Nutrition Supports* [MT5] using the Stocking Opportunities in the Retail Environment (STORE) tool.

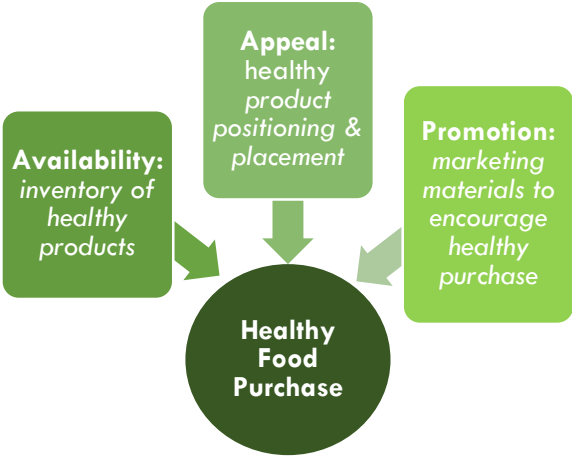
### Healthy Retail

Seven LIAs in nine counties continued to progress their healthy retail partnerships in year three of the program.

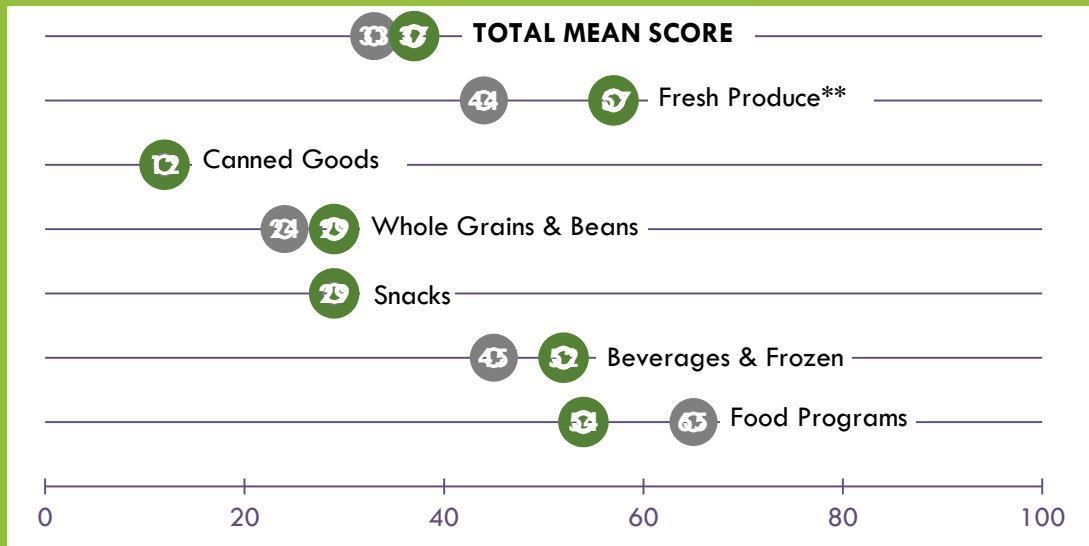
**What is the STORE tool?** STORE measures the availability, appeal, and promotion of healthy foods in the retail setting (Figure 1). Trained LIA staff assessed these characteristics for the fresh and frozen produce section, canned goods, snacks, beverages, and advertisements, as well as the presence of WIC and SNAP EBT.

**Did STORE scores change over time?** Yes. Fifteen STOREs from four counties were scored in FY17 and again in FY19, enabling comparison. Figures 2 and 3 show small stores’ changes in section scores [MT5] and changes by intervention type, respectively.

### 1. LIAs assessed healthy retail availability, appeal, and promotion across two years.



**2. Changes in mean STORE section scores were mixed from FY17 to FY19.**  
(n=14 small stores)



\*\*p<0.01, d=.73

The most notable increases in section scores for small stores were found in *Fresh Produce* (30%), and *Beverages & Frozen* (16%). While LIAs did not describe new SNAP or WIC barriers, the mean score for *Food Programs* decreased (17%) over time. In addition, a large Coconino County retailer saw an increase in total score from 59 to 75, with the greatest improvements in *Canned Goods* (102%) and *Snacks* (50%). Both types of retailers showed the greatest increase in product appeal versus availability or promotion, which suggests that the re-positioning of existing inventory may be more feasible or preferable to store owners.

*Success Story*

“Tuba City Bashas has made progress implementing individually priced fruit at the deli counter. Here is a picture of the new baskets our program purchased for the deli area and at the registers! We are working with the store manager on signage and finding areas to post recipe cards and nutrition information. Programs in the area are reaching out to our staff to schedule store tours at Bashas.”

—Coconino County Health Department

**3. Appeal scores<sup>a</sup> in small stores increased significantly from FY17 to FY19.** (n=14)



<sup>a</sup>Scores ranged from 0 (weak supports) to 100 (strong supports)  
\*\*p<0.01, d=.79





**4. LIAs increased their STORE use from FY17 to FY19.**

**In FY17**

- 5 LIAs
- 18 STORE assessments
- 5 counties

**In FY19**

- 7 LIAs
- 26 STORE assessments
- 9 counties

**How did all STOREs score in FY19?** In FY19, LIAs assessed a total of 26 food retailers across nine counties [MT5]. Increased evaluation of large stores represented most of the growth from FY17 (Figure 4), with nine assessed this year. As shown in Figures 5a and 5b, scores for small retailers were lower than for large retailers, which makes sense given supermarkets’ greater overall square footage and inventory. Despite this, the *Grocery Fresh Produce* section (large retailers only), had a low mean of 25 of 100 for the availability, appeal, and promotion of fruits and vegetables. This represents a notable gap in supports for grocery customers to shop healthy in the produce section, and an area of opportunity to strengthen those interventions with large grocers.

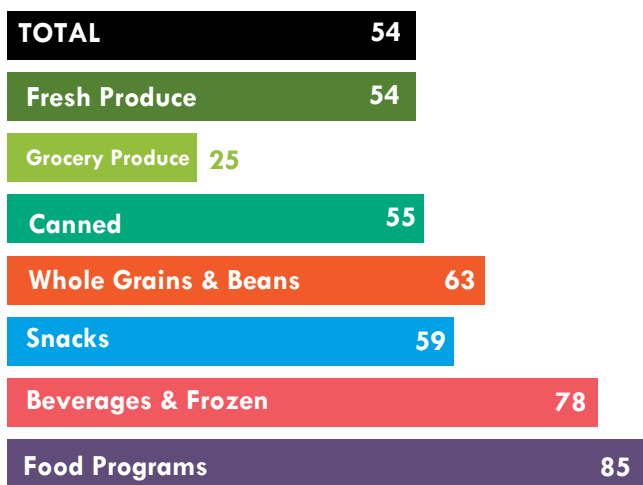
*Success Story*



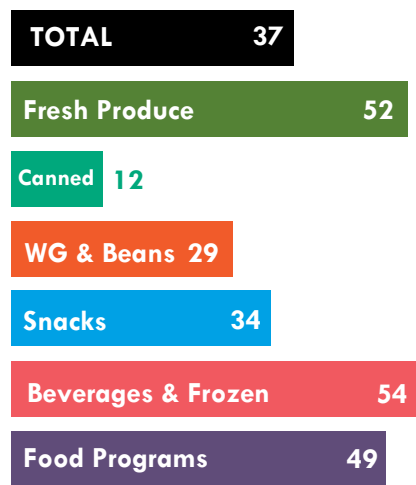
“Our staff worked with the owners of ABC Mart to design and install custom, culturally specific fruit and vegetable storefront window decals. The decals included the *Healthy Starts Here* logo and messages in English and Burmese, and replaced signs advertising sugar sweetened beverages, chips, and cigarettes. The storefront is now colorful, inviting, health promoting, and more accurately displays the unique healthy products that community members can find at ABC Mart. The owner has seen an increase in customer requests for specific items featured in the window panels since they were installed.”

– Maricopa Department of Public Health

**5a. Mean STORE scores<sup>a</sup> for large stores in FY19 varied by section. (n=9)**



**5b. Mean STORE scores<sup>a</sup> for small stores in FY19 were lower than scores for large stores. (n=17)**



<sup>a</sup> Scores ranged from 0 (weak supports) to 100 (strong supports).

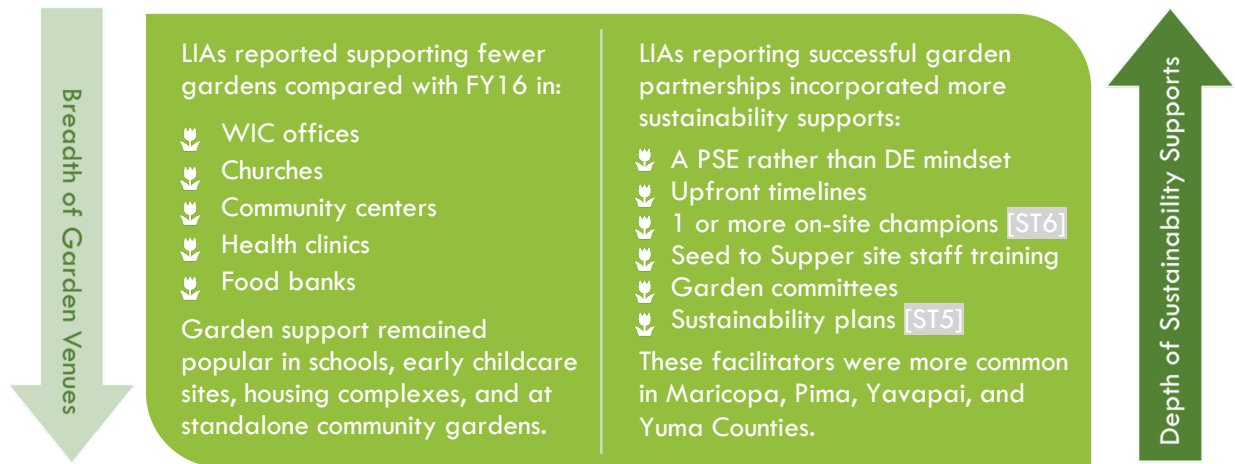
## Gardens

Eight LIAs in 13 counties supported gardens [MT5] in SNAP-Ed communities during FY19. Gardening represented 21% of all SEEDS actions, compared with 28% in the previous year. In particular, LIAs reported activities to support *new* gardens at 68 sites, although not all gardens came to fruition by the end of the year (Figure 6).

### 6. Schools were the most common location for new garden support in FY19. (n=68)



### 7. LIAs reported deeper gardening interventions, emphasizing sustainability.



**Strengths.** After four years, LIAs reported narrowing the scope of their gardening support and enhancing sustainability within their key partnerships [LT5] (Figure 7). Additional garden supports included assisting partners in soliciting gardening donations and funds, and technical assistance for vermicomposting, garden layout plans, or troubleshooting.

At schools, LIAs reported connecting the garden to *Junior Master Gardener* and other

curricula, providing teacher training, and participating in the first Garden Sustainability Summit in partnership with the Arizona Department of Education.

**Barriers.** As in previous years, these barriers to implementing successful gardens persisted:

- ☁️ Lack of site commitment
- ☁️ Partners' competing demands
- ☁️ Garden infrastructure (irrigation, fencing)
- ☁️ LIA and site staff turnover
- ☁️ Finding a champion
- ☁️ Weather or climate challenges

## Success Story

"This month the Junior Master Gardeners harvested garlic from what they had planted in late fall. The students were in awe of the pungent smell as we talked about ways that they could use garlic in preparing a dish for their families. In following up with them recently, several had actually used it in a meal at home. This is the first time that they've been able to pick something from the garden and take it home, and they were thrilled!"

-UA Cooperative Extension, Greenlee



## Farm to Institution (FTI)

Five LIAs in four counties selected this strategy in FY19, although Mohave County Department of Public Health did not report activities. Most LIA work (78%) focused on procurement by supporting partner sites to source more local ingredients, usually produce, for meals and snacks.

**Strengths.** Coalition work [ST8] remains an important component of FTI. LIAs reported networking within their coalitions to increase awareness about FTI, educate collaborating agencies, and discuss the broader challenges with stakeholders. In addition, the two Maricopa LIAs' ongoing collaboration with the Sun Produce Co-op [MT8c] resulted in *over 1,000 produce pounds delivered to schools.*

**Barriers.** Ongoing procurement of local produce by large schools remains a supply-and-demand challenge. Small growers appear less able to meet the consistent demand for high volumes of produce required in larger schools. In contrast, local grower procurement remains more feasible at smaller charter schools in urban areas, or for one-time events.

## Success Stories



“The FarmRaiser CSA model at Concordia Charter School has created a sustainable outlet for farmers and given residents the opportunity to purchase fresh, local produce. SNAP recipients get the added benefit of using Double Up Food Bucks to stretch their dollars when paying for their weekly bag of produce with EBT, making it more affordable. The Wellness Coordinator has also incorporated staple food bags from United Food Bank that families pick up with their FarmRaiser bag.”

—UA Cooperative Extension, Maricopa

## New Garden Certifications Support Farm to Cafeteria

While the majority (76%) of FTI work was logged in SEEDs with schools, only Pima and Yuma Counties logged garden-to-cafeteria activities. Interestingly, four counties reported the advancement of garden certifications or renewals in order to support garden-to-meal sourcing, suggesting a current emphasis on this intervention.

“Pearce Elementary leadership was present at the School Garden Certification training and had follow up meetings with the Garden Specialist to apply for certification...With produce grown over the summer and harvested in the fall, the school has successfully incorporated school garden produce into their salad bar. Our staff provides technical assistance to keep the salad bar operating and provides supplemental direct education on healthy eating to encourage students to use the salad bar and get excited about working in the garden.”

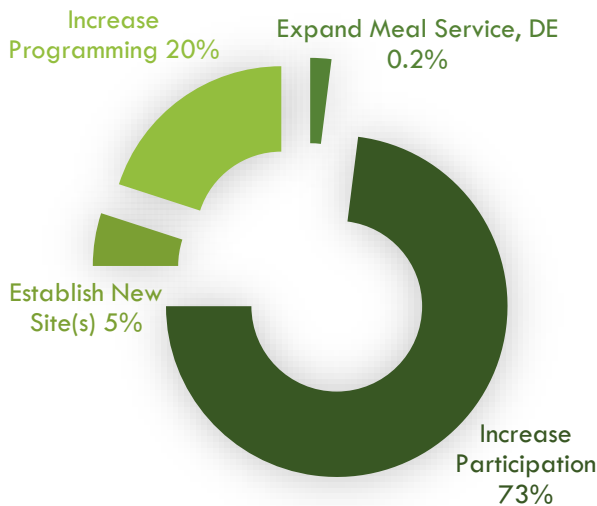
—UA Cooperative Extension, Cochise



## Summer Food Service Program (SFSP)

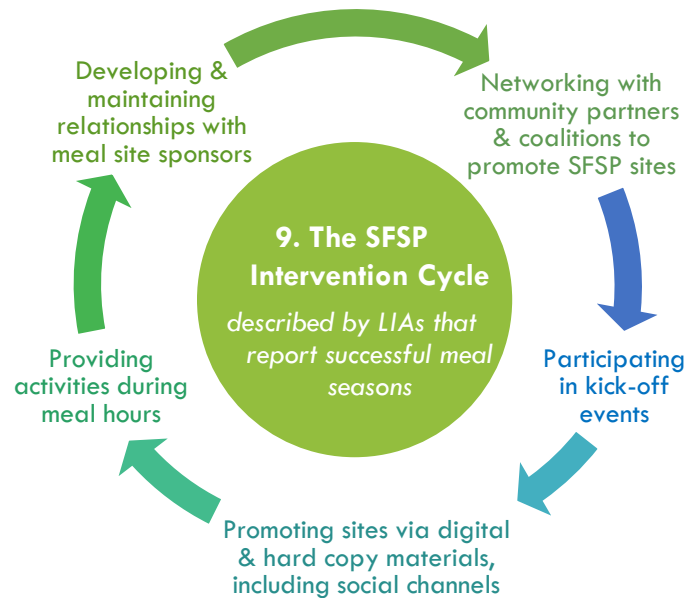
Seven LIAs in 12 counties implemented interventions to support Arizona’s free summer meal program for children [MT5], provided at community locations such as schools, libraries, and recreation centers. A total of 4.5% of all SEEDS actions were in SFSP (versus 5.1% in FY18), divided across five main activities (Figure 8). Two LIAs with the strategy did not report any SEEDS activities in FY19, although their SARNs captured contextual factors.

### 8. Most SFSP SEEDS activities supported increasing attendance at meal sites.



**Ongoing and New Barriers.** Rural LIAs reported ongoing communication or logistical challenges with SFSP meal sites and sponsors, as well as LIA staff turnover, resulting in missed summer opportunities. Transportation barriers to meal sites also continue to persist in rural areas, a barrier that SNAP-Ed alone cannot overcome.

This year, two counties reported challenges with SFSP logistics at the state or USDA level. For Maricopa County, database errors and lag time in SFSP location corrections resulted in significant reported barriers for families to locate meal sites.



**Strengths.** SFSP interventions, which were new to the AZ Health Zone work plan in FY16, have matured in most counties. Successful LIAs have developed multi-year partnerships with meal sponsors, and annually continue to promote those sites and provide DE activities during meal hours (Figure 9). In addition, LIAs in five counties reported unplanned, emergent opportunities to support new SFSP meal sites with new or existing partners—a notable increase from two in FY18.

### Success Story

“We participated in the Holbrook Summer Food kick-off event at the beginning of the summer and provided weekly activities and programming throughout the SFSP season. During the kick-off event, we created a scavenger hunt with our AmeriCorps Vista partner who promotes SFSP with St. Mary’s Food Bank. The scavenger hunt led to the local UA Extension Office, with the intention of increasing the community’s awareness of the office and its resources. During the SFSP, we also provided an hour of CATCH activities each Monday at Hunt Park, with the intention of increasing attendance and encouraging children to return for meals.”

-UA Cooperative Extension, Navajo



## Farmers' Markets with SNAP

Five LIAs in seven counties supported their local farmers' markets in FY19 by making markets more accessible to SNAP-Ed eligible participants and supporting farmers.



### Farmers Market Navigators & Double Up Bucks Work Together to Support SNAP Shoppers

The Double Up Bucks program provides SNAP EBT users with additional dollar-for-dollar spending up to \$20 at farmers' markets [MT8c]. The recently developed AZ Health Zone Farmers' Market Navigator Program [MT5] complemented Double Up Bucks in FY19 by assisting new market shoppers in learning about the day's vendors and how to use their EBT and Double Up Bucks benefits. Leveraged WIC funding enabled Navigators at 13 markets in five counties to receive a four-week stipend during market season, reaching over 400 shoppers.

**Strengths.** In addition to the Farmers' Market Navigator Program (sidebar), LIAs reported success in training DES staff about farmers' markets benefits for their clients, and in ensuring that seniors received their Senior Farmers' Market Nutrition Program (SFMNP) benefits despite challenges to distribution during the market season. Maricopa and Yavapai Counties also supported new farmers in bringing their produce to local markets, as well as coalition work to address broader food shed challenges.

**Barriers.** The discontinuation of current distribution channels for the SFMNP and its sibling program at WIC, and the ensuing chaos, was the largest reported barrier in FY19. In addition, ongoing lack of promotion by DES of farmers' market benefits was reported in spite of LIAs' training efforts.

## 10. In FY19, Farmers' Market activities addressed all levels of the Spectrum of Prevention.

Influencing Policy & Legislation	Double Up Bucks 2018 state funding expanded produce incentives in Arizona
Changing Organizational Practices	Farmers' Market Navigator Programs welcomed and assisted EBT customers
Fostering Coalitions & Networks	LIAs partnered with stakeholders to address food shed and transportation barriers
Educating Providers	WIC & DES staff received <i>Farmers Market 101</i> trainings and resources for clients
Promoting Community Education	Educational, digital, and media outreach materials promoted local markets
Strengthening Individual Knowledge & Skills	Food demonstrations and informational tabling operated during market hours

## Success Story

“Continued collaboration with the City of Sierra Vista Transit Department [helped] to provide free shuttles from the primary transit hub to the Farmers’ Market during every Farmers’ Market date. This was developed through collaboration meetings and attempts by our team to address additional barriers to healthy food consumption. The transit director reports regularly growing ridership.”

-UA Cooperative Extension, Cochise



## Equity and Food Systems



Photo: <https://www.freshlookfoods.com/food-equity/>

Food equity means that healthy food is nutritious, affordable, culturally appropriate, and grown locally with care for those impacted.<sup>1</sup> While the overarching AZ Health Zone program model, based on the Social Ecological Model, addresses structural inequalities present in many under-resourced Arizona communities, the degree to which food systems interventions explicitly align with an equity approach varies by LIA and community.

That said, many LIAs have made progress in creating and supporting the conditions that make healthy food more available in SNAP-Ed eligible communities through the adoption of core food systems interventions, including healthy retail, gardens, and farmers’ markets.

### Equity Principles<sup>2</sup>

1. *Set an equity intention:* interventions should be in the service of achieving equity.
2. *Consider interventions through an equity lens:* interventions can and should address the impacts of historical and structural decisions in a community, the effects on a population, the effects on drivers of inequity, and cultural context.
3. *Implement equitably:* interventions should be designed and implemented commensurate with the values underlying equity work, including the capacity for communities to create their own healthy future.

1. <https://tilth.org/stories/food-justice-definitions/>
2. Adapted from: <https://www.equitableeval.org/ee-framework>

## Recommendations

Consider augmenting healthy retail activities that target low-scoring STORE topics:

- *An investigation of barriers to healthy retail promotion at partner stores* can shed light on the limited progress made, despite the availability of the Healthy Starts Here toolkit.
- Additional training and TA may be warranted to *support LIAs in investing time and resources effectively with large retailers*. Grocery Produce scores were relatively low, and SARNs indicated unique challenges partnering with larger corporate chains.

The AZ Health Zone and LIAs may benefit from garden training that covers:





- *How to build sustainability practices into the start of garden partnerships*, which may result in more enduring gardens. LIAs who have achieved greater garden sustainability have developed resources and processes to increase the likelihood that gardens are “owned” by partner sites and continue to flourish, even if LIA or site staff change.
- *Additional SEEDS reporting standards for gardens* to enable an accurate tally of current gardens at the end of each fiscal year. To date, LIA staff within the same agencies report the same garden sites in multiple ways in SEEDS, and LIAs categorize garden interventions inconsistently.

Consider adding a future *SNAP-Ed strategy for increasing the supply of local farmers and vendors*. This will address gaps in supply and demand from large schools and districts unable to source local ingredients at scale, as well as systems-level challenges for new and established farmers’ markets in rural areas.

*Roll out state and local-level SFSP site marketing as early in the meal season as feasible*, and address communication challenges as soon as possible to limit the impact on families.

*Encourage Farmers’ Market Navigator sustainability through consistent funding*. Consider assessing whether markets with navigators experience a measurable increase in SNAP purchases over time, and/or compared to markets without navigators.

## Equity Recommendations

-  Support the diversity of AZ Health Zone staff, including a range of disciplines, beliefs, and lived experiences.
-  Ensure that local- and state-level interventions address the structural drivers of inequity in local communities by encouraging PSE supports with the greatest potential for changing the conditions of inequity.
-  Enhance the cultural relevance of program interventions through mechanisms such as targeted messaging, trauma-aware training, and tailored curricula.
-  Support the conditions for which communities impacted by the AZ Health Zone are invited to shape priorities and programming through their involvement in shared decision making.



## Community Highlight

# The AZ Health Zone Coconino Supports Coalition Efforts to Enhance Food Security in the Grand Canyon Area

The Grand Canyon community includes the Grand Canyon Village and the towns of Tusayan and Valle. In support of food systems and active living, the AZ Health Zone Coconino has been an active participant in the Tusayan/Grand Canyon Wellness Coalition for three years.

“Participating in the coalition meetings consistently created a trust and confidence in us that has allowed the creation and expansion of many new programs within the Grand Canyon community.”

– AZ Health Zone Coconino

## Summer Food Service Program Expansion

“Originally, a local group of church volunteers made and provided lunch to children at the Grand Canyon Recreation Center three days a week throughout the summer. By participating in the Tusayan/Grand Canyon Wellness Coalition meetings, the AZ Health Zone Coconino introduced the community organizer to St. Mary’s Food Bank, which helped expand the Summer Food Service Program to five days a week, with new sites in Tusayan and Valle. The AZ Health Zone and other volunteers [then] provided physical activity opportunities, nutrition education, and arts and crafts during the lunch programs. *More than 1,800 lunches were served to around 30% of the communities’ eligible children.* The GC/Tusayan Coalition with St. Mary’s Foodbank received the 2018 Western Region Summer Sunshine Award for the category, ‘Reaching Rural, Tribal and/or Underserved Populations’ for the Summer Café’ of the Grand Canyon.”

–AZ Health Zone Coconino







## Growing the Weekend Backpack Food Program

The Wellness Coalition also fostered a collaboration to address the Weekend Backpack Food Program, which provides children with food backpacks for weekend consumption. In FY18, the St. Mary's Food Bank, Delaware North Hospitality, the Grand Canyon Recreation Center, and other coalition members developed a plan for expanding the program: The Grand Canyon Recreation Center would be the Weekend Backpack pick-up location for Grand Canyon area families, while families living in the Valle and Tusayan areas could pick theirs up from the Tusayan General Store, where they would be stored in lockers purchased by the store operator, Delaware North Hospitality.

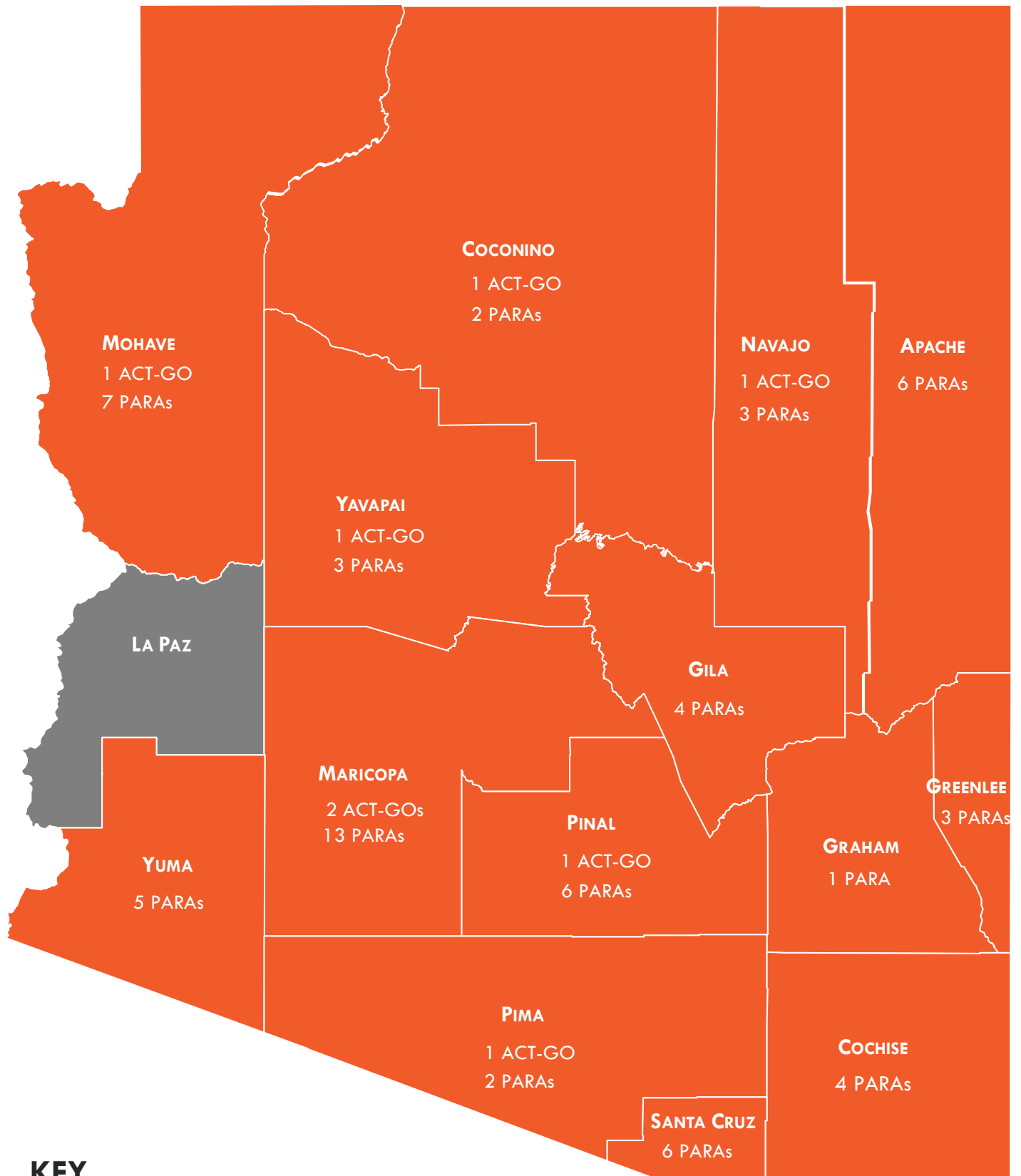


Since implementation, the coalition has found that this delivery method reduced student stigma and provided greater flexibility to participating families. This has increased participation rates, and enabled the program to extend into the summer months. The AZ Health Zone Coconino now helps to sustain the program by sorting foods for backpacks based upon four weekly menus.



## A New Food Bank

The AZ Health Zone Coconino supported a collaboration among the St. Mary's Food Bank, the National Park Service, and the City of Tusayan to accelerate their local food bank initiative. The Grand Canyon Food Bank (pictured above) opened in March 2019, with a larger location now in the planning stages.



## KEY

- ACT-GO = Completed *n* ACTIVE Living Policy GOals Assessments (ACT-GOs) in FY19
- PARAs = Worked in the Active Living focus area and completed *n* PARA assessments in FY19
- = Did not work in the Active Living focus area

# Active Living



Physical activity resource, UA Cooperative Extension, Apache

## AZ Health Zone Active Living Strategies



Build capacity to implement active living policy



Promote participation in and use of physical activity resources



Support family-friendly physical activity opportunities

## Evaluating Active Living

In FY19, the AZ Health Zone assessed work in Active Living Policy through the Active Living Goals Assessment (ACT-GO), an AZ Health Zone tool that measured incremental progress toward specific, measurable, achievable, relevant and time-bound (SMART) policy goals (Figure 11) within communities [ST5, ST6, MT10].









Promotion of Physical Activity (PA) Resources was evaluated using the Physical Activity Resource Assessment (PARA), which

described features, amenities, and incivilities at SNAP-eligible PA resources, and gave an overall score of PA resource condition [LT6].

Data from these assessments were supplemented by local implementing agency (LIA) Semi-Annual Report Narratives (SARNs) and Arizona’s SNAP-Ed Electronic Data System (SEEDS). PA Opportunities are reported with Adult Direct Education (DE), as SNAP-Ed opportunities for both were often linked in FY19.

## Active Living Policy

### 11. Six LIAs set these eight ACT-GO goals in seven counties at the start of FY19.

	<p>Advocate for a policy to improve walk- &amp; bike-ability in Lake Havasu</p>		<p>Advocate for improved walk- &amp; bike-ability in Casa Grande</p>				
<p>Prioritize transportation improvements for SNAP-eligible Sedona communities</p>			<p>Work to increase transit accessibility in Show Low</p>				
		<p>Advance a walking &amp; biking policy in the Town of Tusayan</p>				<p>Support park improvements at two City of Phoenix locations</p>	
<p>Influence public health language in the Glendale active transportation plan</p>				<p>Adopt &amp; begin to implement a Complete Streets Policy in Tucson</p>			



To build progress toward these goals, LIAs were required to select at least two advocacy wins to work on throughout the year. **Figure 12** summarizes the advocacy wins selected and the achievements and challenges associated with each win, as reported by LIA staff at the end of the year.

## 12. LIAs reported ACT-GO advocacy wins, achievements, and challenges in FY19.

Advocacy Win	Achievements	Challenges	Quotes and Notes
<b>Increase Organizational Capacity</b> [ST5a]	<ul style="list-style-type: none"> <li>Increased understanding of advocacy strategies in the community</li> <li>Increased staff leadership</li> <li>Increased advocacy knowledge</li> </ul>	Identifying funding for advocacy efforts	“Building capacity and implementing the ACT-GO is slow but sure. Several times staff have found [an] opportunity to <b>have a conversation with [our] District administration</b> highlighting [our walking/biking policy] efforts.”
<b>Develop Champions</b> [ST6a,c]	<ul style="list-style-type: none"> <li>Identified champions</li> <li>Engaged in relationship development with champions</li> </ul>	Knowing what the advocacy “ask” should be of champions in various roles	<b>Champions were most often public health professionals</b> (or consultants), sometimes town officials, and more rarely, SNAP-eligible community members.
<b>Increase Public Will</b>	<ul style="list-style-type: none"> <li>Community gained positive perceptions of active living goals</li> <li>Community gained belief that their actions would contribute to change</li> </ul>	Difficult to earn community trust if coming in as an outsider	In Maricopa and Pima counties, LIA staff <b>engaged 262 community members in public will-building activities</b> around proposed policies.
<b>Create Policies</b> [MT10a,b]	<ul style="list-style-type: none"> <li>Tucson Complete Streets Policy</li> <li>Glendale Active Transportation Plan</li> </ul>	Requires high level of coordination with partners	“Our role is a familiar one within Active Living Policy - to <b>advocate for health equity</b> and the physical activity and healthy eating needs of people that are SNAP-eligible.”

**Active Living Policy Facilitators.** Two LIAs who took part in the successful passage of community active living policies drew on these facilitators:

- ✚ Planning for success, often using ACT-GO
- ✚ Consistent LIA staffing
- ✚ Enthusiastic and helpful partners
- ✚ Community engagement

Both UA Cooperative Extension & Nutritional Sciences, Pima and Maricopa County Department of Public Health staff relied on prior experience and an already-established

partner network to make connections for community engagement and policy change.

**Active Living Policy Barriers.** While policy change progressed in some counties, it was not without barriers in others. Three commonly reported challenges were:

- ✚ LIA staff turnover
- ✚ Low familiarity with local officials and procedures
- ✚ Shifting local government priorities

In some cases, these barriers were interrelated. In FY19, four LIAs experienced turnover in



their active living staff, resulting in limited progress toward goals in two counties that was partly due to the time it took for new staff to become familiar with the local government officials and policy procedures. In addition, during the time between setting the original ACT-GO goal and onboarding a new staff member to work toward that goal, local government priorities sometimes shifted.

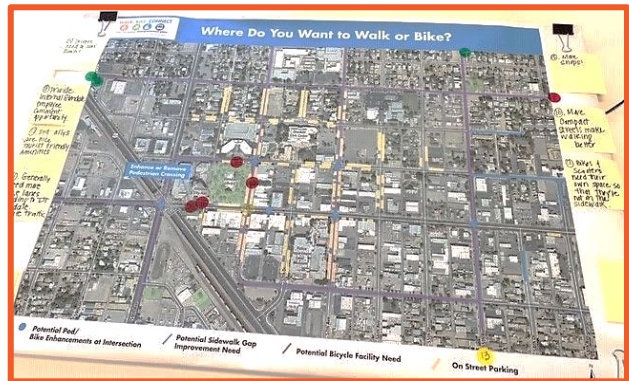
“We have had limited success in participating with the City of Casa Grande in any planning for ‘Smart Growth Development.’ The opportunities have been constrained due to set agendas for the Planning and Zoning Committee and the Board of Supervisors. Future opportunities will be pursued as our [new] staff increase attendance at these committee meetings.”

-UA Cooperative Extension, Pinal

## Success Stories



Advocates celebrate Complete Streets adoption at the 2019 Tucson City Council meeting



SNAP-eligible Glendale residents mapped their active transportation suggestions at local WIC clinics

In Tucson, LIA staff *successfully advocated to include health as one of the six guiding principles* for Complete Streets implementation [MT10b]. In Glendale, AZ Health Zone staff developed a public health equity analysis that mapped socio-economic need in the community. This analysis and public input (photo, right) were included in the Glendale Active Transportation Plan [MT10a].

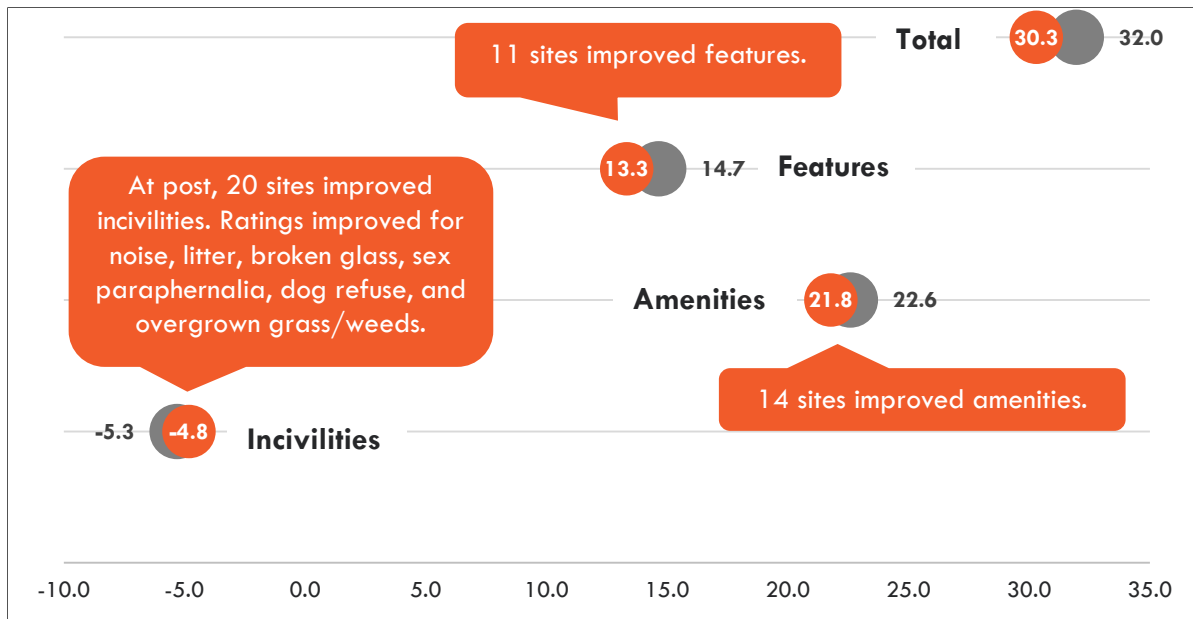
## Physical Activity Resources

In FY19, eight LIAs in 14 counties completed 65 PARAs, 37 of which were follow-ups from FY17. Most resources assessed were parks (44), followed by combination parks featuring resources such as sports facilities (10), trails (7), and other (4).

**Did PARA scores change over time?** We did not find statistically significant changes in total or section scores for PARA from FY17 to FY19 (Figure 13). The average total score dropped, as did the features and amenities

section scores. However, the incivilities score, which tracked characteristics that make resources less enticing, improved: 54% of sites saw positive movement in incivilities [LT6c], and there were statistically significant improvements to two of the most common incivilities, noise ( $p < 0.05$ ;  $d = 0.51$ , medium effect size) and litter ( $p < 0.05$ ;  $d = 0.49$ , medium effect size). It is also worth noting that, despite the drop in average scores, 30% of sites improved features, and 38% improved amenities [LT6c].

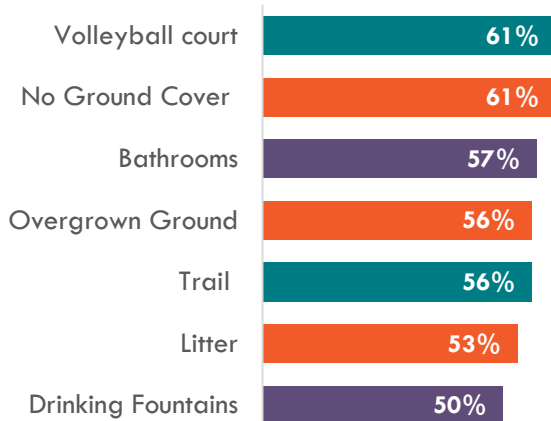
**13. PARA scores were similar from PRE in FY17 to POST in FY19. (N=37)**



**All FY19 PARAs.** The mean total PARA score was 25.7 for the 65 resources assessed in FY19, compared to 32.0 for just the 37 resources measured over time; the 28 resources that were newly assessed had lower mean total and section scores compared to previously assessed resources. This suggests that LIAs are targeting resources in greater

need of improvement. **Figure 14** shows the items most in need of improvement among all resources measured in FY19. In addition, two years of data showed a similar, inverse relationship between the number of incivilities present at resources and the LIA-reported quality of features and amenities (**Figure 15**).

**14. In FY19, at least half of these features, amenities, and incivilities were rated as needing improvement across the 65 PA resources assessed.**



**15. In FY17 and FY19, there were significant negative associations between incivilities and both features and amenities.**



**Facilitators and Barriers to PA Resources.** Decreases in PARA scores may have occurred because incivilities are easier and/or less costly to improve, and cleanup can be done by diverse stakeholders including Parks and Recreation staff and concerned citizens.

“We need to explore ways to assist the Town of Duncan to acquire funding for the many needed Centennial Park improvements. The location is great, but the park is in major disrepair, and the town has limited funds and other needs.”

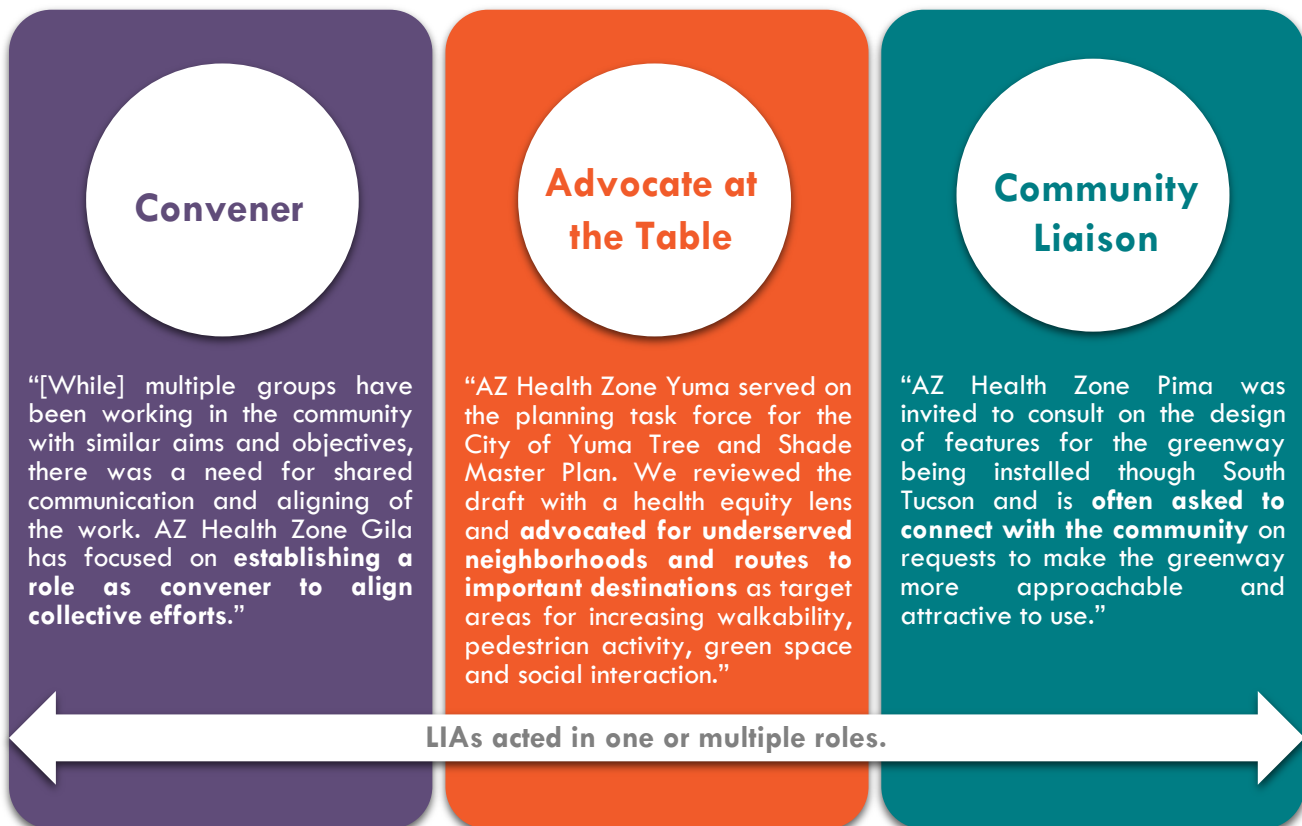
-UA Cooperative Extension, Greenlee

In contrast, LIAs may be less able to affect features and amenities due to city or county funding constraints on infrastructure repairs or enhancements. Relatively low coalition involvement may have also contributed to the lack of PARA score increases: while 92% of LIA *policy* activities involved coalitions, only

39% of support for *PA resources* included coalitions. This underscores the potential importance of working with coalitions to further active living PSEs. More broadly, LIAs reported playing three roles to facilitate their work across all active living strategies (**Figure 16**).

Beyond the perennial *lack of infrastructure funding*, other FY19 challenges to promoting PA resources included *difficulty getting buy-in from community partners*, and *barriers to the use of PA resources beyond resource condition* (e.g., perceived safety, disability access). Conversely, LIAs used *community engagement* and *partnerships* to progress PA resource improvements. The most common partner across all LIAs was the Parks and Recreation department, not surprising given its ability to provide or coordinate physical activity resource improvements.

**16. In FY19, LIAs reported playing three roles to implement active living initiatives.**





### Success Story

From FY17 to 19, UA Cooperative Extension Graham reported improvements to the County Fairgrounds Park walking trail. PARA scores increased, and LIA staff explained how changes were made: they coordinated with partners—including the County Manager, the County Parks and Recreation Department, and the staff at the Fair and Racing Office—to improve the trail. Parks and Recreation staff placed trash cans, which also serve as distance markers, every half mile along the walking trail to decrease litter; the parking area next to the walking trail was cleaned up; and parking backstops were painted yellow by volunteers recruited through AmeriCorps and Eastern Arizona College’s Community Service Day. In addition, gates and other barriers were added to keep animals from entering the playground.

## Active Living and Community Engagement

Active living assessments like the ACT-GO and PARA encourage community engagement in developing policy goals and improving the condition and use of local PA resources. AZ Health Zone staff must choose policy and PA resource goals strategically, mindful of who their champions may be and the funding available. LIA staff prepare to act by:

- ✓ Being, or becoming, a trusted presence in the community.
- ✓ Talking with residents, formally and informally.
- ✓ Convening individuals who care about and are prepared to do something about reducing health disparities in vulnerable communities.



Despite the importance of goal setting, making active living change in Arizona is more about the journey. This journey requires AZ Health Zone staff to embrace innovation: learn more, find champions, listen for the opening of a policy window, and be ready to act.



## Recommendations

Prepare LIA staff for advocacy in their communities by *offering hands-on training for grassroots community advocacy*, including topics such as:

- Developing active living champions
- Advocacy messaging
- Mapping the local power structure related to an active living project

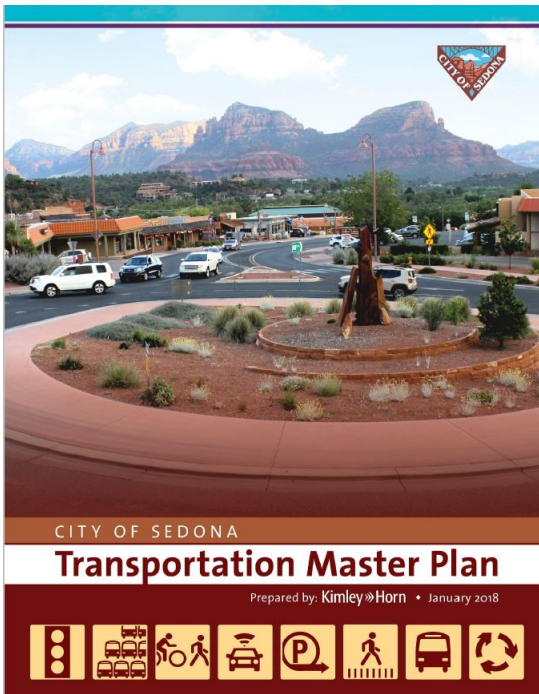
Encourage effective follow-through on active living goals when staff change by *rewarding cross-training of staff*. This will enable more LIA staff members to be aware of community-level active living goals and activities.

Support LIA staff to connect evaluation results to specific active living workplans, and use results to facilitate change. This may be achieved by *encouraging LIA staff to focus on their roles and responsibilities as conveners, advocates at the table, and community liaisons to bring SNAP-eligible voices to the table*.

Increase LIA staff capacity by *inviting LIAs to practice community engagement* and discover what kinds of features and amenities community members seek out at PA resources, and to be attentive to community goals related to PA resources and active living policy.

## Community Highlight

# Community Engagement Supports Active Living in Yavapai and Santa Cruz Counties



## Sedona's Active Transportation Plan

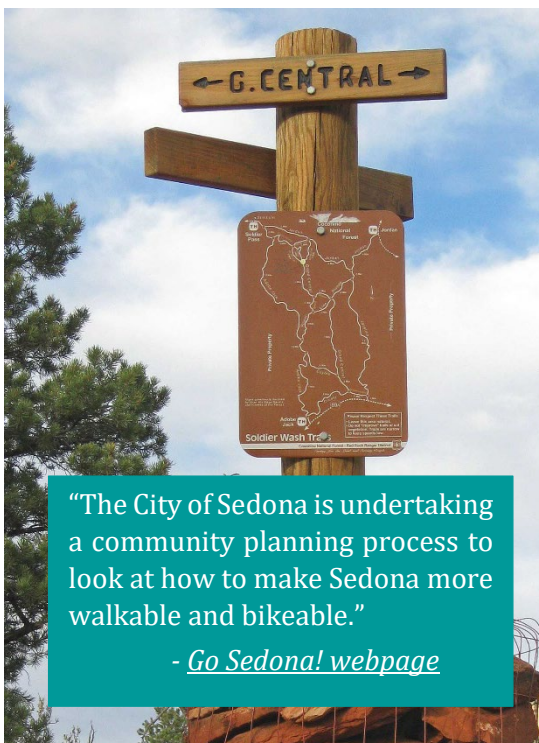
In January 2018, Sedona residents approved a Transportation Master Plan. Planners, public health advocates, and the city manager then invited all stakeholders to participate in *Sedona in Motion*, the Master Plan implementation effort, through public comments and meetings. The Yavapai County Community Health Services (YCCHS) was an active contributor:

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“[AZ Health Zone] staff participated in meetings in Sedona and...voiced concern regarding some underserved areas with many pedestrians and safety issues. City staff agreed some changes to the area to improve safety were needed.”

– Yavapai County Community Health Services

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“The City of Sedona is undertaking a community planning process to look at how to make Sedona more walkable and bikeable.”

- [Go Sedona! webpage](#)

An integral part of Sedona in Motion *GO Sedona!* specifically targets bicycle and pedestrian improvements. The YCCHS supported two community champions in their *GO Sedona!* Efforts, including a citizen engagement coordinator who recruited community advocates for a Bicycle and Pedestrian Citizen Engagement Workgroup to prioritize safety and connectivity. Another champion was a senior planner, who led the Workgroup and organized 24 meetings in a single year!

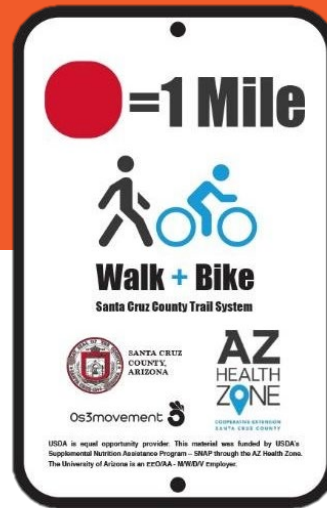
Throughout the planning process, the AZ Health Zone gave voice to the potential needs and concerns of SNAP-eligible residents and “spoke a lot about public transportation, safe pathways to and from public transportation stops, [and focusing on areas near] the local schools.”



## New Signs for Rio Rico Trails

“Through our collaboration with the Santa Cruz County Public Works Department, [we were] able to purchase trail signs and distance markers for approved walking trails near Rio Rico. The signage promotes the AZ Health Zone and contributing partners, encourages physical activity for a healthy lifestyle, and explains how the distance markers work. Blue reflective markers will be put every tenth of a mile along the trails, with red reflective markers at each mile. The hope is that novice walkers will be encouraged to walk at least a tenth of a mile more each day.”

– UA Cooperative Extension, Santa Cruz

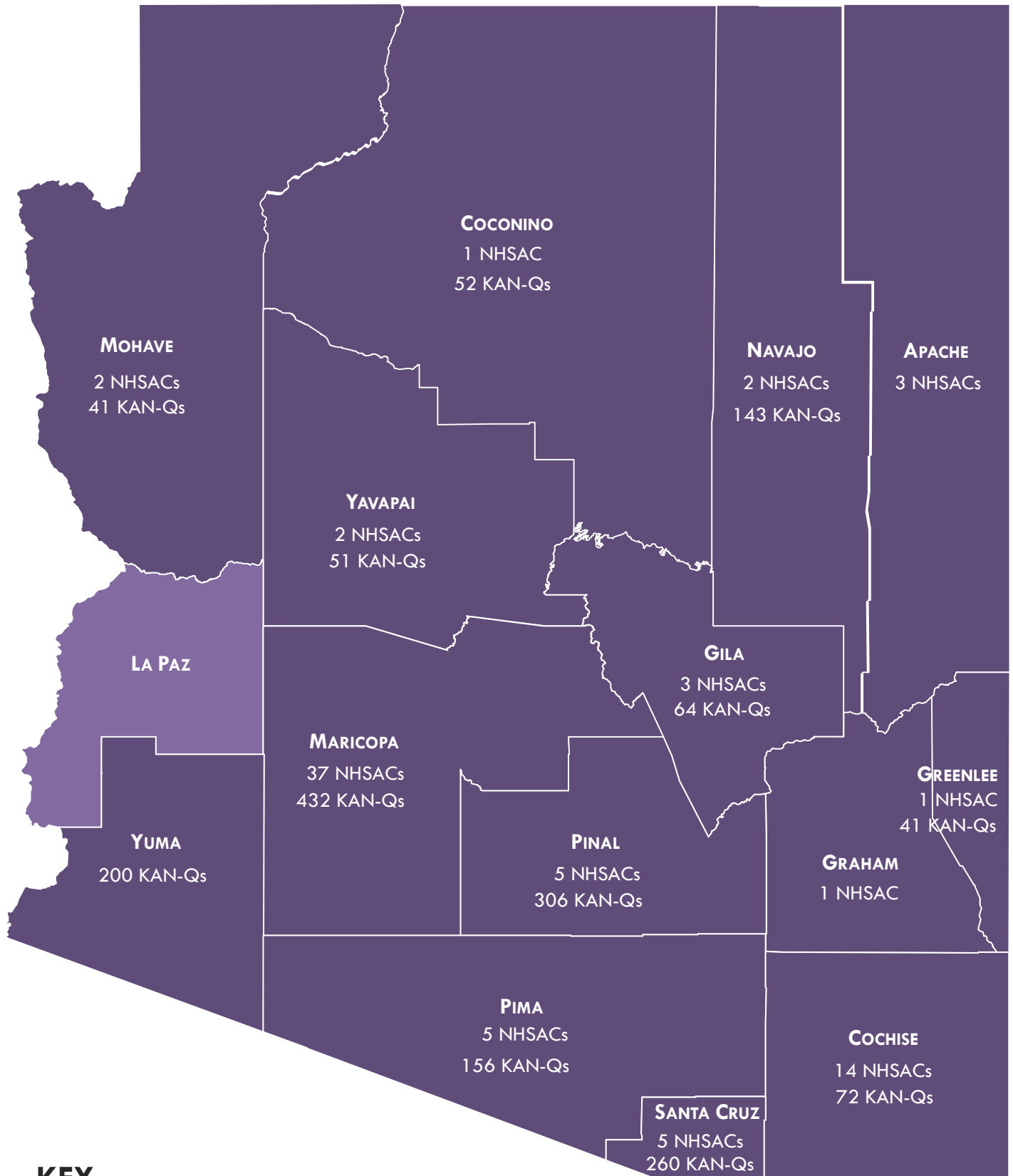


*Signs have been drafted and are currently under consideration for installation on Rio Rico trails.*

“Focus groups with adult class participants were conducted to gather information from residents on potential improvements to the trail system. Participants were asked about general improvements that could be made and if distance/mileage markers would encourage the use of the trail system. This information will be shared with the County Public Works [Department].”

– UA Cooperative Extension, Santa Cruz






**KEY**

**KAN-Q** = Number of matched pre-post KAN-Qs (school year 2018-19)

**NHSACs** = Number of FY19 NHSAC assessments

 = Worked in the School Health focus area



# School Health



Salad Bar Support, Maricopa County Department of Public Health

## AZ Health Zone School Health Strategies



Support the development, implementation, and evaluation of Local Wellness Policies (LWPs)



Improve student, teacher, and staff access to nutrition information



Support comprehensive school physical activity programming (CSPAP)

### Evaluating School Health

In FY19, we assessed the *implementation of school health policies, systems, and environments (PSEs)* [LT5, LT6] using the Alliance for a Healthier Generation’s National Healthy Schools Award Checklist (NHSAC). We also assessed the effect of *multi-level interventions in schools* on students’ knowledge, attitudes, and behaviors [ST1, ST3, MT1, MT3] with the AZ Health Zone Kids’ Activity and Nutrition Questionnaire (KAN-Q).

### School Health PSE Implementation

In FY19, Local Implementing Agencies (LIAs) supported school health in all of Arizona’s 15 counties, completed 81 NHSACs in 13 counties, and provided 456 PSE intervention supports to *NHSAC-participating* schools:

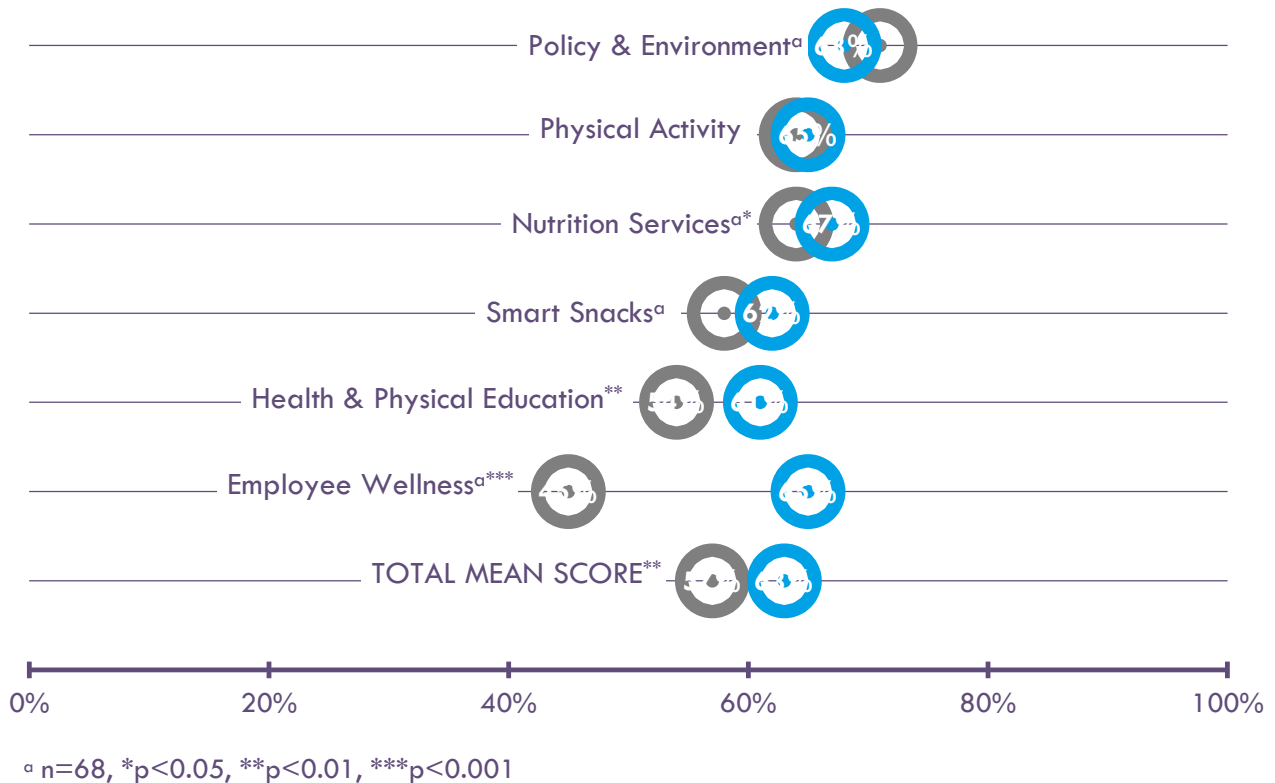


**What is the NHSAC?** The six-section NHSAC is a yes (fully in place) or no (partially or not in place) checklist to measure schools’ actual implementation of health-related PSEs. If LIAs chose to support a school’s adoption of

the related but more robust Healthy Schools Program (HSP), they completed the full HSP assessment in lieu of the NHSAC, which we then translated into yes/no checklist responses. Here, we report mean scores as percentages of the maximum. Scores range from 0% (worst) to 100% (best).

**Change Over Time.** Of the 81 FY19 NHSACs submitted, 71 were matched with FY17 assessments, which allowed us to compare PSE implementation across time. **Figure 17** shows the changes in section and total NHSAC scores across two years [LT5, LT6]. There was a highly significant increase in total mean score, and three section scores increased significantly: Nutrition Services, Health & Physical Education, and Employee Wellness.

## 17. Total mean NHSAC scores increased from FY17 to FY19. (N=71)



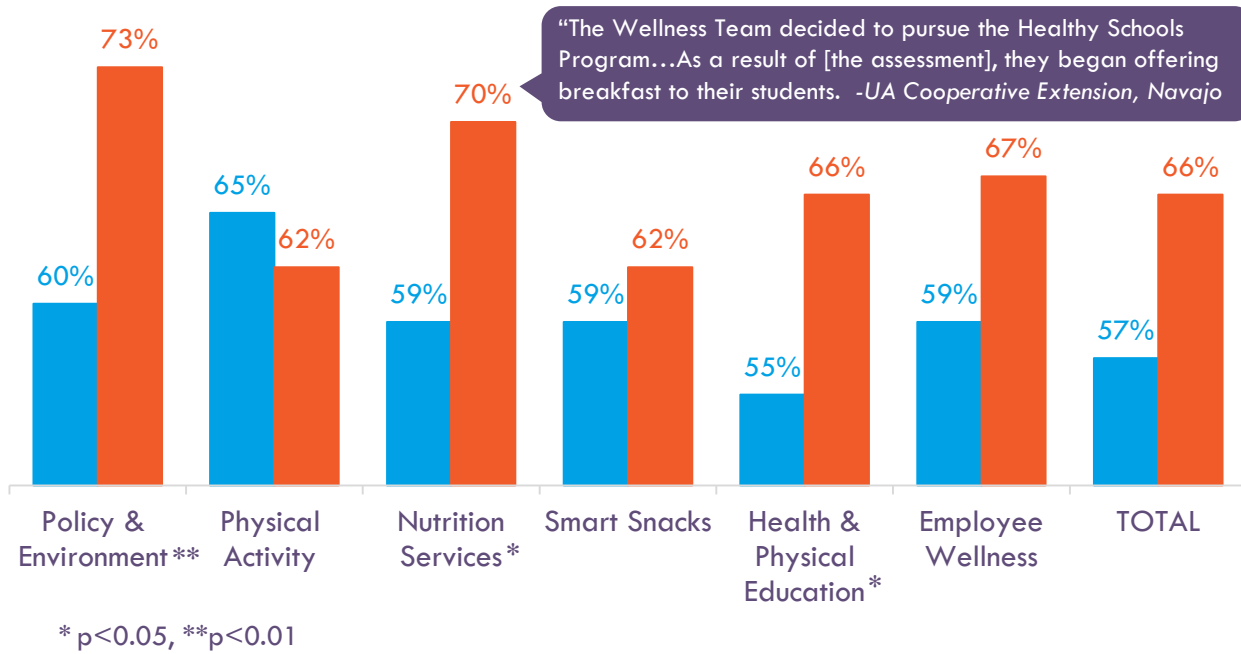
Physical Activity and Smart Snacks increased slightly, while Policy & Environment showed a slight decrease.

**HSP versus Non-HSP Schools.** Of the 81 NHSACs completed in FY19, 44 (54%) participated in the HSP and 37 (46%) did not. There was a trend to a greater mean total score for the HSP versus the non-HSP schools (Figure 18). These findings are somewhat similar to FY17 results, which revealed a very highly significant difference between the mean total scores and five section scores, with the HSP schools implementing more school health PSEs. However, in FY19, the significant differences were limited to three rather than five sections and were weaker overall than in FY17.

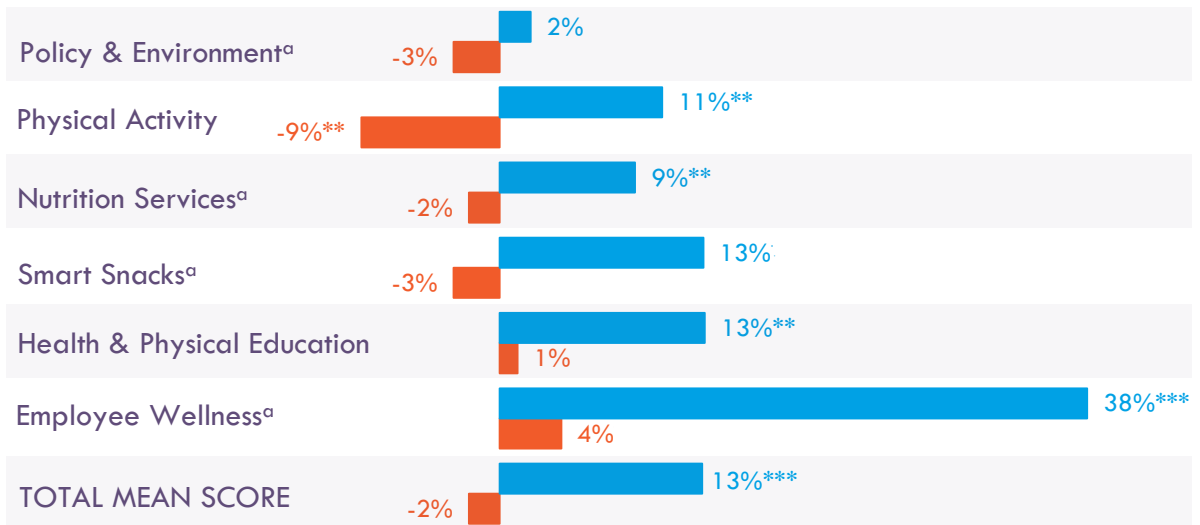
We further explored how scores changed *within* each group from FY17 to FY19. There were highly significant score increases across the *non*-HSP schools for four sections [LT5, LT6], and for the total score (Figure 19). In contrast, the only significant change among HSP schools was a decrease in the physical activity section. One possible contributor is that the non-HSP scores began lower and had greater room for improvement.

Overall, these findings show that *non-HSP schools receiving SNAP-Ed support closed some of the PSE implementation gaps with HSP schools detected two years earlier*. This suggests that SNAP-Ed may work well in conjunction with the HSP, or independent of HSP participation.

**18. HSP schools (n=44) had significantly higher Policy & Environment, Nutrition Services, and Health & Physical Education scores than non-HSP schools (n=37).**



**19. From FY17 to FY19, non-HSP schools (n=36) saw greater increases in NHSAC scores than HSP schools (n=35).**



<sup>a</sup> n=33, \*\*p<0.01, \*\*\* p<0.001

**Wellness Teams [ST7].** One NHSAC item measured the presence of ongoing *school-level* wellness teams. From FY17-19, we found a significant *decrease* in the number of these teams (n=68). These results contrast with our longitudinal findings from FY18, when we reported a significant *increase* in the number of LWPs that established ongoing *district-level* wellness committees. It is possible that, in seeking to meet federal LWP regulations, districts and/or LIAs may be prioritizing participation in district rather than school-level teams. More study is needed to better understand this phenomenon.

“The Prescott Unified School District started incorporating public input during their wellness committees and advertising all meetings. The district is now compliant to all USDA rulings. This happened with a collaboration of the school, Yavapai County staff, parents, Southwest Food Excellence staff and ADE staff.”

-Yavapai County Community Health Services

### Success Story

In FY19, the UA Cooperative Extension Mohave supported a variety of school health PSEs across districts, including written LWP

revisions, LWP implementation using the NHSAC, wellness team participation, and teacher trainings on physical activity.

“Valentine Elementary completed the NHSAC with us [and] realized that they did not offer any before or after-school activities for the kids. This year they have added afterschool programming and clubs.”



“As we both have schools within the district, we partnered with Mohave County Department of Public Health (MCDPH) to work with the Kingman Unified School District food service director, school nurse, and 21<sup>st</sup> Century coordinator to review and revise the LWP, which had not been updated since 2014. Using the results and recommendations from the WellSAT 2.0 that MCDPH had completed, we helped identify areas...that could be addressed through the LWP, such as the high student-to-teacher ratio [we observed] during our sessions with the ninth grade girls’ PE classes...We also provided a CATCH Kids Club training to help district teachers and staff better implement physical activity.”

“The newly revised [Mohave Accelerated Learning Center LWP] was much more extensive than their previous policy and captured more of what the schools were already doing. Through discussions with teachers and staff, we found that many were unaware of the policy. The food service director and superintendent asked if we would present the policy during the staff in-service...After the presentation, many teachers came up to the food service director and asked to be a part of the wellness committee.”

-UA Cooperative Extension, Mohave



## Multi-Level Interventions

During the 2018-19 school year, all AZ Health Zone LIAs supported PSE changes related to the school health strategies. They also provided direct education (DE) to students.

The SET used the KAN-Q to assess changes in students' nutrition and physical activity knowledge, attitudes, and behaviors from the start of the school year, pre-intervention, to the end of the school year, post-intervention. **Figure 20** shows who participated.

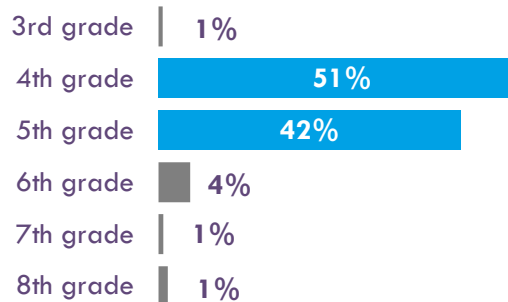
**Did Students Learn?** As in FY18, students' knowledge of the MyPlate recommendations for milk type and physical activity increased significantly [ST1e, ST3], but unlike FY18, the increase in fruit and vegetable knowledge was not significant. The increases were associated with SNAP-Ed interventions (**Figure 21**).

## 20. 1,777 students from 12 Arizona counties completed the KAN-Q at the start and end of the school year.

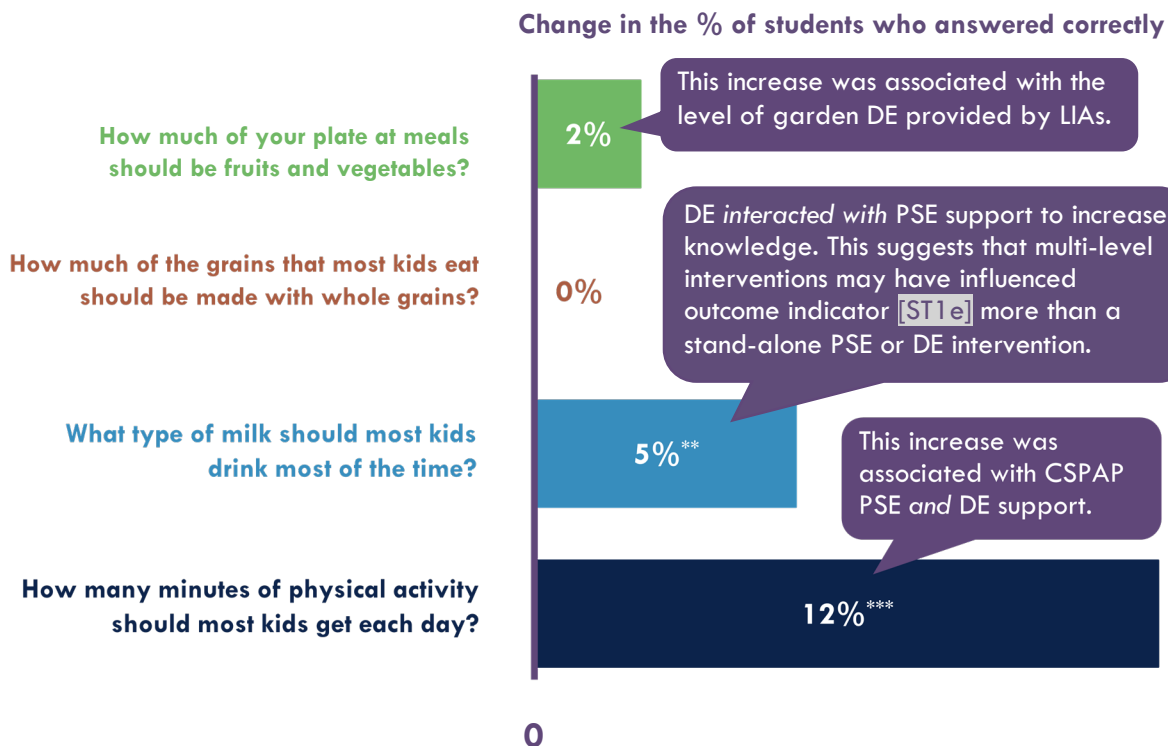
About half of all respondents were **female**.



**Most** were in 4<sup>th</sup> or 5<sup>th</sup> grade. (The average age was 10.)



## 21. Students' knowledge of dairy and physical activity improved at post.



\*\*p≤0.01, \*\*\*p≤0.001

**Did Attitudes Change?** As in FY18, there was little movement in students' attitudes. At pre, most students *already reported* liking fruits, vegetables, whole grains, low-fat dairy, low-or-no sugar drinks, and doing physical activity [ST1a,b,d,]; ST3]. At both pre and post, students expressed the most positive preferences for eating fruit and being active. However, attitudes toward low-fat milk were significantly more negative at post.

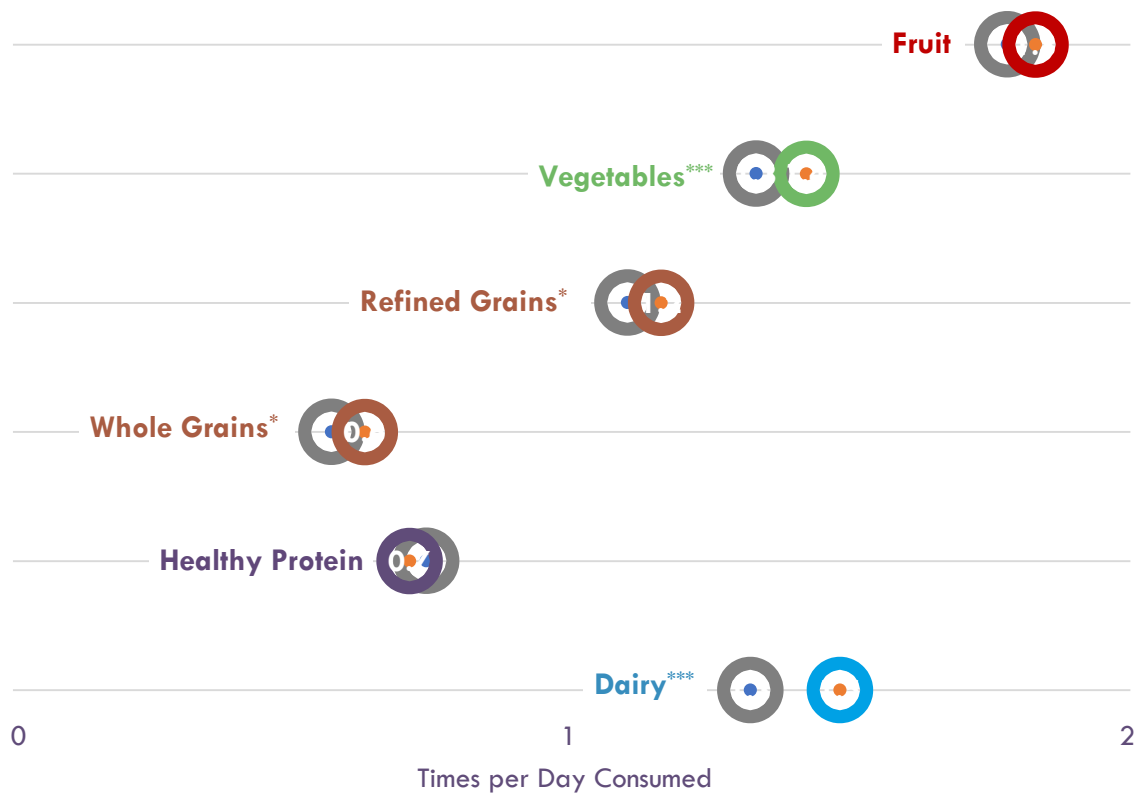
**Did Behaviors Change?** In general, yes. By the end of the school year, students reported an increase in vegetable [MT1m], dairy [MT1i], and grain (all types) intake (Figure 22).

Students also reported being more physically active at post [MT3a,d,e] (Figures 23a and 23b): Their total mean number of physical activity bouts over one week increased from 10.5 at pre to 11.4 at post. As in FY18, physical activity gains were more pronounced for girls than for boys, though this year boys also showed increases (see box, Figure 23a).

Findings for healthy hydration were mixed: Students' daily water and sugary drink intake remained the same at the start and end of the school year. However, as in the previous fiscal year, they still drank about five times more water than sugary drinks at both pre and post.

## 22. Students reported consuming more vegetables, grains, and dairy at post.

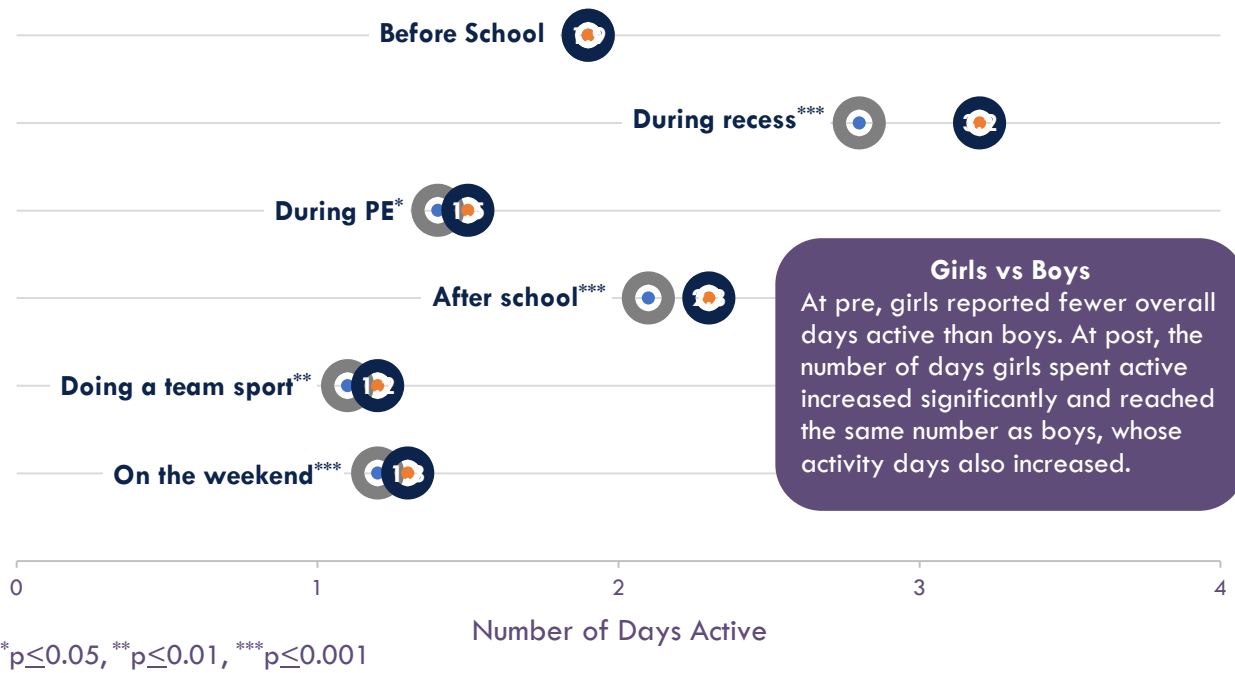
There were no significant changes in fruit or healthy protein (fish, eggs, nuts) consumption.



\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.001$

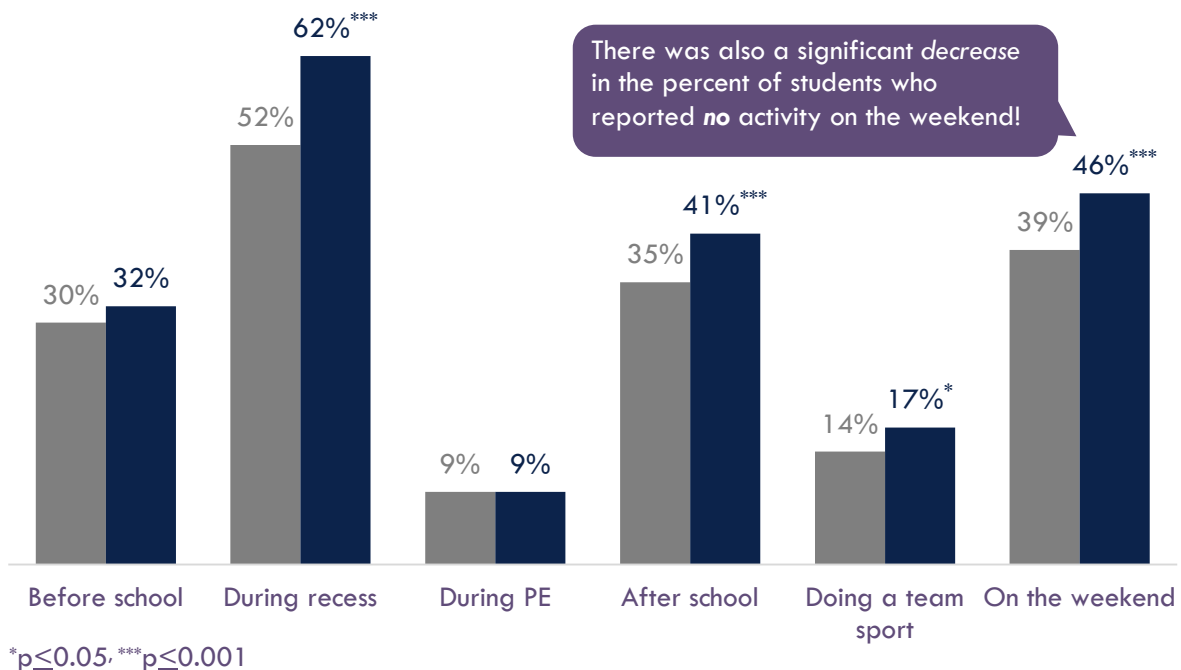
### 23a. The mean number of days that students reported being active increased.

From **PRE** to **POST**, students were more active across all periods assessed except before school.



### 23b. The percent of students that were active increased from **PRE** to **POST**.

At post, more students reported being active for 3+ weekdays in recess, after school, and doing a team sport. And, more students reported being active on both weekend days.





## How did SNAP-Ed supports relate to behavior changes?



All analyses of the relationships between SNAP-Ed interventions and student behaviors were done at the *school level* to allow for the effects of clustering.



SNAP-Ed support for chronic disease prevention and participating in sports and recreational activities was positively associated with an increase in the total mean number of days students were active [MT3a,d,e].



SNAP-Ed gardening support provided to schools was positively associated with an increase in vegetable consumption [MT1m].



Nutrition-focused DE was positively associated with an increase in the ratio of whole-to-refined grains consumed by students [MT1f].



Nutrition-focused DE was also positively associated with an increase in students' fruit intake [MT1i].



PSE support *interacted* with DE support to increase dairy knowledge and intake. Thus, a *multi-level support* may have had a greater influence on [ST1e] and [MT1i] than a single PSE or DE intervention.

**Persistent Challenges.** Some school health barriers have been consistently described in LIA narrative reports from FY16-19. These include a *lack of time or interest by schools, a lack of top-down support from school or district administration, and LIA or school staff turnover, including the loss of wellness champions* with whom to collaborate. In both FY18 and 19, LIAs also expressed *difficulties recruiting or retaining members for school wellness committees*. In FY19, other reported challenges include *difficulty moving from LWP revision or DE to implementing school-level PSEs, schools' confusion regarding school health programs and requirements in Arizona, and a lack of culturally-appropriate, age-appropriate, or needs-based SNAP-Ed programming* to offer schools.

**School Health Facilitators.** In FY18 and FY19, many school health facilitators emerged as the mirror images of the reported barriers. Across both years, LIAs described the importance of *fostering relationships with school districts, in-*

*cluding administrators, school wellness committees, and school health champions* [ST6, ST7]. In turn, the *wellness committees and champions encouraged the implementation of school health interventions*. LIAs also *expanded inter-agency collaboration* [ST8] by working with tribal groups, county health departments, and other community organizations. Two emergent facilitators of PSE change were *required or internal evaluations (e.g., the WellSAT) and LIA support for meeting the ADE's LWP-related requirements*. The latter may reflect the growing influence of the ADE on school health.

"The Food Service Director was unable to attend the ADE's LWP training, so multiple meetings were set up in addition to the quarterly wellness committee meetings to review the new ADE materials covered in the trainings. MCDPH staff assisted the school district by...reviewing the new ADE assessments."

-Maricopa County Department of Public Health



## Success Story

"In April, we gave a presentation to the Duncan Elementary staff at their In-Service on utilizing brain energizers in the classroom and the exciting research findings of how those help in the learning process. Following that meeting, we held a workday at the Duncan Primary/Elementary, where SHAC and community members came together to stencil the sidewalks. [About 30] teachers, teens, and whole families showed up to paint 10 stencils at the school.

We believe the family approach helped to build school and community pride and will encourage the students to use the games more... Teachers and children were thrilled with the results, and spoke excitedly of future use. The kindergarten teacher is planning to use the three by her classroom as centers for language and math, so the students will be getting physical activity while learning... In following up, teachers report that the primary students love to play on the stenciled sidewalks before school in the mornings."

-UA Cooperative Extension, Greenlee



## Recommendations

*Intensify collaboration with the ADE on LWP-related programming.* The SIT can enhance interagency collaboration, LIAs can become more proficient in ADE LWP requirements to align their support, and the SET can further coordinate school health evaluation with the ADE. Together, these efforts can ease district confusion about LWP requirements, facilitate LIAs' ability to support ADE guidelines, and increase school readiness to engage with SNAP-Ed.

*Continue to support school and district wellness teams, multiple wellness champions, and strong LWPs* to enhance school health sustainability despite turnover. LIA training can address how to actively recruit, engage, and retain wellness champions and committee members to strengthen written LWPs and promote their implementation.

*Consider adapting SNAP-Ed curricula and PSEs to enhance outcomes.* Positive health-related attitudes, knowledge, and behavior may be cultivated with the modification of curricula to accommodate student culture, age, developmental stage, and the unique needs expressed by school stakeholders. Collecting information on curricular adaptations, and on how to implement school health PSEs in various contexts, can help to fit interventions to settings.

*Enhance the ability to analyze SEEDS intervention data with outcomes.* Linking intervention supports to outcomes is vital to understanding SNAP-Ed's contribution, and to making recommendations for adjusting interventions to improve effectiveness. Specifically, reporting all school-based activities (school gardens, Farm to School, Safe Routes to School, before- and after-school nutrition and physical activity programming) under school health strategies would enhance school health data analysis, interpretation, and use of findings.

## Community Highlight

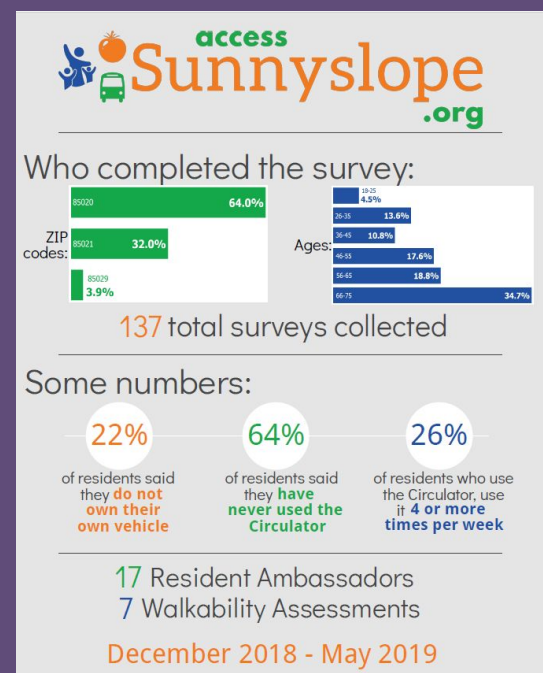
# Maricopa County Department of Public Health Fosters a Collaborative Approach in the Sunnyslope Community

Situated within the Phoenix metropolitan area, the Sunnyslope community celebrates a unique history and cultural identity. For over three years, the Maricopa County Department of Public Health (MCDPH) and the Desert Mission Food Bank programs have fostered a collaborative approach in Sunnyslope, becoming *a model for how to integrate all SNAP-Ed strategies and leverage other projects.*

Central to the success of the work in Sunnyslope is coordinated collaboration by service agencies to help build a healthy community for everyone. These include the City of Phoenix, Valley Metro, International Rescue Committee, Pinnacle Prevention, Keep Phoenix Beautiful, HonorHealth, Quetzal Markets, Country Store, Carnicería dos Hermanos, Washington Elementary School District, Sunnyslope High School, Sun Produce Co-op, Sunnyslope Community Center, Sunnyslope Senior Center, Sunnyslope Manor Senior HUD housing, and La Cascada Senior HUD housing.

To support their work, the MCDPH received a Vitalyst Foundation grant focused on community engagement. Through this project, staff enlisted 17 English- and Spanish-speaking patrons of the Desert Mission Food Bank, residents of Sunnyslope Manor, community gardeners at Mountain View Park, and parents of children attending Mountain View Elementary. Together, these *community members participated in field trips and walkability assessments* to identify assets and barriers for using the free SMART Circulator bus route for accessing no- or low-cost healthy food, places to play, and other community resources.

MCDPH leveraged additional funding to implement Park Rx, which will help to plant trees and add benches at two parks, as well as prescribe park walks to health care clients in the Sunnyslope neighborhood.



Reports were completed in English and Spanish.



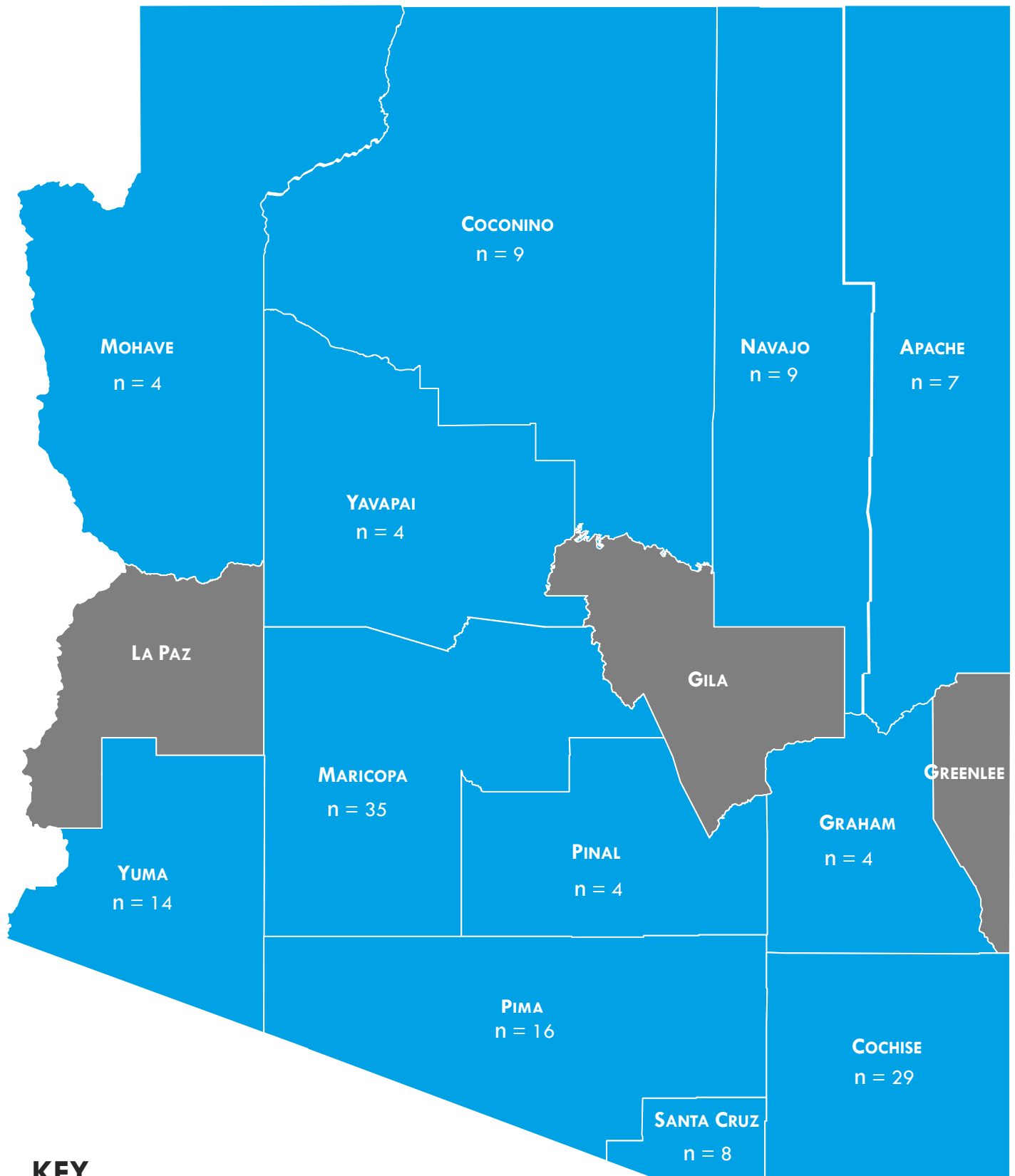


Desert Mission continues to be a strong community partner with its implementation of the Sunnyslope nutrition policy and support for Snack Pac weekend meals, senior center food boxes, and gardens. Healthy retail is also a robust community initiative, including a partnership with the International Rescue Committee to support local refugee farmers in bringing their produce to the Sunnyslope markets.

This year, the MCDPH and Desert Mission continued to partner on an annual community event—the Heart of Sunnyslope—where residents learned about community health resources, received free health screenings, and took home a bag of free vegetables. The event continues to grow and has received national attention, with the *schools and community gardens working together to provide engagement opportunities for residents*.

Aside from the event, ongoing coordinated efforts with the Washington Elementary School District supported gardens, the district’s wellness policy, walking to school, nutrition and physical activity lessons in classrooms, and the Summer Food Service Program.





**KEY**

- = Worked in the Early Childhood focus area (n = number of sites LIAs reported reaching with Early Childhood-related PSEs or DE in SEEDS)
- = Did not work in the Early Childhood focus area



# Early Childhood



Yoga with UA Cooperative Extension, Graham

## AZ Health Zone Early Childhood Strategies



Support nutrition and physical activity policies and environments consistent with the Empower Standards



Improve Early Childhood Education (ECE) capacity in nutrition education and healthy meals



Improve ECE capacity to provide opportunities for physical activity

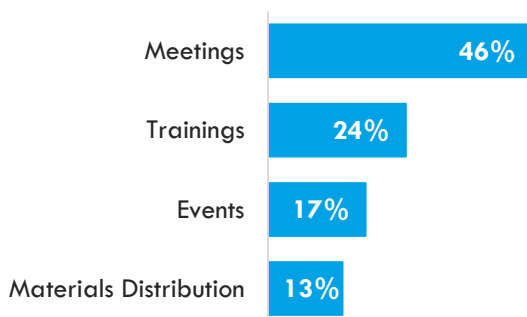
## Evaluating Early Childhood

Six Local Implementing Agencies (LIAs) supported 144 ECE sites across 12 of Arizona’s 15 counties in FY19. We measured early childhood policies, systems, and environment (PSE) and direct education (DE) activities using a combination of the AZ Health Zone’s SNAP-Ed Electronic Data Reporting Systems (SEEDS) and the LIAs’ Semi-Annual Narrative Reports (SARNs). Settings-level outcomes are presented here as success stories and will be reported quantitatively in FY20.

### PSE Interventions

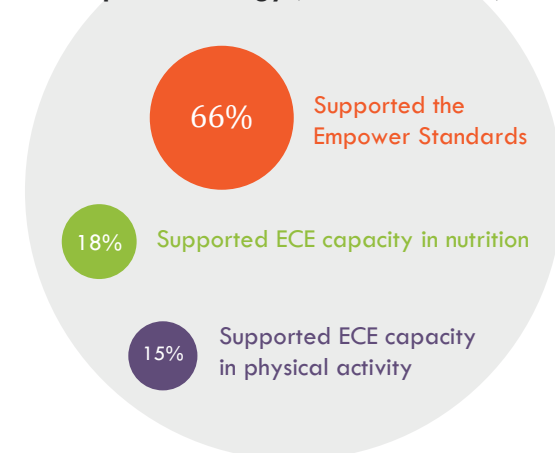
Early childhood PSE intervention activities involved meetings, trainings, materials distribution, and events with ECE partners. In FY19, LIAs reported 416 unduplicated PSE actions with 104 sites ([Figure 24](#)).

#### 24. Meetings were the most reported early childhood PSE activity (n = 416).



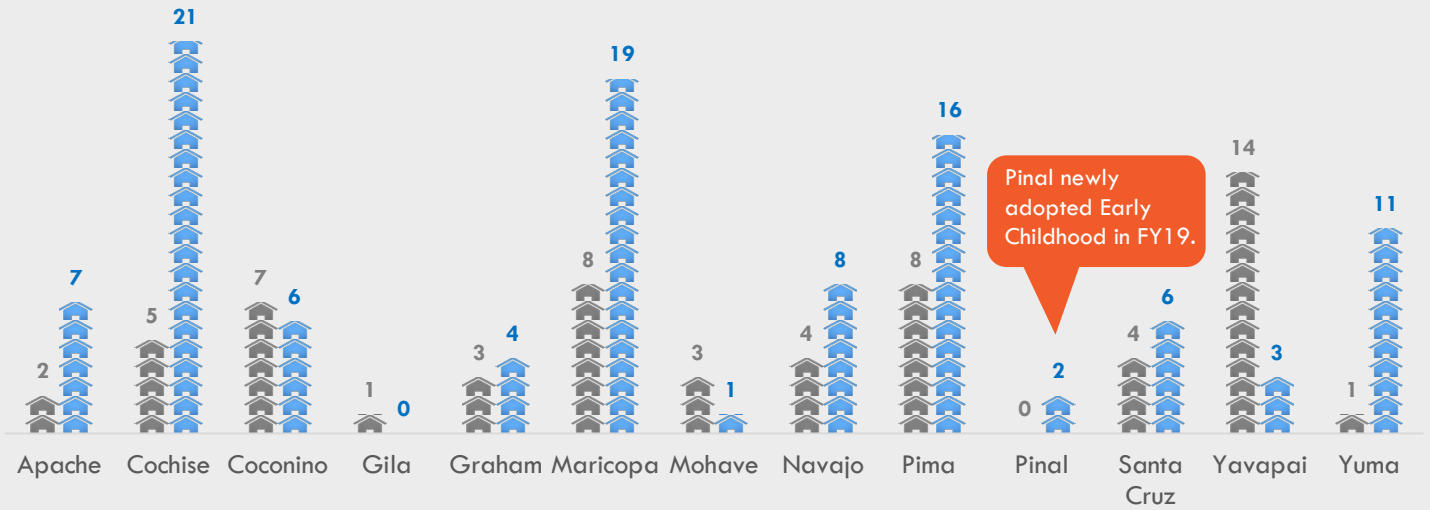
As in previous years, the majority of LIAs chose to work in the Empower strategy when providing PSE support ([Figure 25](#)).

#### 25. Most early childhood PSEs focused on the Empower strategy (n = 416 actions).



**26. LIAs in most counties increased the number of ECE sites they reached with PSEs from FY17 to FY19.**

Two LIAs in Gila and Yavapai Counties stopped working in Early Childhood after FY17.

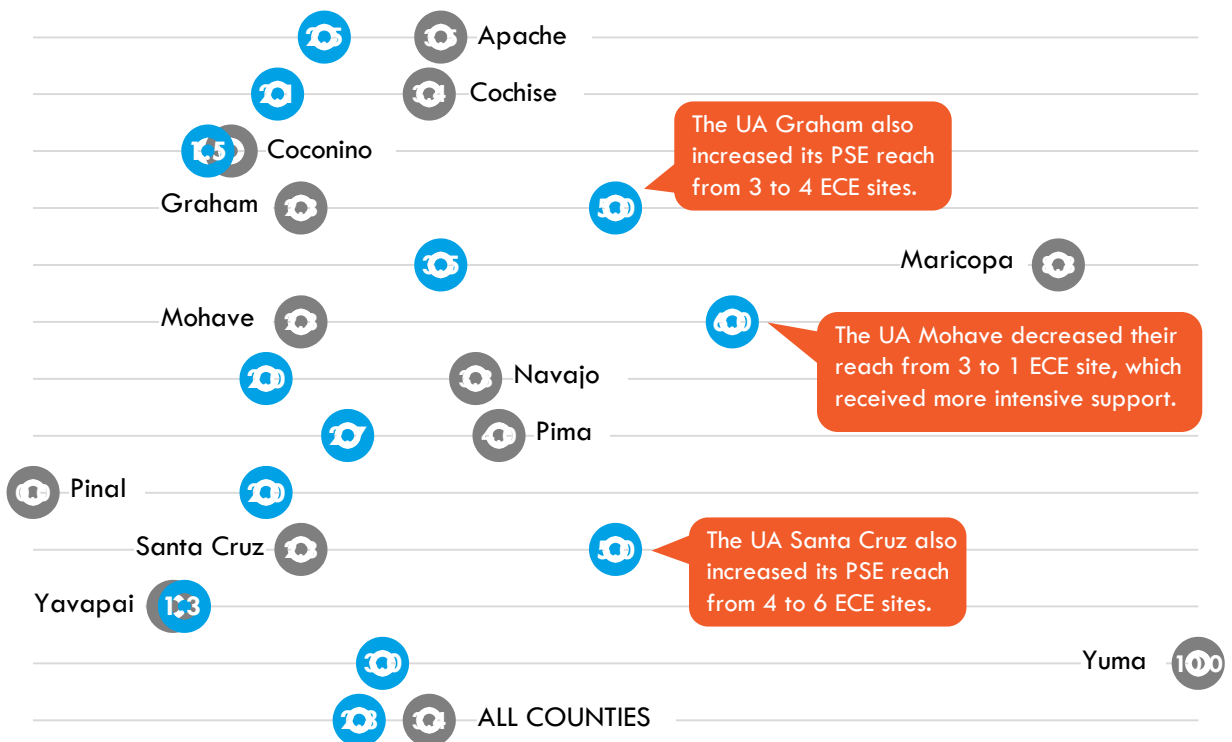


**ECE reach over time.** There was a 42% increase in the number of ECE sites that received PSE supports, from 60 in FY17 to 104 in FY19 (Figure 26). However, the ratio of meetings and trainings per site *decreased* from 3.4 in FY17 to 2.8 in FY19 (Figure 27), which

suggests a slight dip in the number of repeated contacts that LIAs had with individual ECEs. This was likely due to LIAs' rapid reach expansion. Regardless, LIAs were able to average nearly three meetings or trainings per site.

**27. The ratio of meetings and trainings per ECE decreased for 7 of 12 counties from FY17 to FY19.**

Graham and Santa Cruz Counties were unique in that *both* their ECE reach and this ratio increased.



## Success Stories

“[We] formed a new partnership with the Fort Mojave Indian Childcare Center...the site expressed a need for assistance with menu cycles and ways to prepare healthy foods that were child-appropriate and tasted appealing. We provided resources such as the Child and Adult Care Food Program meal patterns, and seasonal menu cycles and recipes... [The cook] implemented the menu cycles the next week [and] also started to replace pre-packaged snacks with snacks she prepared on-site.

“[During Empower trainings for ECE staff], we discussed the changes to the menu and what the teachers were seeing in their classrooms during meal service. A system was set up between the staff and the cook to continuously provide feedback on which recipes were working well with the kids and which were not. Staff were also given the chance to let the director know what they needed in order to provide family-style meals.”

-UA Cooperative Extension, Mohave



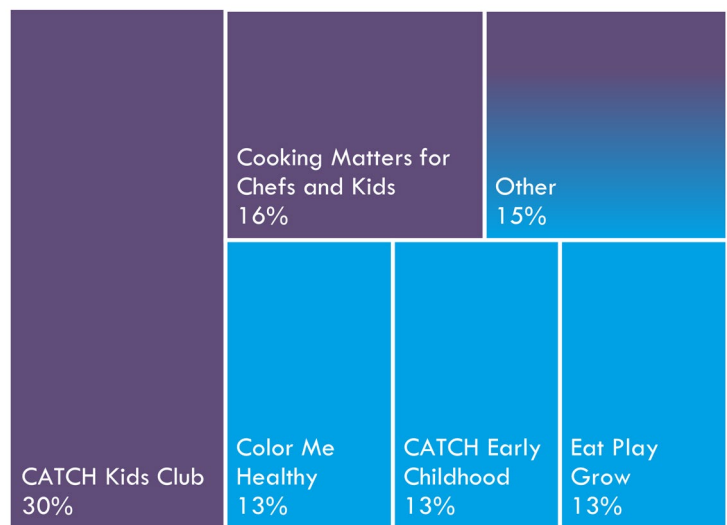
“A different approach to helping programs with family style dining just started at Gateway Community College Child Development Center. [Our] traditional approach was to observe and then provide oral and written feedback, including praise and constructive criticism...In this new approach, [our] staff member acted as a teacher during the meal process to ‘walk the walk’ and gain more credibility when providing feedback...The teachers appreciated [our] willingness to participate in the experience, not just evaluate it, and a debriefing discussion with the teachers after the meal proved valuable. [Our LIA staff] member has also increased her knowledge by participating in the family style meal service.”

-Maricopa County Department of Public Health

## DE Interventions

In FY19, LIAs working in early childhood reported 319 uses of an AZ Health Zone-approved DE curriculum (Figure 28). The most popular curricula (*CATCH Kids Club* and *Cooking Matters for Chefs and Kids*) were taught to school-aged children, mainly in the school setting during before and after school care. The next most popular curricula (*Color Me Healthy*, *CATCH Early Childhood*, and *Eat Play Grow*) were provided to preschoolers, mainly in the ECE setting, but in other locations such as libraries as well. LIAs also reported 674 food demonstrations provided in conjunction with DE and events.

**28. LIAs used DE curricula with school-aged children and preschoolers to support early childhood PSEs (n = 319).**

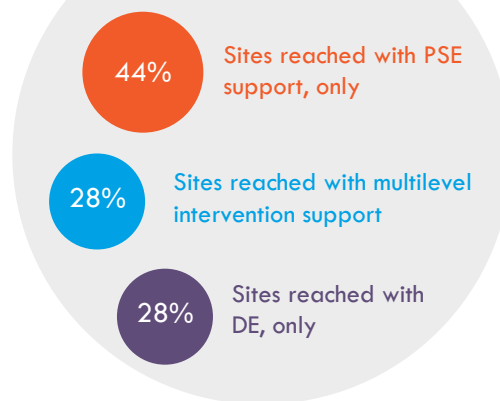


## The Spectrum of Prevention

Multilevel interventions [LT5, LT6] combined early childhood PSEs with DE. According to SEEDS, LIAs provided multilevel intervention support to 40 sites in FY19 (Figure 29).

The Spectrum of Prevention is a useful framework for developing and evaluating multi-level interventions. It includes activities at each of six levels, which can support one another toward a common goal. To better understand how LIAs worked across the Spectrum of Prevention, the SET analyzed LIA intervention activities reported in FY19 SARNs (Figure 30).

### 29. Over a quarter of all sites were reached with multilevel intervention support (n = 144).



### 30. Most FY19 narratives from LIAs working in Early Childhood described activities that fell within the Educating Providers level of the Spectrum of Prevention.

“[We] reached out to AZ Health Zone staff in Yuma County to collaborate on ECE professional development that covered nutrition education in the classroom, basic ECE gardening, and family style dining. [As a result] all ECE staff at Chicanos por la Causa received the same regional in-service training in Yuma (provided by Yuma AZ Health Zone) and Phoenix (provided by UA Cochise).”

-UA Cooperative Extension, Cochise



More than half of LIAs’ early childhood narratives described *Educating Providers*, *Fostering Coalitions and Networks* [ST7, ST8], and *Strengthening Individual Knowledge and Skills*. These activities may be important precursors to *Changing Organizational Practices*, reported in 26% of narratives [MT5, MT6]. Few SARNs mentioned *Influencing Policy* at the state, regional, or ECE level, which is consistent with qualitative and quantitative findings from prior years.

**Barriers.** LIAs have reported persistent challenges to ECE programming from FY16-19, the most notable being *ECE staff turnover*,

*structural changes within ECEs, and competing demands on ECE staff.* In addition, *LIA turnover* has often been reported to further inhibit or stall progress: “Multiple staff turnovers have led to a lull in previously explosive and progressive programming.” While strong policy can enhance sustainability during times of upheaval, we have already noted that SNAP-Ed-supported policy progress over the past four years has been limited.

**Facilitators.** Since FY16, LIAs have consistently reported certain activities to further site-level progress with partner ECEs: *relationship-building, leveraging the state’s*



*Empower program, and cross-pollinating early childhood with other focus areas.* In FY19, LIAs also described two new facilitators: (1) *Networking and coalition-building beyond the site level* [ST8] helped LIAs to build their capacity to support ECEs across counties and regions. (2) *The use of approved curricula and resources* was notable given that a *lack of resources* was reported as a barrier in FY17. Although less discussed than the facilitators above, *administrative support at partner ECEs* [ST6] and *LIA evaluative capacity* appear to be increasing over time.

“The UA Cochise team is a core member of the Cochise County Breastfeeding Taskforce...Follow-up from the Wilder coalition assessment completed last reporting period led to increased goal planning, action taking, and the addition of crucial partners to the Taskforce.”

-UA Cooperative Extension, Cochise

“The CATCH EC curriculum has been a big hit at the ECE centers. Both teachers and students alike enjoy the interactive games.”

-UA Cooperative Extension, Santa Cruz

## Success Story

“[A collaboration of] the Southern Region UA AZ Health Zone ECE units strengthened our collective partnership with the Southern Arizona Child Parent Centers (CPC) organization...Unit ECE leads saw the CPC Annual Summer Conference as an opportunity to collaborate on a comprehensive workshop to provide an overview of the AZ Health Zone Empower and gardening strategies and resources. Each unit was able to bring a unique strength to the three-hour presentation... An extremely valuable outcome was the alignment of Empower Standards and gardening to the Teaching Strategies Gold evaluation system implemented by CPC centers. This training was very well received, particularly by CPC Health Nutrition Specialists who were very encouraged by the Empower support.”

-UA Cooperative Extension, Pima



UA Graham, Cochise, Pima, and Santa Cruz County Extension collaborate on a Regional CPC Summer In-Service.

## Recommendations

Now that LIA reach has expanded, SIT trainings and LIA activities can *focus more attention on intervention dosage and tailored support for partner ECEs*. Evaluation should explore the amount and type(s) of support needed to optimize ECEs’ adoption and maintenance of PSEs.

*Enhance LIA support for regional and individual partner ECE policies*. The SIT may wish to build LIA capacity in this area by providing policy-centered trainings and resources.

Continue to coordinate the Early Childhood focus area with the ADHS Empower Program, and consider *merging all AZ Health Zone early childhood strategies under the single Empower strategy*, which already addresses ECE nutrition and physical activity capacity.



## Community Highlight

# The AZ Health Zone Supports Tribal Wellness Efforts in Mohave Valley

Mohave Valley is a census designated area that overlaps with Fort Mojave tribal lands.

The AZ Health Zone Cooperative Extension in Mohave County has worked with the Mohave Valley community to provide *multilevel intervention support* that spans food systems, active living, early childhood, and direct education. This year, LIA staff collaborated with tribal partners to promote wellness in existing and newly constructed sites.

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“The Mohave Valley community has [begun work] to increase the overall health of the community. They understand the health challenges that exist, and they have made strong efforts focused on prevention to combat those challenges. This focus on health has spread across multiple divisions within the Fort Mojave Indian Tribe, as they are all [dedicated to] improving the community.”

– UA Cooperative Extension, Mohave

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*The Fort Mojave Wellness Center in Mohave Valley was under construction in 2018.*

## SNAP-Ed’s Role in Mohave Valley

“We have helped to bring together different [Fort Mojave tribal divisions] with similar interests within this community. For the past few years, we discussed the idea of creating a community garden with the Cultural Division, but as of last year that project had little forward momentum. Then, the health clinic hired a new clinical dietician with whom we formed a strong relationship. While the new Wellness Center was being built, we formed a relationship with the new wellness team, which had the full support of the Tribal Council. Now the Farm Division and Cultural Center have been brought in with the creation of a community garden that will support the Wellness Center and a new school. [A recent meeting included] our staff, the case manager, the Fort Mojave Health Clinic’s clinical dietician, and the wellness team to discuss our [overlapping] efforts, plan more efficiently, and find ways to support each other [in] a unified [wellness] message.”

– UA Cooperative Extension, Mohave



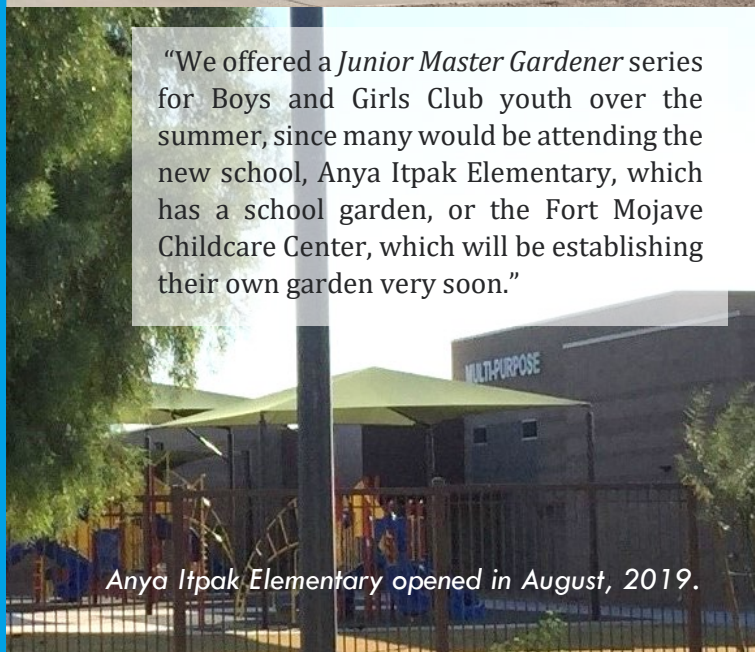




## Multilevel Interventions Abound

“We worked very closely with the wellness team at the Fort Mohave Wellness Center to promote the resource to all age groups... In April, the Wellness Center hosted a youth basketball league, and we delivered a lesson series with cooking demonstrations for younger kids. This allowed parents to utilize the center while their kids attended [SNAP-Ed] activities...In July, we did activities with youth from the Boys and Girls Club next door to the center: age groups ranging from elementary to high school rotated through our activities as well as physical activities led by Wellness Center trainers...in addition, the Lunch and Learn events that we were doing with adults at the Fort Mojave Indian Tribe Health Center are now being held at the Wellness Center. We provide the nutrition and physical activity [lessons] and food demonstrations. The clinical dietician and case manager provide additional dietary information and answer [health-related] questions. After the lesson, adults can join in on physical activities at the center.”

– UA Cooperative Extension, Mohave

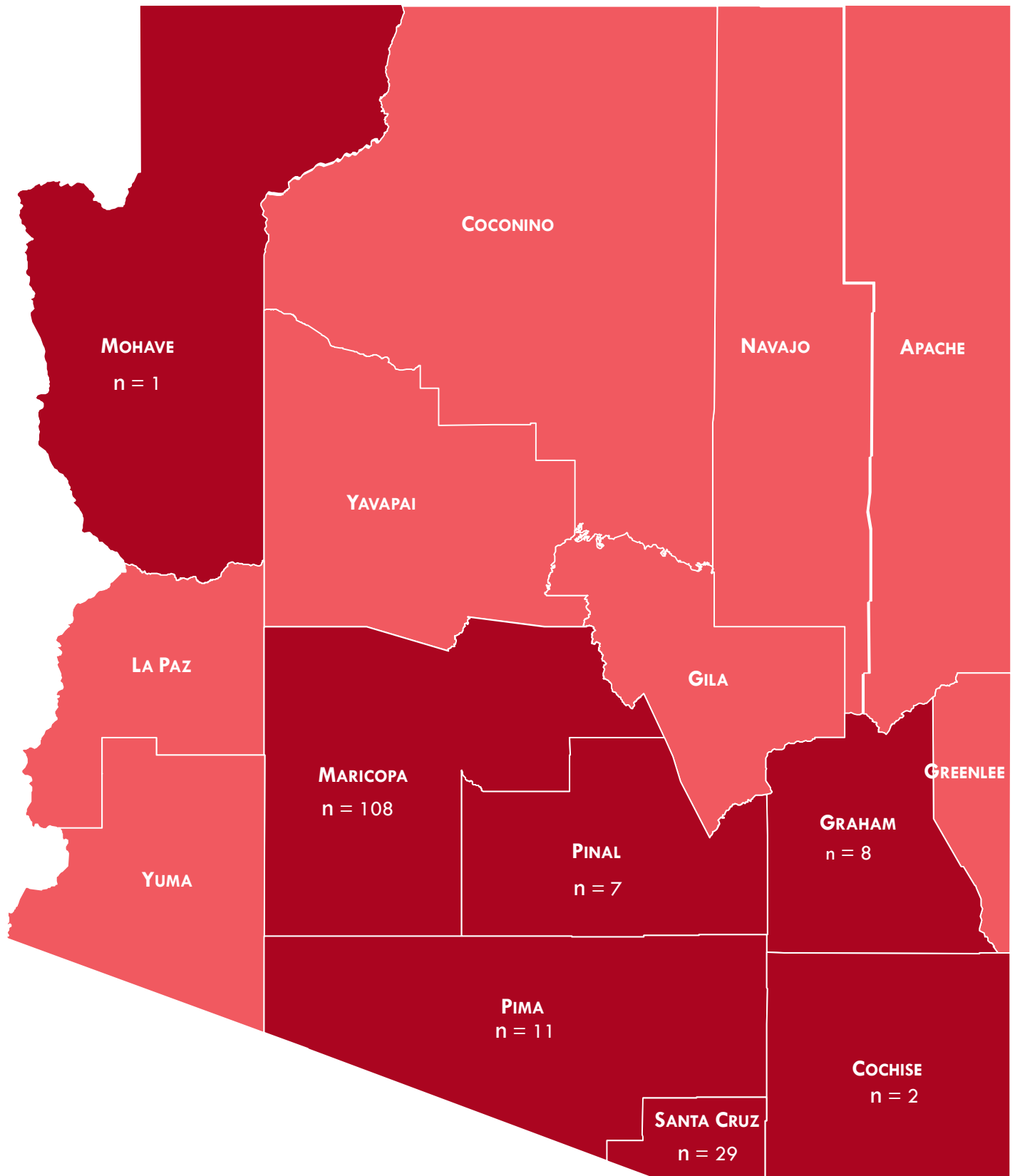


“We offered a *Junior Master Gardener* series for Boys and Girls Club youth over the summer, since many would be attending the new school, Anya Itpak Elementary, which has a school garden, or the Fort Mojave Childcare Center, which will be establishing their own garden very soon.”

Anya Itpak Elementary opened in August, 2019.

By 2019, the Fort Mojave Wellness Center was completed, offering state-of-the-art fitness facilities for all ages, and educational classrooms.





**KEY**

- = Participated in the FY19 Adult DE evaluation (n = number of matched pre-post assessments)
- = Worked in Adult DE



# Adult Direct Education



A UA Cooperative Extension, Maricopa class

## AZ Health Zone Direct Education Strategy



Provide healthy eating and active living education to adults in support of PSE strategies

### Evaluating Adult Direct Education (DE)

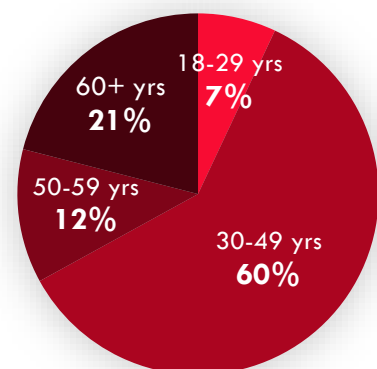
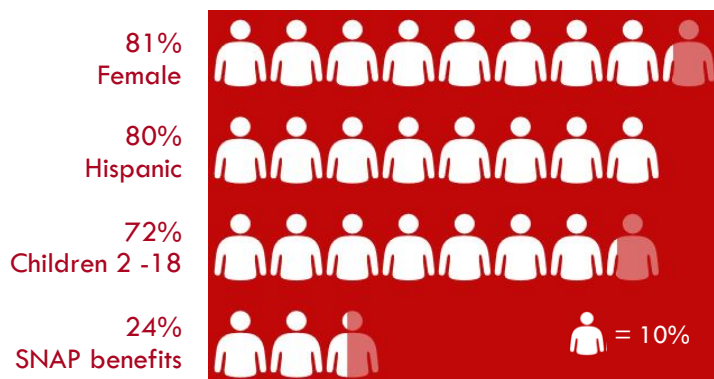
The AZ Health Zone assessed *adult behavior change* [MT1-3] using two University of California Cooperative Extension tools: the Food Behavior Checklist, and the On the Go!/¡De Prisa! survey.

### Series-Based Adult DE

In FY19, SNAP-Ed Local Implementing Agencies (LIAs) taught adult DE class series that were paired with surveys in eight of Arizona’s 15 counties; matched pre and post surveys were collected from seven counties (**Figure 31**). Participants in two curricular series had matched surveys: *MyPlate for My Family (MPFMF)* and *Eat Healthy, Be Active (EHBA)*. By *curriculum*, 98 adults took MPFMF classes and 68 took EHBA. By *language*, 44 adults took surveys in English

while 122 took surveys in Spanish. Spanish speakers were more likely to attend a MPFMF series (73%), while English speakers were likelier to attend EHBA (80%). More Spanish speakers reported Hispanic ethnicity and had children at home versus English speakers. Spanish speakers were also younger: 71% of Spanish speakers were 30-49 years old, versus 27% of English speakers. The oldest group, age 60+, contained 57% of English speakers but just 8% of Spanish speakers.

**31. 166 adults from seven Arizona counties completed matched pre-post surveys.** Most were female, Hispanic, aged 30-49, and had children living at home.



## Physical Activity Results

Significant increases were found for days active and minutes active across both moderate and vigorous physical activity (PA) levels (**Figures 32a and 32b**). A measure of the strength of the result, Cohen's d, is shown in the figure; for reference, *0.20 = small effect, 0.50 = medium effect, and 0.80 = large effect*.

Spanish speakers showed greater improvement than English speakers in days and minutes active (**Figure 33**).

Complementing increases in days and minutes active, average hours spent sitting per week [MT3i] decreased across time, from 22 to 19 hours per week. English speakers decreased from 27.5 hours to 20 hours per week ( $d = 0.66$ ), while Spanish speakers decreased sitting time from 20 to 19 hours.

**32a. There was a significant increase in Days Active in the Last Week [MT3a] from PRE to POST.**



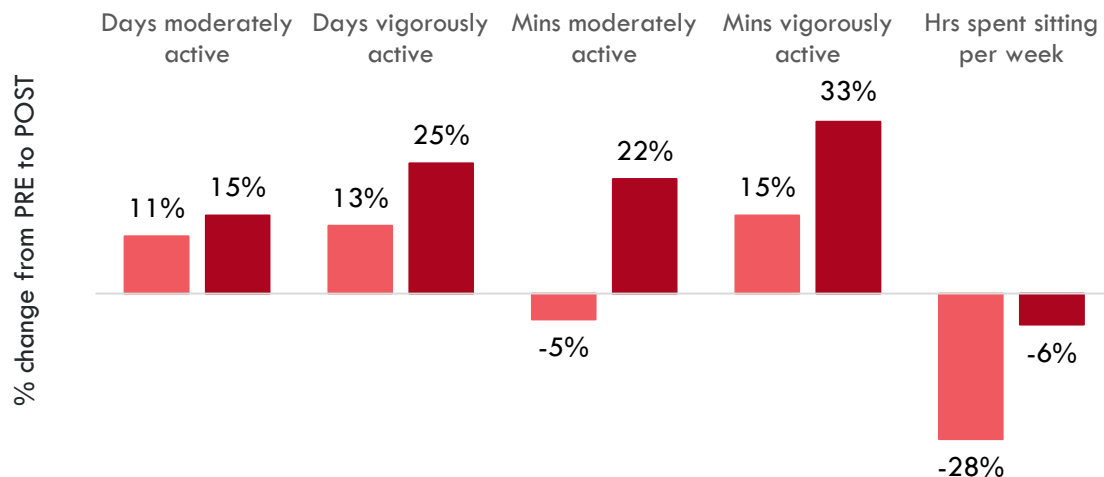
\* $p \leq 0.05$  ( $d = .19$ ), \*\* $p \leq 0.01$  ( $d = .25$ )

**32b. There was a significant increase in Minutes Active on a Representative Day in the Last Week [MT3b] from PRE to POST.**



\* $p \leq 0.05$  ( $d = .19$ ), \*\* $p \leq 0.01$  ( $d = .29$ )

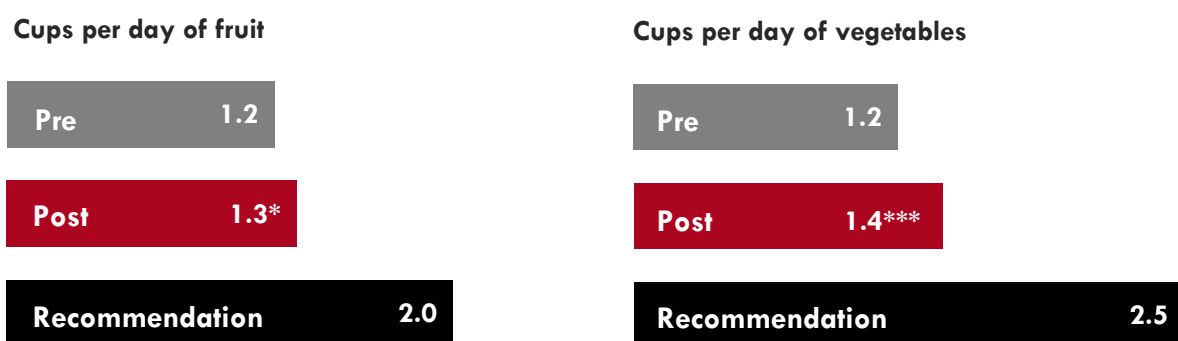
**33. Spanish speakers improved more for moderate and vigorous PA. English speakers improved more for sitting behavior [MT3i].**



## Food Behavior Results

**Fruits and Vegetables.** Figure 35 shows the significant increase in participants' reported fruit and vegetable consumption after participating in a lesson series in FY19. By *language*, both Spanish and English speakers increased intake, though Spanish speakers increased from pre to post by larger percentages than English speakers (16% vs. 5% for fruit, 24% vs. 4% for vegetables). When measured by a seven-item fruit and vegetable subscale [MT1c, MT1d], Spanish speakers improved their fruit and vegetable consumption by 9%, versus just 2.5% for English speakers.

**35. In FY19, daily fruit [MT1i] and vegetable [MT1m] consumption increased from PRE to POST.** Regardless of language, adults fell short of national recommendations at both pre and post, a consistent finding across four years.



\* $p \leq 0.05$  ( $d = .23$ ), \*\*\* $p \leq 0.001$  ( $d = .33$ )

“At Armory Park [Senior Center], participants have increased their interest in fruit and vegetable consumption and now use a weekly chart to keep track of their produce intake.”

-UA Cooperative Extension, Pima

**Sugary Drinks.** All participants significantly decreased their consumption of sugary beverages [MT1h] for regular soda ( $p \leq 0.001$ ,  $d = .84$ ), and for fruit drinks/punch ( $p \leq 0.01$ ,  $d = .45$ ).

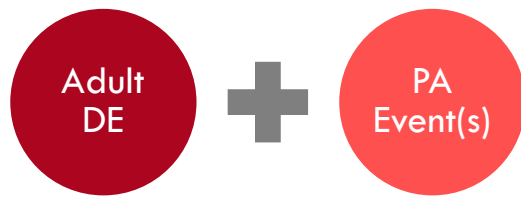
**The Nutrition Facts Label.** Use of the nutrition facts label [MT2b] also increased in all groups. After education, participants who reported always or often using the label increased by 55% ( $d = 0.67$ , medium effect). This was noteworthy, given that participants had reported only an average 11% increase at post in prior years since FY16.

**Food Security.** Participants' average reported food security [MT2g] did not change in FY19, which was similar to findings from the previous two years. By *language*, there was a trend toward English speaking participants improving their food security more than Spanish speaking participants.

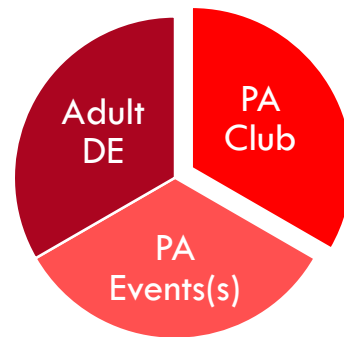
## Multilevel Interventions for PA

Alongside adult DE offerings, LIAs in 13 counties supported adults' opportunities for movement through *PA clubs*, which made up 42% of the PSE work reported under the PA Opportunities strategy, and *recurring PA events*, which made up 50% of the PSE work. Multilevel interventions were documented at 14 sites in eight counties (**Figures 34a and 34b**).

**34a. LIAs combined adult DE and PA events at seven sites.**



**34b. LIAs also offered PA clubs at another seven sites.**



### Success Story

UA Pima staff helped to develop and support a vibrant PA club at a South Tucson site, which they supplemented with DE and PA events.



*House of Neighborly Service PA Club members met twice weekly to walk or dance together*

“Our staff member worked with the House of Neighborly Service to help with the development of the PA Club. She also provides **workshops on PA and direct education**, assists with their self-created incentive program, and encourages the progress made by participants. The [combination of] participant buy-in to the PA Club and UA Pima support has allowed this club to persevere (10-15 participants walking, dancing, or stretching twice a week!). Our staff is in communication with site leadership, and working together we hope to develop a site-specific policy in support of the club.”

*-UA Cooperative Extension, Pima*



## Persistent Barriers

Adult DE continues to show positive changes among our sample of adults who complete surveys. However, these barriers remain:

- 🗣️ *Recruiting and retaining adults for a complete class series.* LIAs consistently report difficulty competing for adults' time and interest, a lack of variety in adult curricula, and a lack of relevance of the adult curricula to community members' interests and/or needs.
- 🗣️ *Motivating adults to complete surveys.*

“Adult DE series have been more difficult for us this year. Many of the sites [we reach] have already received the series that we offer. While we can see the benefit in offering the same curriculum at the same site, we struggle to obtain new participants. Therefore, attendance for adult DE series is low and the site coordinators often cannot get enough people to sign up to hold one of our classes, as was the case with two housing sites this year.”

-UA Cooperative Extension, Mohave

## Adult DE and Community Engagement

“To identify areas of opportunity and improvement, we are continuing to conduct community vision sessions with adult groups so that our DE and activities are more responsive to the communities' needs. We have just begun to implement a collaborative learning approach with adult groups, starting with the senior groups, and it has yielded good results so far as we see them become more engaged and open to sharing. We will continue to build on this and implement this teaching style with parent groups.”

-Yuma County Public Health Services District


The deepening of community engagement practices in Arizona, particularly when trauma-informed, has the potential to increase buy-in with adult participants. LIAs in several counties, including Gila, Maricopa, Pima, and Yuma Counties, have moved toward more collaborative approaches through focused outreach to community residents.

## Recommendations

Approve new adult DE curricula so that LIA staff will have additional options to offer adult learners. This may help to recruit and retain adults.

Transition to more trauma-informed curricula in combination with streamlined evaluation surveys to enhance the AZ Health Zone's responsiveness to participant needs. This may help to encourage and measure behavior change among adults.

Support LIAs in their efforts to reach the same community members with a combination of adult DE and PSE interventions (e.g., adult DE plus a PA club, especially if it utilizes a local PA resource). This will further progress in multilevel interventions for adults and their families.



“Data are just summaries of thousands of stories—tell a few of those stories to help make the data meaningful.”

– Chip and Dan Heath, *Switch: How to Change Things When Change is Hard*

## Acknowledgements

We thank the AZ Health Zone for supporting this FY19 evaluation:

**Cristina Guterman, *AZ Health Zone Administrator***

Stacy Beauregard, *Operations Coordinator*  
Susan Briody, *Social Marketing Manager*  
Jesse Davenport, *Food Systems Specialist*  
Elizabeth Holmes, *School Health Specialist*  
Ryan Lang, *Active Living Specialist*

Therese Neal, *Operations Manager*  
Sharon Sass, *Communications Manager*  
Bianca Valenzuela, *Operations Coordinator*  
Noelle Veilleux, *Early Childhood Specialist*

Stephanie Martinez, *Office Chief, Community Innovations*



# AZ HEALTH ZONE

This report was funded by the AZ Health Zone and approved by the ADHS Human Subjects Review Board. The recommendations included herein are those of the authors and should not be construed as the official position of the ADHS. *SNAP-Ed is the education arm of the USDA's Supplemental Nutrition Assistance Program (SNAP). The USDA is an equal opportunity employer.*



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