AZ HEALTH ZONE

FY20 Evaluation Report

COLLEGE OF AGRICULTURE & LIFE SCIENCES
Nutritional Sciences

Local Implementing Agencies

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List of Acronyms

ADE	Arizona Department of Education
ADHS	Arizona Department of Health Services
CATCH	Coordinated Approach To Child Health
COVID	Coronavirus Disease
DE	Direct Education
DES	Department of Economic Security
EBT	Electronic Benefit Transfer
ECE	Early Care & Education
EHBA	*Eat Healthy, Be Active* curriculum
FBC	Food Behavior Checklist
FY	Fiscal Year (Oct 1st – Sept 30th)
FTI	Farm to Institution
GIS	Geographic Information System
HSP	Healthy Schools Program
KAN-Q	Kids' Activity & Nutrition Questionnaire
LIA	Local Implementing Agency
LWP	Local Wellness Policy
MPFMF	*MyPlate for My Family* Curriculum
NACOG	Northern Arizona Council of Governments
NHSAC	National Healthy Schools Assessment Checklist
PA	Physical Activity
PSE	Policy, Systems & Environment
SARN	Semi-Annual Report Narrative
SEEDS	SNAP-Ed Electronic Data System
SET	AZ Health Zone State Evaluation Team
SFMNP	Senior Farmers' Market Nutrition Program
SFSP	Summer Food Service Program
SHAC	School Health Advisory Committee
SIT	AZ Health Zone State Implementation Team
SLM	Smarter Lunchrooms Movement
SNAC	State Nutrition Action Committee
SNAP	Supplemental Nutrition Assistance Program
SNAP-Ed	Supplemental Nutrition Assistance Program-Education
UA	University of Arizona
USDA	United States Department of Agriculture
WellSAT	Wellness School Assessment Test
WIC	Special Nutrition Program for Women, Infants & Children
Wilder	Wilder Collaboration Factor Inventory

Executive Summary

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 Fiscal Year 2020 (FY20)—the fifth year of the AZ Health Zone's five-year program cycle—including programming impacts from the coronavirus (COVID) pandemic.

Food Systems. Four food systems coalitions in two counties completed a Wilder Collaboration Factors Inventory (Wilder) in FY18 and FY20. Results showed a **decrease in six Wilder collaboration success factors**. LIAs coordinated with community partners to support free meals for children, with **social media and digital efforts accelerating upon the onset of the pandemic**.

Active Living. Six active living coalitions were assessed using the Wilder in FY18 and FY20. **Of the 20 collaboration success factors measured, 18 increased significantly across the two years**. LIAs continued making progress in their active living policy goals, primarily in smaller towns with a focus on transit and transportation planning.

School Health. Local Wellness Policies assessed longitudinally (n=33) saw **significant increases in comprehensiveness for five of six sections, and strength for three of six**. Findings from the Healthy Schools Program (HSP) assessment (n=40 schools) showed that **HSP schools receiving LIA support were more likely to meet best practices compared to non-LIA supported HSP schools** in Arizona and across the US. A longitudinal analysis of students' eating and activity patterns (n=180 students) revealed **sustained, significant increases in vegetable and healthy protein intake after multi-level school-based interventions**.

Early Childhood. Of the 40 NAPSACCs used to assess early care and education sites (ECEs) in six counties, **Head Starts had higher mean total scores than other ECEs.** Notably fewer assessments were completed in FY20 due to COVID—a 62% decrease from FY18.

Direct Education. Two adult DE curricula were taught in FY20 in six counties. However, due to COVID, only four counties' pre surveys could be matched with post surveys. Nevertheless, participants reported a **pronounced increase in the number of minutes spent doing vigorous physical activity, with a significant decrease in hours spent sitting overall**.

The FY20 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. These short-, medium-, and long-term outcomes offer evidence for the strongest areas of continued intervention, as well as potential areas for new program directions.

Introduction

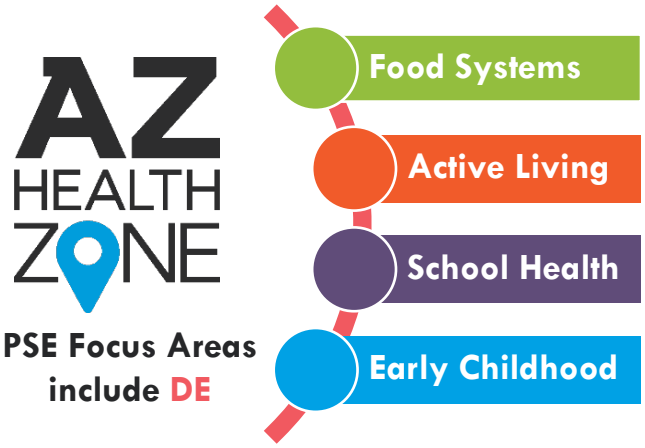
The USDA's Supplemental Nutrition Assistance Program Education (SNAP-Ed) provides community-based initiatives, including nutrition education, in each state to reduce health disparities by increasing the likelihood that SNAP-eligible families will choose healthful diet and physical activity behaviors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

Statistics Note

While p-values can tell us whether a difference is statistically significant, effect sizes tell us the *magnitude* of those differences. We therefore include both p-values and effect sizes in this report. For reference, the standard interpretation of the Cohen's d effect size measure is: **0.20**=small effect, **0.50**=medium effect, and **0.80**=large effect.

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 FY20 evaluation report describes findings from the fifth 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 *5* **EVALUATION STANDARDS** to inform each phase of the SNAP-Ed evaluation:

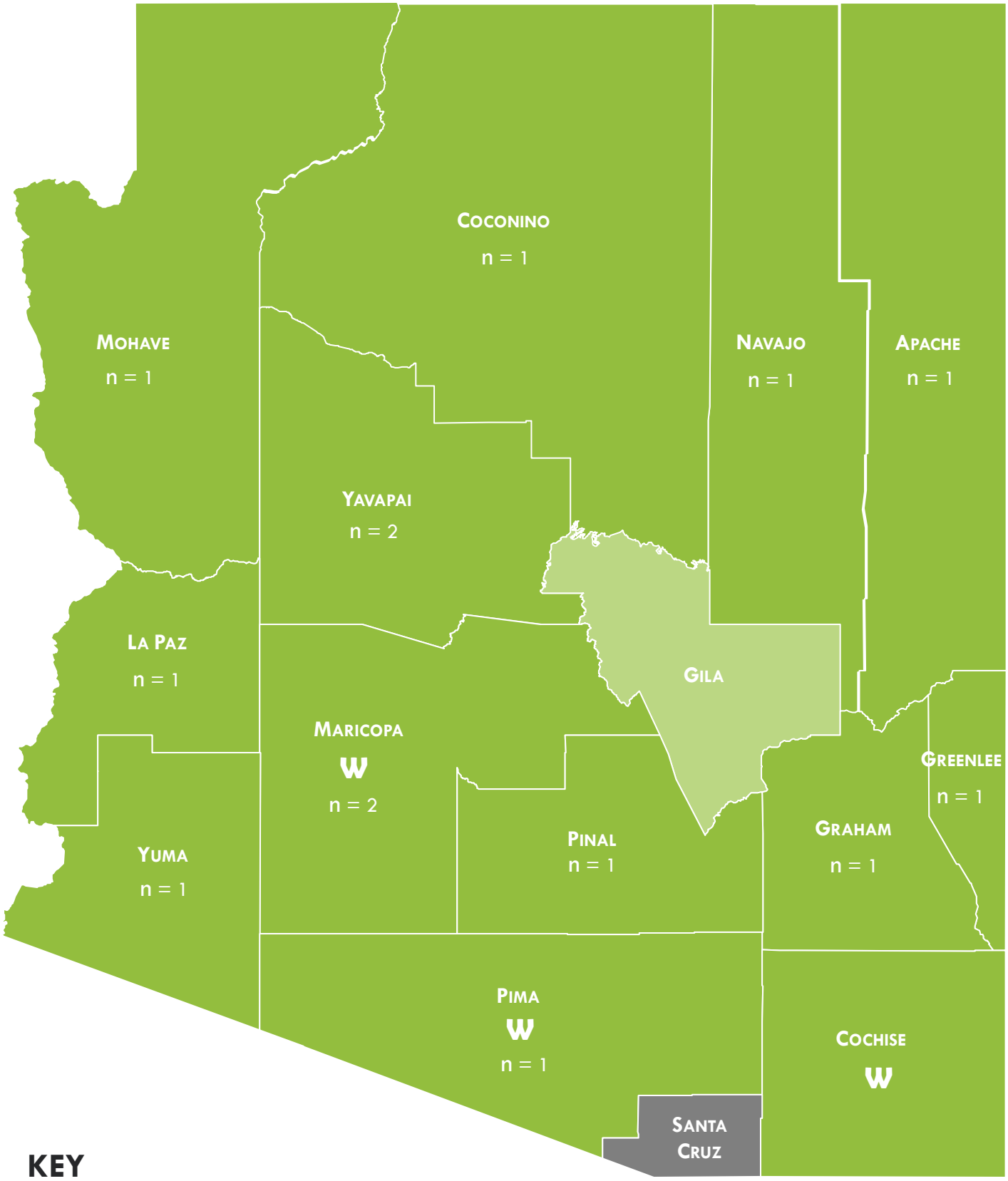
Utility. Be responsive to stakeholders' needs and provide meaningful products.

Feasibility. Design practical, realistic, and contextually appropriate evaluations.

Equity. Incorporate equity and trauma-informed principles into evaluation, engaging stakeholders at multiple levels whenever possible.

Accuracy. Use methods, designs, and analyses that are valid, reliable, and trustworthy.

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



KEY

- W = Participated in the FY20 Food Systems Wilder coalition evaluation
- = Participated in the FY20 Free Meals for Children survey (n = number of LIAs)
- = Worked in Food Systems in FY20
- = Did not work in Food Systems in FY20

Food Systems

Broccoli Harvest at Fuller School, Maricopa

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

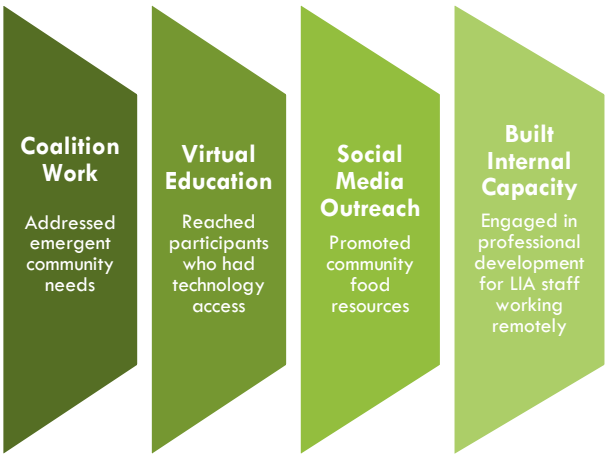
The AZ Health Zone State Evaluation Team (SET) evaluated food systems programming using Arizona's SNAP-Ed Electronic Data System (SEEDS), SNAP-Ed Local Implementing Agencies' (LIAs) Semi-Annual Narrative Reports (SARNs), and two additional evaluation efforts. In this chapter, we present two- and four-year outcomes for *Multisector Partnerships and Planning* [ST8]. In response to the COVID pandemic during the second half of the program year, we report findings on LIAs' efforts to support food access for children through *Nutrition Supports* [MT5].

The Impact of COVID

Arizona's response to the COVID crisis included a *Stay-at-Home* order from March through May of 2020, resulting in the shutdown of in-person SNAP-Ed programming statewide.

How did LIAs' food systems programs respond to COVID? LIA staff reported quick pivots to address the needed services in their communities and remain operational during extended remote working conditions (**Figure 1**). Innovation and collaborative community efforts were key during this time. Additional themes and findings related to the impacts of COVID on each food systems strategy are provided throughout this chapter.

1. In FY20, LIAs reported these shifts in food systems priorities as a result of COVID.



Healthy Retail

Seven LIAs in nine counties continued to progress their healthy retail activities, although only 39% of this year's reported SEEDS activities in the strategy centered on corner and grocery store partnerships. Most of the work (60%) focused on emergency food distribution in response to COVID, with coalitions cited frequently in the SARNs as a mechanism for leveraging resources and communication.

Strengths. Six LIAs in seven counties partnered with small and large food retailers to stock, prominently display, and/or promote healthier products—primarily fresh produce [MT5]. LIAs in two counties also sought to advance healthy food bank policies. Support for small-scale farmers to act as local produce vendors was reported across all food systems strategies this year [MT8].

Success Story

"We supported Quetzal Market in enhancing the promotion and appeal of fresh fruits and vegetables at their store. The store owners dedicated a fridge to displaying fresh fruits and vegetables near the store's front entrance. We provided bright green produce baskets to display produce in that fridge. We also worked with the store owners and the International Rescue Committee to design and install a colorful fridge sign to attract customers to the display and help explain the Fresh Fund Program in Spanish, which is the primary language spoken by their customers."

-Maricopa County Department of Public Health

COVID Reshaped In-Store Healthy Retail Partnerships

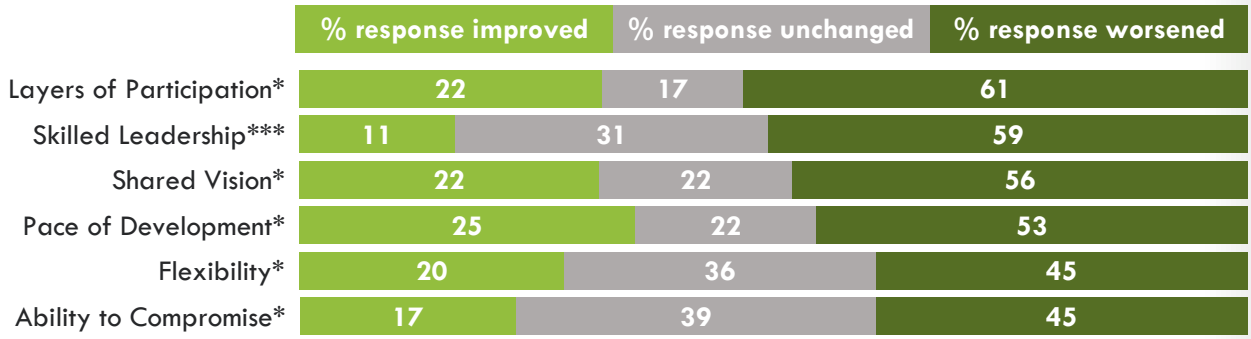
Many LIAs' in-store activities—including face-to-face outreach, food demonstrations, and customer events—paused as a result of the pandemic. Store owners shifted priorities to keeping shelves stocked and adjusting their operations to meet public health guidelines. Three LIAs were able to maintain active store partnerships by engaging in activities such as online promotion of the Double Up Bucks grocery program, virtual networking for store owners to share successful retail adaptations, and promotion of supplemental food resources in their communities.

"With COVID food supply chain disruptions impacting the grocery stores, we shifted our focus to serving as a communication hub regarding food access for the SNAP eligible population. We created a one-stop guide to share food resource information and created tailored guidance specific to food bank and food pantry access for each of the Gila County communities."

-Gila County Public Health Services

Community Coalitions. Coalition initiatives were an important component in LIAs' healthy retail and other food systems efforts before and during COVID. We present the Wilder Coalition Factors Inventory evaluation here for all food systems coalitions assessed in FY20, and longitudinal outcomes from FY16-20 for both food systems and active living coalitions.

2. Coalition members (n=36) reported six factors that declined most over two years.



*p≤0.05, ***p≤0.001

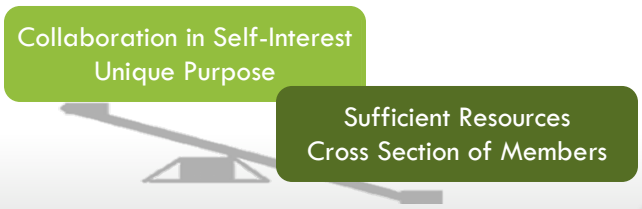
What is the Wilder Collaboration Factors Inventory (Wilder)? The Wilder is a research-based online or hard copy survey for assessing coalition characteristics identified as essential for achieving shared goals [ST8]. It provides scores from 1 (low) to 5 (high) for 22 coalition success factors based on coalition members' survey responses.

Results. Four Maricopa and Cochise County food systems coalitions (n=36 members) were evaluated in both FY18 and FY20, following the AZ Health Zone's alternate year evaluation model. One coalition dropped out due to COVID. Six Wilder success factors decreased significantly over the two-year period among participating coalitions, with small effect sizes (**Figure 2**). No factor increased meaningfully from FY18-20, in contrast to FY16-18 findings.

COVID presented a challenge to interpreting results. Stakeholders' participation in their coalitions, and by extension, in the Wilder, may have been impacted by unknown shifts in priorities during the pandemic. Similarly, for those participating, it was difficult to ascertain how local context may have influenced perceptions about coalition function during COVID. Narratives suggested that coalitions played a key role in supporting emergency food efforts during the pandemic (see *Success Story)*. However, coalitions participating in the Wilder were a small subset of all SNAP-Ed-supported coalitions across the state that responded to communities' emergent needs. As in prior years, this underscores the extent to which each coalition's characteristics at a single time point are unique to the coalition's community context and active stakeholders.

The Highest & Lowest Scoring Success Factors Remained the Same

Although most Wilder success factors decreased from FY18-20, the highest and lowest scoring factors were consistent from FY16-18-20.



Success Story

"We participated in regular coalition meetings, which focused on food access for residents laid off due to pandemic closure of the Grand Canyon National Park and the hospitality industry. Working with the coalition, multiple agencies collaborated to increase food access through the coordination of pop-up food distribution sites throughout the area."

-Coconino County Health & Human Services

New Coalitions. Two new coalitions from Pima County were assessed in FY20, resulting in a total of six food systems coalitions evaluated this year (n=65 coalition members). *Skilled Leadership* received the highest mean score of 4.0. Only *Sufficient Resources* scored below a 3.0 (2.6). The accumulation of factors in the midrange of scoring suggests that on average, members reported moderate confidence this year in the characteristics measured by Wilder that support coalition effectiveness.

Four-Year Longitudinal Results. Five food systems and active living coalitions (n=43 members) in Maricopa and Pima Counties were measured at three time points (FY16-18-20). Results were mixed with no clear patterns. Only *Pace of Development* improved significantly across four years ($p \leq 0.05$), with a small effect size.

Rural vs. Urban Coalitions

Four of the 10 coalitions assessed in FY16 were in the more rural Mohave, Coconino, Yavapai, and Pinal Counties. Only two rural coalitions (not evaluated in FY20 due to COVID) were sustained over four years, compared to five from the more urban Maricopa and Pima Counties. *This suggests possible disparities in rural versus urban coalition resources, function, or other factors.*

Gardens

Seven LIAs in 12 counties supported gardens in FY20 [MT5]. Gardening represented 16% of all SNAP-Ed actions reported in SEEDS, a decrease from the 21% and 28% reported in the past two years, likely due to COVID's impact on garden programs (**Figure 3**). Nevertheless, garden activities were the second most reported SEEDS action in food systems, after the Summer Food Service Program.

Strengths. Arizona's SNAP-Ed gardening models have matured and demonstrated sustainability after five years [LT5]. LIAs most often reported providing gardening materials to sites, technical assistance, the *Seed to Supper* curriculum, professional development for teachers or other onsite staff, and complementary direct education. By site type, LIAs narratively reported more success with school and housing gardens compared to community or ECE site gardens, although community garden successes were reported in four counties.

Barriers. Prior to COVID, LIAs reported the development and continuation of sustainable garden partnerships as a result of several years spent fine-tuning interventions. Nonetheless, four LIAs reported these barriers in FY20:

- Lack of consistency in volunteer or site champion support to maintain gardens
- Partners' competing demands on time and resources
- A limited Northern Arizona planting season, exacerbated by COVID's timing

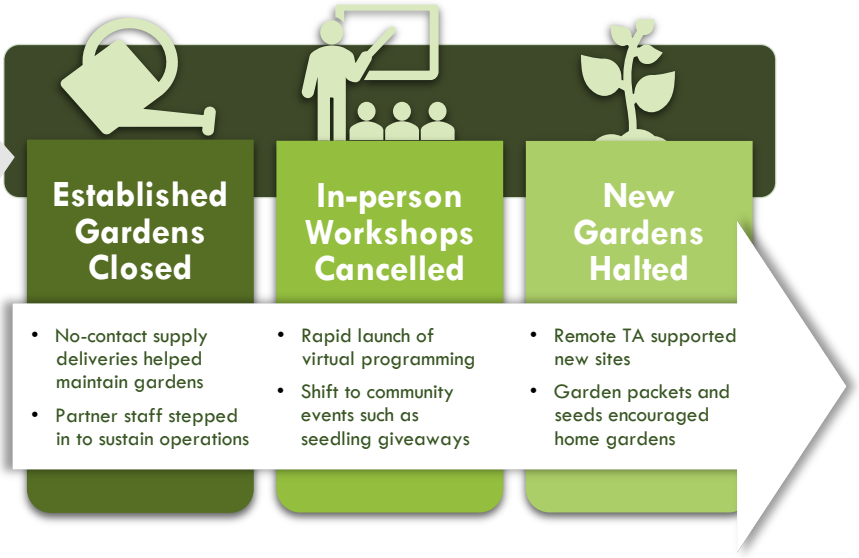
"To help support PSE garden work, we provided food demos and single nutrition lessons at the Peach Springs Boys and Girls Club garden. The garden project was in the planning phase for over a year, and in that time, short gardening activities and nutrition lessons were provided to the kids. Cooking demonstrations utilizing produce that was being grown in a local school garden helped to raise awareness and enthusiasm from the kids to support a garden at the club. We also provided gardening materials, such as lumber, soil, and seeds, to the club to help support the installation of the garden."

-UA Cooperative Extension, Mohave

3. All LIAs implementing gardens reported COVID impacts to their interventions. Several of the frequently reported barriers were addressed using similar program adaptations.

"Management at Casa Sierra Vista and Valle del Desierto housing sites have not allowed the residents to work in the gardens as mitigation against COVID, but the site staff have been very involved in sustaining the gardens. Las Brisas is allowing the residents to work in their garden, and they decided to try their hand at growing corn in May."

-Yuma County Public Health Services District



Farm to Institution (FTI)

Seven LIAs in six counties implemented the FTI strategy in FY20; two LIAs reported successes in their SARNs but *did not report any SEEDS activities for the strategy*. As was the case last year, most LIA work reported in SEEDs (76%) involved procurement to support community partners and sites in purchasing local produce for meals and/or snacks.

Strengths. LIAs engaged in a wide range of FTI activities, including:

- TA to connect local farmers to school and hospital cafeterias [MT8c]
- Education and food sampling in schools [MT8c]
- Garden certifications for safe onsite consumption of produce [MT5]
- TA related to FTI grant opportunities
- Staff capacity-building to support partners

COVID Impacts. Several additional garden certifications that had been planned in Pima and Greenlee Counties were halted midyear. In addition, a new farm-to-school experiential learning program planned for youth in Maricopa County was suspended.

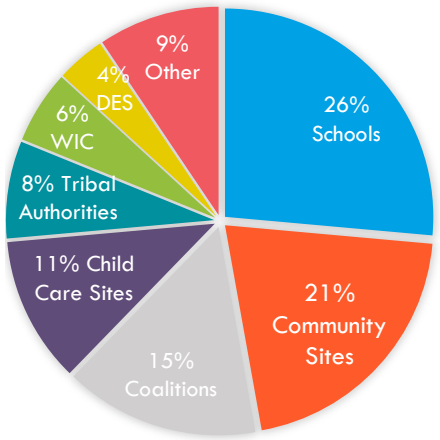
"We supported policies at Quincie Douglas Community Center to harvest garden produce safely. They obtained City of Tucson funding for garden personnel, irrigation, and fencing to protect against vandalism. The center grows enough to use in the senior meal service, and to provide produce to participants who are often food insecure. Direct education is also delivered, with at least 25 joining each lesson. Participants especially enjoy the food demos using produce grown in the garden. In addition, during COVID we provided food safety training over the phone for continued harvest of produce for their senior meal program, and to distribute to emergency food centers."

-UA Cooperative Extension, Pima

Summer Food Service Program (SFSP)

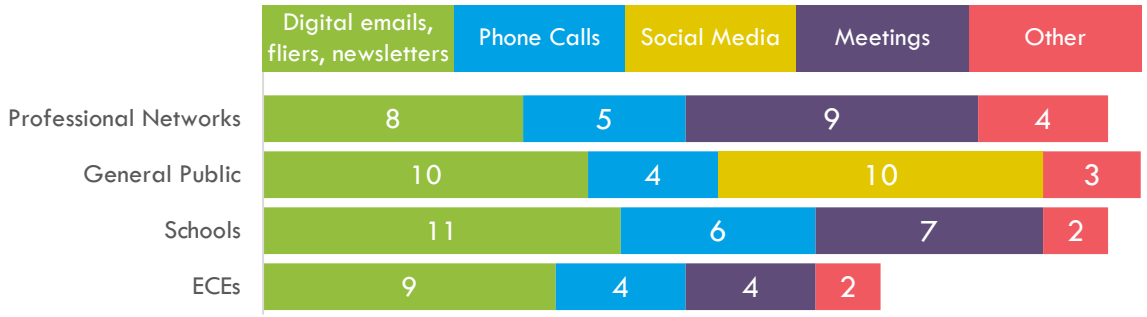
Arizona's March *Stay-at-Home* COVID order left many SNAP-Ed eligible children without free- or reduced-price school meals. This challenge persisted through the SFSP's typical summer season, and for schools remaining in remote instruction into the fall. Community programs throughout the state, including 6 LIAs in 12 counties, coordinated with a variety of partners to support free meal access for children [MT5] (**Figure 4**). LIAs reported 115% more SEEDS work in this strategy (1,058 actions) compared with the previous year (451 actions).

4. 73% of partnerships supported schools, ECEs, community sites, and coalitions.



Strengths. Five of the six LIAs documented their COVID response efforts in an end-year online questionnaire developed by the SET (**Figure 5**). Many LIAs used their social media channels and other digital outreach to distribute meals locations and schedules to early care and education (ECE) programs, schools, and community sites. LIAs' reported that their programs' unique contribution was to compile and distribute hyper-local, up-to-date food resources that they saw as most helpful to their communities. Maricopa, Yavapai, and Yuma Counties also reported being called upon to provide systems-level expertise in convening food access partners during the pandemic (see *Success Story*).

5. Of the 14 local SNAP-Ed programs that promoted free meals, most relied on digital and social media.
Respondents were able to select more than one method per category.



Success Story

"We've been called upon by our community to step up and fill this convener role in a very direct and significant way. We have been present on community-wide resource calls, asked to present about what outlets are available for food access, suddenly been seen as experts in understanding food issues from restaurants, farms and gardens, schools, emergency food, individuals, families, and institutions. It is not uncommon during this COVID period to have a farmer say they have food rotting in the ground and a Head Start to say they have 3 families in dire need. We offered up our parking lot, use of our vehicles, personnel, social media and email lists, anything and everything we can get our hands on to help our community contacts and larger community. We haven't said no during this time."

-UA Cooperative Extension, Yavapai

For example, the Maricopa County Health Department's SNAP-Ed team connected local Family Resource Centers to the Arizona Department of Education to secure meal delivery for families unable to travel to pick-up sites. LIAs also reported that COVID brought their communities together to address the challenges of food access for vulnerable families, and "made us more aware of needs in the community surrounding food and other resources."

Notably, two LIAs in five counties added the SFSP strategy midyear, suggesting that they were well-positioned to support emergent food access issues for children due to the COVID crisis. Interestingly, two LIAs in rural counties reported that several site partners' previously insurmountable barriers to hosting meals were quickly overcome at the onset of the pandemic. *This program adaptation has benefitted SNAP-Ed communities during the public health crisis, with potential for sustainability beyond the pandemic.*

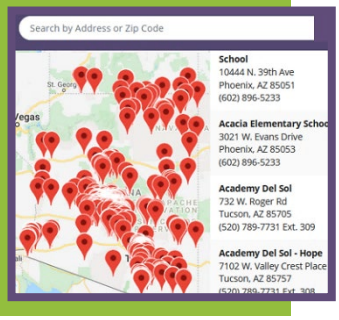
State Nutrition Action Committee

The State Nutrition Action Committee (SNAC) Supported Systems-Level Coordination

Arizona's SNAC strategically aligns state nutrition and physical activity efforts across programs, which became critical to support free meals for children during the pandemic. During this time, LIA activities in partnership with SNAC [ST8c] included:

- Developing consistent strategies & timelines for marketing meal programs.
- Supporting sponsors in communicating state & federal waivers & operational changes.
- Providing partner sites & families with the most updated information.

These strategies were used alongside the AZ Health Zone's online meals map (**right**) and English/Spanish digital marketing toolkits (**bar**, **above** for example).



LIAs Shared Community Perspectives about Food Access during COVID

79% of LIAs who supported free meals for children provided nutrition and physical activity reinforcement items at meal sites in their communities.

"Coming to get the food gave families a chance to see each other and check on neighbors."

"There was confusion on who can receive free meals – parents were not aware that younger children can get food."

"Families were grateful for the meals because of the financial savings and time saved on household work stress."

"Many families have a hard time accessing food boxes and food bank options due to transportation. Or they can't go with all the children and the sole income provider can't make it due to work. Many emergency food outlets have hours reflective of volunteer availability, not working poor needs."

"Some families disliked the lack of variety and felt they could offer a higher-quality meal at home."

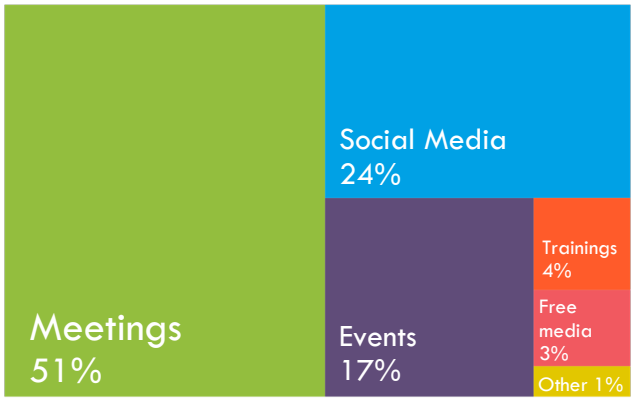
"We've heard about neighbors, or proxies, sitting in line for food boxes and donations, and taking their carload back to their neighborhoods to distribute to the homebound, working, or carless families. Everyone wants an increase in their SNAP benefits, and Double Up Bucks has seen an insane uptick. Policy makers and board members have no idea what it is like to secure food."

Farmers' Markets with SNAP

In FY20, three LIAs in four counties supported their local farmers' markets with PSE work to enhance SNAP utilization [MT8]. LIAs reported 166 PSE actions with 28 partner and market sites (**Figure 6**).

Strengths. Farmers' Market Navigator Programs, which employ paid or volunteer ambassadors to assist shoppers in using their SNAP benefits [MT2a], continued in three counties until the onset of COVID. LIA staff also supported the use of Arizona's Senior Farmers' Market Nutrition Program (SFMNP), WIC vouchers, and Double Up Bucks prior to and during the pandemic [MT2i]. In Maricopa and Pima Counties, coordination with growers and vendors resulted in new food safety resources, as well as SNAP certification at three markets. New market opportunities, primarily at health care and school sites, were in development in Maricopa County, only to be thwarted by COVID.

6. Meetings were the most reported farmers' market PSE activity (n=166 activities).



"We are working with the Sun Produce Cooperative to develop a tiered food safety program with specific standards for the farmers participating in the Cooperative. It will result in a best practices model for cooperative grower groups. We also helped the Arizona Department of Agriculture Policy Committee to establish best practices for pandemic food safety at farmer's markets."

-Maricopa County Department of Public Health

Success Stories

"Our SNAP-Ed team coordinated with the farmers' market, a low-income housing site, and volunteers to bring SFMNP to senior residents. We shopped at the market on behalf of the seniors. The housing bus would pick up the bags and distribute them to the residents. We learned from the housing manager about the isolation and sadness that residents were feeling, so our team's kids drew art and messages to add to the bags. The housing manager let us know that it made residents feel like someone was thinking of them during this time—that they weren't forgotten."

-Gila County Public Health Services

Farmers Markets Experienced Mixed Impacts and Flexible Support During COVID

The public health emergency closed farmers' markets throughout the state during Spring 2020. As a result, LIAs reported 54% fewer PSE actions to support farmers' markets with SNAP EBT compared to the previous year. Farmers' markets in Maricopa and Gila Counties that were able to open seasonally or reopen partnered with LIAs to implement safe operating practices. LIAs also leveraged resources, expertise, and connections with other state entities such as the Arizona Department of Agriculture to support the use of SNAP EBT, pandemic EBT, and other nutrition assistance programs at the markets in order to maximize shoppers' access to food resources during the crisis.

Recommendations

While many food systems-related needs arose as a result of COVID, the emergent conditions on the ground facilitated community coordination and partnerships in several positive ways. As COVID persists into the next year and further evolves, *consider ways to support LIAs to capitalize on their key convener roles* in order to expand the future impact of their community-level food systems work.

The food access barriers faced by many SNAP-Ed families came into sharp relief during the pandemic. *Continue to support LIAs in identifying innovative interventions that support SNAP-Ed eligible individuals and their families to access consistent sources of nutritious food.* Coalition efforts and networking often served as a linchpin for these efforts during COVID and should continue to be encouraged as a program priority.

LIAs continue to seek healthy retail grocery store partners, and store changes have consistently been reported as being more feasible with Arizona-based franchises versus national chains. *Consider developing LIA peer-sharing activities* that highlight this opportunity, as well as providing guidance regarding what has not worked in Arizona with large grocers over the last five years.

As the Double Up Bucks program expands into grocery stores in select counties, *explore how the AZ Health Zone can support LIAs—and by extension, shoppers—in their communities through enhanced local outreach and program promotion with healthy retail partners*.

Future *Wilder evaluations may benefit from the assessment of coalition successes* in addition to coalition characteristics, in order to better understand how coalition effectiveness may encourage community-level changes.

LIAs may benefit from garden training that covers:

- *Development of sustainable, virtual learning models for curricula* such as *Seed to Supper*, which demonstrated popularity in the online space during COVID and can expand reach beyond the pandemic to participants with internet access.
- *Remote technical gardening assistance.* Remote assistance to partner sites was a stopgap during the pandemic. Ongoing use of this delivery system may decrease travel time in some rural areas and support more gardens in communities with limited LIA garden staff.

Several LIAs reported SARN successes in food systems strategies during the year but did not report any SEEDS activities in these strategies. *Additional training may be helpful to reinforce the need for SEEDS documentation of program activities*.

Pilot external funding for the Farmers' Market Navigator Program ended in June 2020. *Encourage Farmers' Market Navigator sustainability through consistent funding or allowability as a SNAP-Ed funded activity*.

The AZ Health Zone's Response to COVID

Resource Sharing to Support Families

When COVID-19 hit, existing disparities in access to healthy food—already a challenge for SNAP-Ed eligible individuals and families—were exacerbated. The crisis has affected many aspects of food resource management, leaving Arizona's most vulnerable populations at an increased risk of food insecurity.

In response, our dedicated AZ Health Zone Local Implementing Agencies (LIAs) supported their community partners to fill the gaps in local food systems by working with school districts, early care and education (ECE) centers, local coalitions, farmers, food banks, and others to provide food and SNAP educational materials.

Bringing Resources and Food to Communities

Distributing Food & Supplies to ECE Families

In Yavapai County, change in demand led to a produce surplus in stores, restaurants, and the Prescott Farmers' Market. The UA Cooperative Extension, Yavapai partnered with Head Starts to develop produce bag pick-ups for ECE families at five sites. In all, they distributed **110 produce bags** with recipe cards and QR codes for both the LIA's website and YouTube videos featuring knife skills, meal preparation, and cooking with seasonal foods.

Connecting Local Growers to Families in Need

In Yuma County, the Yuma SNAP-Ed team worked with the Crane Elementary School District, which served as a "Farmers to Families" food hub providing food boxes to community partner sites, including public housing and an ECE center. They also worked with local partners to support a pickup-and-delivery loop that gave **over 300 food boxes** to people in need, and distributed activity kits to students during the Grab 'n Go meal pickup.

AZ HEALTH ZONE

Moving Garden Plants & Produce into Communities

The UA Cooperative Extension, Apache aided garden produce distribution and an edible plant giveaway: "While we were unable to meet in person, the youth garden club in St. Johns still had a very successful year, with the Demo Garden producing nearly **120 pounds of produce** that was distributed throughout the local community…In May, we held our annual Demo Garden plant give-a-way and distributed about **650 tomato, pepper, and tomatillo plant starts** to beginner gardeners in the local community."

Getting Health-Related Supplies to Schools

While LIAs had to halt their in-person school programming, the UA Cooperative Extension, La Paz coordinated with the Healthy La Paz Coalition to organize a school supply drive. LIA staff provided SNAP-eligible students with water bottles and collected community donations, including **500 hand sanitizers, 600 tote bags, school supplies,** and **masks** for teachers and students: "We received thank you calls, text messages, and online posts thanking Healthy La Paz."

Mobile Meals & Travelling Nutrition Education

"Working with art teachers, we held a contest for students to submit an original art design for the bus wrap and name the bus, which will take free meals to students at locations near where they live and congregate."

In Maricopa County, delivering food to SNAP-eligible families via the school bus route was an effective and safe way to reach those who could not get to local drop-off sites. The Maricopa County Department of Public Health worked with the Deer Valley Unified School District's Wellness Committee to support a **mobile food bus program** with four stops in neighborhoods housing a high density of students receiving free-and-reduced-price meals. The LIA helped with the bus wrap and inside mural, and they made available a bookcase with **nutrition and physical activity books**.

SNAP-Ed staff in Yuma gives out AZ Health Zone activity kits at meal pick-ups.

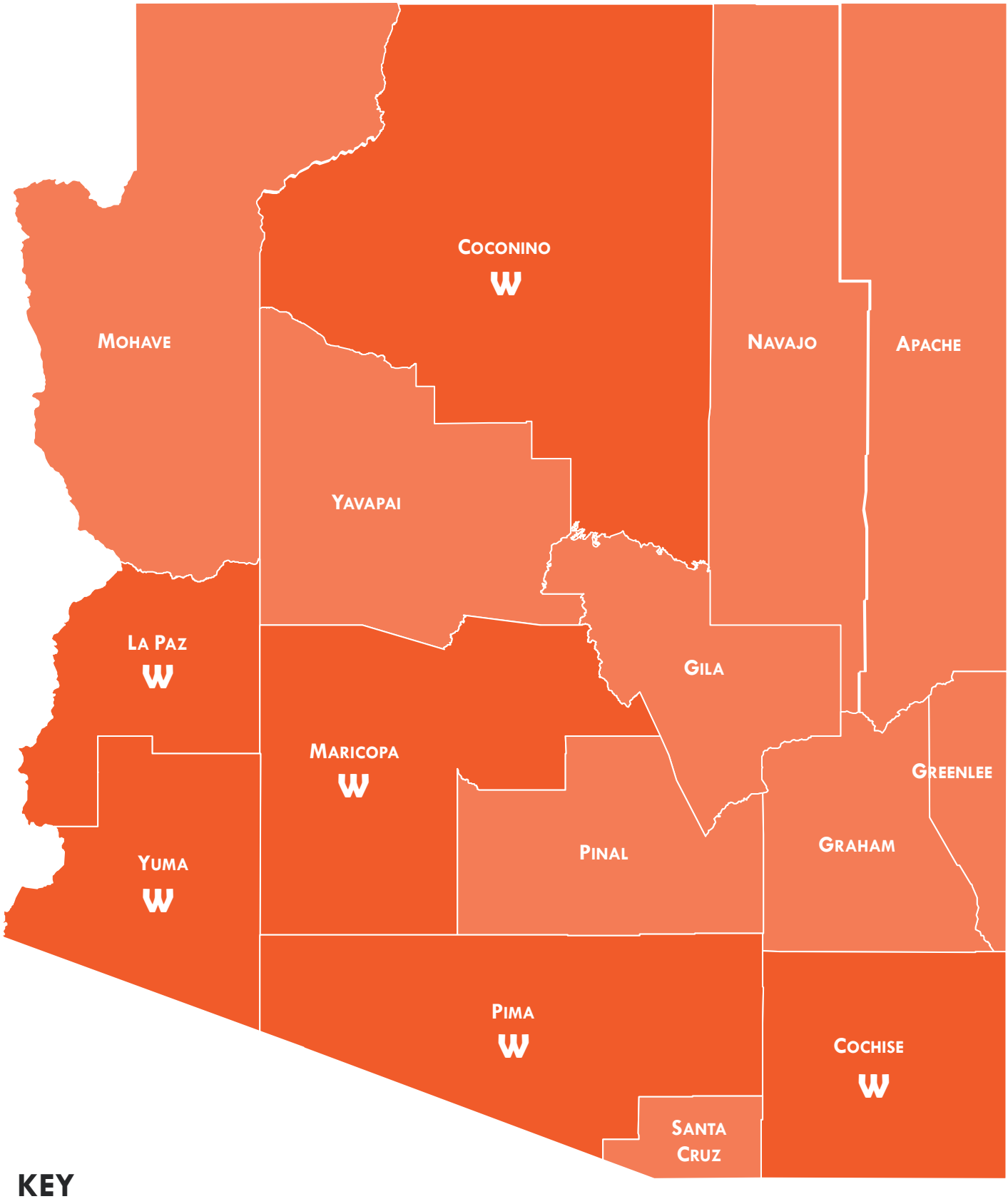
School supply donations fill an AZ Health Zone office in La Paz County.

Transforming AZ Health Zone Materials Distribution in Coconino County

"We coordinated with non-school organizations that were providing the Summer Food Service Program to distribute **over 700 activity kits** filled with nutrition and physical activity resources. The kits covered four themes—Grow a Garden, Cooking, Strong Bones, and Fun with Food—and included AZ Health Zone Fun Food News, games, recipes, measuring cups and spoons, and gardening supplies."

"Due to COVID-19 and travel restrictions on LIA staff, we collaborated with the Coconino County Sheriff's Office to transport the kits from Flagstaff to a Grand Canyon Unified School District parent, who passed them to the bus drivers delivering student meals. We also worked with the Page Library, who gave the kits to families coming to pick up books and summer meals. Lastly, we delivered kits to the Flagstaff Family Food Center and Boys & Girls Club for distribution during summer meals. It was a bonus when the cooking kit aligned with a junior cooking summer camp at the Boys & Girls Club!"

– Coconino County Health & Human Services



KEY

W = Participated in the FY20 Active Living Wilder coalition evaluation

= Worked in Active Living in FY20

Active Living

Cottonwood bike corral, Yavapai County Community Health Services

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

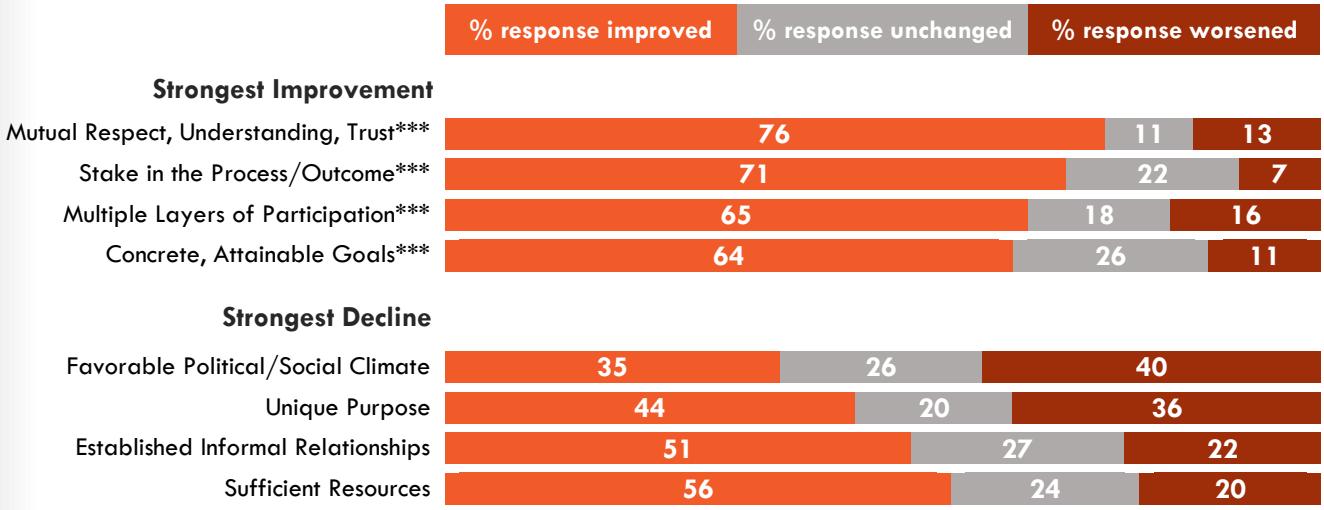
In FY20, the AZ Health Zone assessed work in active living policy and the promotion of physical activity (PA) resources through the Wilder Collaboration Factors Inventory (Wilder), a measure of coalition effectiveness [ST8]. Data from this assessment were supplemented by Local Implementing Agency (LIA) Semi-Annual Report Narratives (SARNs) and Arizona's SNAP-Ed Electronic Data System (SEEDS) reporting. PA opportunities are reported with adult direct education (DE), as these SNAP-Ed interventions were often linked in FY20.

Wilder Results

The AZ Health Zone State Evaluation Team (SET) asked LIAs to complete the Wilder in FY18 and again in FY20. Six active living coalitions were assessed in both years. Of the 20 coalition success factors measured, *18 increased significantly across two years* [ST8]. For 13 of these factors, more than half of the respondents reported that they had improved (**Figure 7**). No factors decreased significantly. **Figure 8** shows the factors that exhibited the greatest change for active living coalitions.

7. Over 50% of coalition members said these coalition success factors improved over two years.

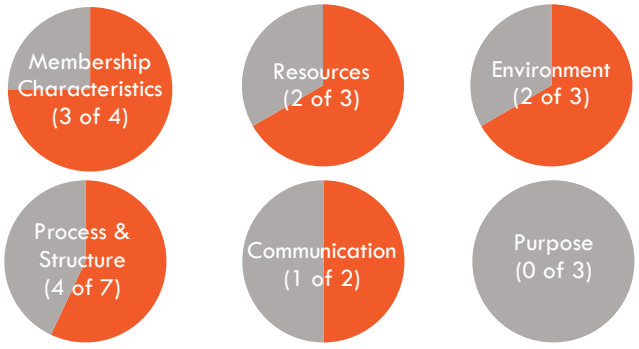
8. Coalition members (n=55) reported that these factors changed the most over two years.



***p≤0.001

Consistently Strong & Weak Success Factors. From FY16-20, the same Wilder factors scored highest and lowest among active living coalitions [ST8]. The four high-scoring factors were *Members Seeing Collaboration in Their Self-Interest, Skilled Leadership, Flexibility,* and *Open & Frequent Communication.* In FY20, *Mutual Respect, Understanding & Trust* also scored high. The four low-scoring factors were *Sufficient Resources, Appropriate Cross Section of Members, Development of Clear Roles & Policies,* and *Multiple Layers of Participation* for member organizations.

9. In FY20, active living coalitions scored significantly higher than food systems coalitions in 5 of 6 Wilder categories. The graphs show the proportion (orange) of *individual* success factors within each category that scored higher for active living vs. food systems.



Active Living vs. Food Systems Coalitions. In FY20, seven active living coalitions (n=80 members) scored 11 of the 22 Wilder coalition success factors significantly higher than did the six food systems coalitions (n=65 members) [ST8] (**Figure 9**).

To explore why active living coalitions reported more positive scores, we examined the coalition goals reported in SARNs. Active living goals were more broadly focused on community wellness and often prioritized food systems as well as active living. In contrast, food system goals were more narrowly focused.

It may seem counter-intuitive that tightly defined goals were less likely to associate with success. However, when coalitions work toward general community wellness versus narrowly defined goals, their members may learn more about local health-related needs and respond by collaborating with partners who can address issues in a more holistic way. Here, this increased networking may have resulted in more positive perceptions of coalitions' function, and thus their higher Wilder scores.

Success Story

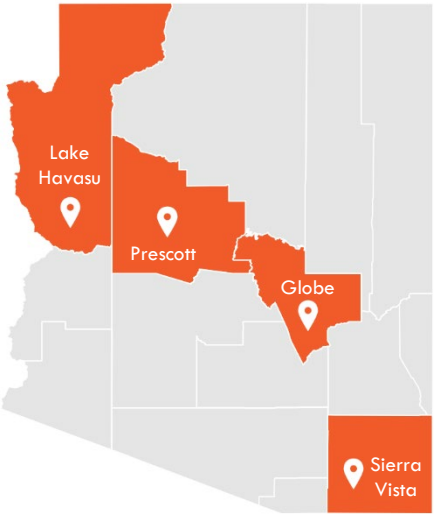
"The *Be Healthy Sierra Vista* Coalition, especially our SNAP-Ed agency, is partnering with the city of Sierra Vista to promote physical activity opportunities for SNAP eligible families. This is being done primarily through fun activities that promote the city's updates to community areas such as parks that are accessible to SNAP audiences. One example is a Physical Activity Bingo Project (right) designed to get community members physically active."

-UA Cooperative Extension, Cochise

Active Living Policy

Building on prior work, LIAs continued to advance active living policy in FY20 by serving as conveners, advocates at the table for SNAP-eligible residents, and community liaisons. In contrast to prior years, *this work featured more prominently in smaller towns, and coalesced around transit and transportation planning* [LT13b] (**Figure 10**).

10. In FY20, LIAs reported more active living policy work in smaller Arizona towns.



- Advocacy for low cost & relevant stops for new bus service in/near Prescott (Quad Cities)
- Public health voice on the technical advisory committee of the city's Transit Board
- Parks & Recreation Department was reinstituted [MT10a] with coalition & community support
- Transportation from Tombstone to Fort Huachuca to Sierra Vista enhanced food access

"This intersection receives a lot of foot traffic and is the connection point from neighborhood housing to the local grocery store. It is also a point where the most vehicle-pedestrian crashes occur. We held several meetings with Arizona Department of Transportation to identify innovative traffic calming opportunities at this location, but the response we received was that something like this has never been done on a highway.'

-Gila County Public Health Services

Active Living Policy Challenges. As active living policy work continued during FY20, COVID and other barriers challenged progress:

- LIA plans for policy-related community engagement were cancelled due to COVID, as gathering in groups was prohibited.
- Coalition participation changed as a result of COVID. Meetings became virtual, participation by some members decreased, there was a shift away from active living priorities, and there were fewer opportunities for spontaneous conversations and connections between coalition members.
- Transportation policy work in rural areas presented unique challenges. LIAs struggled with pushback against traffic calming efforts on a highway (left) and survey collection barriers that limited their understanding of rural transit challenges.

Success Story

LIA staff at the Maricopa County Department of Public Health supported community engagement to inform park improvement plans in South Phoenix. They collected input at neighborhood meetings, events, schools, and other locations.

"Preferred locations for trees and shade were captured by residents on maps that were used by the City of Phoenix Parks and Recreation Department to compare to the tree master plan. The city encouraged this process and welcomed and valued the community input. They installed 120 trees in El Prado Park in South Phoenix and will soon complete planting in other parks. Many residents told us they have participated in surveys and other municipal activities but have never seen any direct outcomes; this time was different. Now when they visit their park, they will see the direct impact their voice had in the project."

-Maricopa County Department of Public Health

Some of the new trees await planting.

Trees being placed along a sidewalk in El Prado Park.

Physical Activity Resources

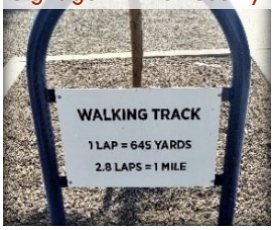
Trail Improvements. In FY20, trail use—for walking, biking, and more—surged. This was partly attributable to COVID, but also reflected the longstanding efforts of LIAs to encourage PA resource improvements. Successes included:

- *Trail lights* installed in Safford, Graham County, which built upon prior improvements [MT10a].
- *The promotion of trail signs* installed in three counties [MT6a] and *distance markers* installed in one county [LT6a].
- A *multiuse path* approved and started in an underserved neighborhood in Sedona, Yavapai County [LT13j,k].

"Due to the COVID shutdown, installation of the additional trail signs to the Rio Rico Walking Trail System and to the Mountain Bike Park in Nogales became a priority. Outdoor physical activity became vitally important as the pandemic continued, and the trail signage was intended to motivate people to be physically active—in addition to reducing stress and anxiety."

-UA Cooperative Extension, Santa Cruz

Signage in Pinal County



Park Improvements. Improvements to local parks [LT6a] included:

- *Extended lighting hours* for public parks in Douglas, Cochise County. The new lighting schedule was made permanent after a summer trial.
- *Park improvements and guided walks* in Phoenix resulting from a collaboration with the ParkRx program in Maricopa County.
- A shared-use site's use of a nearby Phoenix park inspired *community-led talks with the city* about park improvement funding decisions.

Success Story

Under the leadership of the Yuma County Public Health Services District, the annual Body Walk helps develop a culture of health in the county. It not only serves students, but it builds AZ Health Zone active living partnerships between county departments and with the county Board of Supervisors.

"In 2020, the Body Walk was supported by 13 community partners and 13 Yuma County government departments and divisions, who provided in-kind resources and 154 volunteers. Twenty-one schools participated, with 1,511 children and 324 adults. In addition, for the first time we opened a public session for ECE and other community partners and had 50 attendees.

"This year, the Yuma County Library District agreed to host the Body Walk event at the Yuma Main Library. Highlighting the Library District as a new partner and sponsor of Body Walk drew praise and approval from county government leadership and helped solidify the partnership. One county board supervisor even participated as a volunteer educator!"

-Yuma County Public Health Services District

Serving as an Advocate at the Table for SNAP-Eligible Residents. As with active living policy, LIAs working on PA resources reported advocating for SNAP-eligible residents in their communities. After engaging in active living work for several years, it seems that LIA staff are now more comfortable playing the role of active living advocate, and their increased involvement with local government initiatives has led to a greater level of influence:

"Relationships continue to be strong between SNAP-Ed staff, bicycle shops, Bikes for Kids, local bike enthusiasts and Wheel FUN (a non-profit group dedicated to getting kids on bikes). We are able to accomplish so much all working together. Coaching the bike club at the elementary school has helped secure collaborations."

-Yavapai County Community Health Services

- In Pinal County, staff participated in a community needs assessment and mapping session and spoke about the need for PA resource access, assessment, and community outreach.
- In Yavapai County, staff were active in the Bicycle Advisory Committee in Cottonwood. That city received a Silver Bicycle Friendly Community Award in 2020, aided by partnerships among the health department, city government, businesses, and bicycling enthusiasts.
- In Yuma County, an LIA staff member was called upon to address a statewide audience about the contribution of public health to the county's Tree and Shade Master Plan.

Success Story

"We continued work with the Community Health Improvement Plans in the Cameron, Kaibeto, and Tonalea communities, which are all at different points in the trail development process [LT13k].

"Since the completion of the Cameron Community Trail, the AZ Health Zone has been working with the Cameron Senior Center and Head Start to implement a walking program using the new trail [LT6a]. Along with walking logs, nutrition information is distributed to both programs.

"For the Kaibeto Trail, a collaborative made up of the Kaibeto Chapter, the Coconino County Trails Committee, our agency, and the Kaibeto Community Health Improvement Planning Team is working to secure land through the Navajo Nation Land Committee.

"The Tonalea Trail Initiative Team is just beginning the trail initiative process."

-Coconino County Health & Human Services

Challenges to PA Resources Work. Despite LIAs' success to advance their programming related to PA resources in Arizona, several emerging and persistent barriers inhibited progress:

- COVID complicated communication with coalitions and sites and led to the cancellation of events held at PA resource locations, including walking groups.
- Coalitions or other community groups struggled with competing community wellness priorities.
- Community member and local government support for improved PA resources waned in some areas, following initial enthusiasm.

> "With the overall focus changing to immediate health and safety needs, there were also great shifts in the priorities of active living sites and coalitions. These shifts went from 'active living' to just 'living.' Much of the momentum seen around active living efforts was paused during this reporting period."
>
> *-UA Cooperative Extension, Pima*

Recommendations

Encourage multisector coalitions to focus on community wellness, which will enable these groups to pivot to address important issues as they emerge, a crucial part of coalition success. Such an orientation toward wellness not only facilitates active living work, but it allows coalitions to focus on timely community needs as they arise, as highlighted in the COVID pandemic.

Support LIA staff to *pursue active living goals that resonate most with their communities*, and *continue to draw on LIA expertise as conveners, advocates at the table, and community liaisons* as they give prominence to the voices of SNAP-eligible residents.

LIA staff can be (and in some cases, have already shown they are) ready to shift from supporting established PA events and advocacy work to supporting new opportunities. To enhance LIAs' capacity to act when windows of opportunity open, it is important to *focus on the power of relationship building with local active living stakeholders*.

Provide training to LIA staff to strengthen their capacity to promote PSE changes in PA resources and to maintain enthusiasm for newly updated resources. The SNAP-Ed evaluation framework suggests pairing PSE changes with one or more of the following: 1) evidence-based education, 2) marketing, 3) parent/community involvement, and 4) staff training on continuous program and policy implementation.

The AZ Health Zone's Response to COVID:

Mixed Media to Market Local Resources

Connecting with Rural Communities

Many LIAs turned to live video streaming to minimize programming interruptions from COVID. But, disparities in access to stable internet connections in some rural areas challenged SNAP-Ed audiences and partners. In response, *rural LIAs sometimes looked to more traditional forms of media to maintain communication*: LIAs created informational fliers to include with food boxes and school meals, used school announcements to reach parents, and relied on email and phone calls to connect with partners and families:

The UA Cooperative Extension, Cochise creates and distributes a vivid flier to promote the Double Up Food Bucks program at the Sierra Vista Farmers' Market.

"We created a monthly newspaper with sections on different topics, including active living. The September edition highlighted the trail systems in Kingman as a free and accessible way of being physically active in the community. These newspapers were distributed to all of the county WIC offices and public libraries."

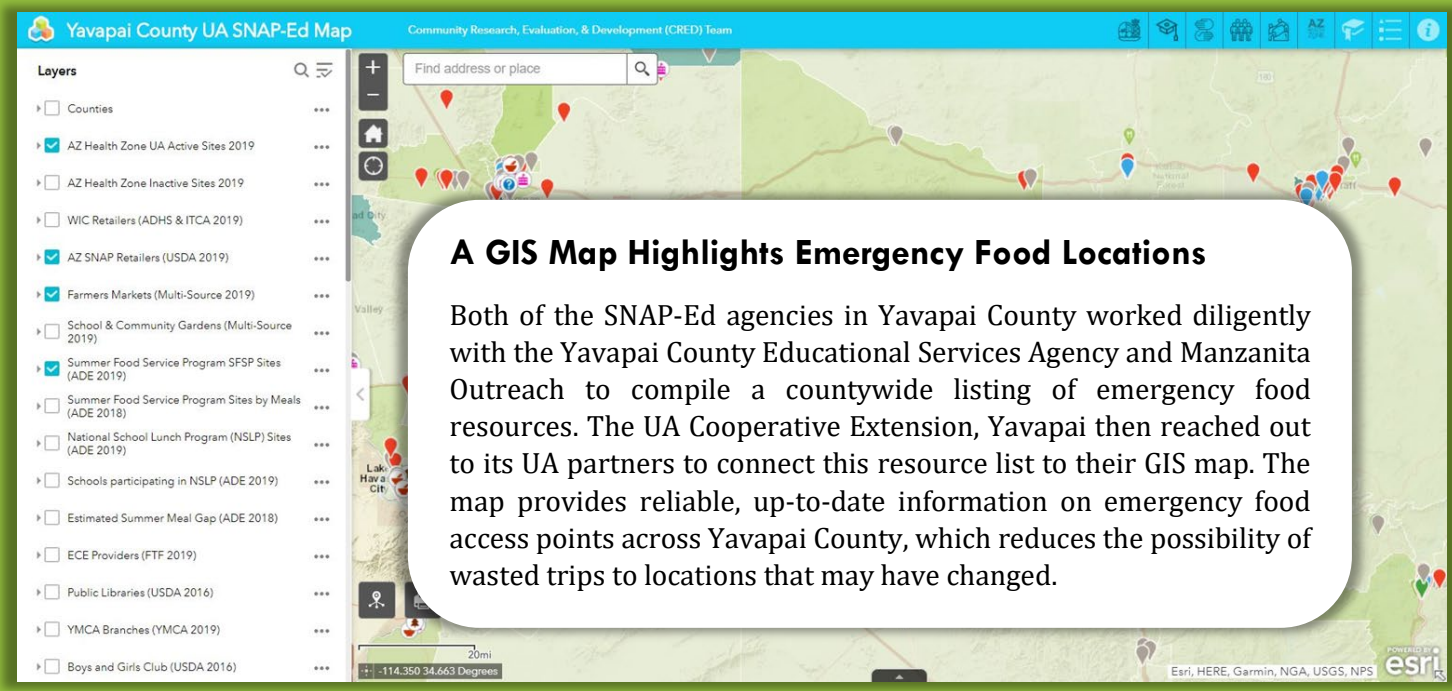
-Mohave County Department of Public Health

"UA Graham staff promoted lunch drop-off sites in their neighborhoods by passing out flyers with menus and drop-off site locations and times."

-UA Cooperative Extension, Graham

Coconino County Health and Human Services continued to participate in the Grand Canyon Tusayan Wellness Coalition, which moved from in-person to conference call meetings to avoid internet issues. LIA staff shared Complete Streets information that the coalition then used to inform Complete Streets discussions with the Town of Tusayan leadership.

Photo: Rural Cochise County, AZ



A GIS Map Highlights Emergency Food Locations

Both of the SNAP-Ed agencies in Yavapai County worked diligently with the Yavapai County Educational Services Agency and Manzanita Outreach to compile a countywide listing of emergency food resources. The UA Cooperative Extension, Yavapai then reached out to its UA partners to connect this resource list to their GIS map. The map provides reliable, up-to-date information on emergency food access points across Yavapai County, which reduces the possibility of wasted trips to locations that may have changed.

MARICOPA HEALTHY
A Healthy Food & Activities App

"Many sections of the Maricopa Healthy app were replaced with information banners and resources regarding COVID to keep the app relevant…In recent months, we started including virtual events. The new virtual events are a bit more challenging to track down, but it is exciting to see how innovative, adaptive, and resilient different organizations and community partners have become. We will continue to promote virtual events."

-Maricopa County Department of Public Health

A New Role for Facebook, Instagram, & Other Platforms

In reponse to the pandemic, LIAs' use of virtual platforms to market nutrition- and physical activity-related resources evolved rapidly from March to September, 2020. All LIAs turned to Facebook, Instagram, smartphone apps, YouTube videos, and more to connect SNAP-eligible families to virtual and physical resources.

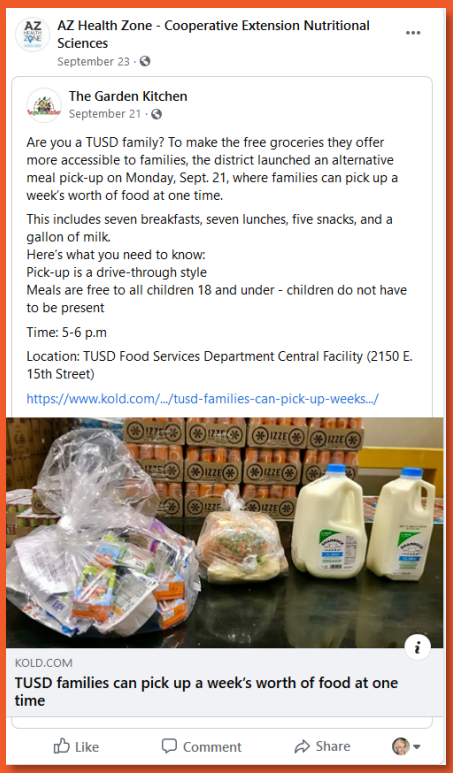
"A result of COVID, we increased social media efforts around promoting physical activity opportunities from April-September via Facebook & Instagram, including free fitness resources, at home fitness ideas, and fitness videos. There was a steady increase in followers over that time to about **4,000 reached monthly: Total PA posts—56, with 50 shares.**"

-UA Cooperative Extension, Pima

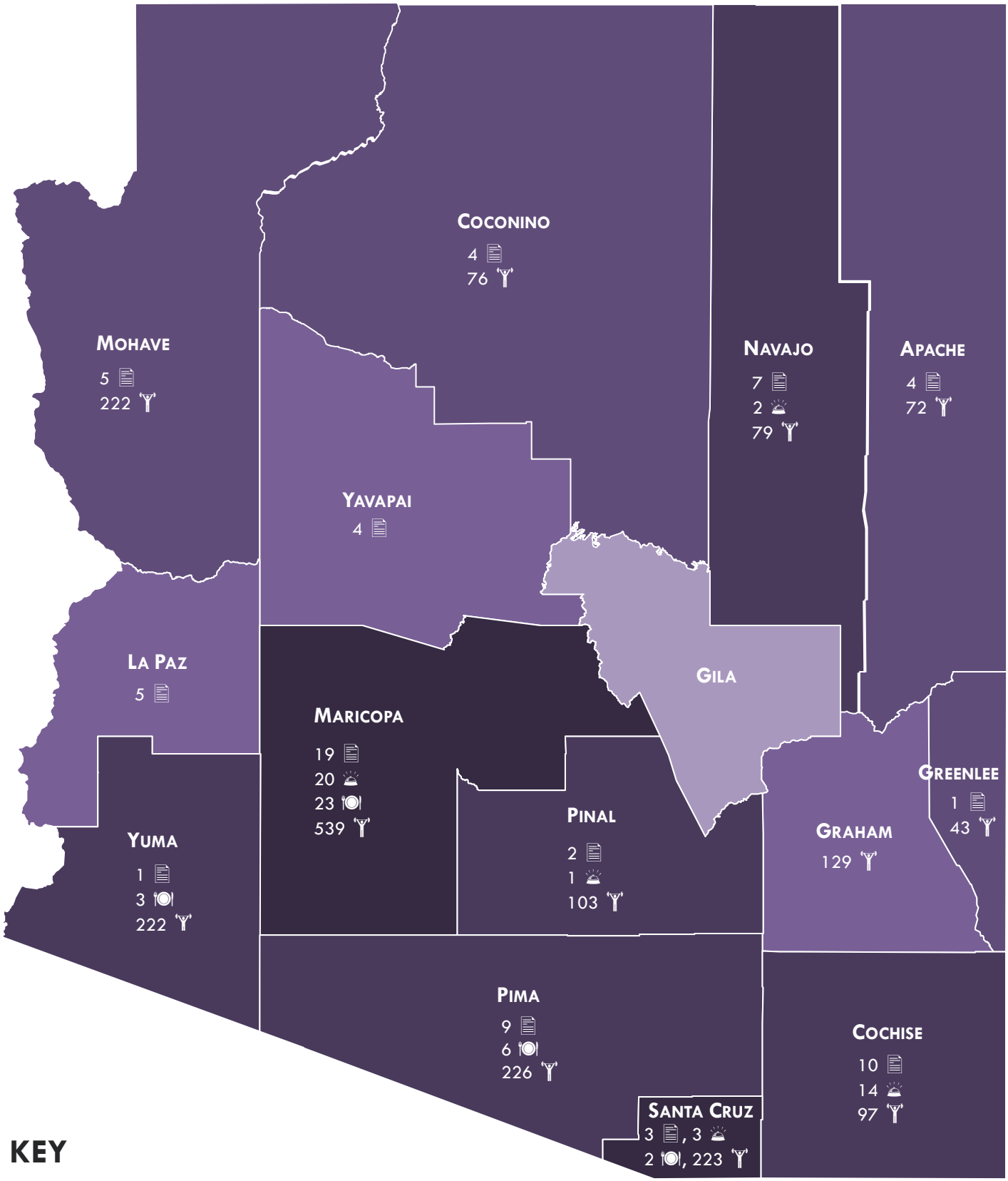
"Over the summer, the AZ Health Zone helped to promote all of the summer food programs in La Paz County through Facebook posts on coalition pages, and by posting to all the community bulletin groups in the county.

"We also helped to promote all of the food pantries and distribution programs across the county and the Colorado River Indian tribal area through our Food for Thought videos."

-UA Cooperative Extension, La Paz



The UA Cooperative Extension, Pima, uses Facebook to promote free groceries for Tucson families.



KEY

= Participated in the FY20 WellSAT 3.0 evaluation (# of assessments)
= Participated in the SY18-20 HSP evaluation (# of assessments)
= Participated in the FY20 SLM Scorecard evaluation (# of pre-assessments)
= Participated in the SY19-20 KAN-Q evaluation (# of pre-assessments)
= Worked in School Health in FY20 (darker: more types of assessments)

School Health

Middle school cooking class, 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 FY20, the AZ Health Zone assessed written LWP quality across time [ST7, MT5, MT6, LT5, LT6] using the Rudd Center for Food Policy & Obesity's WellSAT 3.0 tool; the implementation of school health policies, systems, and environments (PSEs) [ST5, MT5, MT6] with the Alliance for a Healthier Generation's Healthy Schools Program (HSP) assessment; and the school lunchroom environment with the Smarter Lunchrooms Scorecard [ST5, MT5]. We also evaluated multilevel interventions in schools with the AZ Health Zone Kids' Activity and Nutrition Questionnaire (KAN-Q). Although the COVID-related school closures in March 2020 prevented spring survey collection, the State Evaluation Team (SET) was able to restructure the KAN-Q analysis to measure short-, medium-, and long-term indicators at the level of the individual student [ST1, ST3, MT1, MT3, LT1 LT3].

Written LWPs

In FY20, SNAP-Ed Local Implementing Agencies (LIAs) supported LWP review and revision with partner districts and schools across 13 of Arizona's 15 counties. The SET used the WellSAT 3.0 to assess the 74 LWPs submitted by LIAs.

> "Our continuous support of Crane District to improve their Local Wellness Policy was successful. The recent evaluation of their LWP in November 2019 categorized it as *exemplary* and a model policy."
>
> *- Yuma County Public Health Services District*

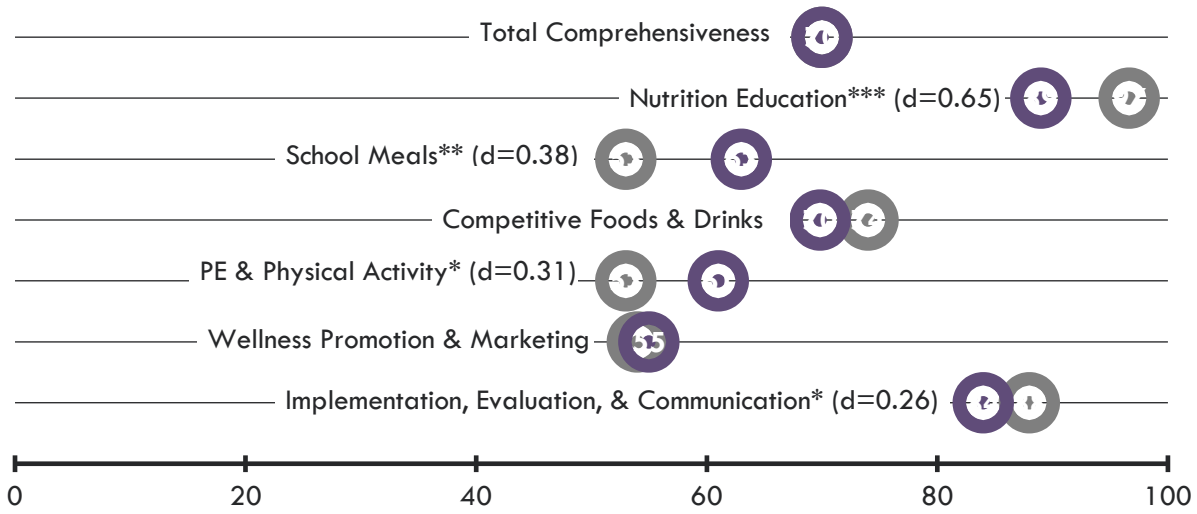
What is the WellSAT? The online WellSAT assesses written LWP quality, giving section and total scores for comprehensiveness and strength from 0 (worst) to 100 (best). Comprehensiveness measures *whether* a policy addresses an item, and strength measures *how well* the policy addresses it.

We used the WellSAT 2.0 in FY16 and FY18, and the updated WellSAT 3.0 in FY20. The 3.0 version is better aligned with federal LWP requirements. While many items and/or their instructions were revised, the six WellSAT sections remained the same.

Change Over Time. Forty-seven LWPs were scored in FY18 and FY20. **Figures 11a and 11b** show the changes in section and total WellSAT scores over time [MT5a,b; MT6a,b]. While total comprehensiveness did not change, *School Meals* and *PE & Physical Activity* scores increased significantly, and *Nutrition Education* and *Implementation, Evaluation, & Communication* scores decreased significantly. The decreases are not surprising, given the stronger scoring guidelines for the WellSAT 3.0 versus the 2.0 in these sections.

11a. Total mean comprehensiveness stayed the same from FY18 to FY20.

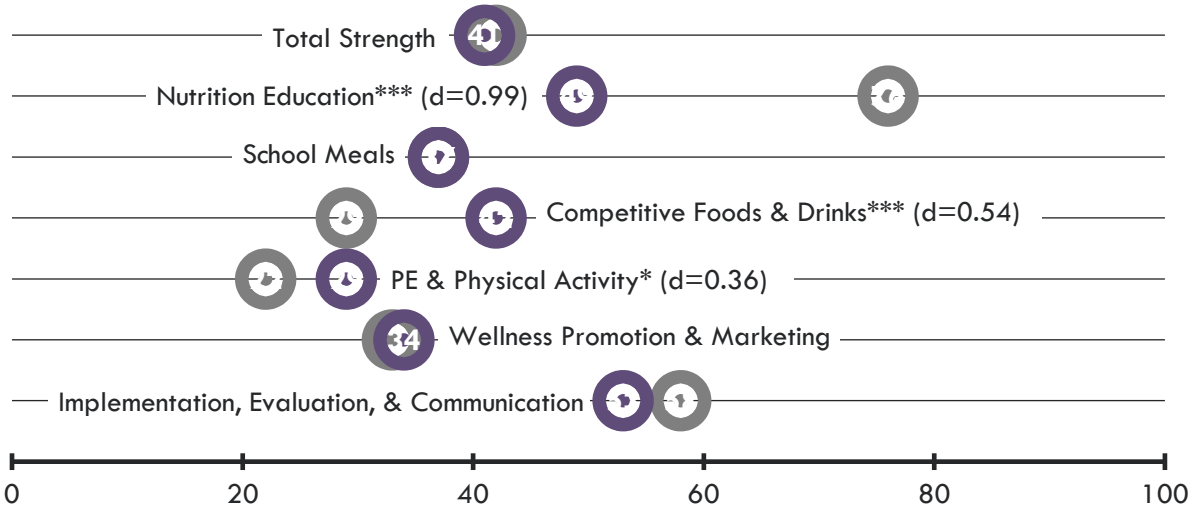
Scores are rounded to the nearest whole number. (n=47)



*p≤0.05, **p≤0.01, ***p≤0.001, effect sizes reported as Cohen's d

11b. Total mean strength held steady from FY18 to FY20.

Scores are rounded to the nearest whole number. (n=47)



*p≤0.05, ***p≤0.001, effect sizes reported as Cohen's d

Similarly, total strength was relatively stable from FY18-20. *Competitive Foods & Drinks* and *PE & Physical Activity* scores increased, while *Nutrition Education* scores decreased.

The FY18-20 results suggest that most districts made few, if any, revisions to *Nutrition Education* and *Implementation, Evaluation, & Communication,* which likely declined due to stricter scoring criteria. Instead, revisions appeared to focus on the foods and beverages that were served, offered, or sold to students throughout the school day.

These conclusions are also supported by our longitudinal analysis of 33 LWPs (**Figure 12**). For all but *Nutrition Education*, mean section scores for comprehensiveness increased significantly across a four-year period [LT5; LT6]. Four of the six sections achieved higher scores in FY18 than FY20, which again is largely attributable to changes in WellSAT 3.0 scoring criteria. Two sections, *School Meals* and *PE & Physical Activity*, had very highly significant score increases from FY16-18, followed by non-significant increases from FY18-20, which are encouraging trends.

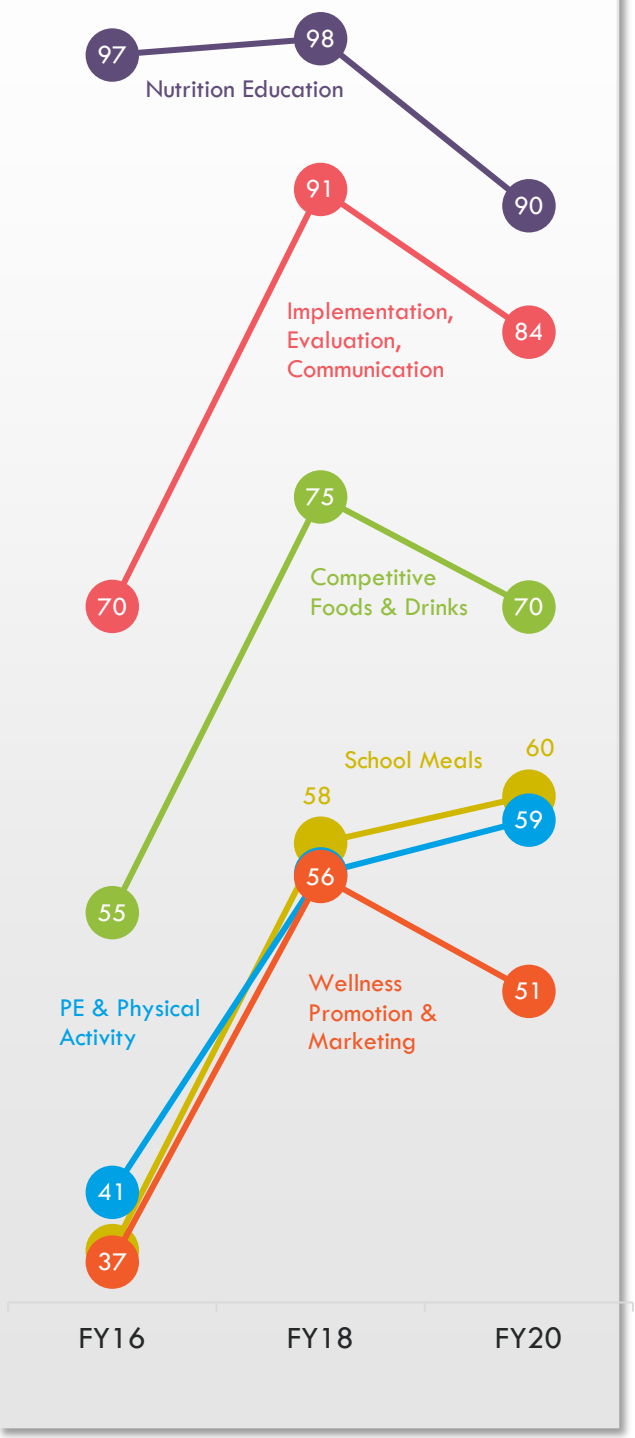
As expected, longitudinal strength scores were notably lower than comprehensiveness and generally mirrored the four-year patterns shown in Figure 12. Three sections had very highly significant increases from FY16-20 [LT5; LT6]: *PE & Physical Activity, Competitive Foods & Drinks* (which continued to climb from FY18-20), and *Implementation, Evaluation, & Communication.*

How Did <u>All</u> LWPs Score this Year? In FY20, we assessed a total of 74 LWPs. **Figures 13a and 13b** provide mean section and total WellSAT 3.0 scores for these policies. The scores varied by topic.

Wellness Committees. Three WellSAT 3.0 items measured whether a written policy established an ongoing District Wellness Committee (DWC) and/or School Wellness Teams [ST7a], and how well policies established processes to engage stakeholders across the entire school community [ST7b]. The percent of FY20 LWPs that met these criteria is shown in **Figure 14**.

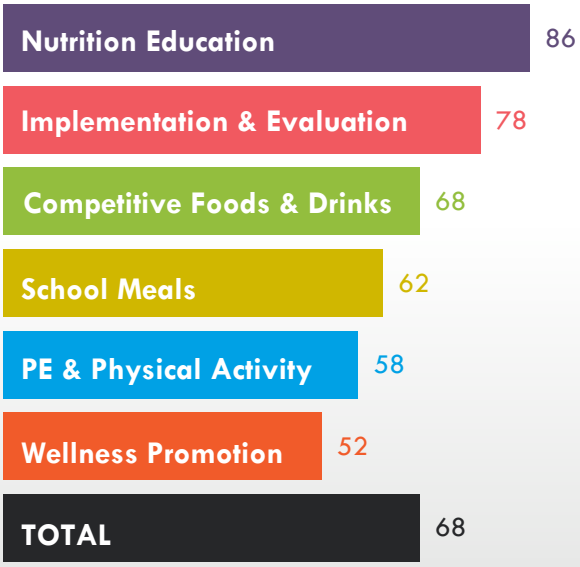
12. Mean comprehensiveness scores for 33 LWPs changed ($p<0.001$) from FY16-20, with large effect sizes.

All but *Nutrition Education* scores increased.



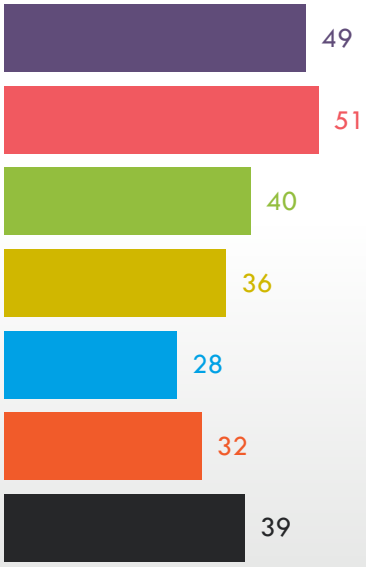
13a. Mean comprehensiveness scores varied by section.

Nutrition Education and *Implementation, Evaluation & Communication* scored relatively high, while *PE & Physical Activity* and *Wellness Promotion & Marketing* scored low.

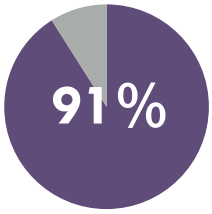


13b. Mean strength scores were notably lower than comprehensiveness.

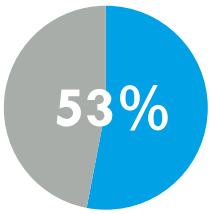
There was room for improvement across all sections, especially *PE & Physical Activity*.



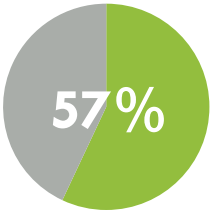
14. How did FY20 policies ensure LWP review and implementation?



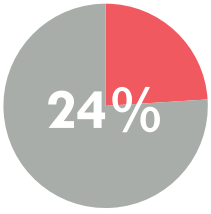
opened LWP participation to the public



proactively engaged community in LWP development



established an ongoing DWC



established school-level wellness teams

Success Stories

"The Roosevelt School District is undergoing their administrative review from the Arizona Department of Education (ADE) this year and was grateful to receive assistance with updating their wellness policy. The food service director said there could not have been more perfect timing for when she received our comprehensive, updated WellSAT 3.0 information and resources."

- UA Cooperative Extension, Maricopa

"The Santa Cruz Valley Unified School District School Health Advisory Committee had our first virtual meeting…Technical assistance provided by LIA staff allowed the committee to come up with an action plan to be ready for the upcoming ADE administrative review."

- UA Cooperative Extension, Santa Cruz

Healthy Schools Program

Some AZ Health Zone partner schools elected to participate in the Alliance for a Healthier Generation's Healthy Schools Program (HSP), which uses a six-step process for improving school health (**right**). Step 2 of that process is to conduct an assessment of nutrition and physical activity PSEs.

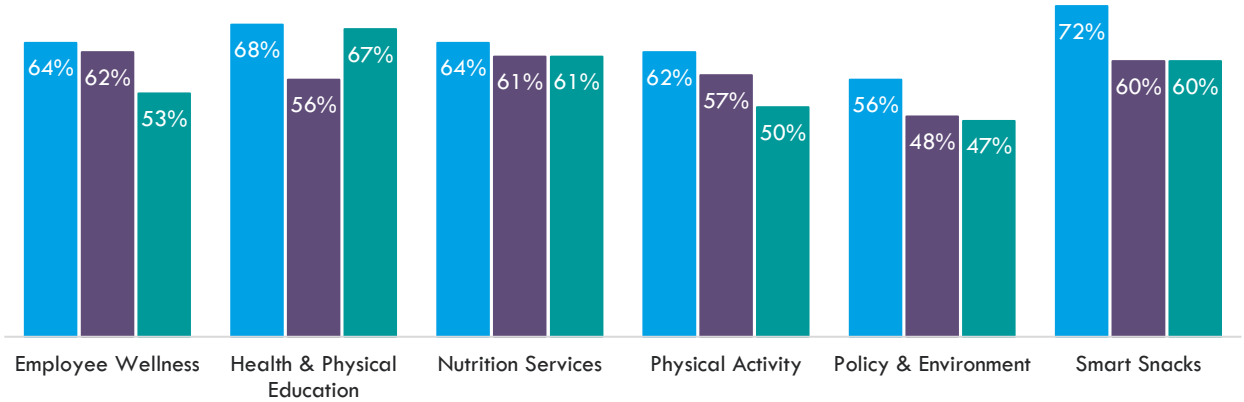
In FY20, 44 AZ Health Zone-supported schools participated in the HSP: 91% completed an HSP assessment and 73% served elementary grades.

Figure 15 shows that, relative to other HSP schools, those supported by LIAs tended to score higher across all six categories assessed [ST5, MT5, MT6]. The difference was especially pronounced for the Smart Snacks topic, where 72% of the items assessed in LIA-supported schools met best practices for adhering to the USDA's Smart Snacks standards for competetive foods and drinks, compared to only 60% for all schools. These findings suggest that LIAs may positively influence nutrition and physical activity PSEs in Arizona.

In terms of individual assessment items, 98% of the AZ Health Zone-supported schools offered breakfast and lunch programs that were fully accessible to all students, and 93% had an active, representative wellness team.

Conversely, only 15% provided multiple points of sale for reimbursable meals, 17% of middle and high schools required a health education course for graduation, and 18% of elementary schools offered the nationally recommended 150 minutes of P.E. per week. These lower scores likely reflect difficultly in instituting changes that require significant resource investment in the absence of state-level policies and funding. Indeed, federal meal programs *do* provide federal and state policy and funding support, which may explain the high participation rates we found for those programs. Enhancing AZ Health Zone-ADE coordination may therefore help to garner support in other areas.

15. The percent of Healthy Schools Program assessment items meeting best practices was higher for AZ Health Zone-supported schools than for all Arizona schools or all US schools.



SLM Scorecard

In FY20, the SET planned to collect pre and post SLM scorecards to assess changes in the meal environment among LIA-supported schools. Due to COVID-related school closures in March 2020, only one pre-post SLM scorecard was completed (**box, top right**). Even so, we analyzed 34 *pre* scorecards and discovered some interesting differences by the type of school meal service provided.

LIAs in four counties submitted SLM scorecards. Most (85%) were from Arizona's more urban counties (Maricopa, n=23; Pima, n=6), and 32% were from counties that share a border with Mexico (Pima; Yuma, n=3; Santa Cruz, n=2).

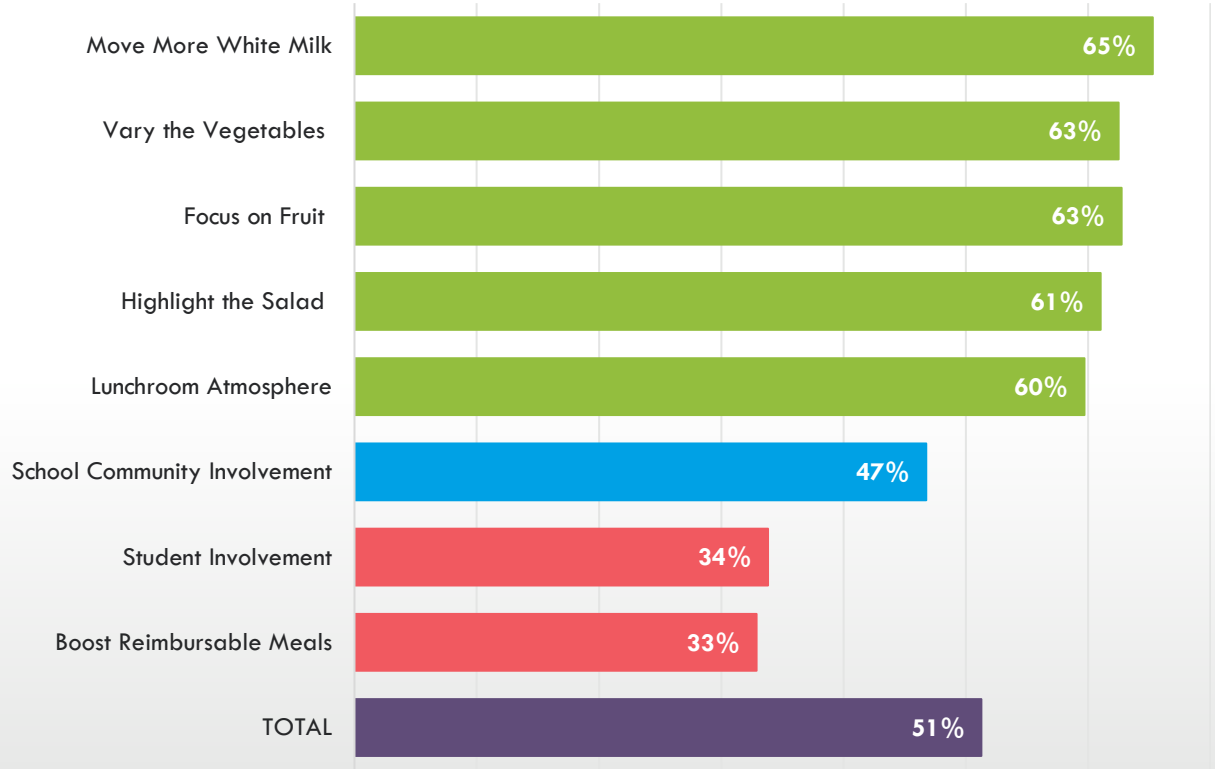
What about the Matched Scorecard?

The UA Cooperative Extension, Santa Cruz, completed a pre *and* post Scorecard with one school in FY20. While the sample size of one prevents a statistical analysis, it is worth noting that the total score increased slightly by 3.4% [MT5a].

The scorecard findings at pre revealed room for improvement across topics [ST5b], especially the three lowest-scoring sections (**Figure 16**). While some section items may require generous resource investment (e.g., taking cash, only, for *a la carte* snacks), most can be accomplished with modest support from the school community (e.g., cafeteria staff politely prompt students to select a fruit or vegetable, the lunch menu is included in morning announcements).

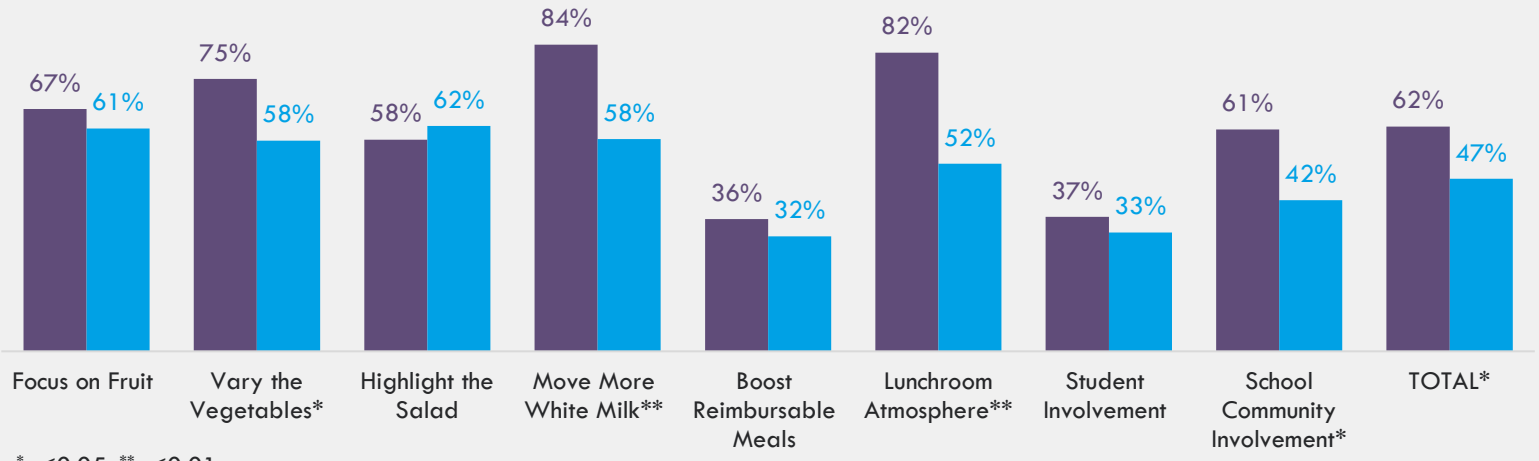
16. By section, the highest mean SLM scores ranged from 60-65% of the maximum possible score, while the lowest scores were about a third of the maximum. (n=34)

The total mean score at pre was about half of the maximum possible score.



17. Mean scores for community eligible schools (n=25) were significantly lower than for non-community eligible schools (n=9) for four of eight SLM Scorecard sections.

Scores were calculated as the percent of the maximum possible score.



*p≤0.05, **p≤0.01

We next explored differences in scores between community eligible schools and all other SNAP-Ed eligible schools. SNAP-Ed eligible schools have at least 50% of students enrolled in the free-and-reduced price lunch program, and community eligible schools make up a subset of this group, serving free meals to all students.

The findings for mean scores by group (**Figure 17**) suggest that *community eligible schools are less likely than other SNAP-Ed supported schools to have the SLM's evidence-based best practices in place*. Thus, to address disparities found for the cafeteria environment, it may be especially important to prioritize SLM work with schools that provide universal free meals, which the AZ Health Zone has already begun to do: 74% of the schools that LIAs supported with FY20 SLM assessments were community eligible [ST5b,c].

Lastly, we examined differences between schools with heat-and-serve versus full kitchens. Schools with full kitchens had significantly higher total and section scores with large effect sizes in: *Vary the Vegetables* (p≤0.05, d=0.75), *Move More White Milk* (p≤0.05, d=0.91), *Boost Reimbursable Meals* (p≤0.01, d=1.09), *Lunchroom Atmosphere* (p≤0.05, d=0.91), and *School Community Involvement* (p≤0.01, d=1.39). Thus, *lower-resourced schools without full kitchens may need additional support to meet best practices for the lunchroom environment* [ST5b].

Multilevel Interventions

In the 2019-20 school year, all LIAs supported school health PSEs and provided direct education (DE) to youth—until Arizona schools closed for in-person learning in March 2020 due to COVID.

The school closures inhibited most regular LIA programming for the rest of the school year. They also prevented most students from completing the post-intervention KAN-Q to assess changes in their knowledge, attitudes, and behaviors. In response, we analyzed pre-intervention data from August-October 2019 in three ways (**right**).

3 KAN-Q Analyses

Cross-Sectional: What were students' ***pre-*** intervention responses over 3 consecutive years?

Longitudinal: What changes were found among students who completed a **pre, post,** and **follow-up** KAN-Q?

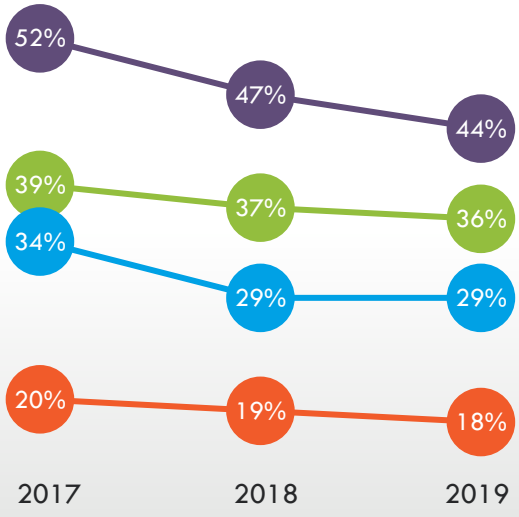
Pre-Post: What changes did the small group that completed 2019-20 pre-post surveys show?

Cross-Sectional Analysis. We analyzed pre-intervention responses from students in 2017, 2018, and 2019 to identify trends. Although the number of respondents varied by year, there was no statistically significant difference in county representation or participants' demographic characteristics:

Year:	2017 (n=4,034)	2018 (n=2,257)	2019 (n=2,031)
% female	48.4%	48.5%	45.7%
Mean age	10.0	9.8	10.0

Knowledge. Each year, students correctly answered about a third of the USDA Dietary Guidelines knowledge questions *prior to any intervention*. By item, the overall proportion of correct responses also remained fairly consistent across years (**Figure 18**). There was a slight decline in students' pre-intervention knowledge over time for all items, most notably between 2017 and 2018.

18. The % correct for KAN-Q knowledge items was highest for physical activity [ST3], followed by fruits & vegetables [ST1g,h], dairy [ST1e], and whole grains [ST1i].



Attitudes. Students' attitudes toward six categories related to the Dietary Guidelines and MyPlate were rated on a scale from 1 (really don't like) to 5 (really like). Across all years, students most enjoyed fruit ($\overline{X}$=4.7) and physical activity ($\overline{X}$=4.5-4.6) [ST1a,3a] and they were generally positive toward low sugar drinks ($\overline{X}$=4.0), low/no fat milk ($\overline{X}$=3.8-3.9) and vegetables ($\overline{X}$=3.8-3.9) [ST1l,e,j,b]. They least enjoyed whole grains ($\overline{X}$=3.6) [ST1d].

"One student told a new student, 'This is the CATCH program. It's fun and you learn things like you need 60 minutes a day of exercise and there are lots of GO foods. It will keep you healthy when you grow up.'"

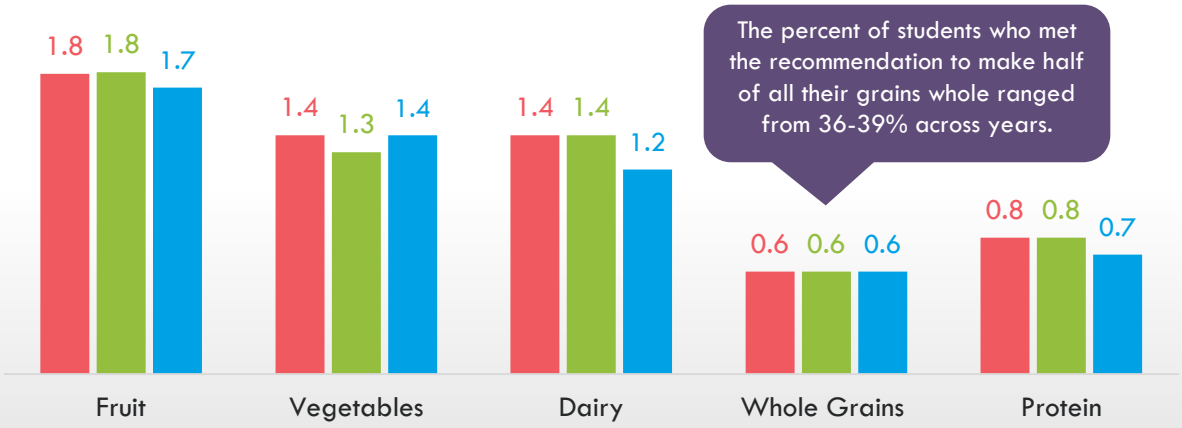
- UA Cooperative Extension, Navajo

Behavior. Pre-intervention nutrition behavior was also consistent across years. At all three points in time, students reported the daily intake pattern shown in **Figure 19**. On average, all food groups were eaten less than twice "yesterday". Thus, if times per day is a rough proxy for servings (more study is needed on this topic), students may not be meeting any recommendations for MyPlate food groups before interventions.

For beverages, students reported consuming water five times more than sugary drinks [MT1g,h] and averaged just over one sugary drink yesterday. Dairy milk intake dropped from 2017-19, while the percent of students who drank non-dairy alternatives or no milk grew, perhaps reflecting a larger cultural shift favoring non-dairy alternatives.

19. At pre, the average number of times that students reported consuming MyPlate foods yesterday was consistent across 2017, 2018, and 2019.

Fruit was eaten most, while whole grains and healthy protein (e.g., fish, nuts) were eaten least [MT1l,j,a,e].

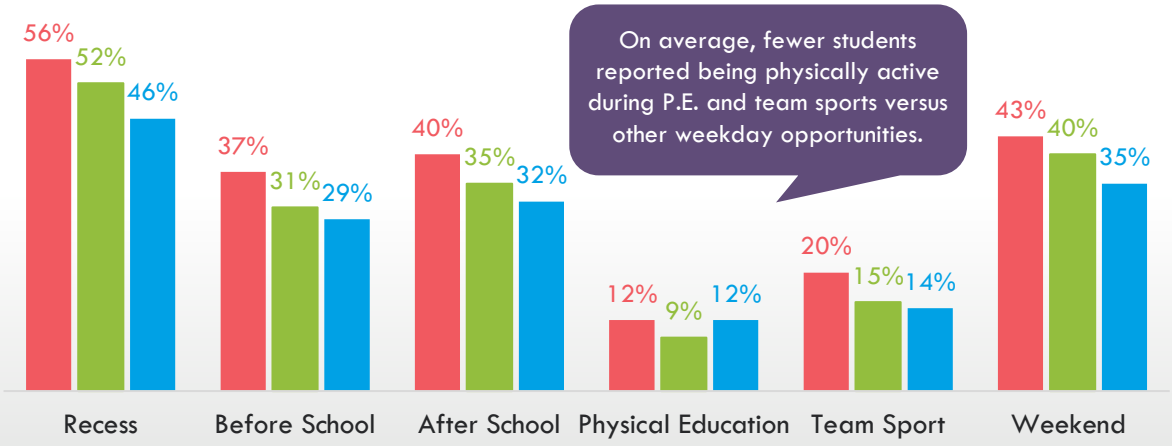


Within dairy milk, about 15% of respondents reported that they regularly drank whole milk in all three years, while their consumption of 2%, 1%, and fat-free milk declined [MT1i].

Most physical activity also decreased [MT3]. From 2017-19, fewer students reported being active during the day (**Figure 20**), and more reported *no* activity before and after school, in a team sport, or on the weekend. In addition, students' total mean number of reported physical activity bouts over a week decreased from 11.3 (2017) to 10.5 (2018) to 9.8 (2019).

20. The percent of students that were physically active <u>before</u> AZ Health Zone support generally decreased from 2017 to 2018 to 2019.

By 2019, fewer students reported being active for 3+ weekdays in recess, before and after school, and doing a team sport, and during both weekend days.



What Can Pre-Intervention Data Teach Us About Designing Interventions?

Most students are not meeting the recommendations for any MyPlate food group. All interventions should continue to address all topics, albeit in targeted ways.

Many students enjoyed drinking water and reported higher water vs. sugary drink intake. School-based interventions can leverage this enjoyment by focusing on PSEs that promote water access throughout the school, e.g., modern hydration stations and water bottle use during class.

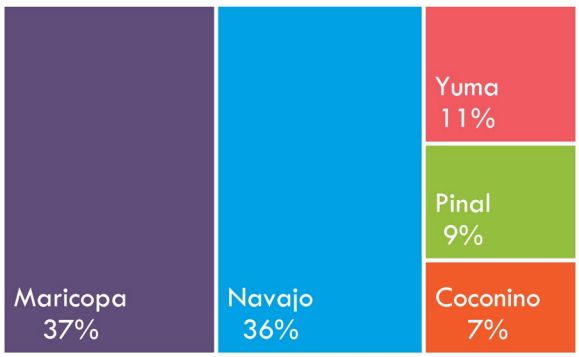
Students' lack of familiarity with whole grains and, to a lesser degree, different types of milk, suggests that school-based interventions may be more effective by emphasizing these topics during DE in combination with PSEs.

Students may be somewhat familiar with vegetable guidelines and enjoy certain types, but low intake suggests that multilevel interventions should be used, combining behaviorally-focused education (e.g., cooking, taste tests) with school PSEs to enhance offerings and encourage consumption.

Even before education, many students recognized the benefits of and enjoyed fruit consumption and physical activity. Interventions may be most effective when they focus on school PSEs to expand and promote (1) fruit offerings during meal and snack times, and (2) opportunities to be active (e.g., during P.E. or recess).

Longitudinal Analysis. Some of the same students completed the KAN-Q in two consecutive school years: pre- and post-intervention in 2018-19, and pre-intervention in 2019-20 that served as an approximate 4-month follow-up. This longitudinal analysis included the 180 students assessed at pre, post, and follow-up (**Figure 21**).

21. Most of the KAN-Q respondents for the longitudinal analysis were from Maricopa and Navajo Counties. (n=180)



Knowledge. In general, more students were able to answer MyPlate knowledge questions correctly over time, from 32% to 37%, which trended toward significance (p=0.06) [ST1].

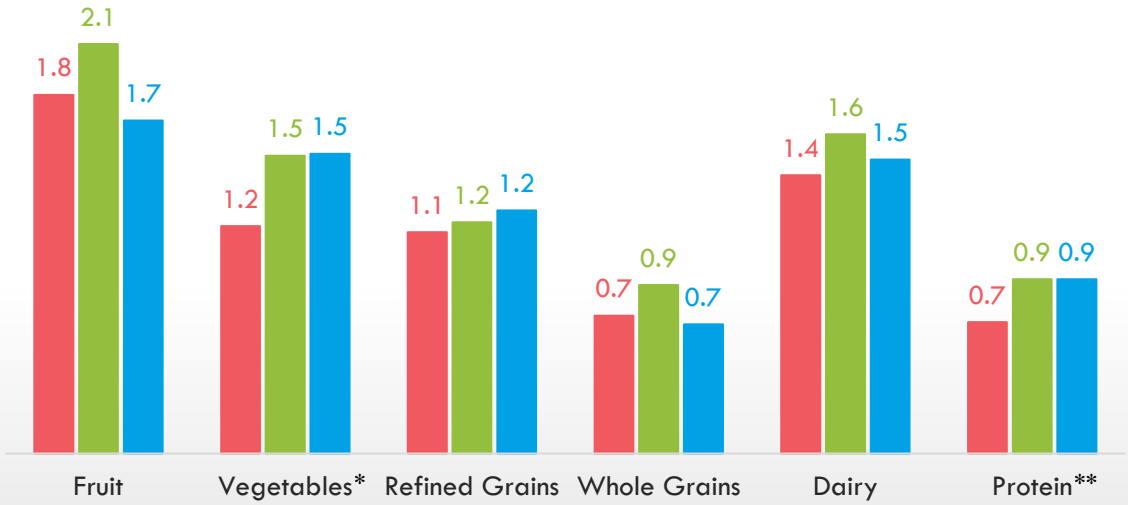
Attitudes. Respondents' attitudes toward MyPlate recommendations were consistently positive but did not improve over time. The only statistically significant change was a decrease in the mean physical activity attitude score, though it remained positive [ST1].

Behavior. Results for nutrition behaviors (**Figure 22**) showed sustained, significant increases in vegetable and healthy protein consumption [MT1m,a,e; LT1]. Dairy intake increased but then dropped significantly at follow-up ($p \leq 0.05$, small effect) [MT1i; LT1].

As with the cross-sectional analysis, fruit was eaten the most, whole grains and healthy protein were eaten the least, and students generally reported low intake of all food

groups (as times eaten yesterday) [MT1l,j,a,e]. They consistently reported drinking water about five times as much as sugar-sweetened beverages, and they consumed an average of one sugary drink the day prior [MT1g,h].

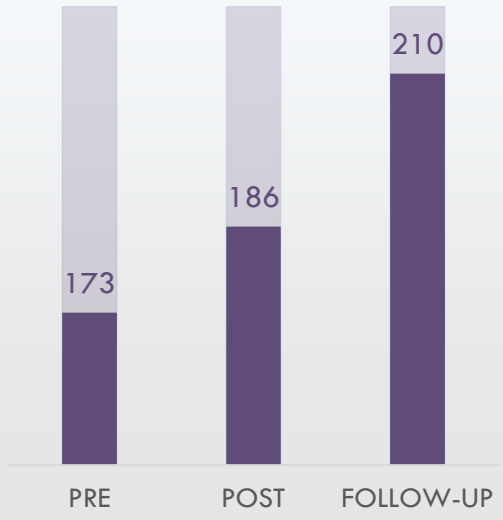
22. Students reported a sustained increase in vegetable and healthy protein consumption from PRE to POST to FOLLOW-UP, with small effect sizes.



*p≤0.05, **p≤0.01

Physical activity findings suggest an increase in student activity over the course of the school year, followed by a decrease during the summer. Respondents' number of weekly activity bouts increased from pre to post (10.5 to 11.8) but decreased significantly from post to follow-up (11.8 to 10.2, p≤0.01, small effect), especially during P.E. and recess [MT3d,e; LT3]. This may reflect changes in students' opportunities to be active during the initial versus final months of the school year, as well as the potential role of the AZ Health Zone in promoting physical activity *during* the school year. There was also a steady increase in the overall sedentary time reported by students from pre to post to follow-up (**Figure 23**). The increase in electronics time [MT3h] trended toward significance (p=0.09) and suggests that students may need ongoing support to be active given the prevalence of electronic technology.

23. The mean number of minutes that students reported watching television and using electronics yesterday increased over time.



A Note about the KAN-Q

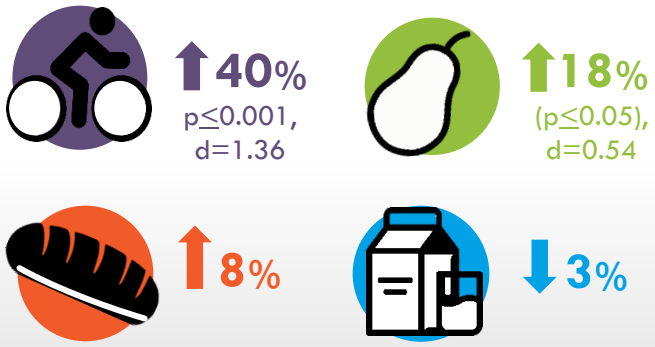
Findings from the longitudinal and cross-sectional analyses corroborate the consistency of KAN-Q results, but more work is needed to determine the extent to which students' intake of some food groups is consistently over- or underreported (e.g., eating grains less than twice per day). More work is also needed to better understand the degree to which *times* per day can act as a proxy for *servings* per day.

Pre-Post Analysis. Just before school closures, 77 fourth graders in one Pima County school completed post-intervention KAN-Qs that were matched to pre-intervention KAN-Qs. About half (49%) were female.

Knowledge. From pre to post, students answered more knowledge items correctly (up 15%, p≤0.001, d=0.64). They learned that they should get at least 60 minutes of daily physical activity [ST3], and that half their plates should be fruits and vegetables [ST1g,h] (**Figure 24**).

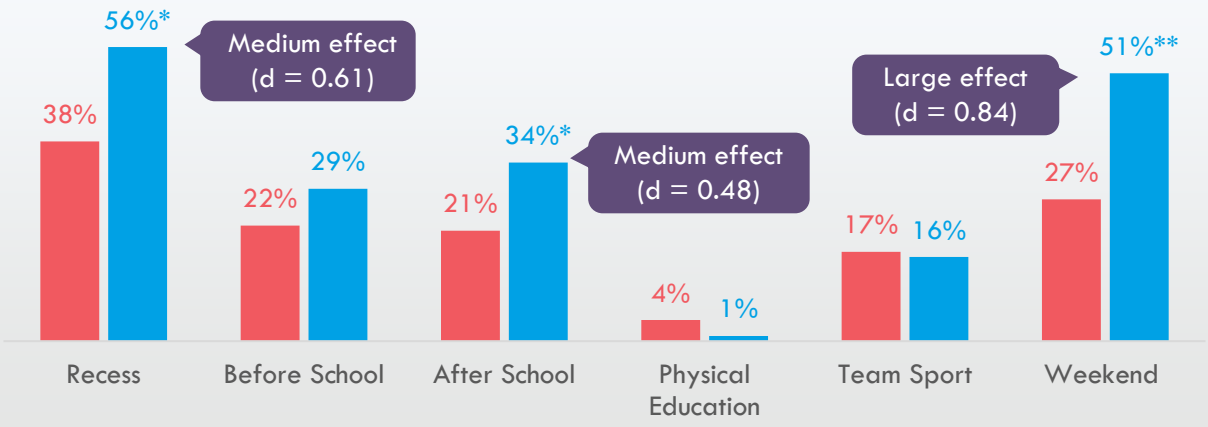
Attitudes. As with the cross-sectional analysis, students' attitudes were most positive for eating fruits [ST1a] and being active [ST3] and least positive for eating whole grains [ST1d]. From pre to post, *mean attitude scores improved significantly for being active* (p≤0.05, d=0.53) *and drinking low- or no-sugar beverages* (p≤0.05, d=0.51) [ST1l, ST3].

24. Students' knowledge increased significantly for physical activity and fruit & vegetable guidelines, but not for whole grains or milk type.

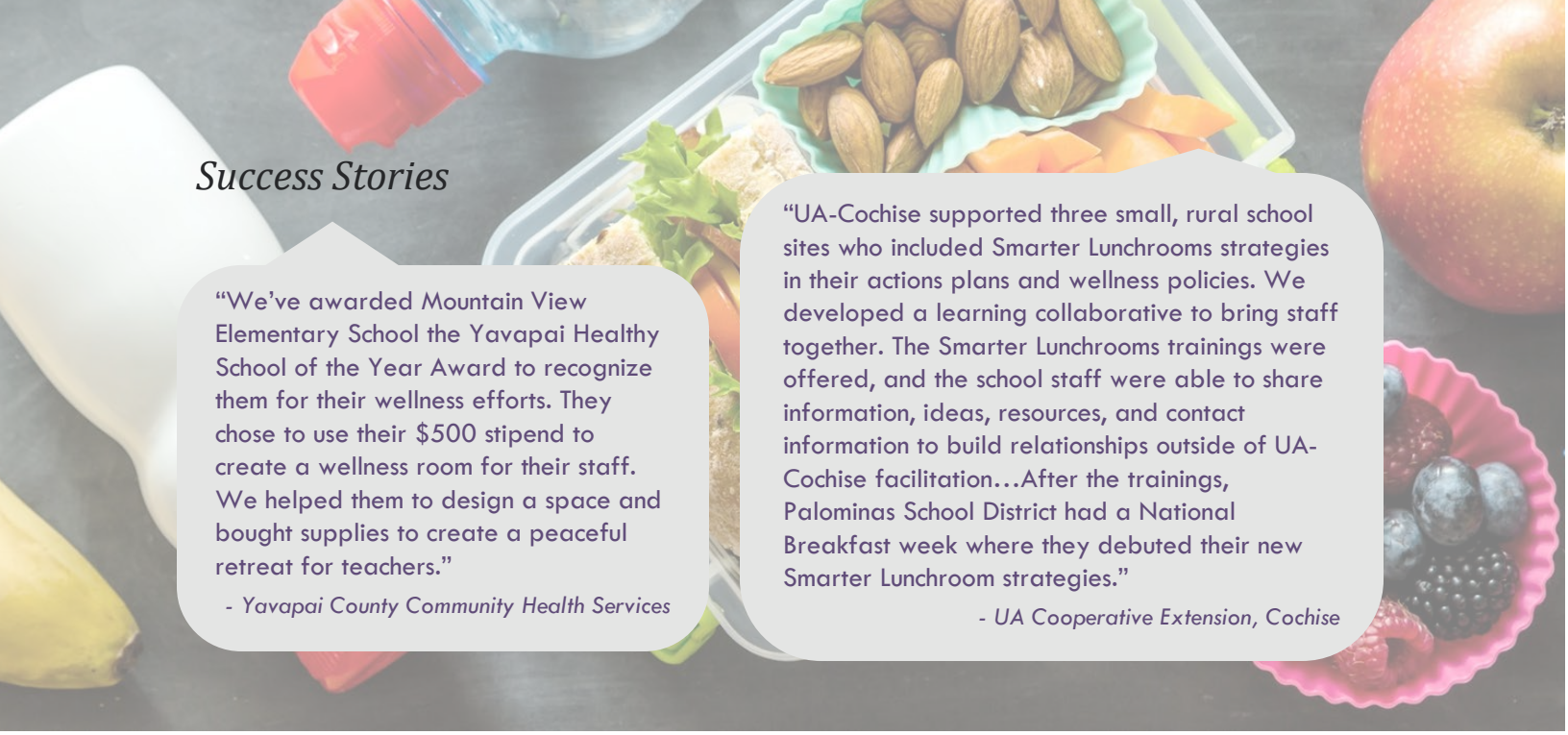


Behaviors. Nutrition behaviors did not show a statistically significant change, but students did report statistically significant increases in physical activity. In addition to the changes shown in **Figure 25**, students' mean total number of weekly activity bouts increased from 9.1 to 10.7 (p≤0.05, d=0.31). Thus, for this Pima County group, AZ Health Zone support may have specifically encouraged positive knowledge, attitudes, and behavior change related to physical activity.

25. From PRE to POST, the % of students that were active for 3+ weekdays during recess and after school, and during both weekend days, increased significantly [MT3b,e].



*p≤0.05, **p≤0.01



Success Stories

"We've awarded Mountain View Elementary School the Yavapai Healthy School of the Year Award to recognize them for their wellness efforts. They chose to use their $500 stipend to create a wellness room for their staff. We helped them to design a space and bought supplies to create a peaceful retreat for teachers."

- Yavapai County Community Health Services

"UA-Cochise supported three small, rural school sites who included Smarter Lunchrooms strategies in their actions plans and wellness policies. We developed a learning collaborative to bring staff together. The Smarter Lunchrooms trainings were offered, and the school staff were able to share information, ideas, resources, and contact information to build relationships outside of UA-Cochise facilitation…After the trainings, Palominas School District had a National Breakfast week where they debuted their new Smarter Lunchroom strategies."

- UA Cooperative Extension, Cochise

Recommendations

Continue to intensify the AZ Health Zone-ADE school health collaboration. Based on these findings, priority areas may include: (1) training LIAs to become more proficient in the ADE's administrative review process, especially as it relates to LWPs; (2) garnering state-level support for PSE/LWP *implementation,* especially for making more resource-intensive changes*;* and (3) building school- and district-level wellness teams.

Encourage LIAs to emphasize these areas for written LWPs: (1) revise language to meet federal guidelines, per the WellSAT 3.0 indications, (2) improve *PE & Physical Activity* and *Wellness Promotion & Marketing* language, (3) recruit and retain members for DWCs and school-level wellness teams, and (4) make LWPs and LWP participation accessible to the public.

Encourage LIAs to focus SLM support in community eligible schools and in schools lacking full kitchens. In addition, LIAs may benefit from SLM trainings that explore the most appropriate ways to develop action plans for schools with and without full kitchens and with and without free meals for all students.

Support multilevel interventions in schools that respond to the KAN-Q results:

- *Focus on PSEs rather than DE to promote fruit, water, and physical activity*. Students already enjoy these, so LIAs may wish to prioritize access and choice through quality hydration stations, water bottles, enhanced fruit offerings (e.g., using SLM techniques), and more opportunities for physical activity. The AZ Health Zone may also wish to develop strategies to reach students with physical activity opportunities during the summer months.
- *Elevate vegetables, grains, and protein/dairy during behaviorally-focused direct education*. To the extent possible, include cooking lessons or demonstrations, taste tests, and other activities designed to build skills, self-efficacy, and awareness of these food groups, and pair lessons with PSEs that reach schools and families more broadly.

The AZ Health Zone's Response to COVID:

Meeting School District Needs

From March 2020 forward, Arizona schools struggled to respond quickly to rapidly changing pandemic conditions across the state. School communities had to develop new ways of delivering student education, meals, and transportation; provide teachers with safe and engaging professional development; and regularly review COVID metrics to determine when and how to reopen for in-person learning. During this time, the AZ Health Zone Local Implementing Agencies (LIAs) stepped in to assist schools in a variety of meaningful ways.

Maintaining Relationships with School Communities in Santa Cruz

"Early in the COVID shutdown, it became apparent that social media and email would be optimal for sharing information with schools, parents, and teachers. Our staff were new to social media, but **we quickly learned how to post on a daily basis.** Soon, our social media presence was noticed by schools and other community partners. Many schools 'liked' and shared our posts and thanked staff for the resources provided. Beyond social media, **we partnered with the Expanded Food Nutrition Education Program to create a monthly newsletter** as another avenue to reach the community."

-UA Cooperative Extension, Santa Cruz

Forging Ahead with Virtual Teacher Trainings in Pima

"Platforms like Zoom, Google Meet, and other social media outlets have made it possible for us to continue our school health policy, systems, and environmental support. While it paused some plans, COVID also allowed for new and more innovative ways to advocate, connect with, and train school partners. For example, converting our *Training of the Trainer* workshops from an in-person to webinar platform has been a future plan of ours. The pandemic enabled this longtime vision to come to fruition. We modified the workshop contents for the virtual classroom setting and expanded marketing efforts by collecting teachers' contact information from school or district websites. The online *Training of the Trainer* workshops were well received by teachers—summer attendance ranged from about 10 to 30 participants per session."

-UA Cooperative Extension, Pima

Supporting School District Reopenings in Three Rural Counties

St. Johns Unified School District #1

Plan for Reopening of Schools in August 2020 including Mitigation procedures

"As schools began to plan their re-opening in our areas with new health and safety protocols, we were able to help many school districts with their health and safety efforts specific to Local Wellness Policy and COVID mitigation requirements. We provided water bottles for all students in the St. Johns and Round Valley School Districts, and in two Navajo Nation school districts—Rock Point and Red Mesa.

"When visiting Vernon Elementary School—one of the first schools to re-open—we saw that the preschool through first grade students had their names printed on their new water bottles and grabbed them as they went out to attend P.E."

-UA Cooperative Extension, Apache

"Teachers reached out to us for ways to continue supporting students' nutrition and physical activity during COVID. We created physical activity kits for their classrooms and provided the *CATCH Kids Club* curriculum and activity box to each school. This allowed teachers to take charge and keep students learning about nutrition, physical activity, and making healthy choices."

-UA Cooperative Extension, Graham

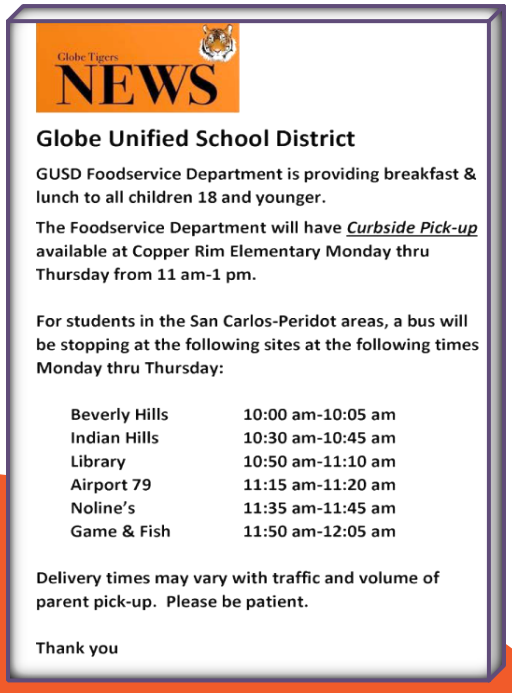
"After in-school learning resumed locally, a teacher contacted us about purchasing balls and other playground equipment so that *each* middle school class could have something to play with at recess (since they can't share equipment with any other class). We helped her get in touch with the School Health Advisory Committee (SHAC) president, and then SHAC members voted [to approve] the proposal. We're so glad that we have a SHAC with the funds to provide that equipment!"

- UA Cooperative Extension, Greenlee

Assisting A New Meal Delivery System in Gila

"At the onset of COVID, we immediately worked with the school food service teams at Globe and Miami Unified School Districts to identify meal program gaps and support their transition to meal delivery. The Globe Unified School District was one of the first rural districts in Arizona to adopt the meal delivery model via school bus stops. This coordination effort included school food service, school transportation, administration, and our team serving in the role of technical assistance, communications, and nutrition education support. Curbside free meals also continued at the school sites throughout the summer."

-Gila County Public Health Services



Globe Tigers NEWS

Globe Unified School District

GUSD Foodservice Department is providing breakfast & lunch to all children 18 and younger.

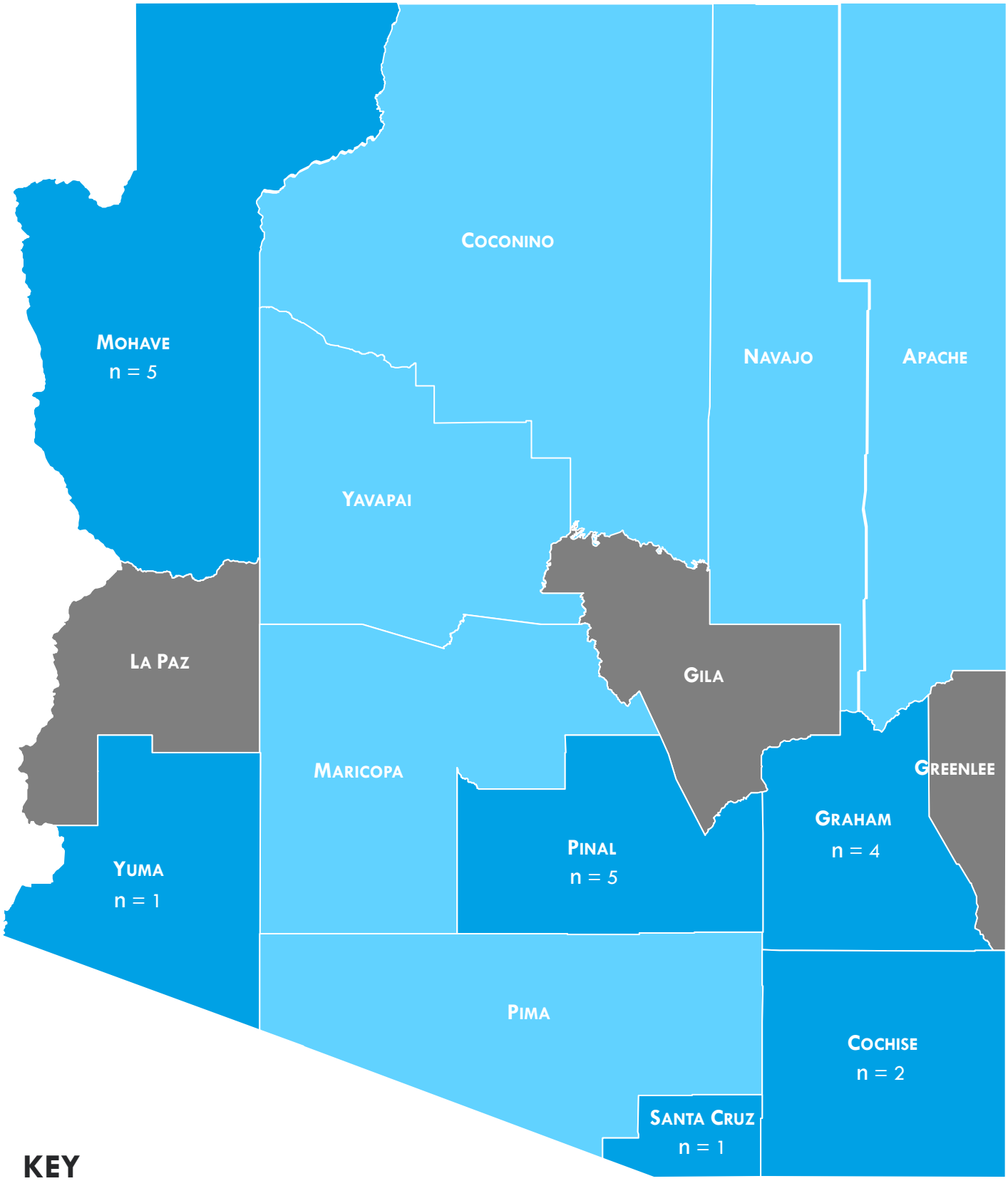
The Foodservice Department will have *Curbside Pick-up* available at Copper Rim Elementary Monday thru Thursday from 11 am-1 pm.

For students in the San Carlos-Peridot areas, a bus will be stopping at the following sites at the following times Monday thru Thursday:

Beverly Hills	10:00 am-10:05 am
Indian Hills	10:30 am-10:45 am
Library	10:50 am-11:10 am
Airport 79	11:15 am-11:20 am
Noline's	11:35 am-11:45 am
Game & Fish	11:50 am-12:05 am

Delivery times may vary with traffic and volume of parent pick-up. Please be patient.

Thank you



KEY

= Participated in the FY20 NAPSACC evaluation (n = number of ECEs assessed)

= Worked in Early Childhood in FY20

= Did not work in Early Childhood in FY20

Early Childhood

UA Cooperative Extension, Pima promoted the Arizona Empower Program at a regional ECE training

AZ Health Zone Early Childhood Strategies

- Support nutrition and physical activity policies and environments consistent with the Empower Standards
- Improve early care and education (ECE) capacity in nutrition education and healthy meals
- Improve ECE capacity to provide opportunities for physical activity

Evaluating Early Childhood

Six LIAs supported early childhood across 12 of Arizona's 15 counties during FY20. The State Evaluation Team (SET) assessed ECE policies, systems, and environments (PSEs) [ST5, MT5, MT6, LT5, LT6] using the University of North Carolina at Chapel Hill's Nutrition and Physical Activity Self-Assessment for Child Care (NAPSACC) tool. We also used Local Implementing Agencies' (LIAs) Semi-Annual Narrative Reports to better understand SNAP-Ed activities with partner ECEs, including success stories around sustainable changes [LT10] and COVID impacts.

NAPSACC

LIAs worked with their partner ECEs to assess site-level PSEs using the NAPSACC tool in FY16, 18, and 20. However, COVID-related ECE closures from March 2020 through the end of the fiscal year hindered LIA plans to complete many assessments. This led to the small sample sizes reported here for both our FY18-20 pre-post analysis and our analysis of longitudinal changes in scores over five years.

"The impact of COVID on ECE partners was the closure of most sites. Those that remained open or reopened had much less communication with staff, as priorities shifted to pressing health & safety protocols."

-UA Cooperative Extension, Pima

About the Tool. The NAPSACC includes seven self-assessment modules that provide ECEs with feedback on PSE strengths and areas for improvement. In FY20, the AZ Health Zone used three modules: *Child Nutrition, Infant & Child Physical Activity*, and *Outdoor Play & Learning*. *Outdoor Play & Learning* was newly introduced to LIAs this year, while the other two modules were used in prior years.

How did scores change from FY18-20? Five SNAP-Ed-supported ECEs completed *Child Nutrition* assessments in both FY18 and FY20. All mean section and total scores increased [MT5a-d], with two of the sections showing statistical trends to significance (**Figure 26a**).

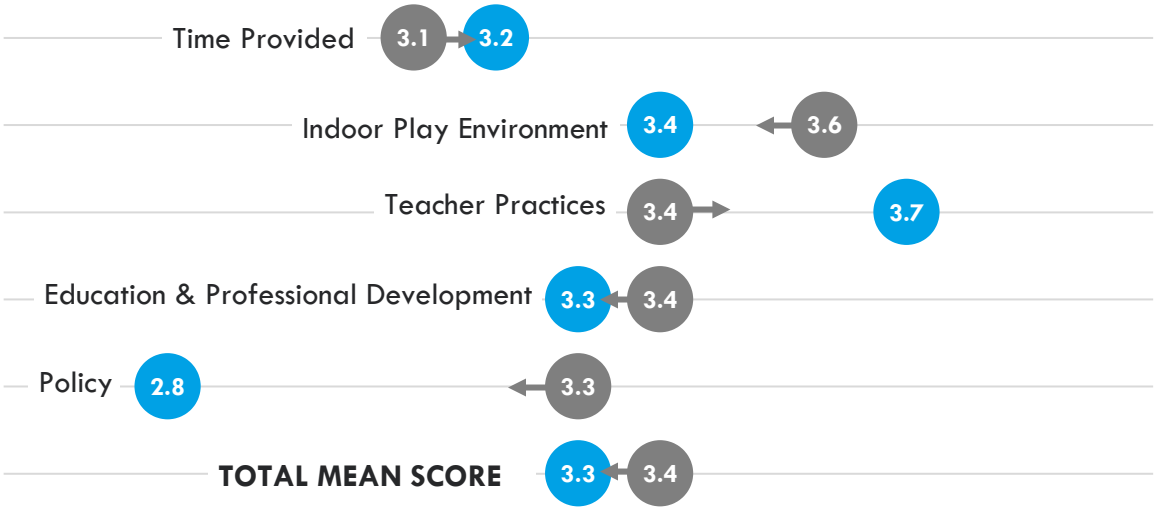
26a. Mean *Child Nutrition* scores increased from FY18 to FY20. (n=5)

Scores ranged from 1 (weakest practice) to 4 (best practice).

The increases in Feeding Environment, Feeding Practices, and Total Mean Score trended toward statistical significance despite the small sample size.

26b. Changes in mean *Infant & Child Physical Activity* scores varied by section from FY18 to FY20. The total score decreased slightly. (n=7)

Scores ranged from 1 (weakest practice) to 4 (best practice).

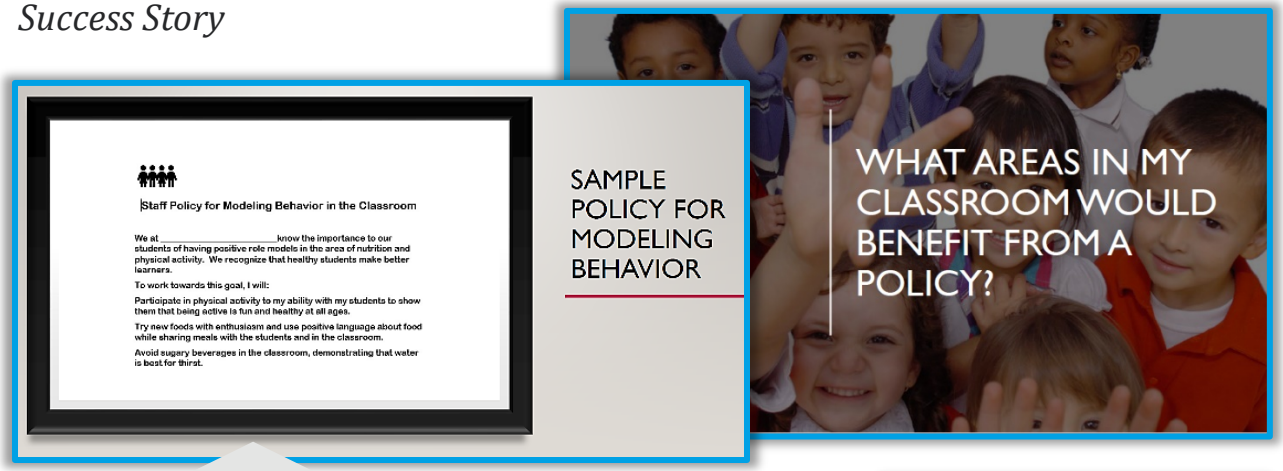


Seven ECEs completed *Infant & Child Physical Activity* assessments in FY18 and FY20. Mean section scores for Time Provided and Teacher Practices increased [MT6a,c] while scores for all other sections decreased [MT6a-d]. As a result, the total mean scored dropped slightly but not significantly (3.4 to 3.3) (**Figure 26b**).

How did scores change over five years? Four ECEs in four counties completed the *Child Nutrition* module in FY16, 18 , and 20. Scores increased from FY16 to FY20 for all but the Beverages Provided section [LT5], although the small sample size restricted our ability to detect statistically significant changes. The Foods Provided and Feeding Environment sections showed a steady increase over time, while scores for the other sections dropped from FY16 to 18 and then increased from FY18 to 20.

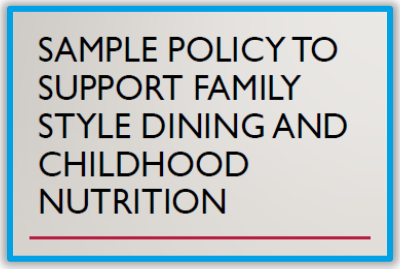
Six ECEs in three counties completed the *Infant & Child Physical Activity* module in FY16, 18 , and 20. In contrast to *Child Nutrition*, most of these section scores *decreased* from FY16-20. The Policy and Education & Professional Development sections declined steadily, while scores for Time Provided dropped from FY16 to 18 and were partially recouped from FY18 to 20. Even so, all section scores besides Policy had relatively high means (>3) that suggested these ECEs were at least partly implementing best practices across all five years [LT6].

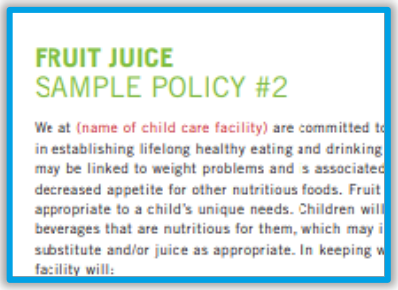
Success Story



"In addition to a professional development collaborative, UA-Cochise continues to offer 11 individualized professional development trainings to sites. A major success has been the implementation of a 'Policy in the Classroom' workshop, which encourages teachers to consider the importance of policy and provides technical assistance for creating small policies in the classroom. Another success has been 'Incorporating Nutrition Education into Circle Time,' as many teachers report now utilizing circle time and books to further nutrition and physical activity messages. 'Family Style Dining' has also been successful for several sites."

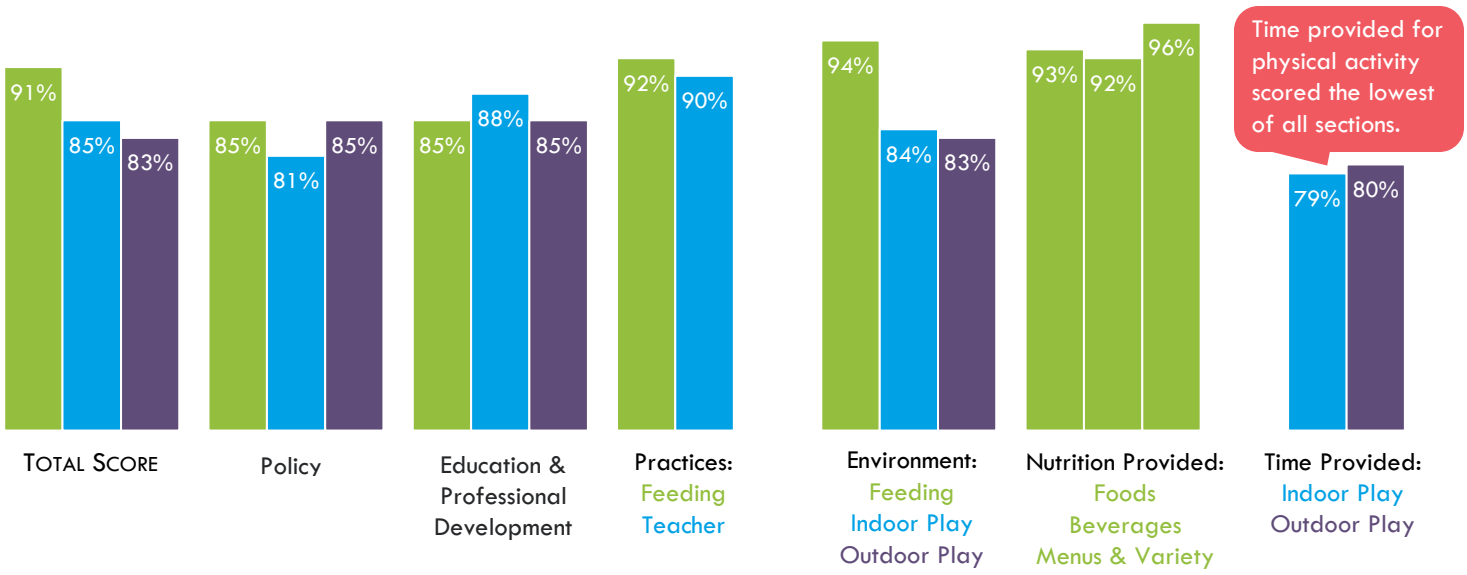
-UA Cooperative Extension, Cochise





27. In FY20, the mean total NAPSACC score was lowest for *Outdoor Play & Learning* (n=13), followed by *Infant & Child Physical Activity* (n=13). *Child Nutrition* (n=14) had the highest score.

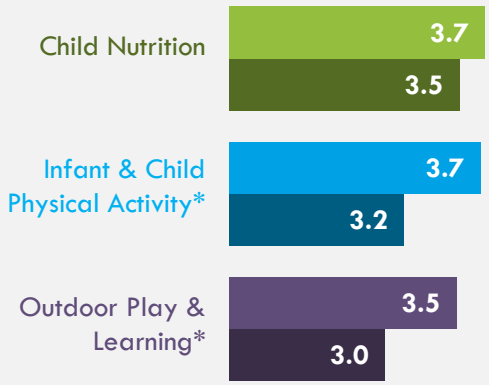
Scores were calculated as the percent of the maximum possible score. Color coding indicates that Policy and Education & Professional Development were asked in all modules, while other sections were module-specific.



FY20 Findings. In FY20, LIAs completed 40 NAPSACCs in six counties using three modules. Despite the addition of the *Outdoor Play & Learning* module, there was a 62% reduction in the number of completed assessments compared to FY18, largely due to COVID restrictions and closings.

Figure 27 shows the mean total and section scores for all modules in FY20. Results were similar to patterns found in prior years: ECEs were more likely to meet best practices for nutrition versus physical activity, and Policy scored consistently low across modules (≤85% of the maximum possible score) [ST5]. Scores for *Outdoor Play & Learning* were similar to *Infant & Child Physical Activity*, with Time Provided the lowest scoring of all sections (≤80% of the maximum) [ST5].

28. In FY20, the mean total scores for Head Starts (light bars) were higher than for other ECEs (dark bars) across all modules. Scores ranged from 1 (weakest) to 4 (best).



*p≤0.05

Head Start versus Other ECEs?

Arizona's Head Start ECE programs aim to provide quality education and wellness-related services to underserved communities. In FY20, many LIAs partnered with Head Start as well as non-Head Start providers to support early childhood PSEs.

We compared NAPSACC scores for Head Starts versus other ECEs and found that **Head Starts had higher mean total scores than non-Head Starts for all three modules (Figure 28).** Mean section scores for *Child Nutrition* and *Infant & Child Physical Activity*, and three of four mean section scores for *Outdoor Play & Learning*, were higher for Head Starts. The most pronounced differences were in the *Outdoor Play & Learning* Policy and Education & Professional Development sections.

Success Stories

"AZ Health Zone staff collaborated with the First Things First childcare health consultant to stencil and paint playgrounds at Kaibab Learning Center (KLC), Page Head Start, and Page Unified School District Preschool. Center staff chose the stencils, location, and colors, and painted the designs. Programs have increased outdoor learning time during COVID-19, and the painted playgrounds will be permanent to encourage physical activities for years to come [LT10]. The KLC staff expressed, 'The stencils for the playground and the playground materials have been a huge hit! The children were so excited and surprised when they came in on that Monday morning. The staff were equally impressed. It has been a great addition to our outdoor areas.' "

- Coconino County Health & Human Services

"For the third year, AZ Health Zone LIAs in Apache, Coconino, Navajo, and Yavapai co-delivered the *Color Me Healthy* Train the Trainer program with our partners at Northern Arizona Council of Governments (NACOG) Head Start. Our training underwent some changes, notably being virtual via Zoom, to meet the needs of both the displaced LIA staff and the Head Start staff spread out across four counties.

"A major accomplishment of this continuing PSE work has been the total adoption of the *Color Me Healthy* curriculum as both an evidence-based nutrition education intervention across the NACOG service region as well as the policy requirement at the NACOG Head Start administrative level that all lunch aide and cook staff be trained in delivering this curriculum once per month for the entire academic year [LT10]."

- UA Cooperative Extension, Yavapai

Recommendations

Consider ways to enhance the tailored ECE support provided by LIAs, including:

- *Encouraging greater ECE engagement in the change process, module selection, and use of resources* by leveraging the recent statewide move to the online Go NAPSACC.
- *Making LIAs aware of the potential differences between Head Start and other ECE programs.* As a first step, share back the findings from this report for discussion.
- *Highlighting the lowest-scoring NAPSACC topics for action planning.* This includes Time Provided for physical activity, Policy, and the Indoor & Outdoor Play Environment.

Continue to support LIA networking and collaboration with other LIAs and local/regional organizations. These have grown over the past five years and appear to have played an important role in sustainability. Efforts can include the expanded use of learning collaboratives, reaching out to other regional Head Start councils beyond NACOG, and building on LIAs' successful efforts to provide collaborative professional development opportunities to multiple ECEs.

The AZ Health Zone's Response to COVID:

Technology for Community Connections

The pandemic led to program cancellations across every Local Implementing Agency (LIA) in Arizona. While this was a setback to achieving FY20 goals, LIAs across the state found innovative ways to engage participants through the use of technology, including online social media platforms. This abrupt program adaptation also created new opportunities to collaborate with partners across the state.

The UA Cooperative Extension, Maricopa serves up virtual DE, complete with a food demo.

Social Media to Reach Participants

All LIAs across Arizona used at least one social media platform—Facebook, Instagram, YouTube, Zoom, and more—to reach the SNAP-eligible community with live or recorded cooking, gardening, and physical activity demonstrations and direct education (DE). This was intended to keep participants safely engaged in SNAP-Ed, with the hoped-for added benefit of reducing social isolation.

The UA Cooperative Extension, Apache planned to provide three in-person food preservation workshops on the Navajo Nation. After these were postponed due to COVID, the program shifted to instead film, record, and disseminate video versions on their Facebook page. In this way, the LIA not only reached the tribal community, but they made the virtual education available to all Facebook visitors.

Coconino County Health and Human Services led a physical activity session during a virtual health fair hosted by the Northern Arizona Council of Governments (NACOG) Area Agency on Aging. Residents from two local senior homes and the general public attended, and the recorded session was uploaded to the NACOG website for future use. The LIA also donated **300 resistance bands with instruction sheets, nutrition tips,** and **links to other YouTube instructional videos.**

A Virtual Celebration of Community & Culture

The Maricopa County Department of Public Health SNAP-Ed highlighted Arizona's food and culture during the pandemic. They created videos featuring Navajo, African American, and Mexican culture and cuisine, and they brought in community members with these cultural backgrounds to help—including recruits from Native Health (right, below right) and the Balsz School District. The LIA also supported active living in the Iglesia Episcopal San Pablo community (below).

"One of our shared use worship sites, Iglesia Episcopal San Pablo has developed such a following with their community residents that they have continued to program on social media throughout the pandemic. …Not only has their *Salud en Balance* team provided health-promoting activities for the community that have been cultivated by the church, but it has also addressed the sense of social isolation with which many residents have struggled during the pandemic."

-Maricopa County Department of Public Health

A Navajo video demonstrates traditional food preparation, including Three Sisters & Blue Corn Mush.

Rounding the Learning Curve for Virtual Direct Education

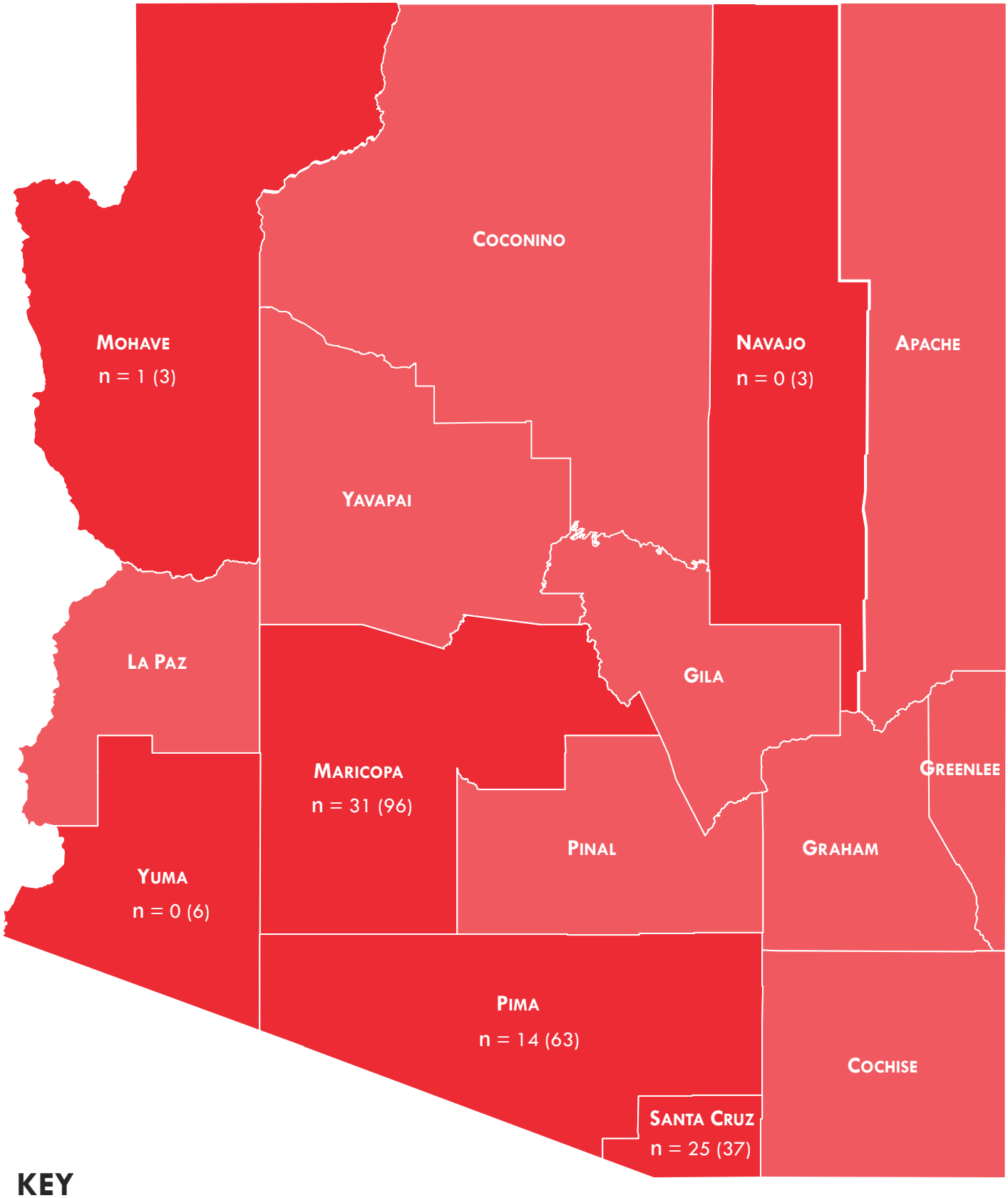
After an initial practice period with delivering youth direct education online, the Yuma County Public Health Services District and the UA Cooperative Extension, Pinal rapidly adapted their programming. Among the many curricula they used, Yuma SNAP-Ed delivered the 8-lesson *Botany on Your Plate* to help elementary school youth understand edible plants. After the lessons, they engaged the youth in a virtual seed starting activity.

The UA Cooperative Extension, Pinal was able to apply what they learned from facilitating a Facebook Live event to create a recorded *Color Me Healthy* video series for preschoolers that incorporated music, sing-a-longs, and animations. They uploaded the videos to their YouTube channel and Facebook page. In September, a Pinal Instructional Specialist delivered a live weekly Zoom session for the children and their parents.

A SNAP-Ed staff person facilitates virtual youth education in Yuma.

"As she worked from home, the Instructional Specialist 'co-hosted' each *Color Me Healthy* lesson with her 4-year old daughter. She had a lot of fun watching her daughter and the attendees dance and participate in each activity."

– UA Cooperative Extension, Pinal



KEY

= Participated in the FY20 Adult DE evaluation (n=number of matched assessments (number of pre-only))

= Worked in Adult DE in FY20

Adult Direct Education

The UA Cooperative Extension, Pima taught a senior class prior to COVID

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)

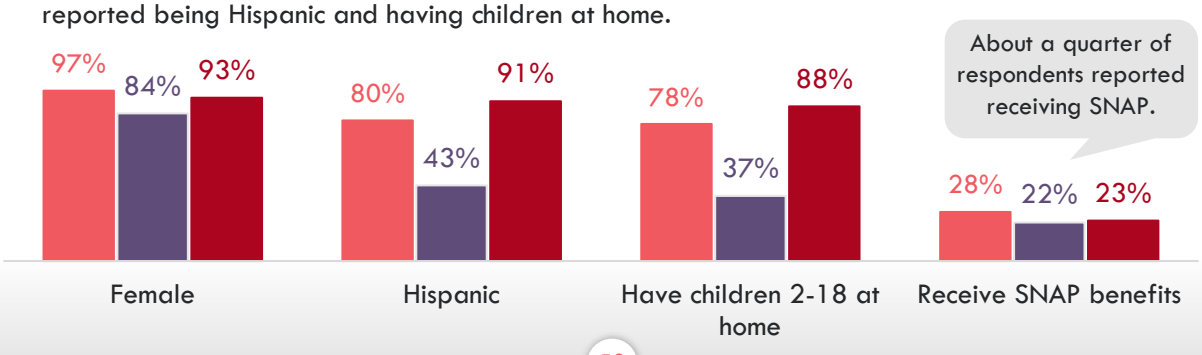
The AZ Health Zone assessed *adult behavior change* [MT1-3] using two University of California Cooperative Extension tools: the Food Behavior Checklist, and the On the Go!/¡De Prisa! survey.

Assessing Adult DE amid COVID

In FY20, four SNAP-Ed Local Implementing Agencies (LIAs) taught two adult DE class series that were paired with surveys: *MyPlate for My Family (MPFMF)* and *Eat Healthy, Be Active (EHBA)*. Fifty-eight adults completed the full *MPFMF* class series and 13 completed *EHBA*. While 208 pre surveys were collected in six counties, only 71 matched pre-post surveys were collected from four counties due to COVID-related cancellations before the final class and post survey (**Figure 29**). Most respondents (59%) were aged 30-49, and 25% were aged 50+.

English vs. Spanish Speakers. By language, 107 English speakers and 101 Spanish speakers completed pre surveys. Of these, only 23 English speakers and 48 Spanish speakers also took post surveys after classes were cancelled. Seventy-two percent of the Spanish speakers assessed at pre attended a *MPFMF* series. Compared to English speakers, more Spanish speakers reported Hispanic ethnicity and had children at home (**Figure 29**). Spanish speakers were also younger: only 19% were aged 50+, versus 57% of English speakers.

29. Females were more likely to complete matched (n=71), English PRE (n=107), and Spanish PRE (n=101) surveys. Most of the matched surveys were completed by respondents who reported being Hispanic and having children at home.



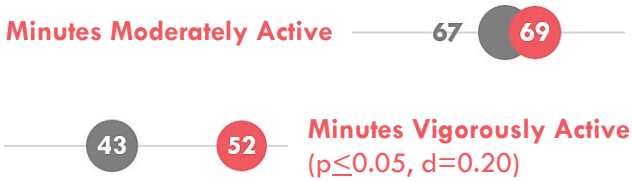
A walking group supported by the Maricopa County Department of Public Health

Physical Activity Results

For the matched surveys, we found a significant pre-to-post increase in the number of minutes spent doing vigorous physical activity, with a small effect size (**Figure 30**).

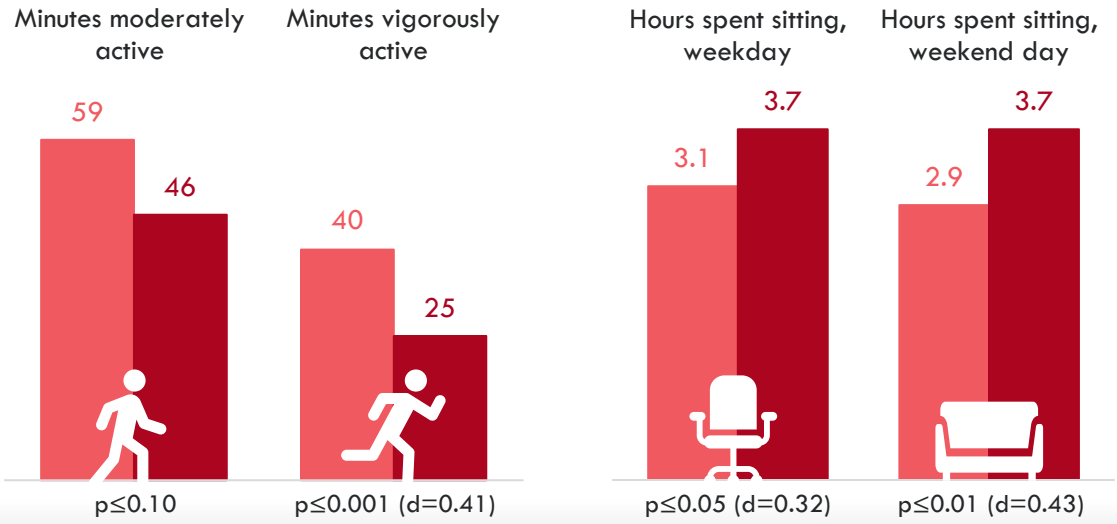
Respondents also reported an overall significant decrease in hours spent sitting on weekdays [MT3i], from 3.4 hours per day at pre to 2.7 at post (d=0.34). Time spent sitting on Saturday and Sunday also dropped from 3.1 to 2.6 hours, which trended toward significance.

30. *Minutes vigorously active on a representative day in the last week* [MT3b] increased from PRE to POST.
Minutes moderately active also increased slightly.



For the pre-only surveys, we found that Spanish speakers were more active and sat less than English speakers (**Figure 31**). These results are similar to findings from previous years.

31. At PRE, Spanish speakers were more active than English speakers on a representative day, especially for vigorous physical activity [MT3b]. They also sat less [MT3i].

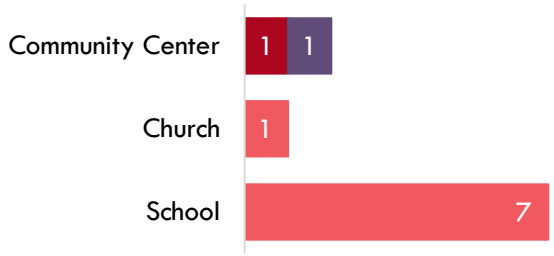


Multilevel Interventions. We additionally examined the active living-related policy, systems, and environment (PSE) activities reported by LIAs in Arizona's SNAP-Ed Electronic Data System (SEEDS). Alongside their adult DE, LIAs in three of Arizona's most populous counties supported *recurring physical activity events*, which made up 42% of the PSE work reported in FY20 under Physical Activity Opportunities, and *physical activity clubs*, which made up 31%—a notable drop from the 42% in FY19.

According to LIA narratives, this decrease was partly due to COVID and partly due to increased sustainability [LT10] that grew out of strong partnerships and leadership from volunteers or site staff.

Multilevel interventions involving adult DE and physical activity PSEs were documented at 10 sites in three counties (**Figure 32**). LIAs also undertook multilevel work to support food systems PSEs connected with adult DE curricula, as illustrated in the quote below.

32. LIAs combined adult DE with physical activity events, clubs, or both at three site types.



"LIA staff helped establish a garden club with an AmeriCorps Vista member. They worked with residents of the housing site on garden clean-up day and delivered garden equipment for the community gardeners. They also conducted the first session of the *Seed to Super* curriculum with residents."

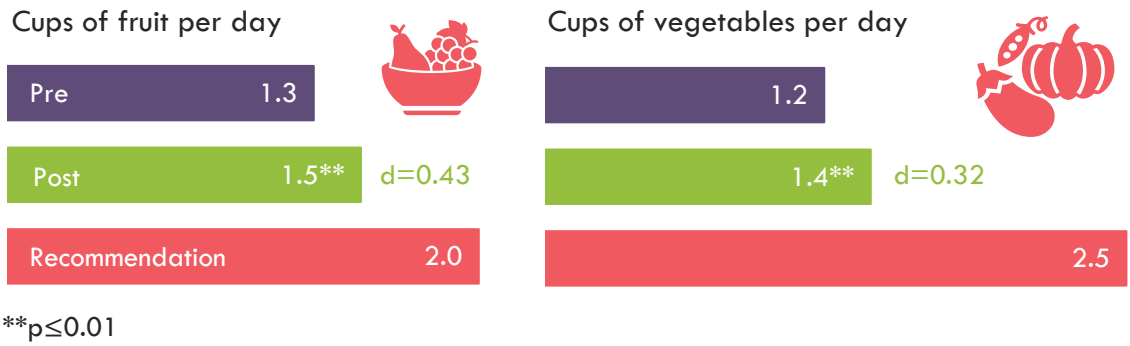
-Maricopa County Department of Public Health

Food Behavior Results

Fruits and Vegetables. After completing an adult DE series, participants significantly increased their reported fruit and vegetable consumption (**Figure 33**). When measured by a seven-item fruit and vegetable subscale [MT1c, MT1d], *participants improved their combined fruit-vegetable intake by 10%.*

Looking at the larger pre-only sample, we found that English and Spanish-speaking participants reported similar amounts of fruit and vegetable cups consumed, however Spanish speakers scored higher than English speakers on the seven-item fruit and vegetable subscale ($p \leq 0.05$, $d=0.28$).

33. In FY20, daily fruit [MT1l] and vegetable [MT1m] intake increased after attending a DE series. Adults fell short of national recommendations, consistent across five years.



**$p \leq 0.01$

Nutrition Facts Label, Sugary Drinks, & Food Security. From pre to post, respondents' use of the nutrition facts label [MT2b] increased in all groups: Participants who reported always or often using the label grew by 46% (d=0.95).

Unlike prior years, respondents' sugary beverage intake [MT1h] did not change much from pre to post: 50% reported no change in regular soda and 57% reported no change in fruit drinks/punch.

Participants' average reported food security [MT2g] did not change in FY20, similar to findings from the previous three years. Using pre-only data, *Spanish speaking participants were significantly more likely to report running out of food before the end of the month than English speakers* ($p \leq 0.001$, d=0.62).

Adult DE was Enhanced & Challenged by Technology during COVID

In FY20, LIAs reported 357 adult DE actions in SEEDS (e.g., an adult DE lesson). Of these, 44 (15%) were delivered virtually. While no measure of virtual DE outreach existed prior to COVID, LIA staff had begun experimenting with technology-mediated ways to reach adults earlier in FY20. For example, staff used Eventbrite at a Maricopa County food bank to encourage online registration for free cooking classes, which doubled participation rates.

COVID accelerated the frequency of technology use, as well as the breadth of platforms used, as LIA staff worked to stay connected to their communities from March through September 2020. An existing barrier also grew more noticeable during COVID—the disparity in access to technology, including Wi-Fi. Technology-related barriers were especially common in rural communities, and when reaching out to tribal or senior audiences.

> "Our educators successfully hosted Facebook Live classes in English and Spanish. These classes were advertised in our focus communities but were ultimately attended by a more diverse group of participants. Some sites have seen a decrease in participation, largely due to limited access or literacy with technology. But in some cases the virtual approach has allowed those that are often not able to make it to in-person classes due to scheduling, childcare, or transportation, to now be able to attend."
>
> *-UA Cooperative Extension, Maricopa*

> "Due to the rural nature of our communities and the lack of infrastructure, especially internet providers and cell phone service, doing virtual DE is very difficult. Many of our participants do not have home internet, or if they do they have limited data or get kicked off if too many people are online."
>
> *-UA Cooperative Extension, Apache*

Strong Partnerships & Technology Facilitated Adult DE

The AZ Health Zone in Pima County partnered with the Pima County Health Department to pilot adult DE during a school's parent-principal breakfast meeting. This was foundational to new engagement opportunities throughout the county.

Coconino County Public Health Services District partnered with WIC for their staff to teach an adult DE curriculum virtually. All county WIC participants were invited; the AZ Health Zone staff trained WIC staff on the curriculum and assisted in structuring the classes.

As highlighted in the *Technology for Community Connections* section of this report, many LIAs began developing more online nutrition and physical activity content to reach adults, including videos and class series advertising. Pre-COVID, these were often underutilized.

Background Photo: A UA Cooperative Extension, Yavapai staff person used her home garden as a teaching tool

Success Story

Due to COVID, LIA staff in seven of 15 counties began to offer adult DE virtually. The most commonly taught virtual curriculum was *Seed to Supper*, a six-session gardening series. Staff in six of Arizona's 15 counties provided this curriculum, reaching an average of *26 participants per class*.

The in-person curriculum was already popular—in Maricopa County alone, over 100 Spanish speaking adults participated in *Seed to Supper* classes this year prior to COVID. The transition to virtual teaching allowed LIA staff to expand their reach, both geographically and demographically. The virtual space also prompted staff to enhance participant engagement in a variety of ways.

Although challenges arose with virtual delivery—including how to advertise classes, register participants, and track the AZ Health Zone-required demographics—the popularity of the curriculum, perhaps intersecting with food access concerns during COVID, contributed to the reported success with virtual adult DE.

"We knew there was a community need for gardening education, and many community partners never had the time to schedule an in-person *Seed to Supper* class. This was an opportunity to fill the gap and include the point people for garden partner sites. A Boys and Girls Club, a school district, a community garden, a food bank, and a tribal wellness center and health clinic all had point people who attended the lessons."

-UA Cooperative Extension, Mohave

LIAs Had Much to Say about Virtual *Seed to Supper*

"Staff worked closely with the Cooperative Extension Master Gardeners, who were at each session to answer questions."

"We emailed participants weekly and requested that they send in pictures of their gardens, and any problems that they might be having."

"Class participants responded positively to pictures of things they'd seen before, such as this elm tree weed (left), when we included examples in virtual class."

Recommendations

Choose curricula, lesson topics, and/or delivery methods (e.g., in person or virtual) based on audience so learners are gaining information on what is most important to them in a way that works for them. This may help to recruit and retain adults, as seen with the *Seed to Supper* curriculum. Community engagement prior to implementation of DE is recommended.

Focus on food insecurity: How can AZ Health Zone programs strengthen their support to participants who consistently report struggling to put food on the table? This is particularly important as COVID exacerbates food insecurity among SNAP-eligible Arizona residents. Trauma-informed approaches to DE may support LIA staff to be more responsive to participants' lived realities.

Seek more community input on PSE strategies to ensure that the goals community members care about are being addressed. DE integrated with PA clubs and/or gardening opportunities may provide an informal opportunity to connect with local adults and to seek feedback on potential multilevel interventions to benefit adults and their families.

Summary of FY20 SNAP-Ed Evaluation Framework Indicators

The table below summarizes the 18 SNAP-Ed Evaluation Framework indicators reported by the AZ Health Zone in FY20, which includes five of the six SNAP-Ed priority indicators. The focus areas under which each indicator is reported is shown in colored text, with the tool(s) used to measure the indicator provided in parentheses.

Level	Short Term (ST) Readiness & Capacity	Medium Term (MT) Changes	Long Term (LT) Effectiveness & Maintenance
Individual	**ST1 Healthy Eating** School Health (KAN-Q) **ST3 PA** School Health (KAN-Q)	**MT1 Healthy Eating*** School Health (KAN-Q) Adult DE (FBC) **MT2 Food Resource Management*** Food Systems (SEEDS, SARN) Adult DE (FBC) **MT3 PA*** School Health (KAN-Q) Adult DE (On the Go!)	**LT1 Healthy Eating** School Health (KAN-Q) **LT3 PA** School Health (KAN-Q)
Environmental Settings	**ST5 Need & Readiness** School Health (HSP, SLM) Early Childhood (NAPSACC) **ST7 Organizational Partnerships*** School Health (WellSAT)	**MT5 Nutrition Supports*** Food Systems (SEEDS, SARN, Free Meals Survey) School Health (WellSAT, HSP, SLM) Early Childhood (NAPSACC) **MT6 PA Supports** Active Living (SEEDS, SARN) School Health (WellSAT, HSP) Early Childhood (NAPSACC)	**LT5 Nutrition Supports Implementation** Food Systems (SEEDS, SARN) School Health (WellSAT) Early Childhood (NAPSACC) **LT6 PA Supports Implementation** Active Living (SEEDS, SARN) School Health (WellSAT) Early Childhood (NAPSACC) **LT10 Planned Sustainability** Early Childhood (SARN) Adult DE (SARN)
Sectors of Influence	**ST8 Multisector Partnerships & Planning*** Food Systems (Wilder, SARN) Active Living (Wilder, SARN)	**MT8 Agriculture** Food Systems (SEEDS, SARN) **MT10 Community Design & Safety** Active Living (SEEDS, SARN)	**LT13 Government Investments** Active Living (SEEDS, SARN)

PA: Physical Activity, FBC: Food Behavior Checklist *SNAP-Ed Priority Outcome Indicator

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Jennie Altman, *Community Nutrition Specialist*
Stacy Beauregard, *Operations Coordinator*
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Elizabeth Holmes, *School Health Specialist*
Ryan Lang, *Active Living Specialist*
Therese Neal, *Operations Manager*
Bianca Valenzuela, *Operations Coordinator*
Melisha Bryant, *Early Childhood Specialist*
Bonnie Williams, *Early Care & Education Manager*

Stephanie Martinez, *Office Chief, Community Innovations*

"What is this faithful process of spirit and seed that touches empty ground and makes it rich again? Its greater workings I cannot claim to understand. I only know that in its care, what has seemed dead is dead no longer, what has seemed lost is no longer lost, that which some have claimed impossible, is made clearly possible, and what ground is fallow is only resting–resting and waiting for the blessed seed to arrive on the wind..."

– Clarissa Pinkola Estés, *The Faithful Gardener*

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