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UNIVERSITY OF ILLINOIS SNAP-ED

Community Network Evaluation Report

July 2023



Illinois Extension
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN



UI Health
Office of Community Engagement and
Neighborhood Health Partnerships



Altarum

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Authors and Acknowledgements

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Executive Summary

PROGRAM DELIVERY MODEL

Illinois Supplemental Nutrition Assistance Program (SNAP) Education (IL SNAP-Ed) provides community-based nutrition education for individuals and families eligible for SNAP benefits and works with communities and local partners to make nutritious foods and physical activity accessible for all. The goal of SNAP-Ed is to improve participants' healthy eating and physical activity choices, consistent with the [Dietary Guidelines for Americans](#) and [Physical Activity Guidelines for Americans](#), to prevent obesity and reduce the risk of chronic disease. In Illinois, the program is delivered under the Illinois Department of Human Services by the University of Illinois through Illinois Extension and the University of Illinois Health's Chicago Partnership for Health Promotion (CPHP).

IL SNAP-Ed implements a community-based network approach grounded in the [Social Ecological Model](#), a well-established public health framework emphasizing the interconnectedness of personal choices with an individual's environment and community context, in achieving behavior change. Within each SNAP-Ed community network (referred to as "networks" in this report), SNAP-Ed staff deliver nutrition education to eligible audiences and collaborate with local partners and community coalitions on policy, system, and environmental (PSE) interventions, prioritizing the specific needs, opportunities, and readiness of partners and eligible families within the network.

Networks are comprised of hub and spoke communities where eligible individuals live, learn, work, eat, shop, and play. Hubs are population centers where services and eligible individuals are concentrated. Spokes are nearby communities with higher concentrations of eligible individuals who regularly travel to hubs for services. Networks are defined using visualized data from the American Community Survey 5-year estimates of [SNAP eligibility](#) (185% of the federal poverty level) and plotted locations of geographically tethering core life services (e.g., Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), employment, groceries, healthcare). Networks are constructed based on how most eligible individuals in an area travel. Some networks contain only hubs, others contain hubs and spokes, and some have dual hubs where travel between two nearby hubs is typical for daily activities related to live, learn, work, eat, shop, and play.



To better understand network characteristics and program factors impacting outcomes of eligible populations living in SNAP-Ed networks, IL SNAP-Ed contracted Altarum to collaboratively plan and implement a comprehensive, multi-component evaluation of the community network approach. The evaluation was conducted from February 2021 through January 2023. During this time, an evaluation of a newly launched statewide social marketing campaign also took place. A full report of the statewide social marketing campaign evaluation is available.

PART 1: DEVELOPMENT OF A NETWORK RANKING SYSTEM

The first step of the network evaluation was to develop a system for ranking identified SNAP-Ed networks by factors that influence obesity prevention in eligible populations with the purpose of understanding similarities and differences of networks across the state. Networks were assessed using external and internal program indicators (i.e., obesity prevention supports) from the 2019–2020 program year and assigned to one of three tiers based on the quantity of supports present in a network. Tier 1 networks had more supports whereas Tier 3 networks had fewer supports. The following steps were used to create a tiered system of networks used for sampling in Parts 2 and 3 of the overall evaluation.

- ▲ Step 1: Assign SNAP-Ed program sites to networks.
 - Sites receiving SNAP-Ed programming were assigned to the networks in which they were geographically located.
- ▲ Step 2: Determine indicators for classifying networks.
 - Indicators related to SNAP-Ed activities, partnerships, coalitions, and community assets that support obesity prevention were selected.
- ▲ Step 3: Summarize indicators by network.
 - Indicators were summed across the network and averaged per 1,000 SNAP-eligible population or percent of SNAP-eligible population.
- ▲ Step 4: Standardize measures.
 - Standardized scores were created using z-scores within each fiscal year.
- ▲ Step 5: Create a total network score.
 - A total score for each network was calculated by summing the z-scores. The final score incorporated weighting for different indicators to reflect their impact on obesity prevention; those with the potential for greater impact were assigned greater weights.
- ▲ Step 6: Rank networks and divide into tiers.
 - Networks were ranked from highest to lowest using the network total scores.

FINDINGS

High population networks appeared in the lower tiers more often than low population networks. This indicates more obesity prevention supports were present per 1,000 eligible individuals for low population networks than for networks with higher populations. This information was used to plan intervention locations for the statewide social marketing campaign “Eat.Move.Save.” to increase program dosage for high population networks and monitor staffing placement goals.

PART 2: CHARACTERIZE NETWORKS, PARTNERSHIPS, AND COALITIONS

Within networks, partnerships and multi-sector collaboratives and coalitions are developed to reach families across settings with a combination of SNAP-Ed activities. To understand the depth and value of how these partnerships and coalitions contribute to SNAP-Ed goals and outcomes, a multi-component partnership and coalition assessment was conducted. The assessment consisted of four major activities.

- ▲ Network partner analysis

- ▲ Local partner survey
- ▲ Local partner interviews
- ▲ Local SNAP-Ed staff focus groups and survey

Analysis of Partner Alignment

Local SNAP-Ed staff in sample networks completed an assessment that identified network partners and coalitions for federal fiscal year (FFY) 2022. Partners were categorized as direct, parallel, or asset. Direct partners worked directly with SNAP-Ed on obesity prevention strategies, parallel partners worked on obesity prevention strategies independent of SNAP-Ed, and asset partners were present in the network but did not currently work on obesity prevention strategies; however, they contributed to the SNAP-Ed outcomes of interest by the nature of their organization or purpose.

The information was compiled and analyzed to determine if differences were present across networks and partner categories. The categories were ranked as high, medium, or low by the total number of partners and proportion of direct, parallel, and asset partners.

FINDINGS

Overall, 1,245 total partners were reported across the selected networks. A total of 231 partners were from urban networks, 621 were micro-urban/suburban, and 393 were rural.

- ▲ Across all partners, 41% were considered direct, 21% were considered parallel, and 38% were considered asset.
- ▲ The types of organizations most frequently identified were food pantries/meal sites/hunger organizations, schools, grocery stores, and parks and recreation.
- ▲ Rural communities reported the greatest proportion of direct partners (52%), followed by urban (44%), and micro-urban/suburban communities (34%). Micro-urban/suburban communities reported the greatest proportion of assets (43%), followed by urban (37%), and rural communities (31%).

Partner Survey

Next, a partner and coalition survey was developed to determine how community organizations and coalitions contribute to healthy eating, active living, and food access in the network via organizational and community-wide strategies and policies. Partner organizations identified in the partner alignment process (n=1,245) (including all categories: direct, parallel, and asset) were invited to participate in the online survey. The survey opened in May 2022 and closed in July 2022. The final dataset included 97 responses, with 33 respondents indicating a direct partnership with IL SNAP-Ed (35%).

FINDINGS

SNAP-Ed partners reported a deep partnership with long-term commitment to joint activities in healthy eating, nutrition, physical activity, food access, or obesity prevention. Partners were notably experienced in supporting healthy behaviors, food access, and obesity prevention efforts within their communities, overwhelmingly agreed their organization can influence community-level prevention efforts and were committed to supporting these types of activities in the future.

- ▲ 33 respondents (35%) reported partnering directly with IL SNAP-Ed with nearly half (46%) indicating the partnership had extended four or more years.

- ▲ Most commonly, organizations' current efforts included creating environments that promote healthy choices and access to food (83%), providing education on healthy living topics (74%), and participating in coalitions focused on promoting healthy living and access to food (72%).
- ▲ Nearly 60% of respondents planned to expand their current efforts to create an environment that promotes healthy choices and access to food.

Partners reported that participation on coalitions provides their organizations an opportunity to collaborate with similarly focused agencies around common goals to improve healthy lifestyles and access to food.

- ▲ 42% of respondents reported their organization participated on at least one multi-partner coalition, most commonly focused on increasing food access (65%).
- ▲ Respondents' organizations played a lead or organizing role for 26 coalitions.
 - Coalitions led or organized by respondents' organizations most commonly worked to improve the coordination of health or food systems (56%) and the majority of respondents (77%) indicated their coalition's membership was representative of the community served.
- ▲ Major accomplishments of the coalitions in the past three years included: increasing access to food throughout communities served, supporting capacity building of other local organizations, and providing educational opportunities related to healthy eating and physical activity.

Partner Interviews

One-on-one interviews were conducted to learn how partners and coalitions contributed to broad community-wide changes and policy implementation to support food access, healthy eating, and active living. A total of nine interviews were conducted between August and October 2022 with various organization types (e.g., food bank/pantry, faith-based, healthcare, government program/agency, early childhood), service areas, and levels of partnership with IL SNAP-Ed.

FINDINGS

- ▲ Of the nine organizations represented, six indicated they were currently working with IL SNAP-Ed in various capacities such as utilizing existing educational resources, hosting classes, working with SNAP-Ed to create, implement, and assess healthy policies, coordinating with SNAP-Ed to avoid duplication of efforts within the community, collaborating on community coalitions, councils, and committees, and working with SNAP-Ed to disseminate aligned messages in the community.
- ▲ Partners reported common challenges when implementing programs, such as limited funding, staffing challenges, volunteer burnout, lack of time, and unclear direction. However, interviewees shared that working in partnership with SNAP-Ed and other community organizations helped address these challenges by providing curriculum and materials, knowledge of resources, parental engagement, and collaborative leadership.
- ▲ Interviewees value their relationship with IL SNAP-Ed, noting that by working towards common goals, both groups expand their reach and make a positive impact on their community.
- ▲ Quotes that represented the type of information gathered:
 - "Our partnership with Extension has really shown that this is a perfect partnership, and everything that Extension stands for ties directly into what we're trying to do

with [other organizations] and addressing social determinants of health in [our community].” – Interviewed partner

- “Their ability to communicate and be on the ground and educate and change, you know, have trust relationships locally and then our ability to have sort of funds and translate local need into state policy and some of that work, it just complements each other.” – Interviewed partner

Staff Focus Groups and Survey

The final component of the partnership and coalition assessment consisted of focus groups and a brief survey for local SNAP-Ed staff. Focus group discussions sought to determine how partnerships and coalitions contribute to broad community-wide changes and policy implementation relative to healthy eating, physical activity, food access, and obesity prevention within networks. The survey captured information such as job role and length of employment. A total of 21 local staff members representing a variety of networks participated in either a virtual focus group or a virtual key informant interview (KII), and 16 completed the survey during June and July 2022.

FINDINGS

- ▲ Local staff members had strong relationships with organizations in their networks, especially staff who were in their positions prior to the COVID-19 pandemic.
- ▲ The pandemic brought community-wide food access issues to the forefront which resulted in several initiatives being implemented to improve access to food.
- ▲ Although SNAP-Ed programming is valued within networks, there was a lack of visibility of program activities. Not all partners were aware of SNAP-Ed programming.
- ▲ Staff recommended a continued focus on engaging diverse groups of community members in local and program decisions. Staff agreed that having a more diverse workforce that more accurately reflects the audience being reached would help to engage residents. Additionally, more diversity, equity, and inclusion training and technical assistance may improve outreach efforts to community members.

PART 3: IMPACT EVALUATION OF THE NETWORK APPROACH

Part 3 of the network evaluation (September 2021–April 2022) focused on determining the ways in which SNAP-Ed programming impacts eligible audiences living in SNAP-Ed networks. A population-level survey was developed to identify relationships between SNAP-Ed program exposure and individual health behaviors in relation to differences in networks, demographics, geography, or other socio-economic characteristics. Population-level indicators measured fruit and vegetable consumption, physical activity, food security, and quality of life. Individual-level indicators measured intent to change behavior and food resource management.

The survey was administered at two time-points, six months apart (“baseline” and “follow-up”), to eligible residents in sample networks as well as to a demographically similar comparison group of people not living within a SNAP-Ed network. A total of 25,000 invitations were mailed to individuals who met SNAP-Ed eligibility criteria; 1,578 individuals completed the baseline survey, and 857 completed the follow-up, of which 572 resided in a community network and 285 resided in comparison communities.

FINDINGS

- ▲ One-quarter (26%) of eligible residents living in community networks reported exposure to SNAP-Ed programming compared to 17% of residents living in comparison communities.
- ▲ Exposure within networks was significantly higher among Black, non-Hispanic residents, residents with children in the household, those experiencing food insecurity, those having a body mass index (BMI) classified as overweight or obese, and those participating in assistance programs.
- ▲ A majority of network residents (59%) took action after exposure to SNAP-Ed.
 - Those experiencing food insecurity were more likely to take action than their food secure counterparts, and those with an overweight or obese BMI were more likely to take action than those with a normal BMI.
 - The most common actions taken were starting to be more active, starting to eat more fruits and vegetables, and trying new recipes.
- ▲ Comparison group residents had significantly higher fruit and vegetable consumption frequencies than network residents at baseline and follow-up. However, likelihood of daily consumption and of increasing frequency of fruit and vegetable consumption were similar between groups.
 - Top barriers to eating more fruits and vegetables in both groups were cost, spoilage, and perceptions of already eating enough fruits and vegetables.
- ▲ The comparison group had higher levels of physical activity at baseline and follow-up, but both groups were similar in likelihood of meeting physical activity recommendations, likelihood of increasing physical activity from baseline to follow-up, and readiness to change physical activity.
- ▲ Top barriers to being more physically active for both community network and comparison group residents included weather, lack of time, and lack of motivation.

PART 4: RETURN ON INVESTMENT ANALYSIS

The final component of the network and social marketing campaign evaluation conducted was a return-on-investment analysis measuring whether estimated economic benefits of the SNAP-Ed program exceed the upfront cost of administering the program. SNAP-Ed program data was used to estimate the population receiving various components of the program (direct education, indirect education, social marketing campaign messages, and PSE interventions) and prior literature on the likely impacts was used to predict the number of obesity and food insecurity cases prevented. An economic model was then developed and used to estimate the total value of future health and economic improvements through decreased healthcare spending, improved life expectancy, and increased lifetime earnings.

FINDINGS

- ▲ An estimated 5,060 cases of obesity and 570 cases of food insecurity were prevented across Illinois children and adults in a single year.
- ▲ For a single year of programming, IL SNAP-Ed was estimated to generate total discounted future societal benefits between \$76.0 million and \$135.3 million.
- ▲ These societal benefits accrue from:
- ▲ Expected future reductions in obesity and food insecurity that produce health care cost savings (\$35.7 million–\$65.8 million) and

- ▲ Increased educational outcomes, life expectancy, and lifetime earnings (\$40.3 million–\$69.5 million).
- ▲ When compared to the cost of delivering the program (\$14.2 million in the study year), SNAP-Ed programming returned between \$5.36–\$9.54 per dollar spent.
- ▲ Across program components, the largest benefits were generated by:
 - Social marketing activities (\$25.3 million–\$45.4 million),
 - Followed by PSE activities (\$23.9 million–\$42.2 million),
 - Direct education (\$11.3 million–\$20.2 million), and
 - Indirect education activities (\$15.5 million–\$27.6 million).
- ▲ For a single year of programming, IL SNAP-Ed was estimated to generate future benefits for:
 - The federal government between \$23.9 million and \$43.5 million,
 - State and local governments between \$5.4 million and \$9.4 million, and
 - Households and the private sector between \$46.7 million and \$82.4 million.

Overview of SNAP-Ed Community Network Approach

PROGRAM DELIVERY MODEL

Illinois Supplemental Nutrition Assistance Program (SNAP) Education (IL SNAP-Ed) provides community-based nutrition education for individuals and families eligible for SNAP benefits and works with communities and local partners to make nutritious foods and physical activity accessible for all. The goal of SNAP-Ed is to improve participants' healthy eating and physical activity choices, consistent with the [Dietary Guidelines for Americans](#) and [Physical Activity Guidelines for Americans](#), to prevent obesity and reduce the risk of chronic disease. In Illinois, the program is delivered under the Illinois Department of Human Services by the University of Illinois through Illinois Extension and University of Illinois Chicago Partnership for Health Promotion (CPHP).

IL SNAP-Ed implements a community-based network approach grounded in the [Social Ecological Model](#), a well-established public health framework emphasizing the interconnectedness of personal choices with an individual's environment and community context, in achieving behavior change. Within each SNAP-Ed community network (referred to as "networks" in this report), SNAP-Ed staff deliver nutrition education to eligible audiences and collaborate with local partners and community coalitions on policy, system, and environmental (PSE) interventions, prioritizing the specific needs, opportunities, and readiness of partners and eligible families within the network.

Networks are comprised of hub and spoke communities where eligible individuals live, learn, work, eat, shop, and play. Hubs are population centers where services and eligible individuals are concentrated. Spokes are nearby communities with higher concentrations of eligible individuals who regularly travel to hubs for services. Networks are defined using visualized data from the American Community Survey 5-year estimates of [SNAP eligibility](#) (185% of the federal poverty level) and plotted locations of geographically tethering core life services (e.g., Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), employment, groceries, healthcare). Networks are constructed based on how most eligible individuals in an area travel. Some networks contain only hubs, others contain hubs and spokes, and some have dual hubs where travel between two nearby hubs is typical for daily activities related to live, learn, work, eat, shop, and play.



To better understand network characteristics and program factors impacting outcomes of eligible populations living in SNAP-Ed networks, IL SNAP-Ed contracted Altarum Institute (Altarum) to collaboratively plan and implement a comprehensive, multi-component evaluation of the community

network approach. The evaluation was conducted from February 2021 through January 2023. During this time, an evaluation of a newly launched statewide social marketing campaign also took place. A full report of the social marketing campaign evaluation is available.

ORGANIZATION OF THIS REPORT

This report is organized into four parts highlighting the various components of the Community Network Evaluation. Each part contains a description of the methodology and data analysis approach, as well as key findings and conclusions. The report is organized as follows:

- ▲ Part 1: Development of the Community Network Grading and Typology System
- ▲ Part 2: Characterizing Community Networks: Partnerships and Coalitions
- ▲ Part 3: Impact Evaluation of the Community Network Approach
- ▲ Part 4: Return on Investment Analysis



Part 1: Development of
the Community Network
Grading and Typology
System

INTRODUCTION

In FFY 2021, Altarum began working with IL SNAP-Ed to plan and carry out an impact evaluation of the SNAP-Ed community networks. The first step of the network evaluation was to develop a system for ranking identified SNAP-Ed networks by factors that influence obesity prevention in eligible populations with the purpose of understanding similarities and differences of networks across the state. Therefore, Altarum developed a grading and typology system that provides an organized framework for IL SNAP-Ed to rank their networks. This framework assists in answering the two critical questions related to IL SNAP-Ed community networks:

1. Is there a threshold of network characteristics and/or intervention components that relate to varying levels of impact?
2. Are there characteristics of networks that support healthier outcomes?

COMMUNITY NETWORK RANKING AND SAMPLING APPROACH

Community networks were assessed using common indicators and assigned to tiers based on the strength of the network. The following steps detail how the networks were classified to create a tiered system of networks for sampling.

Step 1: Assign SNAP-Ed sites to networks

To determine where SNAP-Ed activities are taking place, sites receiving SNAP-Ed programming were assigned to the networks in which they are located. SNAP-Ed sites were primarily assigned to networks based on the city the network served, except for networks in Chicago and Rockford that were assigned sites based on census tract and one network that is based on the county.

Step 2: Determine appropriate indicators for classifying networks

There were several indicators recommended to classify networks that allowed for assessment of network strength. These indicators were related to SNAP-Ed activities as well as partnerships and assets within the network that work toward obesity prevention, including:

- ▲ Number of direct education activities, adults and youth
- ▲ Number of direct education participants, adults and youth
- ▲ Number of indirect education activities
- ▲ Reach of indirect education activities
- ▲ Number of PSE change activities
- ▲ Reach of PSE activities
- ▲ Number of PSE changes
- ▲ Number of partnerships
- ▲ Number of coalitions
- ▲ Number of assets: specifically, hospital needs assessment and Illinois Project for Local Assessment of Needs (IPLAN)

Step 3: Summarize indicators by network

If an indicator was tied to a SNAP-Ed site (direct and indirect education; PSE change activities; or

partnerships), the indicator was summed across the network by fiscal year. Coalitions and assets were primarily tied to the networks based on the county they served. The indicators were then averaged per 1,000 SNAP-eligible population in the network or percent of SNAP-eligible population served or reached.

Step 4. Standardize measures

To be able to rank all networks based on the indicators, standardized scores were created using z-scores within each fiscal year. The z-score takes the network score, subtracts the average of all networks, and divides by the standard deviation. This method is used by the County Health Ranking System¹ to rank counties by health indicators. Z-scores in any networks with less than 20,000 total population were capped at 3 or -3.

$$Z = \frac{(\text{Network Value}) - (\text{Average of Networks})}{(\text{Standard Deviation of Networks})}$$

Step 5. Create a total network score

Once the z-scores were calculated for each indicator, a total score for the networks was calculated. Initially, total scores were calculated by summing the z-scores using several different methods, as shown below:

- ▲ Counting each type of outcome (direct education, indirect education, PSE change activities) once by taking the highest z-score across each measure (Oneper_MAX)
- ▲ Counting each type of outcome (direct education, indirect education, PSE change activities) once by taking the average z-score across each measure (Oneper_AVE)
- ▲ Using all measures individually (Multi)
- ▲ Using only selected measures (LTD)

¹ <https://www.countyhealthrankings.org/explore-health-rankings/our-methods/calculating-ranks>.

The final score also incorporated weighting for different indicators to reflect the impact on obesity prevention; those with more impact have higher weights. In **Exhibit 1.1**, inclusion of indicators and weights are shown for each method used to calculate total score.

Exhibit 1.1. Indicators and Weights Used to Calculate Total Network Score


Indicator	Included in Oneper_MAX Total Score	Included in Oneper_AVE Total Score	Included in Multi Total Score	Included in LTD Total Score	Weight
Direct education, number of activities, adults	X (Maximum z-score)	X (Average z-score)	X		1
Direct education, number of participants, adults			X	X	2
Direct education, number of activities, youth	X (Maximum z-score)	X (Average z-score)	X		1
Direct education, number of participants, youth			X	X	1
PSE, number of activities	X (Maximum z-score)	X (Average z-score)	X		1
PSE, reach			X	X	1
PSE, number of changes			X	X	2
Indirect education, number of activities	X (Maximum z-score)	X (Average z-score)	X		.5
Indirect education, reach			X	X	.5
Number of partnerships	X	X	X	X	2
Number of coalitions	X	X	X	X	1
Number of assets (presence of Hospital needs assessment and/or IPLAN)	X	X	X	X	1

Note: Green shading indicates measures that were assigned a weight of 2 and orange shading indicates measures that were assigned a weight of 0.5; all other measures were assigned a weight of 1.

After reviewing the information presented in the table above, the IL SNAP-Ed team selected the **Multi** method to create a total score.

Step 6: Rank networks and divide into tiers

Using the network summary scores, networks were ranked from highest to lowest for both FFY 2019 and FFY 2020, and then divided into three tiers. Approximately one-third of networks were included in each of the three tiers, although slight adjustments were made to ensure similar numbers of the SNAP-eligible population in each tier. Tier 1 includes those with the highest scores (strongest networks) and Tier 3 includes those with the lowest scores. A complete listing of all networks with their scores and associated tier can be found in **Appendix A**.



Part 2: Characterizing Community Networks: Partnerships and Coalitions

INTRODUCTION

Within networks, partnerships and multi-sector collaboratives and coalitions are developed to reach families across settings with a combination of SNAP-Ed activities. To understand the depth and value of how these partnerships and coalitions contribute to SNAP-Ed goals and outcomes, a multi-component partnership and coalition assessment was conducted.

IL SNAP-Ed is implementing a community network approach to SNAP-Ed that focuses on the specific needs and opportunities in a defined geographic region. Each region, using a community-based orientation, conducts an assessment to determine the best approach to support residents' diet quality, physical activity, and ability to obtain healthy food to feed their families.

To meet the program goal of reaching families across multiple community settings with a combination of evidence-based SNAP-Ed activities, IL SNAP-Ed has established formal partnerships and created multi-sector community collaborations/coalitions. As defined by the *SNAP-Ed Evaluation Framework and Interpretive Guide*, active partnerships “include two or more individuals who regularly meet, exchange information, and identify and implement mutually reinforcing activities that will contribute to adoption of one or more organizational changes or policies.”

To determine who are the key influencers of obesity prevention within a network and how partnerships and coalitions impact IL SNAP-Ed community networks, Altarum conducted a Statewide Partnership and Coalition assessment to understand the depth and value of these relationships in contributing to SNAP-Ed goals and network outcomes. This assessment consisted of the following:

- ▲ Network partner analysis
- ▲ Local partner survey
- ▲ Local partner interviews
- ▲ Local staff focus groups and survey

Research questions shown in **Exhibit 2.1** helped guide the development of the process evaluation instruments. Also described in **Exhibit 2.1** are the various sources of data (key informant interviews (KII), surveys, PEARS, alignment matrix) that were used to help answer each research question.

Exhibit 2.1. Research Questions, Mode of Data Collection, and Source

Research Question	Source					
	Staff KII	Staff Survey	Partner KII	Partner Survey	PEARS	Alignment Matrix
1. What is the key influencer's level of engagement in and commitment to obesity prevention efforts?		X	X	X		
2. What are the partner/coalition's current and future plans for obesity prevention efforts?			X	X	X	
3. What is the partner/coalition's perceived level of influence on obesity within the network?			X	X		

Research Question	Source					
	Staff KII	Staff Survey	Partner KII	Partner Survey	PEARS	Alignment Matrix
4. Does the partner/coalition collect data/outcomes on the obesity outcomes of interest?			X	X		
5. Is the partner/coalition willing to share their data?			X	X		
6. Does the partnership/coalition include representatives of the culturally diverse communities who are relevant to targeted strategies?		X	X	X	X	
7. What is the quantity of key assets within the network?					X	X
8. What is the distribution of obesity prevention work across partners (direct, parallel, other community agency) within the network?					X	X
9. What are the variables that can be associated with network outcomes?	X	X	X	X	X	X
10. Are community food and activity environments changing within the network?	X		X	X	X	
11. What are the stability and sustainability of the strategies to drive long-term impact?	X	X	X	X		
12. Which strategies can be further optimized for greater impact?	X	X	X	X		

The following is a summary of each component of the partnership and coalition assessment, including methodology, key findings, and conclusions.

ANALYSIS OF PARTNERSHIP ALIGNMENT MATRICES

The first step of the partnership and coalition assessment included local SNAP-Ed staff in sample networks completing an alignment matrix that identified network partners and coalitions for FFY 2022. The information was then compiled and analyzed to determine if differences were present across networks and partner categories, as detailed in the following methodology.

Methodology

IL SNAP-Ed local staff completed alignment matrices that reported partnership data for FFY 2022. Partnerships were rated as direct, parallel, or asset partners based on the following definitions.

- ▲ Direct: Organizations/agencies where direct education is carried out or who are planning or implementing PSE strategies directly with SNAP-Ed. The work done influences that partner's site or common partners.

- ▲ Parallel: Organizations/agencies conducting direct education, PSE, or other obesity prevention efforts, but not in direct partnership with SNAP-Ed.
- ▲ Asset: Organizations/agencies who exist in the network and are not direct SNAP-Ed partners and do not independently conduct obesity prevention activities, but who contribute to the outcomes of interest by the nature of their organization/purpose.

Data were compiled and analyzed across community network tiers and networks (see Part 1) to determine if differences were present across the partnership types. Community networks were then ranked as either high, medium, or low in terms of total number of partnerships, proportion of direct partnerships, proportion of parallel partnerships, and proportion of asset partnerships. Rankings were defined based on tertiles for each partnership variable (i.e., total number of partnerships, proportion of direct partnerships, proportion of parallel partnerships, and proportion of asset partnerships). Those in the top third were ranked as “high”, those in the middle third were ranked as “medium”, and those in the bottom third were ranked as “low”.

Rankings were merged with online survey data collected (see Part 3), and analyses were conducted to determine if outcomes such as fruit and vegetable consumption, physical activity or food security, varied across partnership rankings. Descriptive statistics were calculated, and Chi-square analyses and 95% confidence intervals were used to determine differences in outcomes across partnership rankings.

Network Staffing

For additional context, staff full time equivalents (FTEs) were compiled for networks and tiers. Approximate staffing varied across networks and tiers and is summarized below. However, there are some limitations to the implications of this data as some networks had incomplete staffing data and were not accounted for in the analysis. Overall trends indicate greater FTEs in Tier 1 networks, followed by Tier 2 and Tier 3 networks.

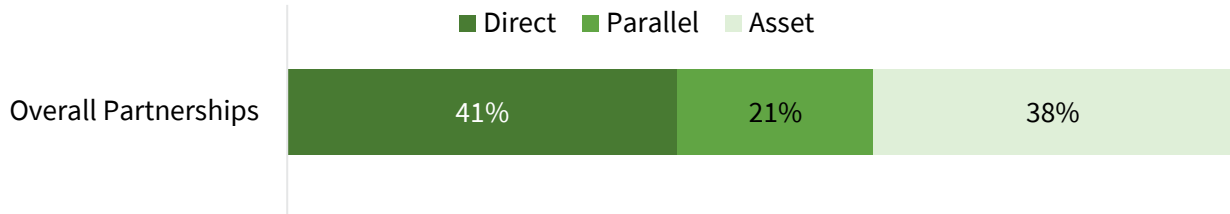
- ▲ Tier 1 Networks: 14.1 FTEs in 2019 and 16.45 FTEs in 2022
 - Mt. Vernon/Carmi/Centralia: 6.1 FTEs in 2019 and 6.45 FTEs in 2022
 - Greater Peoria/Pekin: 8 FTEs in 2019 and 10 FTEs in 2022
- ▲ Tier 2 Networks: 6.2 FTEs in 2019 and 5.2 FTEs in 2022
 - Auburn Gresham: 2 FTEs in 2019 and 2 FTEs in 2022
 - Sparta/Greenville-Mulberry Grover-Sorento/Murphysboro: 4.2 FTEs in 2019 and 3.7 FTEs in 2022
- ▲ Tier 3 Networks: 3.2 FTEs in 2019 and 4.1 FTEs in 2022
 - Harvey/Dixmoor/Riverdale: 0.2 FTEs in 2019 and 1.1 FTEs in 2022
 - Springfield: 3 FTEs in 2019 and 3 FTEs in 2022

Findings

OVERALL PARTNERSHIPS

Overall, 1,245 total partners were reported across the selected networks. Across all partners, 41 percent of partnerships reported were considered direct partners, 21 percent were considered parallel partners, and 38 percent were considered assets.

Exhibit 2.2. Overall Partnerships by Partnership Type



The types of organization that were most frequently reported as partners overall were: food pantries/meal sites/hunger organizations (n=270, 22%), schools (n=212, 17%), grocery stores (n=177, 14%), and parks and recreation (n=166, 13%). The most common types of organization that were reported as direct partners were food pantries/meal sites/hunger organizations (23%) and schools (23%). The most common types of organizations that were reported as parallel partners were schools (26%) and grocery stores (21%). The most common types of organizations that were reported as asset partners were parks and recreation (27%), food pantries/meal sites/hunger organizations (27%), and grocery stores (26%).

When evaluating the most common types of organizations that were identified as partners (i.e., food pantries/meal sites/hunger organizations, schools, grocery stores, and parks and recreation), there were some significant differences across partnership types. Based on 95% confidence intervals:

- ▲ Food pantries/meal sites/hunger organizations were significantly more frequently reported as asset and direct partners than parallel partners (p<.005);
- ▲ Grocery stores were significantly more frequently reported as asset partners than parallel and direct partners (p<.005);
- ▲ Schools were significantly more frequently reported as direct partners than parallel or asset partners (p<.005); and
- ▲ Parks and recreation were significantly more frequently reported as asset partners than parallel or direct partners (p<.005).

Exhibit 2.3. Partnership Type by Organization Type

Organization Type	N	Percent within Organization Type	Percent within Partner Type
Agriculture/Farmers Markets/Community Gardens			
Direct	15	43	3
Parallel	12	34	5
Asset	8	23	2
Total	35	-	3
Community Organization			
Direct	12	100	2
Parallel	0	0	0
Asset	0	0	0

Total	12	-	1
Early Childhood Education/Head Start			
Direct	48	60	9
Parallel	9	11	4
Asset	23	29	5
Total	80	-	6
Food Pantries/Meal Sites/Hunger Organizations			
Direct	119	44	23
Parallel	24	9	9
Asset	127	47	27
Total	270	-	22
Faith-Based Organizations			
Direct	5	26	1
Parallel	9	47	4
Asset	5	26	1
Total	19	-	2
Federally Qualified Health Centers			
Direct	13	46	3
Parallel	7	25	3
Asset	8	29	2
Total	28	-	2
Funders			
Direct	31	76	6
Parallel	6	15	2
Asset	4	10	1
Total	41	-	3
Government			
Direct	33	92	6
Parallel	2	6	1
Asset	1	3	0
Total	36	-	3
Grocery Stores			
Direct	2	1	0
Parallel	53	30	21
Asset	122	69	26
Total	177	-	14
Hospitals/Healthcare/Public Health			
Direct	41	56	8
Parallel	29	40	11
Asset	3	4	1
Total	73	-	6
Housing/Emergency Shelters			
Direct	14	47	3
Parallel	7	23	3

Asset	9	30	2
Total	30	-	2
Libraries			
Direct	5	71	1
Parallel	2	29	1
Asset	0	0	0
Total	7	-	1
Parks and Recreation			
Direct	21	13	4
Parallel	16	10	6
Asset	129	78	27
Total	166	-	13
Schools			
Direct	118	56	23
Parallel	67	32	26
Asset	27	13	6
Total	212	-	17
Senior Services			
Direct	8	57	2
Parallel	5	36	2
Asset	1	7	0
Total	14	-	1
Social Services			
Direct	15	56	3
Parallel	8	30	3
Asset	4	15	1
Total	27	-	2
Universities/Colleges			
Direct	9	75	2
Parallel	3	25	1
Asset	0	0	0
Total	12	-	1
Businesses			
Direct	5	56	1
Parallel	3	33	1
Asset	1	11	0
Total	9	-	1
Afterschool Organizations			
Direct	4	100	1
Parallel	0	0	0
Asset	0	0	0
Total	4	-	0
Media			
Direct	2	50	0
Parallel	0	0	0

Asset	2	50	0
Total	4	-	0
Transportation			
Direct	2	100	0
Parallel	0	0	0
Asset	0	0	0
Total	2	-	0
Job Training			
Direct	1	100	0
Parallel	0	0	0
Asset	0	0	0
Total	1	-	0
Government Officials			
Direct	5	83	1
Parallel	1	17	0
Asset	0	0	0
Total	6	-	1
Safety			
Direct	1	100	0
Parallel	0	0	0
Asset	0	0	0
Total	1	-	0

*Note: Some partners were reported in multiple organization types.

Partnerships Across Community Types

Rural communities reported the greatest proportion of direct partners (52%), followed by urban (44%), and micro-urban/suburban communities (34%). Micro-urban/suburban communities reported the greatest proportion of assets (43%), followed by urban (37%), and rural communities (31%).

Partnership types varied by community type:

- ▲ Rural communities reported a significantly greater proportion of direct partners than micro-urban/suburban communities (52% compared to 34%, $p < .005$).
- ▲ Micro-urban/suburban communities reported a significantly greater proportion of asset partners (43% compared to 31%, $p < .005$) than rural communities.

Exhibit 2.4. Partnerships by Community Type

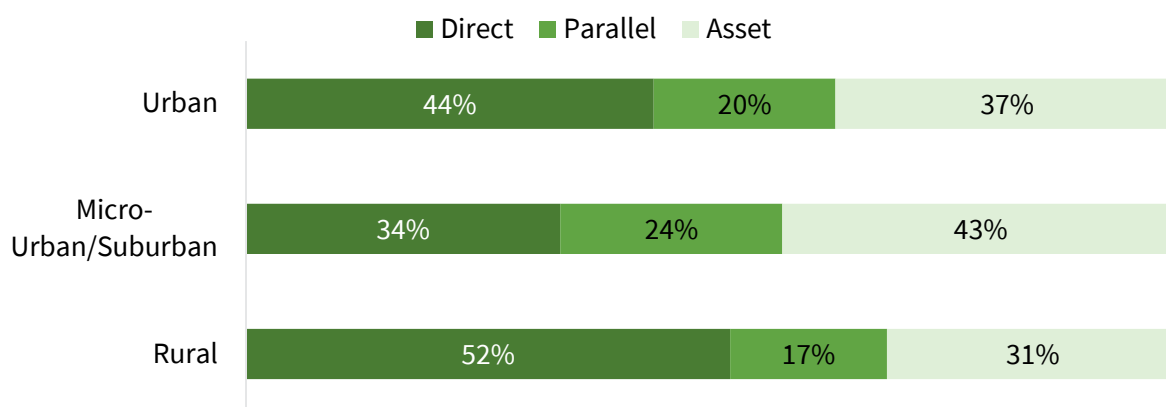


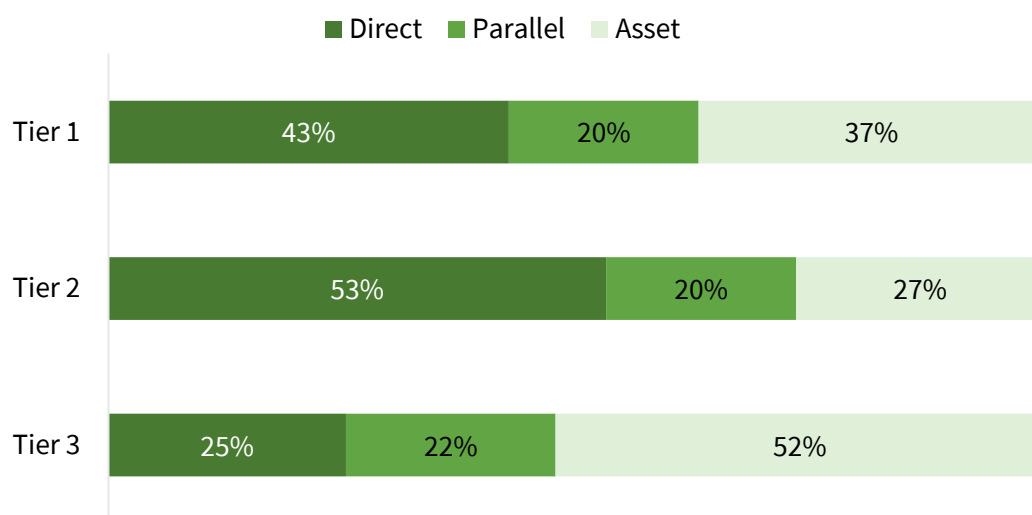
Exhibit 2.5. Partnerships by Community Type

Community Type	N	Percent
Urban		
Direct	101	44
Parallel	45	20
Asset	85	37
Total	231	-
Micro-Urban/Suburban		
Direct	209	34
Parallel	148	24
Asset	264	43
Total	621	-
Rural		
Direct	204	52
Parallel	66	17
Asset	123	31
Total	393	-

Partnerships Across Tiers

Tier 2 community networks reported the greatest proportion of direct partners (53%), followed by Tier 1 (43%), and Tier 3 networks (25%). Tier 3 community networks reported the greatest proportion of asset partners (52%), followed by Tier 1 (37%), and Tier 2 networks (27%). Partnership types varied by tier:

- ▲ Tier 2 networks reported a significantly greater proportion of direct partners than Tier 1 networks (53% compared to 43%, $p < .005$).
- ▲ Tier 3 networks reported a significantly smaller proportion of direct partners than Tier 1 (25% compared to 43%) and Tier 2 networks (25% compared to 53%, $p < .005$).
- ▲ Tier 1 networks reported a significantly greater proportion of asset partners than Tier 2 networks (37% compared to 27%, $p < .005$).
- ▲ Tier 3 networks reported a significantly greater proportion of asset partners than Tier 1 (52% compared to 37%, $p < .005$) and Tier 2 networks (52% compared to 27%, $p < .005$).

Exhibit 2.6. Partnerships by Community Network Tier**Exhibit 2.7. Partnerships by Community Network Tier**

Tier 1	N	Percent
Direct	274	43
Parallel	130	20
Asset	236	37
Total	640	
Tier 2		
Direct	165	53
Parallel	63	20
Asset	82	27
Total	310	
Tier 3		
Direct	75	25
Parallel	66	22
Asset	154	52
Total	295	

Partnerships Across Networks

Sparta/Greenville-Mulberry Grove-Sorento/Murphysboro (55%; rural), Auburn Gresham (50%; urban), and Mt. Vernon/Carmi/Centralia (49%; rural) reported the greatest proportions of direct partners across networks. Springfield (55%; micro-urban/suburban) and Harvey/Dixmoor/Riverdale (48%; urban) reported the greatest proportion of asset partners across networks. Parallel partnerships ranged from 15–26% of partners across networks. Partnership types varied by network.

- ▲ All networks reported a significantly greater ($p < .005$) proportion of direct partners than Springfield (20%; micro-urban/suburban).
- ▲ Sparta/Greenville-Mulberry Grove-Sorento/Murphysboro (55%; rural) also reported a significantly greater ($p < .005$) proportion of direct partners than Greater Peoria/Pekin (40%; micro-urban/suburban) and Harvey/Dixmoor/Riverdale (36%; urban).

- ▲ Springfield reported a significantly greater ($p < .005$) proportion of asset partners (55%; micro-urban/suburban) than all networks except Harvey/Dixmoor/Riverdale (urban).
- ▲ Harvey/Dixmoor/Riverdale (48%; urban) reported a significantly greater ($p < .005$) proportion of asset partners than Sparta/Greenville-Mulberry Grove-Sorento/Murphysboro (26%; rural) and Auburn Gresham (28%; urban).
- ▲ Greater Peoria/Pekin (37%; micro-urban/suburban) reported a significantly greater ($p < .005$) proportion of asset partners than Sparta/Greenville-Mulberry Grove-Sorento/Murphysboro (26%; rural).

Exhibit 2.8. Partnerships by Community Network

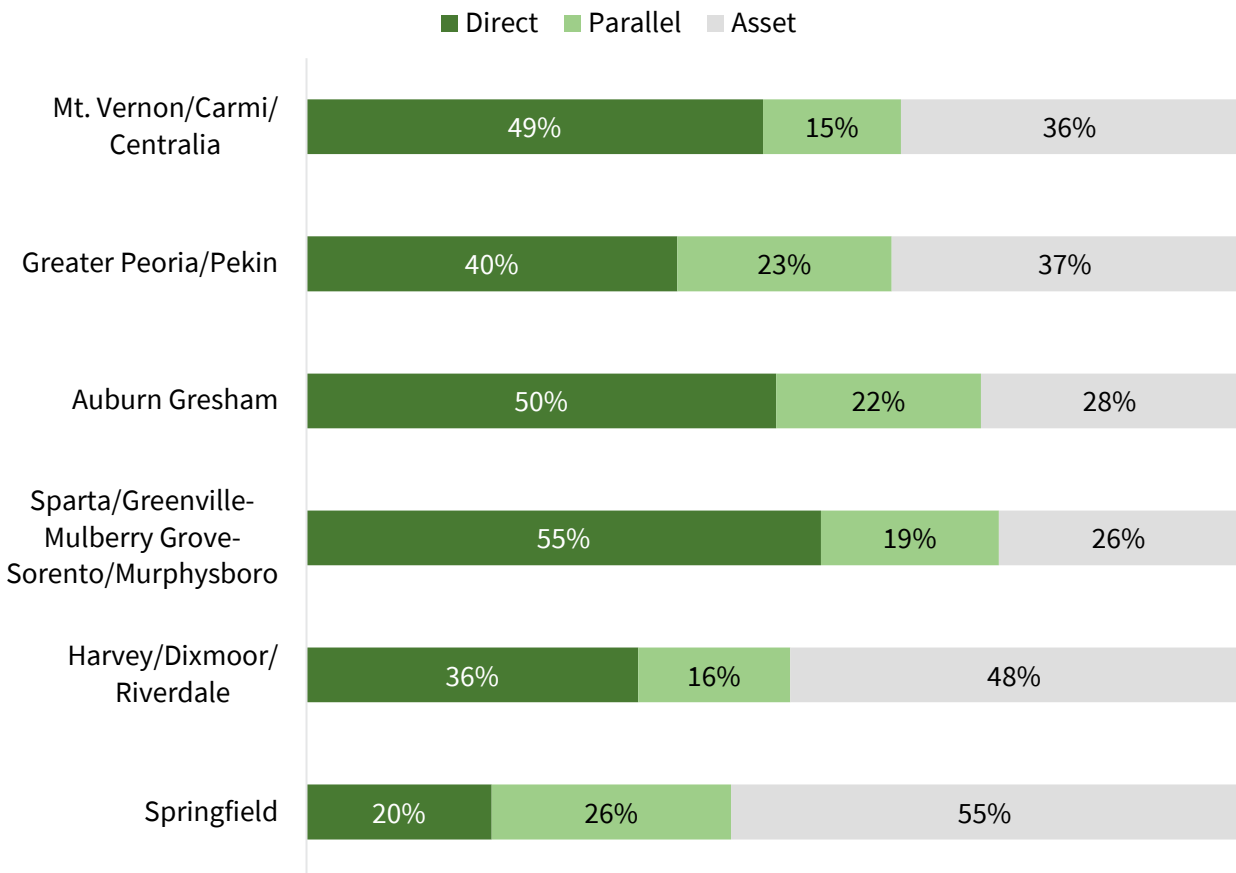


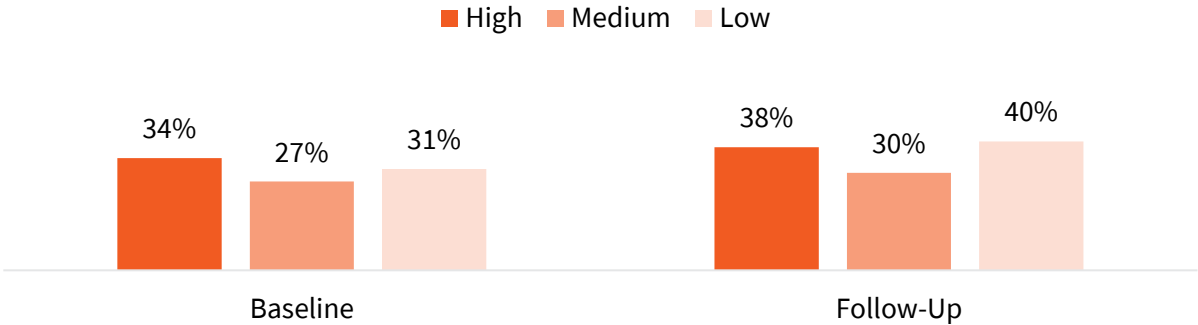
Exhibit 2.9. Partnerships by Community Network

Mt. Vernon, Carmi, Centralia (rural)	N	Percent
Direct	103	49.0
Parallel	31	14.8
Asset	76	36.2
Total	210	
Greater Peoria/Pekin (micro-urban/suburban)		
Direct	171	39.8
Parallel	99	23.0
Asset	160	37.2
Total	430	
Auburn Gresham (urban)		
Direct	64	50.4
Parallel	28	22.0
Asset	35	27.6
Total	127	
Sparta, Greenville-Mulberry, Grove-Sorento, Murphysboro (rural)		
Direct	101	55.2
Parallel	35	19.1
Asset	47	25.7
Total	183	
Harvey, Dixmoor, Riverdale (urban)		
Direct	37	35.6
Parallel	17	16.3
Asset	50	48.1
Total	104	
Springfield (micro-urban/suburban)		
Direct	38	19.9
Parallel	49	25.7
Asset	104	54.5
Total	191	

FRUIT AND VEGETABLE CONSUMPTION

Daily fruit consumption among Illinois residents living within select community networks was compared to total number of partners present within the network and ranked on a scale of low, medium, and high. At baseline, networks with high total partner rankings reported the greatest frequency of daily fruit consumption among Illinois residents living within the select community networks (34%). At follow-up, networks with low total partner rankings reported the greatest frequency of daily fruit consumption among Illinois residents living within the select community networks (40%). Differences in daily fruit consumption at baseline and follow-up across total partner rankings were not statistically significant.

Exhibit 2.10. Daily Fruit Consumption by Total Partner Ranking at Baseline and Follow-Up



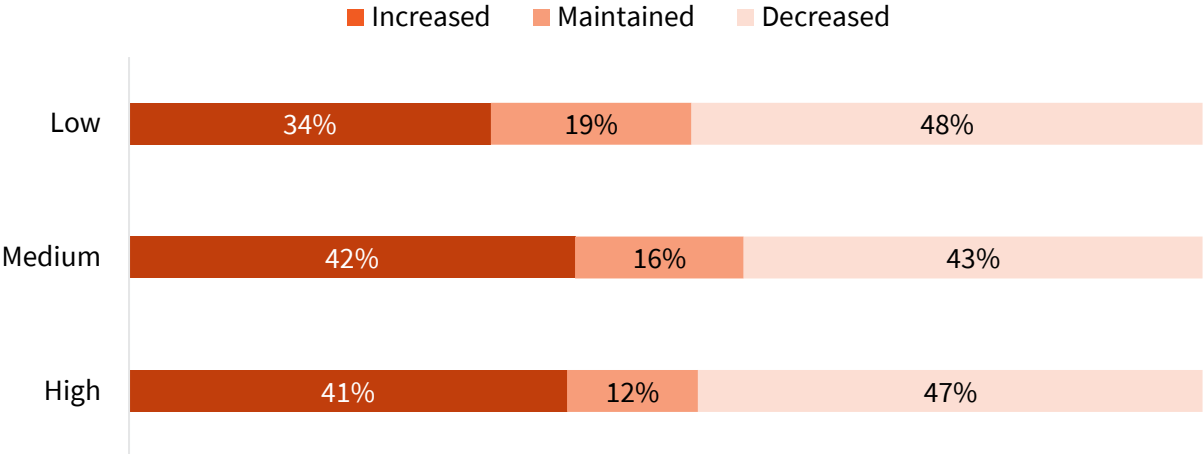
Daily fruit consumption among Illinois residents living within select community networks was compared to total number of direct, parallel, and asset partners present within those networks, each ranked on a scale of low, medium, and high. The percentage of Illinois residents consuming fruit daily ranged from 27–35% at baseline and 25–41% at follow-up, and varied with no distinct pattern between networks with varying amounts of direct, parallel, and asset partners. Additionally, differences in daily fruit consumption at baseline and follow-up across direct, parallel, and asset partner rankings were not statistically significant.

Exhibit 2.11. Daily Fruit Consumption by Direct, Parallel, and Asset Partner Rankings at Baseline and Follow-Up

Daily Fruit Consumption		
	Baseline	Follow-Up
Direct Partner Ranking		
High	27%	32%
Medium	35%	41%
Low	27%	25%
Parallel Partner Ranking		
High	30%	33%
Medium	28%	33%
Low	32%	39%
Asset Partner Ranking		
High	31%	35%
Medium	32%	35%
Low	27%	33%

When looking at change in fruit consumption from baseline to follow-up, networks with medium total partner rankings reported the greatest proportion of residents that increased their fruit consumption (42%), followed by networks with high rankings (41%), and networks with low rankings (34%). Differences in change in fruit consumption frequency from baseline to follow-up across total partner rankings were not statistically significant.

Exhibit 2.12. Change in Fruit Consumption by Total Partner Ranking



Change in fruit consumption across direct, parallel, and asset partner rankings varied with no distinct pattern. The proportion of Illinois residents living within select community networks who increased their fruit consumption frequency from baseline to follow-up was highest in networks with low direct partner rankings (43%), medium parallel partner rankings (41%), and medium asset partner rankings (41%). Additionally, differences in change in fruit consumption between baseline and follow-up across direct, parallel, and asset partner rankings were not statistically significant.

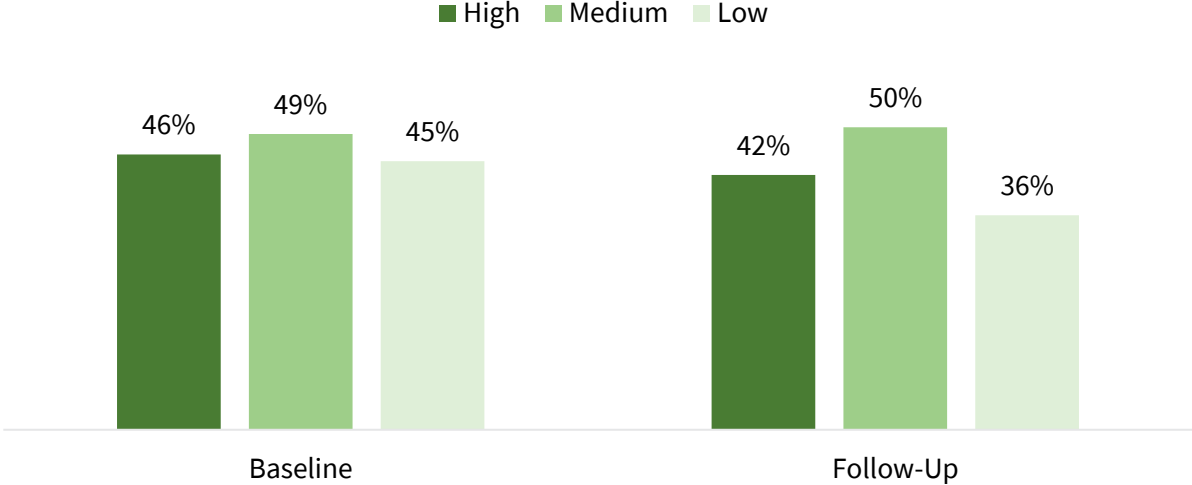
Exhibit 2.13. Change in Fruit Consumption by Direct, Parallel, and Asset Partner Rankings

	Change in Fruit Consumption		
	Increased	Maintained	Decreased
Direct Partner Ranking			
High	39%	17%	43%
Medium	38%	15%	47%
Low	43%	12%	45%
Parallel Partner Ranking			
High	40%	14%	47%
Medium	41%	18%	40%
Low	36%	17%	47%
Asset Partner Ranking			
High	38%	16%	46%
Medium	41%	13%	47%
Low	39%	18%	43%

At baseline, networks with medium total partner rankings reported the greatest frequency of daily

vegetable consumption among Illinois residents living within select community networks (49%). Similarly at follow-up, networks with medium total partner rankings reported the greatest frequency of daily vegetable consumption among Illinois residents living within select community networks (50%). Differences in daily vegetable consumption at baseline and follow-up across total partner rankings were not statistically significant.

Exhibit 2.14. Daily Vegetable Consumption by Total Partner Ranking at Baseline and Follow-Up



The percentage of Illinois residents consuming vegetables daily ranged from 43–58% at baseline and 41–50% at follow-up and varied with no distinct pattern between networks with varying amounts of direct, parallel, and asset partners. Additionally, differences in daily vegetable consumption at baseline and follow-up across direct, parallel, and asset partner rankings were not statistically significant.

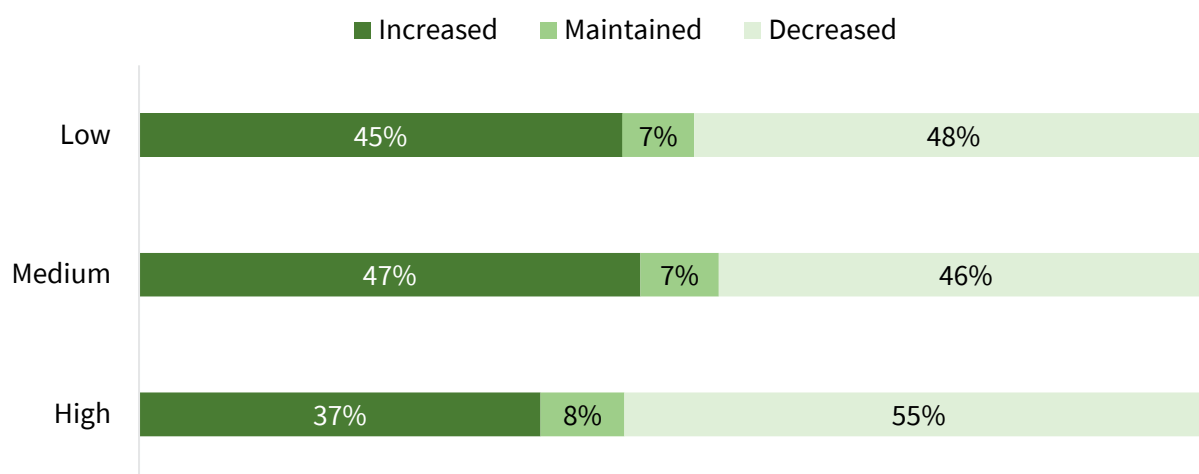
Exhibit 2.15. Daily Vegetable Consumption by Direct, Parallel, and Asset Partner Rankings at Baseline and Follow-Up

Daily Vegetable Consumption		
	Baseline	Follow-Up
Direct Partner Ranking		
High	45%	45%
Medium	51%	43%
Low	47%	49%
Parallel Partner Ranking		
High	43%	41%
Medium	49%	50%
Low	58%	48%
Asset Partner Ranking		
High	54%	48%
Medium	48%	45%
Low	43%	43%

When looking at change in vegetable consumption from baseline to follow-up, networks with medium total partner rankings reported the greatest proportion of residents that increased their vegetable

consumption (47%), followed by networks with low rankings (45%), and networks with high rankings (37%). Differences in change in fruit consumption frequency from baseline to follow-up across total partner rankings were not statistically significant.

Exhibit 2.16. Change in Vegetable Consumption by Total Partner Ranking



Change in vegetable consumption across direct, parallel, and asset partner rankings varied with no distinct pattern. The proportion of Illinois residents living within select community networks who increased their vegetable consumption frequency from baseline to follow-up was highest in networks with high direct partner rankings (49%), medium parallel partner rankings (50%), and low asset partner rankings (51%). Additionally, differences in change in vegetable consumption between baseline and follow-up across direct, parallel, and asset partner rankings were not statistically significant.

Exhibit 2.17. Change in Vegetable Consumption by Direct, Parallel, and Asset Partner Rankings

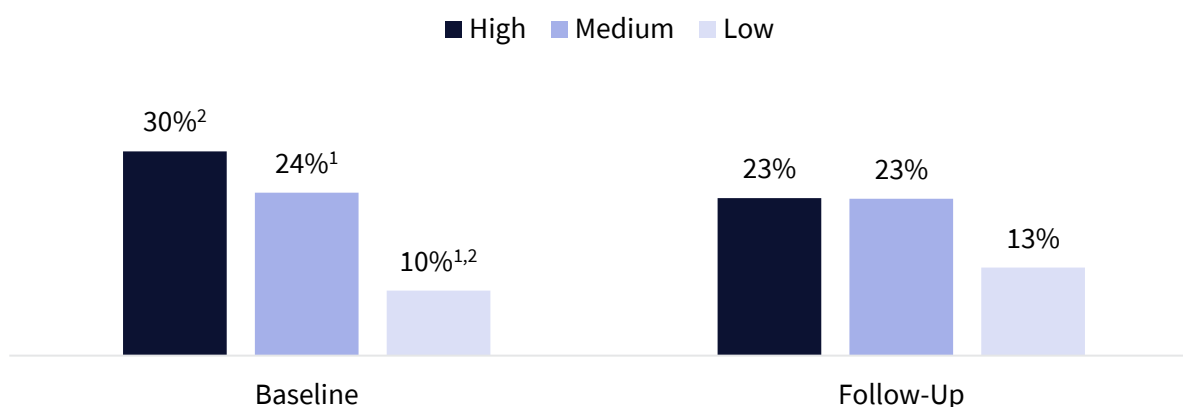
Change in Vegetable Consumption			
	Increased	Maintained	Decreased
Direct Partner Ranking			
High	49%	6%	45%
Medium	36%	10%	54%
Low	45%	5%	50%
Parallel Partner Ranking			
High	44%	5%	51%
Medium	50%	9%	41%
Low	37%	10%	53%
Asset Partner Ranking			
High	40%	9%	51%
Medium	38%	7%	54%
Low	51%	6%	43%

PHYSICAL ACTIVITY

Physical activity among Illinois residents living within select community networks was compared to

total number of partners present within the network, ranked on a scale of low, medium, and high. At baseline, significantly fewer Illinois residents living in community networks with low total partner rankings (10%) reported meeting physical activity recommendations compared with residents from networks with medium (24%) and high (30%) total partner rankings (p=.001). There were no significant differences at follow-up.

Exhibit 2.18. Meeting Physical Activity Recommendations by Total Partner Ranking at Baseline and Follow-Up



Matching superscripts note significantly different values based on 95% Confidence Intervals

At baseline, there were significantly more Illinois residents living in select community networks with medium asset partner rankings (30%) that reported meeting physical activity recommendations than residents from networks with low (17%) asset partner rankings (p=.030). There were no significant differences at follow-up or for direct or parallel partner rankings.

Exhibit 2.19. Meeting Physical Activity Recommendations by Direct, Parallel, and Asset Partner Rankings at Baseline and Follow-Up

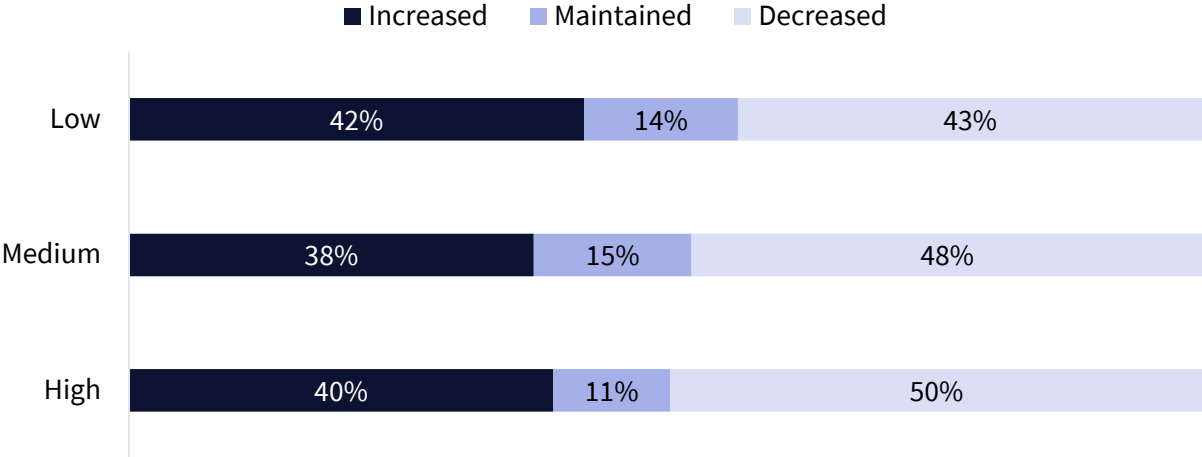
	Meeting Physical Activity Recommendations	
	Baseline	Follow-Up
Direct Partner Ranking		
High	19%	20%
Medium	24%	22%
Low	26%	20%
Parallel Partner Ranking		
High	23%	19%
Medium	21%	28%
Low	20%	16%
Asset Partner Ranking		
High	19%	19%
Medium	30% ¹	21%
Low	17% ¹	21%

¹Significantly different based on 95% Confidence Intervals.

Networks with a low total partner ranking reported the greatest proportion of residents that increased their physical activity from baseline to follow-up (42%), followed by networks with a high ranking

(40%), and networks with a medium ranking (38%). Differences in change in physical activity from baseline to follow-up across total partner rankings were not statistically significant.

Exhibit 2.20. Change in Physical Activity by Total Partner Ranking



Change in physical activity across direct, parallel, and asset partner rankings varied with no distinct pattern. The proportion of residents who increased their physical activity from baseline to follow-up was highest in networks with medium direct partner rankings (41%), medium parallel partner rankings (44%), and low asset partner rankings (43%). Additionally, differences in change in physical activity between baseline and follow-up across direct, parallel, and asset partner rankings were not statistically significant.

Exhibit 2.21. Change in Physical Activity by Direct, Parallel, and Asset Partner Rankings

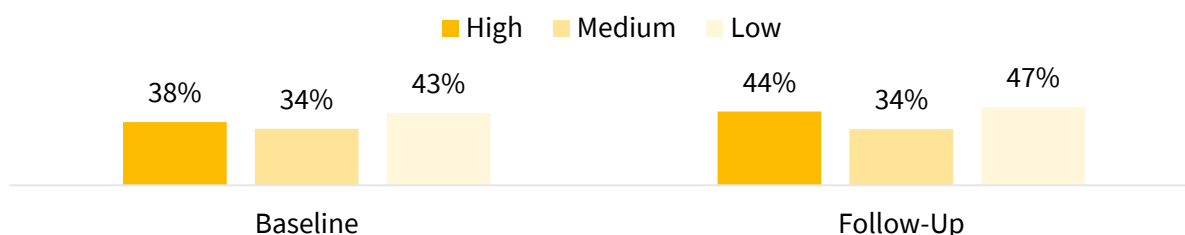
	Change in Physical Activity		
	Increased	Maintained	Decreased
Direct Partner Ranking			
High	40%	14%	47%
Medium	41%	10%	49%
Low	35%	23%	42%
Parallel Partner Ranking			
High	39%	16%	45%
Medium	44%	9%	46%
Low	34%	13%	53%
Asset Partner Ranking			
High	38%	17%	45%
Medium	35%	13%	52%
Low	43%	12%	44%

FOOD SECURITY

Food security among Illinois residents living within select community networks was compared to total number of partners present within the network ranked on a scale of low, medium, and high. At

baseline, networks with low total partner rankings reported the greatest frequency of food insecure residents (43%). At follow-up, networks with low total partner rankings reported the greatest frequency of food insecure residents (47%). Differences in food insecurity at baseline and follow-up across total partner rankings were not statistically significant.

Exhibit 2.22. Food Insecurity by Total Partner Ranking at Baseline and Follow-Up



Results for food insecurity varied across partnership type rankings.

- ▲ Illinois residents living in community networks with medium direct partner rankings at follow-up more frequently reported being food insecure than residents from networks with high direct partner rankings (49% compared to 33%, $p < .005$).
- ▲ Illinois residents living in community networks with low parallel partner rankings at baseline more frequently reported being food insecure than residents from networks with medium parallel partner rankings (51% compared to 27%, $p < .005$). Results were similar at follow-up (54% compared to 24%, $p < .005$).
- ▲ Illinois residents living in community networks with medium (45%) and high (50%) asset partner rankings at follow-up more frequently reported being food insecure than residents from networks with low asset partner rankings (29%, $p < .005$).

Exhibit 2.23. Food Insecurity by Direct, Parallel, and Asset Partner Rankings at Baseline and Follow-Up

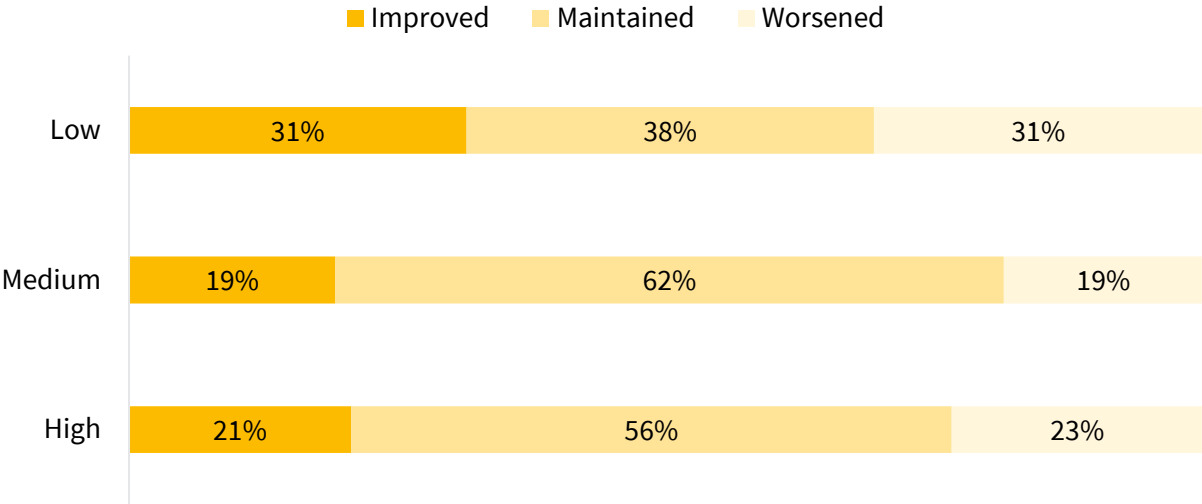
	Food Insecurity	
	Baseline	Follow-Up
Direct Partner Ranking		
High	35%	33% ¹
Medium	42%	49% ¹
Low	36%	42%
Parallel Partner Ranking		
High	37%	42%
Medium	27% ²	24%
Low	51% ²	54%
Asset Partner Ranking		
High	42%	50% ⁴
Medium	42%	45% ³
Low	31%	29% ^{3,4}

Matching superscripts note significantly different values based on 95% Confidence Intervals

Networks with low total partner rankings reported the greatest proportion of residents that improved their food security status from baseline to follow-up (31%), followed by networks with high rankings (21%), and networks with medium rankings (19%). Differences in change in food security from

baseline to follow-up across total partner rankings were not statistically significant.

Exhibit 2.24. Change in Food Security by Total Partner Ranking



Change in food security across direct, parallel, and asset partner rankings varied with no distinct pattern. The proportion of Illinois residents living in community networks who improved their food security status from baseline to follow-up was highest in networks with medium direct partner rankings (24%), low parallel partner rankings (27%), and high asset partner rankings (25%). Differences in change in food security between baseline and follow-up across direct, parallel, and asset partner rankings were not statistically significant.

Exhibit 2.25. Change in Food Security by Direct, Parallel, and Asset Partner Rankings

	Change in Food Security		
	Improved	Maintained	Worsened
Direct Partner Ranking			
High	22%	58%	19%
Medium	24%	50%	27%
Low	21%	52%	26%
Parallel Partner Ranking			
High	24%	51%	25%
Medium	16%	70%	14%
Low	27%	45%	27%
Asset Partner Ranking			
High	25%	45%	30%
Medium	22%	56%	22%
Low	22%	59%	19%

Conclusions and Recommendations

Overall, most partnerships identified by local staff were direct partners (41%) or asset partners (38%). The proportion of each different type of partnership varied across community type (i.e., rural, micro-

urban/suburban, urban), tier, and network. However, no distinct patterns in variation were noted.

No differences in fruit and vegetable consumption behaviors were identified across partnership types. Additionally, there were no associations with likelihood of change in fruit and vegetable consumption across partnership types. However, there was a significant difference at baseline between communities with low total partner rankings and those with medium and high partner rankings. Residents from communities with low total partner rankings less frequently reported meeting physical activity recommendations. There were no other significant differences at follow-up or in likelihood of change in physical activity across partnership types. However, there were significant differences in food insecurity at baseline and follow-up across direct, parallel, and asset partner rankings.

Limitations to this analysis include the data that were available to capture partnership characteristics and impact. There were multiple factors for which data were not available or able to be factored into this analysis, such as staffing considerations, social marketing campaign dispersion, and whether partners were collaborating on direct education programming, PSE change strategies, or both. These results are likely impacted by the quantitative and descriptive nature of the data. To determine partnership impact, a more detailed exploration is needed to inform decision making. To further explore relationships between community partners and health behavior outcomes, next steps could include:

- ▲ Merging data with PEARS reporting data across all sites and partners reported.
- ▲ Exploring relationships between staffing FTEs and capacity for partnership cultivation.
- ▲ Capturing qualitative data to inform a more robust categorization of partnership types.
- ▲ Developing a more robust categorization for partnerships that captures impact or contribution to PSE change work that supports health behaviors.

PARTNER SURVEY

A partner and coalition survey was developed to determine how community organizations and coalitions contribute to healthy eating, active living, and food access via organizational and community-wide strategies and policies. Partner organizations identified in the partner alignment process were invited to participate in the survey, as detailed in the following methodology section.

Methodology

INSTRUMENT DEVELOPMENT AND MEASURES

In partnership with the University of Illinois Extension SNAP-Ed, Altarum developed the community partnerships and coalition survey instrument to be completed by select SNAP-Ed community network stakeholders. Altarum conducted a brief literature review to inform the development of the instruments and tested the survey questions with local partners prior to finalizing the tool. The survey instrument sought to determine how community organizations and coalitions contribute to healthy eating, active living, and food access through organization and community-wide strategies and policies (see **Exhibit 2.26**). See **Appendix B** for the survey instrument. Using the online survey platform, Alchemer, Altarum developed a web-based survey for dissemination to local partners.

Exhibit 2.26. Partner Survey Question Topics, by Section

Survey Section	Survey Question Topic
Organization information	<ul style="list-style-type: none"> • Organization: <ul style="list-style-type: none"> - Name - Type - Area served <ul style="list-style-type: none"> ○ Specific counties - Partnership with IL SNAP-Ed (yes or no); if yes: <ul style="list-style-type: none"> ○ Length of partnership ○ Type of partnership • Perceived level of influence on healthy eating, nutrition, physical activity, food access, and obesity prevention efforts • Current and future plans related to healthy eating, nutrition, physical activity, community food access, and preventing obesity
Participation in multi-partner community, regional or statewide coalitions	<ul style="list-style-type: none"> • Name and number of coalitions • Organization's role in coalition • Topic coalition is focused on • Operational characteristics of coalitions • Accomplishments of coalitions • Goals and activities of coalitions • Area served by coalitions
Participation in follow-up KII	<ul style="list-style-type: none"> • Willingness to participate • Respondent name • Contact information • Preferred mode of communication

SURVEY RECRUITMENT

Partner organizations who were identified in the partner alignment matrices as direct or parallel partners (refer to Analysis of Partnership Alignment Matrices in Part 2) were invited to participate in the online survey. University of Illinois Extension staff who were working within the networks sampled for the community network impact evaluation were provided with a letter to disseminate to their partners. Starting in May 2022, local staff began delivering the survey invitation letters to their partners. Childcare and school-based partners were prioritized to receive the letter in May 2022, and all other partners were invited to take the survey in June 2022. Additionally, the IL SNAP-Ed generated a mass email that was sent to all partners who were listed in the alignment matrices with an email address. Reminder emails were sent in June and in the beginning of July, and the survey was closed in July 2022.

DATA ANALYSIS AND REPORTING

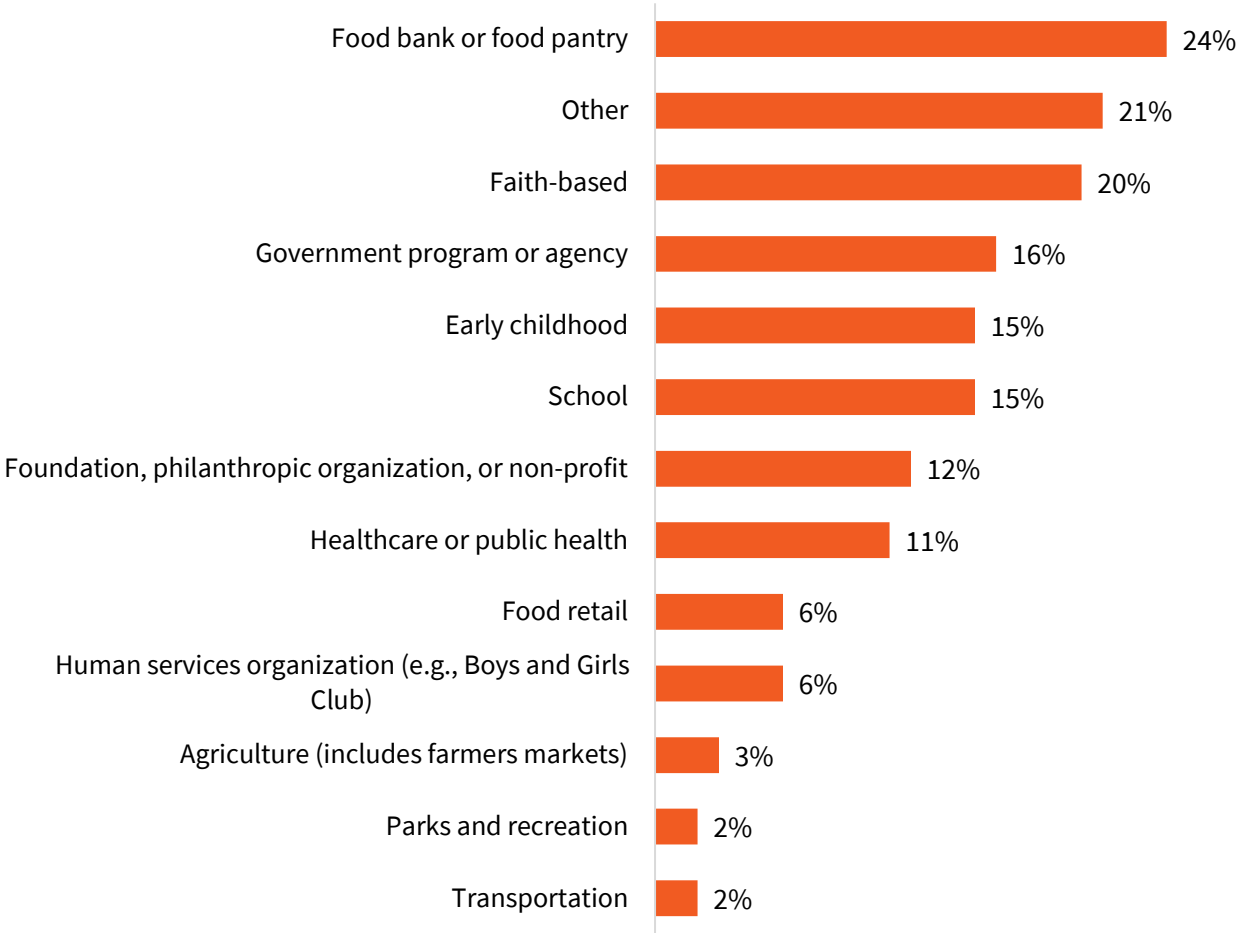
Survey data were exported from Alchemer into a single Microsoft Excel file. The final dataset included 81 complete and 15 partial responses for a total of 97 responses. Descriptive statistics and frequencies were calculated for all survey questions. The following section presents a detailed summary of findings.

Findings

ORGANIZATION CHARACTERISTICS

Nearly one-quarter (24%) of all respondents reported the type of organization they represented was a food bank or food pantry (see **Exhibit 2.27**). Other types of organizations (21%) and faith-based organizations (20%) were also commonly represented. Other types of organizations included housing, such as homeless shelters or senior housing, academic institutions, libraries, and thrift stores.

Exhibit 2.27. Type of Organization (n=97)

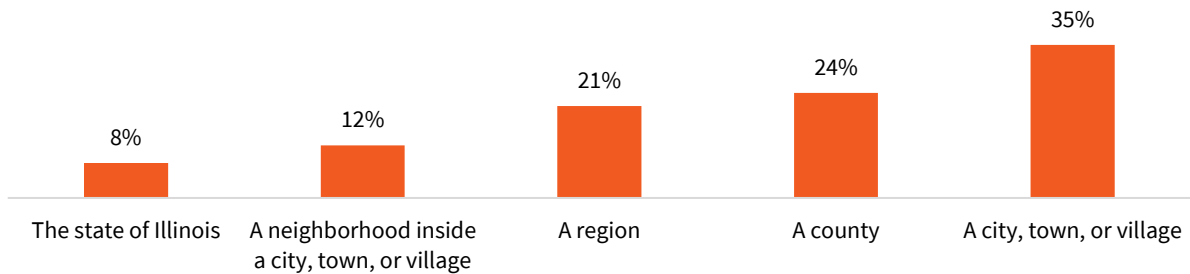


Note: The total percentage is greater than 100% as respondents could select more than one organization type.

Respondent organizations served various areas throughout Illinois, most commonly a city, town, or village (35%) (see **Exhibit 2.28**). For partners serving the regional or county-levels, Jackson, Jefferson, and Peoria were the most commonly served counties (n=11 organizations each).

Respondents' organizations **most commonly** served cities, towns, or villages.

Exhibit 2.28. Area Served by Respondent Organization (n=97)



Most commonly:

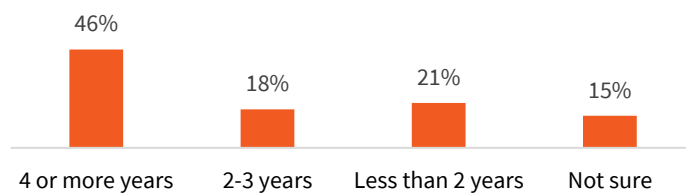
- ▲ Tier 1 respondents were faith-based organizations serving cities, towns, or villages.
- ▲ Tier 2 respondents were foundations, philanthropic organizations, or non-profits and schools serving counties and cities, towns, or villages.
- ▲ Tier 3 respondents were other types of organizations such as retail and organizations providing educational opportunities serving cities, towns, or villages.
- ▲ Respondents at the state level were food retail organizations.

PARTNERSHIP WITH IL SNAP-ED

Thirty-three respondents (35%) reported their organization partnered with IL SNAP-Ed through the University of Illinois Extension or Chicago Partnership for Health Promotion (CPHP). The remaining 65 percent of respondents did not partner with IL SNAP-Ed or were unaware of the partnership. Of the 33 organizations that partnered with IL SNAP-Ed, nearly half (46%) reported the partnership had extended four or more years (see **Exhibit 2.29**).

35%
of respondents
reported their
organization **partnered**
with IL SNAP-Ed.

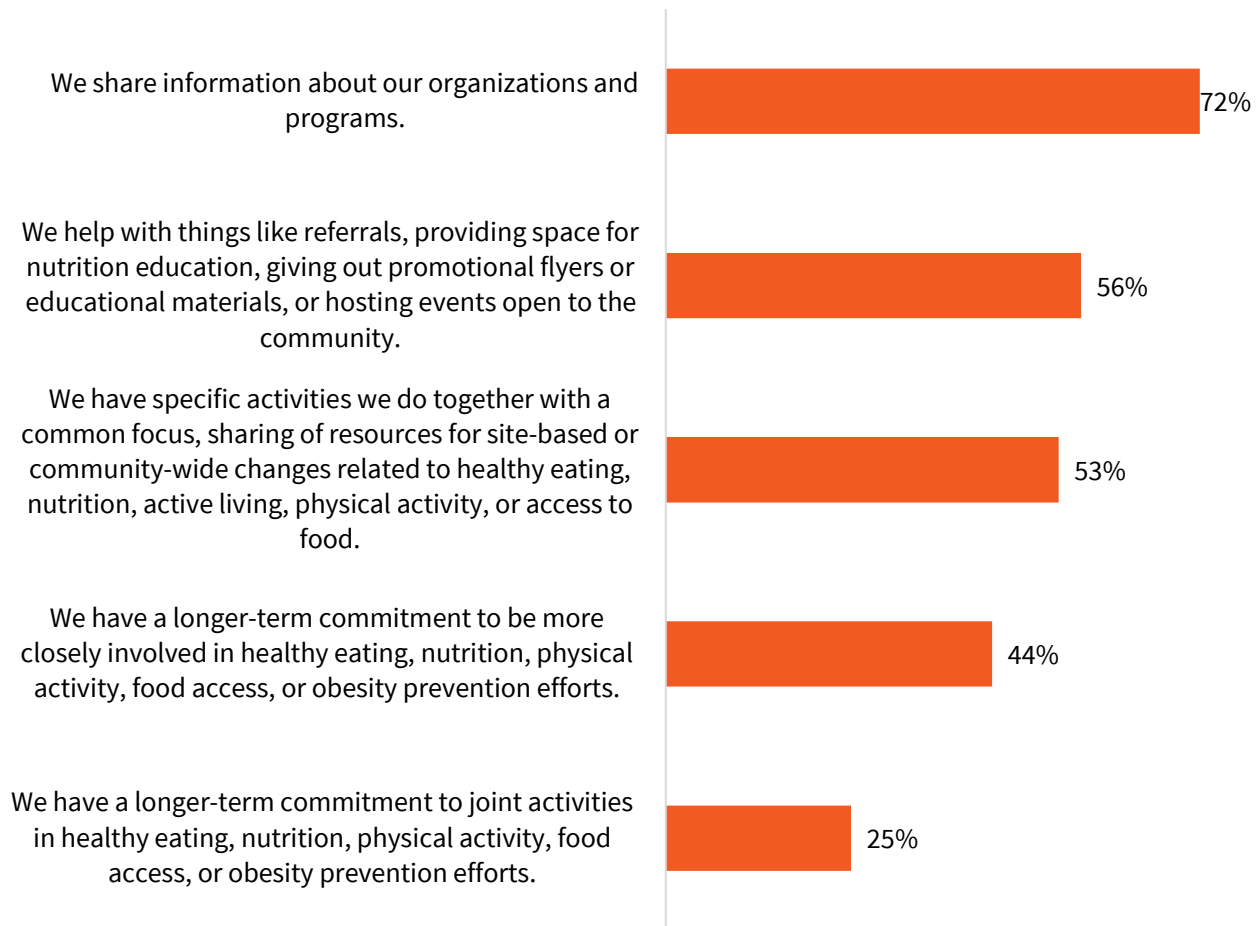
Exhibit 2.29. Length of Partnership with IL SNAP-Ed (n=33)



Nearly 40% of all respondents from Tier 1, Tier 2, and at the state level reported their organization had partnered with IL SNAP-Ed. Most commonly, the partnership dated four or more years. No Tier 3 respondents indicated their organization had partnered with IL SNAP-Ed.

When asked about the depth of their partnership, nearly three-quarters (72%) of all organizations partnering with IL SNAP-Ed noted they shared information about their organization and programs (see **Exhibit 2.30**). Notably, only one-quarter (25%) of respondents reported that their organization has a longer-term commitment to joint activities in healthy eating, nutrition, physical activity, food access, or obesity prevention.

Exhibit 2.30. Description of Depth of Partnership with IL SNAP-Ed (n=32)

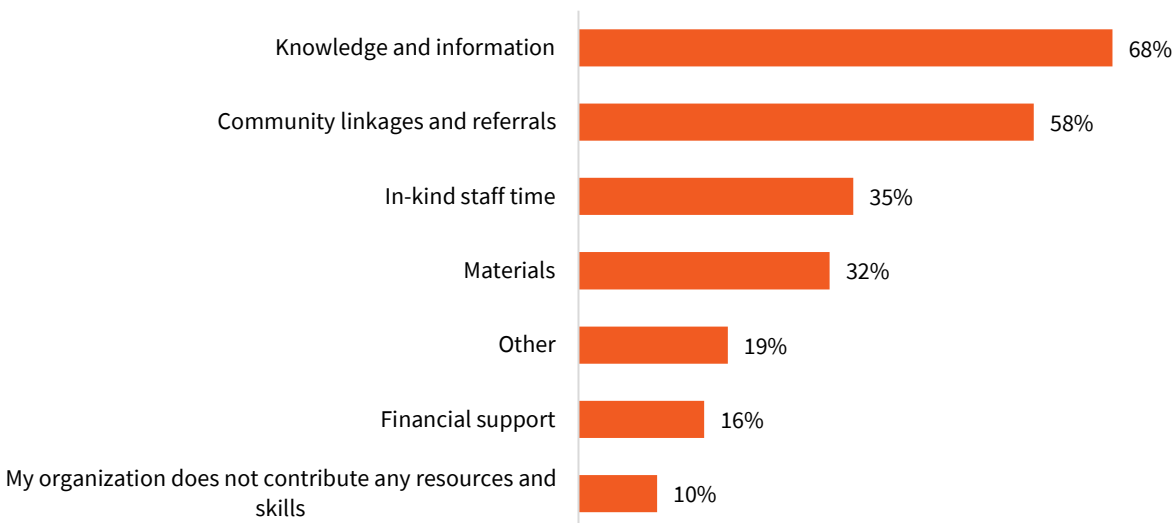


Note: The total percentage is greater than 100% as respondents could select more than one response.

Of those organizations partnering with IL SNAP-Ed, Tier 1 (72%) and state-level partners (100%) most commonly described their depth of partnership with IL SNAP-Ed as sharing information about their organizations and programs. More than three-quarters of respondents from Tier 2 described the partnership as helping with things like referrals, providing space for nutrition education, giving out promotional flyers or educational materials, or hosting events open to the community.

Respondents reported that their organization contributes a variety of resources and skills to their partnership with IL SNAP-Ed; most commonly, knowledge and information (68%) and community linkages and referrals (58%). Other contributions included physical space, grant funding, and referrals for nutrition education (see **Exhibit 2.31**).

Exhibit 2.31. Contributions to IL SNAP-Ed Partnership (n=31)

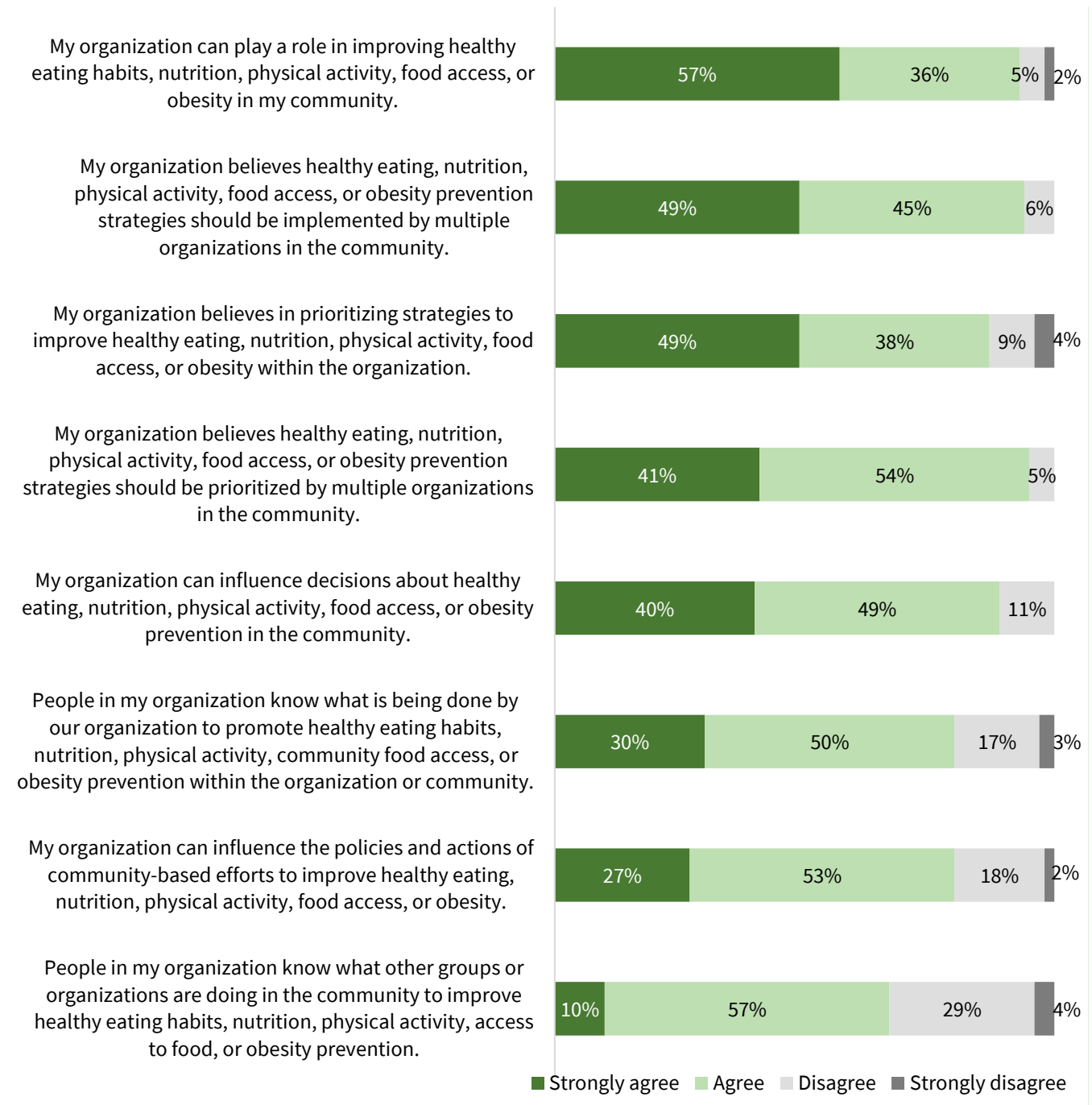


Note: The total percentage is greater than 100% as respondents could select more than one response.

Across the respondent organizations who partner with IL SNAP-Ed, the greatest number of organizations within Tier 1, Tier 2, and at the state level report contributing knowledge and information to the partnership (56%, 78%, and 67% respectively).

Respondents detailed their organizations' perceived level of influence on and beliefs about healthy eating, nutrition, physical activity, food access, and obesity prevention efforts. Most respondents strongly agreed (57%) their organization can play a role in improving healthy behaviors, access to food, and obesity within their community (see **Exhibit 2.32**). However, approximately one-third of respondents (33%) disagreed or strongly disagreed that people in their organization know what other groups and organizations are doing in the community to improve healthy behaviors, food access, and obesity prevention.

Exhibit 2.32. Organization Perceived Level of Influence on Healthy Eating, Nutrition, Physical Activity, Food Access, and Obesity Prevention Efforts (range: n=84–89)

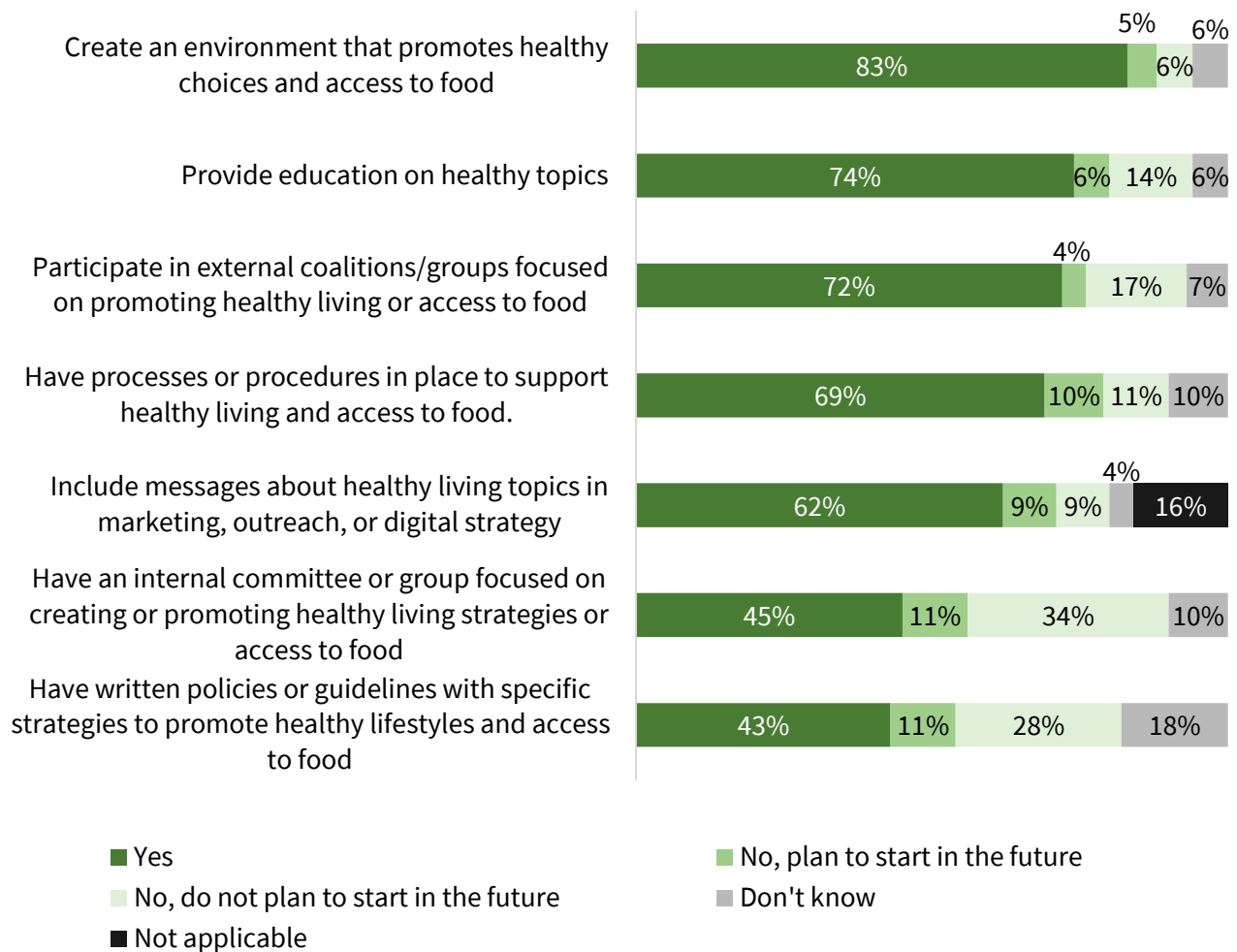


- ▲ 59% of Tier 1 respondents, 60% of Tier 2 respondents, and 57% of state-level respondents **strongly agree** their organization can play a role in improving healthy eating habits, nutrition, physical activity, food access, or obesity in their community.
- ▲ 75% of Tier 3 respondents **agree** their organization can influence policies and actions of community-based efforts to improve healthy eating, nutrition, physical activity, food access, or obesity.
- ▲ More than half of all state-level respondents **strongly agree** their organization:
 - can influence decisions about healthy eating, nutrition, physical activity, food access, or obesity prevention in the community;
 - believes healthy eating, nutrition, physical activity, food access, or obesity prevention strategies should be prioritized by multiple organizations in the community; and
 - believes healthy eating, nutrition, physical activity, food access, or obesity prevention strategies should be implemented by multiple organizations in the community.

Partner organizations currently **create environments that promote healthy choices and access to food, provide education on healthy living topics, and participate in external coalitions focused on promoting healthy living and access to food.**

Respondents were asked about their organizations' current efforts and future plans to support healthy eating, nutrition, physical activity, community food access, and obesity prevention activities. The vast majority (83%) responded positively that their organization creates an environment that promotes healthy choices and access to food (e.g., hanging signs to promote healthy behaviors, menu labeling, healthy vending, creating walking paths, on-site bike racks, on-site food pantry, on-site farmers market, backpack program). Nearly three-quarters (74%) provide education on healthy topics and a similar percentage (72%) participate in external coalitions/groups focused on promoting healthy living or access to food. Although less than half (43%) of organizations currently have written policies or guidelines with specific strategies to promote healthy lifestyles and access to food, more than 10 percent plan to start in the future (see **Exhibit 2.33**).

Exhibit 2.33. Partner Organizations’ Current Efforts to Support Healthy Eating, Nutrition, Physical Activity, Community Food Access, and Obesity Prevention (range: n=79–87)



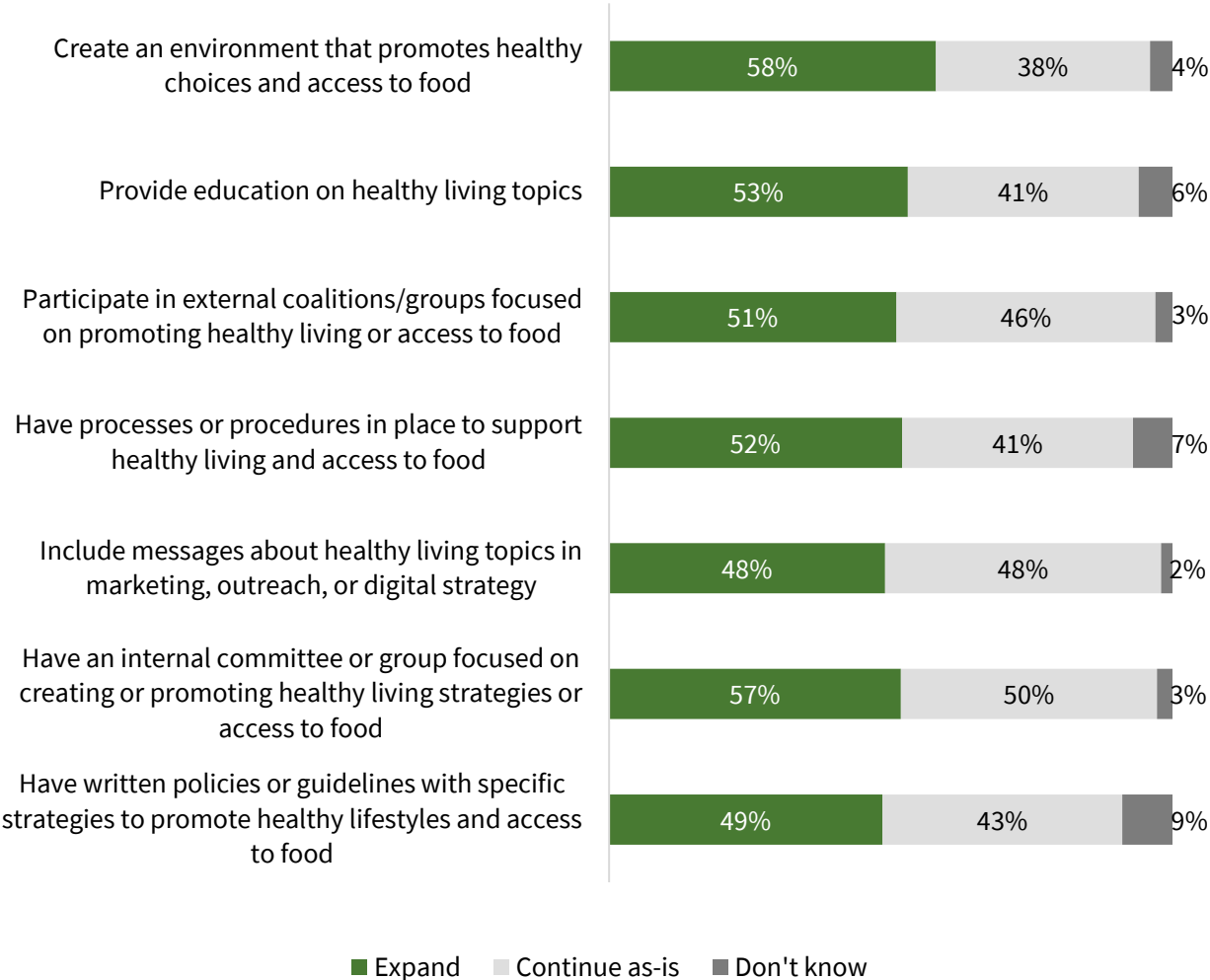
Across tiers, more than half of all respondent organizations:

- ▲ Provide education on healthy topics (Tier 1: 71%, Tier 2: 88%, Tier 3: 75%, and state-level: 57%).
- ▲ Create an environment that promotes healthy choices and access to food (Tier 1: 82% Tier 2: 83%, and state-level: 100%).
- ▲ Have processes or procedures in place to support healthy living and access to food (Tier 1: 73%, Tier 2: 54%, and state-level: 92%).
- ▲ Participate in external coalitions/groups focused on promoting healthy living or access to food (Tier 1: 67%, Tier 2: 78%, and state-level: 91%).
- ▲ Include messages about healthy living topics in marketing, outreach, or digital strategy (Tier 1: 65%, Tier 2: 52%, and state-level: 75%).

75 percent of state-level respondents report their organizations have written policies or guidelines with specific strategies to promote healthy lifestyles and access to food and has an internal committee or group focused on creating or promoting healthy living strategies or access to food.

For those respondents whose organizations were currently engaged in activities related to healthy eating, nutrition, physical activity, community food access, and obesity prevention, they were also asked to share their organizations’ intent to implement the same activities in the future. The status of organizations’ future plans were categorized as expand, continue as-is, or don’t know. Approximately half of all respondents noted their organization was likely to expand all of their organizations’ current efforts addressing healthy living within their communities, and almost 60 percent plan to expand efforts to create an environment that promotes healthy choices and access to food (see **Exhibit 2.34**).

Exhibit 2.34. Partner Organizations’ Future Efforts to Support Healthy Eating, Nutrition, Physical Activity, Community Food Access, and Obesity Prevention (range: n=35–71)

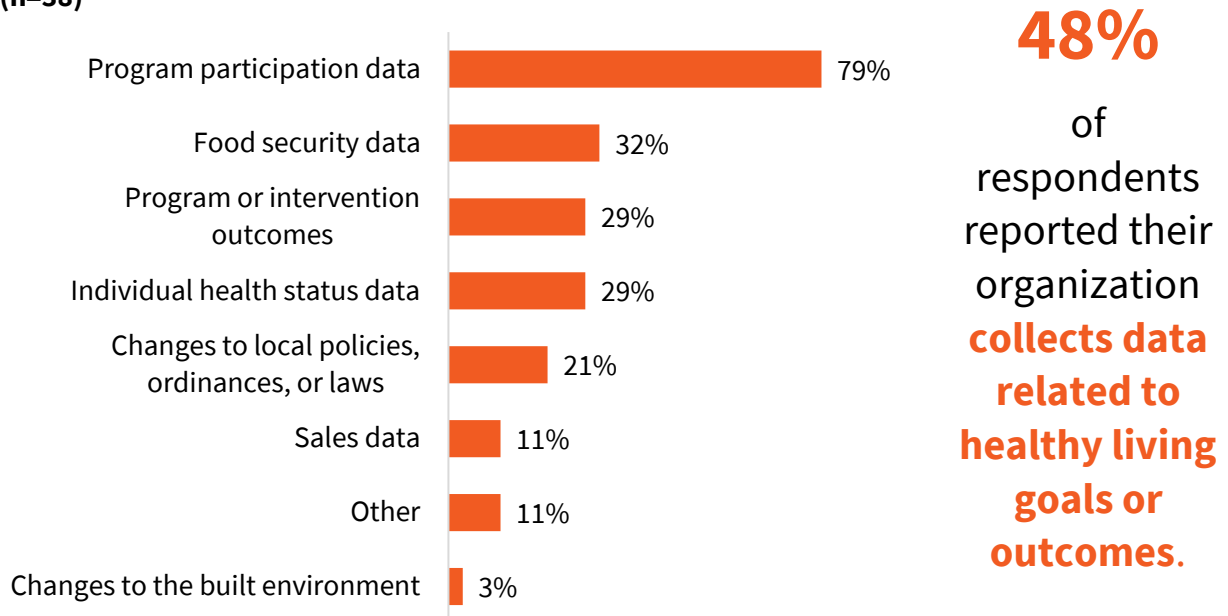


Across all tiers, for the respondents who were currently engaged in activities related to healthy eating, nutrition, physical activity, community food access, and obesity prevention, responses were mixed between expansion and continuation of the activities as-is.

- ▲ Respondents from Tier 2 reported their organization was committed to expanding their work around each of the seven strategies.
- ▲ More than half of all respondents at state-level organizations plan to expand their efforts, including having processes or procedures in place to support healthy living and access to food (73%), creating an environment that promotes healthy choices and access to food (62%), and participating in external coalitions/groups focused on promoting healthy living or access to food (60%).
- ▲ More than half of all respondents at Tier 3 organizations plan to expand their efforts, including participating in external coalitions/groups focused on promoting healthy living or access to food (100%) and having policies or guidelines with specific strategies to promote healthy lifestyles and access to food (100%).
- ▲ More than half of all respondents at Tier 1 organizations plan to expand their efforts to create an environment that promotes healthy choices and access to food (53%).

A total of 38 respondents (48%) noted their organizations collect data related to healthy eating, nutrition, physical activity, food access, or obesity prevention goals or outcomes. Respondents overwhelmingly reported their organizations collect program participation data (79%); however, few organizations (3%) collect data on changes to the built environment (see **Exhibit 2.35**). Of the 38 partner organizations collecting data, 26 (68%) stated they would be willing to share their collected, non-identifiable data with IL SNAP-Ed.

Exhibit 2.35. Types of Data Collected by Respondent Organization (n=38)



Respondent organizations across all tiers and at the state level most commonly collected program participation data.

MULTI-PARTNER COALITION EFFORTS

A total of 42 respondents reported their organization participated on at least one multi-partner coalition. Of those, 27 respondents (64%) were affiliated with more than one coalition and a total of 100 coalitions were described in more detail (see **Appendix C**). Nearly half of all respondents' organizations contributed to the external coalitions as an active participant (see **Exhibit 2.36**). External coalitions were focused on a variety of topics, most commonly increasing food access (65%, see **Exhibit 2.37**). Other topics included substance use, mental health services, transportation, capacity and relationship building, and information sharing.

At least one respondent from each tier and at the state level reported their organization participated on at least one multi-partner coalition. On average, state-level organizations contributed to three coalitions, Tier 1 and Tier 2 organizations contributed to two coalitions, and one Tier 3 organization participated in one coalition.

Exhibit 2.36. Respondent Organizational Role on Multi-Partner Coalitions (n=100)

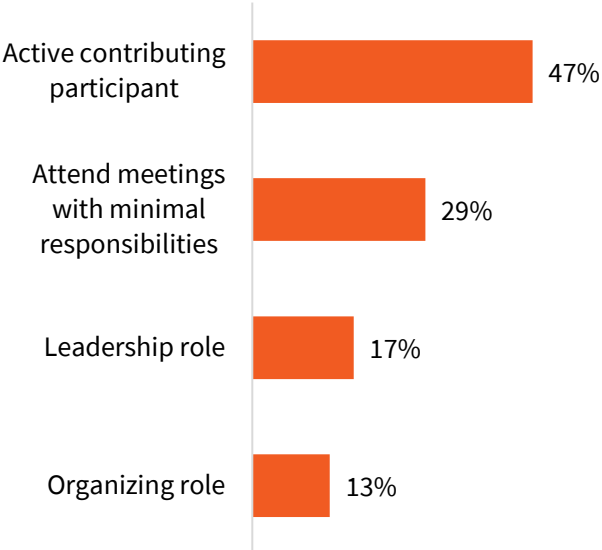
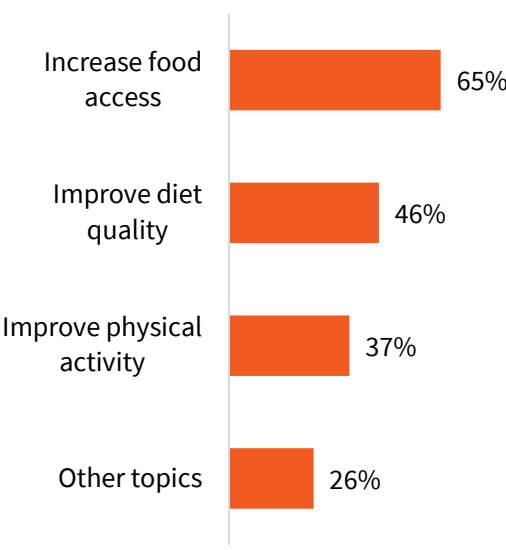


Exhibit 2.37. Topic Areas of Multi-Partner Coalitions (n=100)

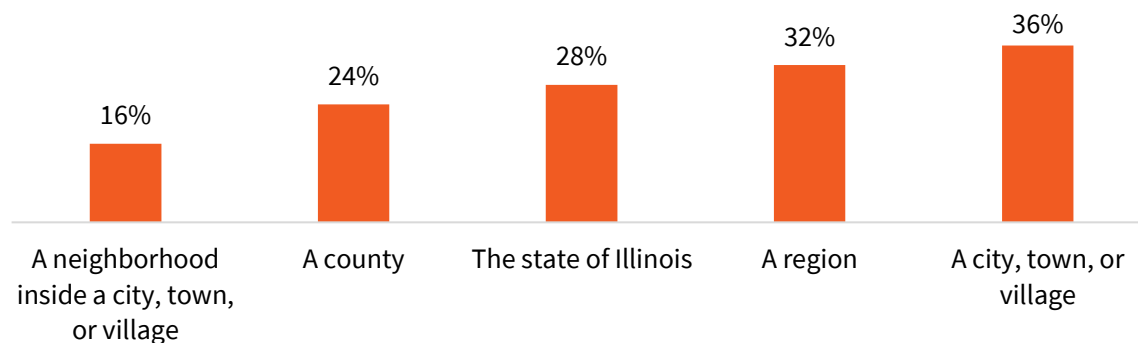


Respondents from Tier 1, Tier 2, and state-level organizations most commonly serve as active contributing participants on multi-partner coalitions aimed to increase food access. The single Tier 3 respondent organizes a multi-partner coalition seeking to address mental health.

Respondents' organizations contributed to 26 coalitions (26%) in a lead or organizing role. As such, they were asked to provide more details about those external, multi-partner coalitions. According to the respondents the coalitions most commonly serve cities, towns, or villages (see **Exhibit 2.38**).

Respondents' organizations play a lead or organizing role for **26** coalitions.

Exhibit 2.38. Area Served by Coalitions Led or Organized by Respondent Organizations (n=26)

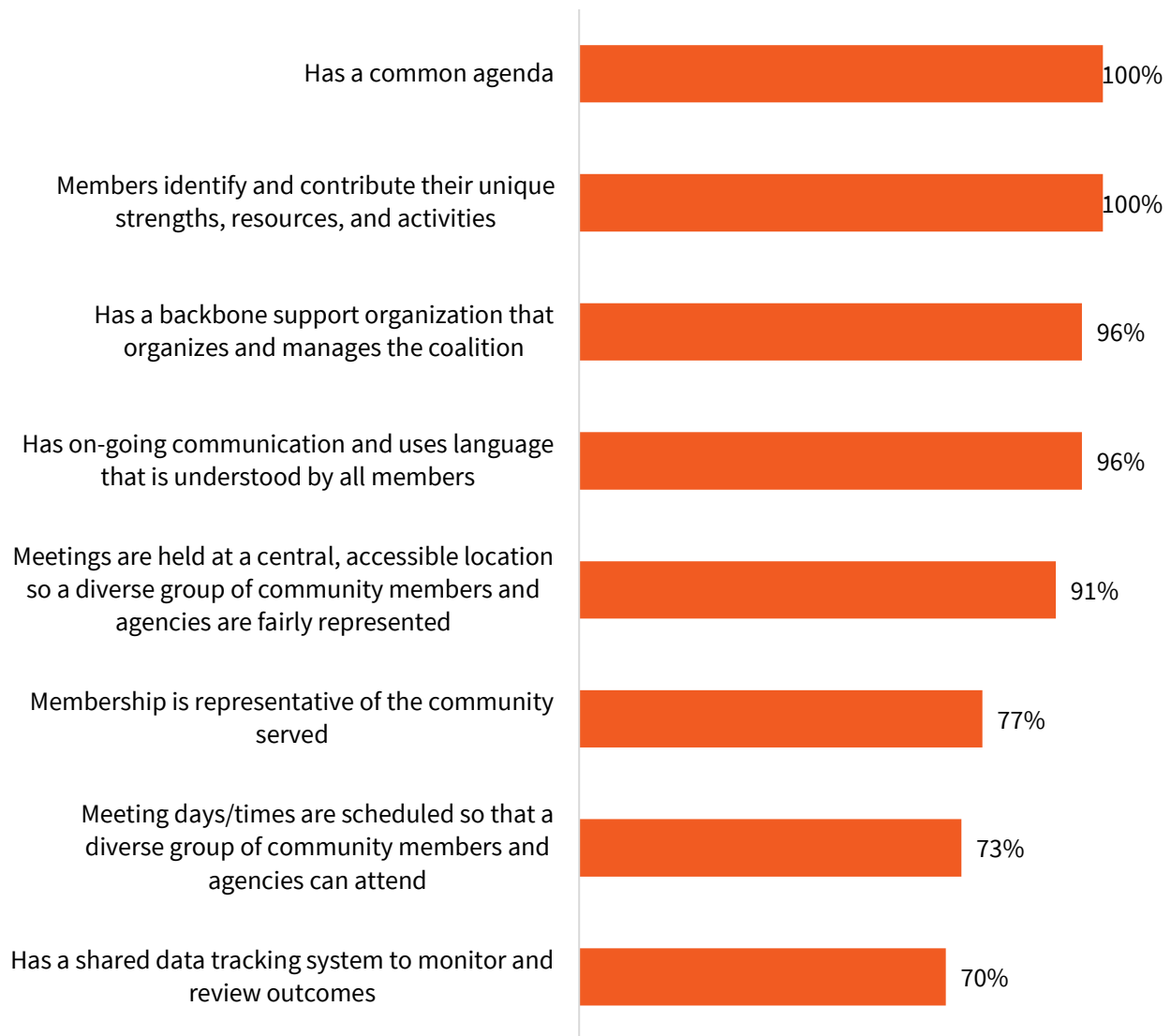


Of the 26 coalitions in which respondents serve a lead or organizing role, Tier 1 respondents contributed in that capacity for half of reported multi-partner coalitions (n=13). Tier 1 respondents reported that the coalitions they led frequently served city, towns, or villages, while coalitions led by Tier 2 and state-level respondents most commonly served the State of Illinois. The single Tier 3 respondent-led coalition served neighborhoods within cities, towns, or villages.

All coalitions have a common agenda, and members identify and contribute their unique strengths, resources, and activities. Less than three-quarters of all reporting coalitions have shared data tracking systems to monitor and review outcomes (see **Exhibit 2.39**).

All coalitions led or organized by respondents' organizations **have a common agenda, and members identify and contribute their unique strengths, resources, and activities**. Of those coalitions, nearly all have a **backbone support organization** to help manage and organize the coalition.

Exhibit 2.39. Description of Coalitions Led or Organized by Respondent Organizations (range: n=22-26)



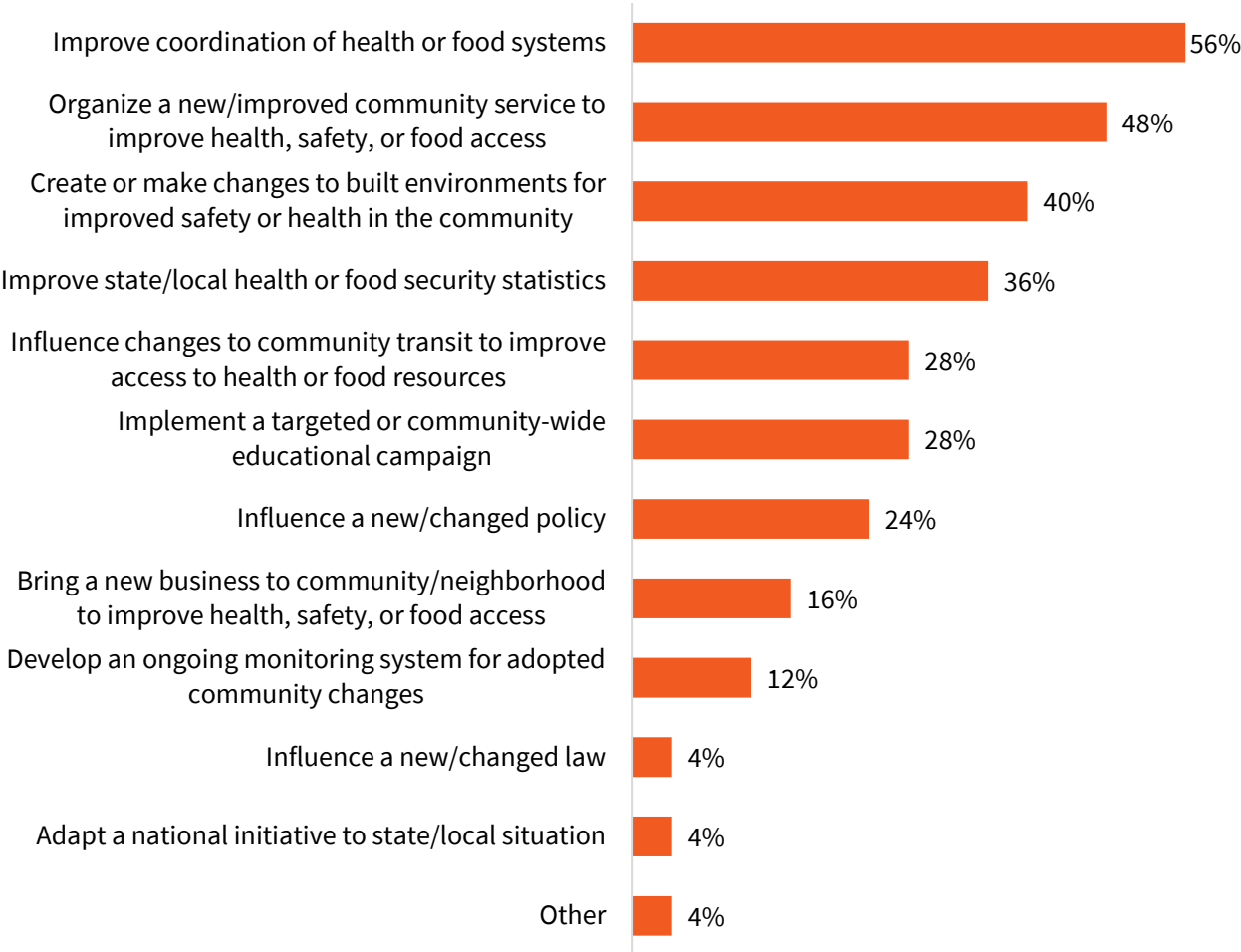
Note: The total percentage is greater than 100% as respondents could select more than one response.

Descriptions of the coalitions led or organized by respondent organizations were consistent across all tiers and state-level organizations. All respondents reported their coalitions had a common agenda and members identified and contributed their unique strengths, resources, and activities. Least commonly, their coalitions had a shared tracking system to monitor and review outcomes.

Twenty-five respondents shared more information about the current goals and activities of the coalitions led or organized by their organizations. Over half (56%) reported the coalition sought to improve the coordination of health or food systems. Coalitions also commonly organized new or improved community services to improve health, safety, or food access (48%) and created or made changes to built environments for improved safety or health in the community (40%; see **Exhibit 2.40**).

Most commonly, coalitions led or organized by respondents’ organizations work to **improve coordination of health or food systems**.

Exhibit 2.40. Goals and Activities of Coalitions Led or Organized by Respondent Organizations (n=25)



Note: The total percentage is greater than 100% as respondents could select more than one response.

Goals and activities of respondent-led coalitions varied by tier. Respondents from Tier 1 and Tier 2 most commonly reported working to improve the coordination of health or food systems (46% and 78%, respectively). State-level respondent-led coalitions most commonly report organizing a new or improved community service to improve health, safety, or food access. The Tier 3 respondent-led coalition aimed to influence a new or changed policy.

Finally, respondents were asked to share the major accomplishments related to nutrition and healthy eating, physical activity, and food access of the coalitions led or organized by their organizations. The most frequently achieved accomplishments of the past three years included:

- ▲ Increasing access to food throughout the communities served;
- ▲ Supporting capacity building of other local organizations; and
- ▲ Providing education opportunities related to healthy eating and physical activity.

Conclusions

Although the majority of community network stakeholders are unaware of their partnership and contributions to IL SNAP-Ed, more than one-third report a deep and extensive partnership with a long-term commitment to joint activities in healthy eating, nutrition, physical activity, food access, or obesity prevention.

A total of 35 percent of respondents noted their organizations partnered with IL SNAP-Ed, while the remaining individuals did not partner or were unaware of the partnership. More than half of all respondent organizations who partner with IL SNAP-Ed have had an established relationship for at least two years, with most extending beyond four years. Partner organizations are invested in their relationships with IL SNAP-Ed, providing a variety of supports including information sharing, referrals, and collaborating on site-based and community-wide changes.

Respondents overwhelmingly agreed their organization can influence community-level healthy eating, nutrition, physical activity, food access, and obesity prevention efforts.

Respondents feel strongly their organizations play a key role in improving individual habits of community residents. Similarly, these respondents note the importance of organizations prioritizing strategies to improve individual behaviors and habits; to maximize impact, multiple organizations can partner together to support community-based interventions. However, nearly one-third of respondents report that they are unaware of the full scope of community-based interventions being implemented by other organizations.

Respondent organizations are notably experienced in supporting healthy behaviors, food access, and obesity prevention efforts within their communities and are committed to supporting these types of activities in the future.

Most commonly, respondent organizations are working to create an environment that promotes healthy choices and access to food, provides education on healthy topics, and participates in external coalitions focused on promoting healthy living and access to food. Less than half noted they had an internal committee or had developed written policies or guidelines with specific strategies to promote healthy lifestyles and access to food. Nearly all respondents intend at least to continue their current efforts and strategies, and in most cases, plan to expand their work supporting healthy eating, nutrition, physical activity, community food access, and obesity prevention. Most commonly, respondents will seek to expand their efforts to create a healthy environment and have an internal committee or group focused on creating or promoting healthy living strategies and/or access to food. In addition, the vast majority of respondent organizations are collecting program participation data to monitor their healthy living goals and outcomes.

Multi-partner coalitions provide respondent organizations the opportunity to organize with similarly focused agencies around common strategies to improve lifestyles and access to food.

Nearly half of all respondents participate on at least one multi-partner coalition within Illinois. These organizations frequently described their role as active contributing participant and described the coalition's major focus was to increase food access. One-quarter of multi-partner coalitions described by respondents were led or organized by their organization. These coalitions have common agendas, and members contribute their unique strengths and resources. Similarly, these coalitions have ongoing communication, and meetings are held at a central and accessible location for a diverse group of community members to attend. More than half of all coalitions led by respondent organizations aim to improve the coordination of health or food systems within their community.

PARTNER INTERVIEWS

One-on-one interviews were conducted to learn how partners and coalitions contribute to broad community-wide changes and policy implementation to support food access, healthy eating, and active living. A total of nine interviews were conducted as described in the following section.

Methodology

INSTRUMENT DEVELOPMENT AND MEASURES

In partnership with the University of Illinois Extension SNAP-Ed, Altarum developed a partner KII guide aligned with the partner survey. The purpose of the interview guide was to complement the partner survey by gathering in-depth qualitative information regarding how partnerships and coalitions contribute to broad community-wide changes and policy implementation to support food access, healthy eating, and active living. The topics covered in the partner interview guide are outlined in **Exhibit 2.41**. See **Appendix D** for complete interview guide.

Exhibit 2.41. Partner Interview Topics, Organized by General Theme

General Themes	Topic Areas
Organizational information	<ul style="list-style-type: none"> ▲ Services offered ▲ Population served ▲ Service area ▲ Current efforts in promoting healthy eating/nutrition, physical activity, food access, and other obesity prevention strategies ▲ Plans for next three years
Partnership with IL SNAP-Ed	<ul style="list-style-type: none"> ▲ Description of partnership with IL SNAP-Ed ▲ Rationale for partnering with IL SNAP-Ed or barriers to partnering ▲ Benefits of partnership
Partnerships and coalitions	<ul style="list-style-type: none"> ▲ Participation in community coalitions ▲ Successes and challenges ▲ Engagement of diverse SNAP-eligible audiences ▲ Effect of pandemic on partnerships ▲ Changes observed within the community
Future efforts and sustainability	<ul style="list-style-type: none"> ▲ Healthy strategies that can be sustained to deliver long-term impact ▲ Healthy strategies that can be enhanced or expanded for greater impact ▲ Groups or partners to engage and additional resources needed ▲ Major funders of healthy strategies within service areas

PARTNER INTERVIEW RECRUITMENT AND DATA COLLECTION

Respondents to the partner survey were asked if they or someone from their organization would be willing to be contacted by Altarum for an interview. If the respondent selected 'yes,' they were asked to provide contact information. Once the partner survey was closed, Altarum exported the data and

prepared a dataset containing the names of respondents or others interested in an interview along with relevant information for scheduling. From this dataset, a list of potential interviewees was identified. Individuals selected for interviews represented a variety of different organization types (e.g., food bank/pantry, faith-based, healthcare, government program/agency, early childhood), a variety of different service areas, as well as a mix of organizations that did and did not partner with IL SNAP-Ed.

Altarum contacted 15 individuals from the dataset via email to schedule one-on-one interviews. Two declined to be interviewed, four did not respond after multiple email attempts or emails were undeliverable, and nine agreed to participate in an interview. The interviews were conducted from August through October 2022. All interviews were conducted virtually via Microsoft Teams by an experienced Altarum staff member.

QUALITATIVE DATA ANALYSIS

Interviews were audio-recorded and transcribed for analysis. Interview transcripts were reviewed for clarity and accuracy prior to analysis. Transcripts were uploaded to NVivo 11, a qualitative data analytical software used to identify themes across multiple sources. Nodes or categories were developed by Altarum to organize the data by overarching and sub-themes. Additionally, Altarum utilized case attributes to further analyze relationships between themes and interviewee characteristics (i.e., if the organization partnered with IL SNAP-Ed). When appropriate, verbatim comments from interviews were utilized to support thematic analysis.

Findings

INTERVIEWEE CHARACTERISTICS

The nine interviewees represented a range of organizations across Illinois including food pantries, health departments, hospitals or health clinics, non-profit organizations, philanthropic organizations, and policy organizations. Interviewees also held a variety of roles such as nutritional and wellness coordinators, program directors, and marketing managers. Interviewees' organizations were located within six community networks: Auburn Gresham, Peoria, Centralia, Sparta, Murphysboro, and Mt. Vernon. One organization was considered a statewide partner and served all community networks. When examined by tier, there were three partner organizations providing services within Tier 1 community networks, four partner organizations providing services in Tier 2 community networks, and two partner organizations serving multiple tiers. The partner organizations within each tier represented a variety of different organization types, serviced different populations, and focused on varying initiatives.

ORGANIZATIONAL INITIATIVES AND STRATEGIES

To develop a better understanding of how organizations are impacting their communities, interviewees were asked to highlight their organization's strategies to support healthy eating, nutrition, physical activity, food access, and/or obesity prevention initiatives (see **Exhibit 2.42**). Interviewees provided examples ranging from hosting virtual and in-person cooking classes, developing employee wellness programs, and working with state legislators and agencies to increase program benefits, all with the goal of improving access to services for their communities.

Exhibit 2.42. Examples of Organizational Strategies to Promote Healthy Behaviors

Health and Wellness Education	Food Security and Access	PSE Change
<ul style="list-style-type: none"> ▲ Cooking Classes ▲ Diabetes Management Classes ▲ Employee Wellness Programs ▲ Health Fairs ▲ Healthy Eating Education ▲ Recipe Development and Distribution ▲ School-based Food and Nutrition Classes ▲ School-based Physical Activity Classes ▲ Weight-loss Classes 	<ul style="list-style-type: none"> ▲ Collaborating with Farmers Markets ▲ Community Gardening Initiatives ▲ Expanding the Healthy Pantry Program ▲ Free Meal Distribution ▲ Food Distribution and Delivery 	<ul style="list-style-type: none"> ▲ Advocating for Increased SNAP Benefits for Farmers Markets ▲ Updating State-wide School Physical Activity/Education Requirements

“We’re hoping to create an environment in addition to providing food to people who need a meal but [also] an environment where people in the community can connect, you know, across social and racial lines. So, we’re trying to promote healthy eating in that way.” – Interviewed partner

Organizations also served a variety of geographic areas. Those who provided services such as free meals, food bags, or school-based classes typically served smaller geographic areas such as a village, cities, counties, and in a few cases, multiple counties at a time. Other organizations, those who had a broader focus on implementing policies and representing larger food banks, worked at the county, state, or regional level.

PROGRAM CHALLENGES

When asked to highlight any barriers to implementing healthy strategies, interviewees shared that limited funding, staffing challenges, volunteer burnout, lack of available time, and unclear directions or leadership around certain initiatives were the most pressing concerns in their organizations. Additionally, the impact of the COVID-19 pandemic shifted the focus from program services to COVID-related work for many of the community partners.

“We wish we had endless resources and endless time to [accomplish all of] our goals.” – Interviewed partner

Some interviewees also shared situational challenges related to the work that they do. In one example, an organization struggled to deliver food during poor weather conditions and expressed concern for their team’s ability to continue providing services in the event of inclement weather. Another interviewee noted the challenge of limited grocery stores within the community, which was affecting healthy food access for their program participants. Examples of other challenges included high crime rates and poor infrastructure within interviewees’ service areas.

“The weather has a really bad effect on trying to handle all these boxes of produce and hand them out. We [have] just been incredibly lucky that it's never rained on us.” – Interviewed partner

“If we're out teaching kids to eat healthier foods and they don't have a grocery store, we need to be really mindful of that.” – Interviewed partner

Despite these challenges, interviewees shared that working in partnership with IL SNAP-Ed, the University of Illinois Extension, and other community organizations helped address these challenges by providing SNAP-Ed curriculum and materials, knowledge of resources, parental engagement, and collaborative leadership.

IMPACT OF THE PANDEMIC

The COVID-19 pandemic posed new and unique challenges to all partner organizations. One interviewee's organization, which operates under a hospital system, was stretched in multiple directions, and their work quickly shifted from food and nutrition education to COVID-19 response. Staff in the organization were asked to assist in vaccine clinics, manage testing sites, and were even asked to develop new COVID-19 protocols. Other organizations faced staffing challenges due to high numbers of staff being out sick and experiencing burnout. While organizations struggled with many challenges, some of the smaller non-profit organizations saw an increase in the number of people interested in volunteering within their communities to help others, which was crucial for the successful implementation of their interventions.

“We had to pause especially being underneath the hospital system. We got moved into... rescue mode when it came to the pandemic.” – Interviewed partner

“There's a really solid base of volunteers and what we found here is you can have all the money in the world, but if you don't have volunteers to pull it off, you don't have anything.” – Interviewed partner

Not only did the pandemic change how organizations operated, but it was also the catalyst for one interviewee's organization to initiate their work. In this particular situation, the interviewee assumed the lead role for a food distribution program (the U.S. Department of Agriculture's (USDA) Farm to Family food box program) to ensure that community members were able to receive food. After the program ended, the organization expanded their community partnerships to increase access to food options and provide more food delivery. Volunteers in the community also played a vital role within this organization, reaching out to elderly individuals to check in on their needs and provide information on local COVID-19 outbreaks.

“We had volunteers who would call elderly and homebound people... once a week. [They would ask] ‘You feeling OK? Do you need anything? And do you want some updates on our local COVID outbreak?’ It let people know we care.” – Interviewed partner

Despite changing priorities, many interviewees' organizations still attempted to provide educational services via online learning, which posed its own set of challenges. Although nutrition educators had access to virtual platforms, broadband access was not widespread throughout the community, and many community members did not know how to use virtual platforms.

“Our education just came to almost a screeching halt as much as we tried to shift to virtual, [but on] the user end, they weren't able to shift to virtual, so that just paused [our education] as well.” – Interviewed partner

In addition to impacting the ability of organizations to serve their populations, almost every interviewee shared that the COVID-19 pandemic shed light on the inequities and disparities of food access within the communities they serve. In one case, an interviewee shared that their organization was flooded with calls for help due to an increased need for food. In response, the organization shifted focus from the nutritional value of foods distributed to focusing on solely “getting food on tables,” regardless of the type of food.

CHANGES OBSERVED WITHIN THE COMMUNITY

Interviewees were asked to describe any changes that they may have observed within their communities relative to healthy eating and food access over the past three years. As previously noted, some interviewees described decreased access to healthy foods due to a lack of grocery stores in certain communities. Others noted that the government’s response to the pandemic resulted in more resources coming into communities to address food access issues; however, they voiced concerns about what will happen when those resources are scaled back. Inflation was also noted as something that could be affecting healthy food access for many Illinois families in the post-pandemic era. Other changes noted within the community included more partners helping with emergency food distribution (thus increasing community food access) and greater collaboration between nutrition and food system advocates.

“I think the momentum has really shifted in the last couple years to recognize that nutrition was an important part of the charitable food system. I feel like for a long time there was tension between nutrition advocates and charitable food system advocates, and the pandemic finally cut that tension.” – Interviewed partner

ENGAGEMENT WITH SNAP-ED

Of the nine organizations represented, six indicated that they currently work with IL SNAP-Ed in various capacities, ranging from utilizing existing SNAP-Ed educational resources; engaging with SNAP-Ed educators and hosting SNAP-Ed classes; working with SNAP-Ed to create, implement, and assess healthy policies; coordinating with SNAP-Ed staff to avoid duplication of efforts within the community; collaborating with SNAP-Ed staff on community coalitions, councils, and committees; and working with SNAP-Ed to disseminate similar messages throughout the community.

Specific examples of how organizations have partnered with SNAP-Ed include:

- ▲ Collaborating with SNAP-Ed to identify potential community partnerships and expand service offerings for underserved populations.
- ▲ Inviting SNAP-Ed nutrition educators to WIC offices to offer food tastings and health education classes to WIC participants.
- ▲ Co-presenting with SNAP-Ed at local and regional conferences.
- ▲ Utilizing assessments conducted by SNAP-Ed to determine the impact of newly implemented policies within their organization.

When asked why they have partnered with IL SNAP-Ed, interviewees highlighted the common goals

between their respective organizations. Interviewees noted that by working toward common goals, both organizations can expand their reach and make a positive impact on their communities.

“We each have our own driving lanes, our own viewpoint, but we have an alignment of purpose.” – Interviewed partner

“I also [want to] highlight that... we're actually making change. You know, we're instituting food policies and food pantries so that they recognize they need to build in more nutritious foods and that's directly coming [from SNAP-Ed] leadership.” – Interviewed partner

Interviewees attributed many of their program successes to their reliable and trusted partnerships with IL SNAP-Ed. Nearly every interviewee who was currently partnering with IL SNAP-Ed indicated that SNAP-Ed resources, such as curriculum and research-based information, was complementary to the work of their organization.

“They seem to just show up. They seem to take the lead, which is really, really nice to have in the community.” – Interviewed partner

“Our partnership with Extension has really shown that this is a perfect partnership, and everything that Extension stands for ties directly into what we're trying to do with [other organizations] and addressing social determinants of health in [our community].” – Interviewed partner

“Their ability to communicate and be on the ground and educate and change, you know, have trust relationships locally and then our ability to have sort of funds and translate local need into state policy and some of that work, it just complements each other.” – Interviewed partner

Other cited benefits of a SNAP-Ed or University of Illinois Extension partnership included the following:

- ▲ **Having a strong connection with the University of Illinois.** Organizations appreciated having access to the high-quality, research-based information that comes from being associated with a large university.
- ▲ **Utilizing marketing and publicity expertise within the SNAP-Ed team.** Interviewees shared how their partnership with SNAP-Ed helped them develop high-quality communication materials for community events.
- ▲ **Building relationships with reliable staff.** Multiple interviewees shared how their connections and relationships with SNAP-Ed and University of Illinois Extension staff were crucial to connecting with other community organizations. Additionally, interviewees felt that they could count on SNAP-Ed or the University of Illinois Extension staff to provide the services promised and fulfill their program commitments.

For organizations that do not currently partner with IL SNAP-Ed, interviewees shared they did not know what types of resources were available through SNAP-Ed or how to engage with them. All organizations not currently partnering with SNAP-Ed indicated that they were interested in a potential partnership in the future and would like to learn more about the available resources.

“We have not worked directly with the program. I’m always looking for an opportunity to bring in any type of free programming or education to our community, whether we have the classes here at the hospital or we coordinate with the local library or something to have speakers and stuff come in.” – Interviewed partner

KEY COMMUNITY PARTNERSHIPS AND COALITIONS

Aside from partnering with SNAP-Ed, all interviewees were asked to highlight any other community partnerships that support their organizational initiatives. Examples of current community partners included the YMCA, community hospitals, health departments, faith-based organizations, food councils, food pantries, grocery stores, and community centers. In addition to partnering with established community organizations, some interviewees reiterated how crucial individual volunteers were to the mission and activities of their organizations. Interviewees spoke highly of their community partners and attributed the success of their initiatives to the collaborative nature of their efforts.

“I think that we have learned that we can continue to carry the banner of our organizations while working together. You know and do things well and eloquently together. So we’ve worked really hard on collaboration the last three years and I think Extension’s leadership has been prominent in that.” – Interviewed partner

“Everyone has a piece of their responsibility and I think that is really helpful because it keeps all the moving pieces moving and spreads out the burden of the work on any [one] organization or person. So I think that’s been really helpful.” – Interviewed partner

Further, some interviewees shared that they participate in different community coalitions that address broader issues around healthy eating and food security. While advocating for on-the-ground services, many of these coalitions assess the broader landscape and address issues such as SNAP benefits or state-wide nutrition policies.

ENGAGEMENT OF DIVERSE AUDIENCES IN COMMUNITY COALITIONS

Interviewees who were participating in community coalitions were asked if the voices of all groups affected by the actions of the group had a seat at the table and whether they were being included in meaningful ways in the activities of the coalition. Some interviewees indicated that their coalitions had conducted focus groups, surveys, and needs assessments to better understand the needs of the audiences they serve, whereas others indicated their coalitions have not done a good job engaging with priority populations in the past, but plan to prioritize this in the future. Furthermore, some noted that the pandemic also posed challenges engaging members of the community over the past three years due to fewer opportunities to meet in person and limited staff capacity. When asked if additional groups or individuals should be included in these efforts in the future, some interviewees mentioned the need to engage specific audiences, such as youth, families, older adults, people living in rural communities, and non-English speaking populations.

“We did a pretty comprehensive assessment of the pantries and what guests wanted. And you know, it came out loud and clear. They want to see more fruits and vegetables, more lean proteins, and they want to see culturally matched foods that are recognizable to their family.” – Interviewed partner

“We’ve had a lot of people talking about youth voice. We have not figured out how to engage youth very well. I know there’s a couple organizations that sort of do it sort of

holistically, but [we're trying] to figure out how to get the youth voice in and opportunities for that.” – Interviewed partner

KEY FUNDERS

Interviewees shared that their organizations receive funding from the following sources:

- ▲ Charitable Trusts
- ▲ Community Fundraisers
- ▲ Federal Agencies (Health Resources and Services Administration (HRSA), Delta Regional Authority)
- ▲ Grocery Retailers
- ▲ Foundations (e.g., Rockefeller Foundation)
- ▲ Individual Donations
- ▲ Non-Profit Organizations (Partnership for a Healthier America)
- ▲ Small Community Grants

Interviewees noted that while grants and donations were helpful, they did not provide consistent funding year-to-year, which poses challenges for program sustainability. Additionally, some interviewees shared concerns about the lack of funding in a post-COVID world.

“COVID funding that has come along with [the pandemic] has been great. I'm a little scared when those reimbursement reserves [go away], that's gonna hurt.” – Interviewed partner

LOOKING FORWARD

Interviewees were asked to share what they see their organization accomplishing in the future, how their organization plans to sustain current programs, and what strategies they see as furthering their organization’s impact. Across the board, interviewees shared that they would like to expand the reach of their services, whether it be reaching out to a broader population, providing an increased number of services to their current population, or growing their partnerships within their communities. When asked how their organization could expand their programs, multiple interviewees expressed the need for increased funding, more staff and volunteers, and better resource allocation along with continuing to foster partnerships with their community allies.

“The strategy is to continue to work with [community partners]. It is the ability to work with each other and not have egos... the biggest thing is [working] together as a community, not against each other.” – Interviewed partner

“My... goal in my position is to make [our organization] more than a food distributor... and leverage SNAP-Ed funds because they're the people who get the funding to provide recipe cards and education. Through this partnership we will focus on the retention of our programs.” – Interviewed partner

Almost all interviewees mentioned that they plan to continue to engage with their partners, including SNAP-Ed, community organizations, or coalitions. Interviewees also shared the need to engage with different populations to further their organization’s reach and impact, such as youth, families, and racially and ethnically diverse communities.

“I think that empowering youth and empowering families to be able to make healthier choices is always really good. Prevention is always easier than interventions later.” – Interviewed partner

“We have to figure out how to engage the Black community more in our work.” – Interviewed partner

LESSONS LEARNED AND ADVICE FOR THE FUTURE

At the conclusion of each interview, interviewees were asked to share lessons learned and advice for implementing healthy strategies in Illinois communities. Interviewees expressed that community partnerships and engaging with coalitions helps not only reach common goals but also allows each organization to focus on their areas of expertise. Interviewees expressed the need to work with individuals who share a common purpose.

“Make sure you find other people to help you that want to do it... my wife and I learned this very quickly. You have to attract other folks that want to help because it takes a lot of people, a lot of energy to do any of these initiatives.” – Interviewed partner

Another interviewee expressed similar sentiments but went further by noting that it is necessary to gather input and feedback from the priority populations prior to implementing the work. Additionally, understanding what other organizations do helps to ensure efficient use of already limited resources by filling gaps, sharing resources, and avoiding duplication of efforts. Almost every interviewee expressed that building and maintaining strong relationships is at the core of what they do.

“...Involving our audience that we're trying to target. So, I would say, what did they really want? What do they think is beneficial in this area? Working together and listening to the people is important.” – Interviewed partner

“I did lots of research and networking because I don't feel like I would have gotten anything off the ground without [those] relationships.” – Interviewed partner

In terms of lessons learned, many of the sentiments shared by interviewees aligned with relationship building and engaging their communities in meaningful ways. One interviewee noted the importance of just getting the community work initiated and having patience throughout the process.

“Don't wait until everything is perfect to start. And it's not going to happen overnight.” – Interviewed partner

Partner Interview Conclusions

Interviewees described working on a variety of successful initiatives designed to promote health and wellness within their communities; the potential to expand these efforts highlights the need for reliable and sustainable funding sources and meaningful engagement of priority populations.

Partner organizations described implementing a variety of initiatives within their communities focused on health and wellness, food access and food security, and PSE change. They serve a variety of different communities, from small towns and villages to regional and statewide efforts. All interviewees expressed an interest in expanding the reach of their services, whether it be reaching out to a broader population, providing an increased number of services to their current population, or growing their partnerships within their communities. With expanded services, partners will need to leverage existing resources and identify reliable funding sources that will help ensure sustainability of these initiatives going forward. Furthermore, as noted by several interviewed partners, there is ongoing need to engage priority populations in meaningful ways to help plan and implement successful initiatives.

Interviewees encountered challenges to their work, especially during the pandemic, but relied on community relationships to help overcome these challenges.

Interviewed partners shared that limited funding, staffing challenges, volunteer burnout, lack of time, and unclear directions or leadership around certain initiatives were the most pressing concerns within their respective organizations. Additionally, the impact of the COVID-19 pandemic shifted the focus of many community partners away from providing services and instead toward the pandemic response. Despite these challenges, interviewed partners were able to further their work by coordinating with other partners within their communities, such as SNAP-Ed, the University of Illinois Extension, and other community organizations with similar missions and goals. While the COVID-19 pandemic shed light on the inequities and disparities of food access within Illinois communities, continuing to build strong coalitions and partnerships, working toward a common goal, and leveraging one another's resources will continue to help address unmet need, as interviewed partners observed during the pandemic.

Interviewees value having a strong connection with the University of Illinois Extension and SNAP-Ed.

In many instances, the interviewed partners were actively working alongside SNAP-Ed and the University of Illinois Extension, and they described working towards common goals and expanding one another's reach to make an impact on their communities. Organizations that partner with SNAP-Ed and University of Illinois Extension value the resources, research-based materials and information, and connections to other community partners that SNAP-Ed and the University of Illinois Extension have to offer. Some partners were unaware of the types of resources available through SNAP-Ed or how to engage with them. Finding ways to connect SNAP-Ed with partners doing similar work within the same communities is essential to leveraging one another's resources and should remain a priority in the future.

STAFF FOCUS GROUPS AND SURVEY

The final component of the partnership and coalition assessment consisted of focus groups and a brief survey with local SNAP-Ed staff. Focus group discussions sought to determine how partnerships and coalitions contribute to broad community-wide changes and policy implementation relative to healthy eating, physical activity, food access, and obesity prevention within networks. The brief survey captured information such as job role and length of employment.

Methodology

INSTRUMENT DEVELOPMENT AND MEASURES

In partnership with the University of Illinois Extension SNAP-Ed, Altarum developed a focus group facilitator guide and a brief survey for local staff to complete. The purpose of the focus group discussions was to learn how partnerships and coalitions contribute to broad community-wide changes and policy implementation relative to healthy eating, physical activity, food access, and obesity prevention within the sampled community networks. Focus groups were designed to last approximately 45–60 minutes. In addition to the focus group discussion, Altarum developed a brief survey to capture information about focus group attendees (e.g., job role, length of employment). The survey was designed to take approximately five minutes to complete. The topics covered in the focus group facilitator’s guide and survey are outlined in **Exhibit 2.41**. See **Appendix E** for the focus group guide and survey.

Exhibit 2.43. Focus Group and Survey Topics

Topic Area	Focus Group	Survey
Employer (University of Illinois Extension or Chicago Partnership for Health Promotion (CPHP)), job role, length of employment and community network served		X
Key partnerships	X	
Partnerships unable to establish	X	X
Effect of pandemic on partnerships	X	
Major successes relative to healthy eating/nutrition, physical activity, food access, and/or obesity prevention in community network	X	
Sustainability of strategies	X	
Engagement of diverse SNAP-eligible audiences	X	
Barriers to implementing healthy strategies/ways to overcome barriers	X	
Changes observed within community relative to healthy eating/nutrition, physical activity, food access, and/or obesity prevention	X	
Perceived value of SNAP-Ed within the community	X	

FOCUS GROUP RECRUITMENT AND DATA COLLECTION

Staff members from sampled networks were invited to participate in focus groups. University of Illinois Extension SNAP-Ed identified community workers, program coordinators, and unit educators to participate in focus groups and provided the names and contact information to Altarum. Additionally, staff members from CPHP were identified and their contact information was also provided to Altarum. Altarum scheduled focus groups so that staff members working within the same community networks were grouped together. Focus groups consisted of two to four attendees, and in most instances, consisted of a variety of staff members serving in different roles. In some instances, when group scheduling could not be coordinated, Altarum conducted one-on-one interviews with staff members. The same facilitator guide was used to conduct interviews as focus groups; therefore, for the purposes of this report, all participants will be referred to as “focus group participants.” A total of 21 staff members participated in either a focus group or an interview representing the following community networks: Peoria/Pekin, Springfield, Sparta & Murphysboro, and Auburn Gresham. All focus groups and interviews were conducted virtually by one to two experienced Altarum facilitators (leader and note-taker/assistant) and were audio-recorded for notetaking purposes. All staff members who participated in the focus groups or interviews were sent a brief survey to complete. A total of 16 staff members completed the survey, representing a 76% response rate.

IL SNAP-Ed staff work with local coalitions on a quarterly basis to complete the SNAP-Ed Coalition Survey collecting data on coalitions’ capacity and progress adopting community changes. Findings from the coalition survey are presented in call-out boxes throughout this section to explore any relationships with data and information reported by staff in the survey or throughout focus groups.

DATA ANALYSIS AND REPORTING

The focus group recordings were professionally transcribed. Focus group transcripts were uploaded into NVivo 11, a qualitative data analytic software. A hierarchical coding structure was developed, which enabled the examination of broad themes, as well as specific topics within those themes. The initial coding structure was based on the broad themes of the interview guide. Particular attention was paid to recurring ideas and thoughts, as well as opposing viewpoints. When appropriate, verbatim comments are provided from the KIs to illustrate themes and variations. Quantitative responses to the web-based survey were tabulated and reported in aggregate form.

Focus Group Findings

FOCUS GROUP PARTICIPANT CHARACTERISTICS

The majority (87%) of participants who responded to the survey were employed by the University of Illinois Extension, and among these respondents, the majority were community workers (57%), followed by unit educators (29%) and program coordinators (14%) (see **Exhibit 2.42**). Fewer survey respondents were employed by CPHP (13%), and these respondents indicated their roles were intervention coordination and a PSE generalist. Among all survey respondents, the majority (75%) had four or more years of experience (see **Exhibit 2.43**).

Exhibit 2.44. Staff Member Roles

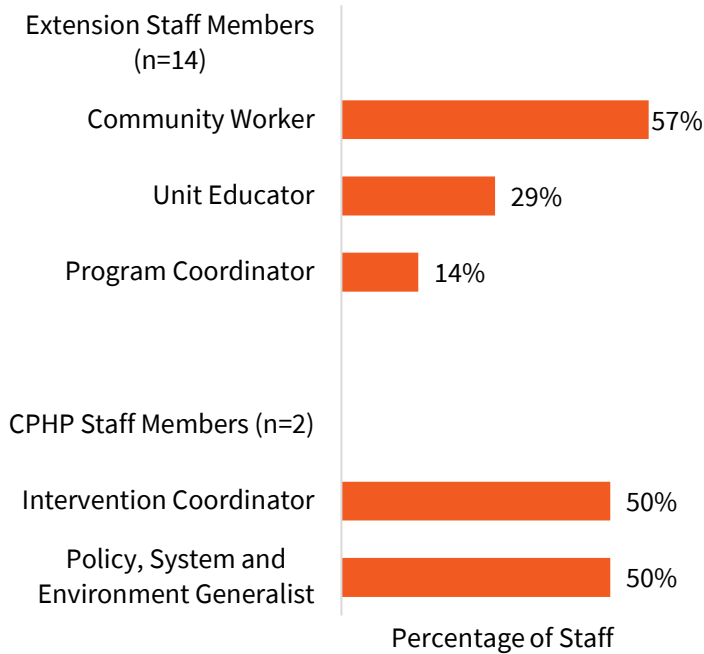
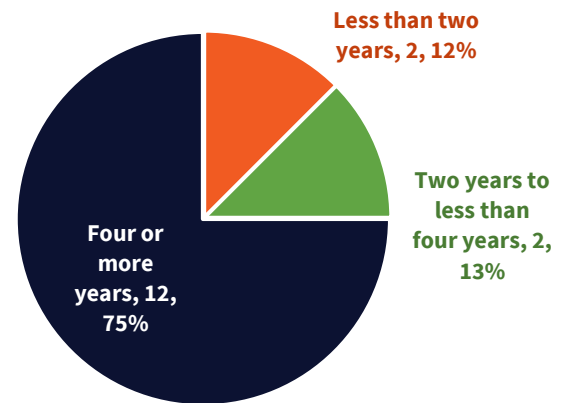


Exhibit 2.45. Staff Member Years of Experience (n=16)



KEY PARTNERSHIPS

All focus group participants were asked to describe the key partners who support efforts around healthy eating/nutrition, physical activity, food access, and obesity prevention within their community networks. The types of partners described included food access partners such as farmers markets, community gardens, food pantries and food banks, government agencies and programs such as WIC and local health departments, housing authority and senior living communities, and schools. Some focus group participants also described coalitions as their key partners, such as wellness task forces and food coalitions.

“I have a couple of food pantries that I go to that really promote healthy eating and they try to get produce in their food pantry. It’s not just a staple-type food pantry. They really utilize what SNAP-Ed brings to the food pantry and they just help me as much as possible.” – Local staff member

“I’d say one of the key partners is probably the farmers market, especially now with it being summer. They provide all of the Link Up and the SNAP benefits, but they also provide kids programs who are able to go there. They do a Power of Produce programs, so we’re able to teach there, but then also hand out recipe cards and feature recipes and everything on the site. They get a lot of SNAP participants at the farmers market... I think they’re a key partner because they support what we do, but then we can also give our support, so it works both ways.” – Local staff member

Survey respondents were asked to indicate if there are any organizations within their community network with whom they would like to establish partnerships but have been unable to because the

organization chose not to partner with SNAP-Ed or they were unable to develop a partnership. Survey respondents most frequently indicated no (44%, n=7) or unsure (25%, n=4) in response to this question; however, nearly one-third (31%, n=5) said yes. Among those who said yes, three said they were unable to partner with a government program/agency, three were unable to partner with schools, two were unable to partner with faith-based organizations, one was unable to partner with an agricultural organization (including farmers markets), and one was unable to partner with a food store. Focus group participants elaborated more on the types of organizations with whom they would like to establish partnerships. This included locations that had previously provided SNAP-Ed programs but have been unable to since the start of the pandemic, such as senior housing sites, schools, and food pantries. Other potential partners include community colleges, the Illinois Department of Human Services offices, grocery stores, hospitals, and the Aldermans' offices. One focus group participant indicated a desire to reach out to the entire community and not just focus on low-income individuals.

Focus group participants noted that the pandemic presented a barrier to establishing and continuing partnerships, as many organizations were or are no longer allowing outside entities in due to safety precautions. Additionally, staff turnover at organizations was described as a barrier to establishing partnerships. Focus group participants also mentioned a lack of time and capacity to build new partnerships.

“Well, we’ve been trying to get into a little bit more of the senior buildings but because of the pandemic, a lot of the senior buildings were closed because they get – it’s easier for them to get a little bit sick. So, just waiting for the pandemic to hopefully be over and just start services completely again, that would be great.” – Local staff member

“I think we have strong relationships and strong partnerships with almost each and every one of the people on that list. I think where we struggle is where we’ve seen staff vacancies or staff turnover in partner agencies and just having to rebuild that relationship.” – Local staff member

“I started back in August of last year. So, the networking aspect, building up my connections and stuff like that, I think that has a lot to do with why I can’t do some of the programming that I want to, but I’m working on it and I’m getting there.” – Local staff member

By the end of Quarter 4 in FFY 2022, all coalitions were classified by IL SNAP-Ed staff as either in the Maintenance or Sustainability stage of development.

- ▲ In the Maintenance stage, a coalition has begun initiating projects and initiatives, such as developing logic models, creating evaluation plans, conducting surveys, and monitoring member feedback.
- ▲ In the Sustainability stage, a coalition is maintaining the benefits of the program over time, developing resources, and maintaining a funded infrastructure to sustain activities and outcomes, and build community capacity.

All 13 coalitions in Tier 1 were classified in the Maintenance phase of development. In Tier 2, six coalitions were classified in the Sustainability phase of development, and one coalition was classified in the Maintenance phase.

STATUS OF COMMUNITY ENVIRONMENT

Focus group participants were asked about the changes they may have observed within their communities over the past three years relative to nutrition, physical activity, and food access. Regarding food access and nutrition, some focus group participants noted a reduction in food access as the result of the pandemic. Some communities experienced grocery store closures. However, others described increased food access because of all the resources mobilized during the pandemic. Furthermore, some focus group participants believed the pandemic presented an opportunity to bring food access initiatives to the forefront.

“I really struggle with this question because the whole pandemic, I think, brought more food into our communities, having free meals to all school kids. Some of those things that were federal programs or even state-funded programs had some huge impact on our community.” – Local staff member

“COVID brought food access into the spotlight and it was the perfect time to move through some of those things and develop some of those systems and different things that we are doing now.” – Local staff member

“We are creating a farmers’ market food hub that has eight farmers’ markets in it that are all accepting SNAP EBT [electronic benefits transfer] this summer. So, that’s exciting. They’re trying to make food more accessible and promoting more healthy local produce. I mean, I think we’ve got some great things happening, but are we better off, are fewer people hungry? I’m not sure. I’d say we’re about the same. We have some great initiatives, but we’re probably about the same if you look at our statistics and our data.” – Local staff member

“I would say specifically to food access in the last three years with all the pandemic, I think it’s become more like the food access locations, emergency food shelters, pantries, they’ve become more known and appreciated, and so they’re getting more recognition, but they’re also taking more, at least, the ones I go to, more pride in what they do and how they help so they’re wanting to enhance their pantries. They’re wanting to offer more and they’re wanting to provide more for their clients.” – Local staff member

“Before the pandemic hit and we were out there hitting the streets, hitting our different sites, the people, they loved it. I mean, they literally look forward to what I was giving out for the next week because it was something different for them. When the pandemic hit, it changed everything. We really haven’t gotten back on scale since then.” – Local staff member

Similarly, focus group participants were split on whether physical activity has improved or worsened over the past three years. In some communities, physical activity worsened because of the pandemic and other community factors. However, others noted initiatives that have increased opportunities for physical activity, such as the development of walking paths and trails, placement of prompts to encourage physical activity, expansion of sidewalks, and community gardens. Gyms and health clubs were described by some as being too costly for most low-income families.

“It’s really challenging to have PSE interventions with physical activity because physical activity is something that you have to make that choice and make a special effort, and so I think we have a hard time getting organizations onboard to work with us for physical

activity PSE change but we're working on it." – Local staff member

"I think people got used to living inside and not going out so that was a big thing that they called out as needing help but yes, HEAL [Healthy Eating and Active Living] has that built environment and physical activity piece, but we just haven't been able to move that needle." – Local staff member

"We've been able to go in and make some environmental changes in those partner sites such as implementing a stairwell promotion strategy. So, promoting stairwell usage as opposed to their elevators, so just giving them the idea that physical activity is a really good component of our lives, but also being able to share within that this is a different strategy that you could use. We also have implemented what we call mile markers strategies, which means that we will put placards. We will mount placards in the hallways of these different buildings to show that the residents have walked half a mile, or they've walked a mile, so the hallways are marked, and we're able to give them an idea of changing the environment in which they live in, and then promoting the fact that physical activity, again, is very important." – Local staff member

SUCCESSES RELATIVE TO HEALTHY STRATEGIES

Focus group participants were asked about major successes they may have seen relative to healthy eating/nutrition, physical activity, food access and/or obesity prevention within their community networks over the past three years. Several focus group participants spoke about their ability to reach youth and adults through direct programming and the positive feedback they receive from these individuals, while others noted successes from broader coalition work, such as mobile markets and gardening initiatives. Several focus group participants described initiatives that were designed for specific target audiences, such as Hispanic populations. Some successful initiatives emerged from the pandemic, such as providing home gardening kits to students, mobile food pantries, and more access points for healthy foods.

"So, over the past three years, I think we've seen a lot of success in that space of systems work and coalition work. Both of our food banks adopted nutrition policies, healthy nutrition policies. They also – most of the food banks are really involved with mobile pantries especially during the pandemic but it even has continued, and that effort is supported by a local coalition as well." – Local staff member

"We've had a lot of success within our SNAP-Ed program. I think it starts with our community workers in schools and developing those relationships with schools. This summer, we have kicked off some book walks, working with the local school or local parks and libraries, and we've been successful at sharing that information throughout our community networks." – Local staff member

Focus group participants described several influential partners, such as a development corporation, community garden networks, food pantries/banks and food pantry networks, and schools. In several instances, focus group participants reported that SNAP-Ed helped these partners implement healthy policies within their respective organizations, such as the adoption of nutrition policies in food banks and wellness policies in schools.

Several coalitions impacted the communities they serve throughout FFY 2022:

Ten coalitions from Tier 1 accomplished 29 goals, including:

- ▲ Organized a new/improved community service to improve health, safety, or food access (n=7)
- ▲ Adapted a national initiative to state/local situations (n=4)
- ▲ Improved coordination of health and food systems (n=4)
- ▲ Implemented a targeted or community-wide social marketing campaign (n=3)
- ▲ Influenced a new/changed policy (n=3)
- ▲ Implemented a targeted or community-wide educational campaign (n=2)
- ▲ Influenced changes to community transit to improve access to health and food resources (n=2)
- ▲ Brought a new business to community/neighborhood to improve health, safety, or food access (n=1)
- ▲ Created or made changes to built environment for improved safety or health in the community (n=1)
- ▲ Developed an ongoing monitoring system for adopted community changes (n=1)
- ▲ Improved state/local health or food security statistics (n=1)

Two coalitions from Tier 2 accomplished 2 goals, including:

- ▲ Created or made changes to built environment for improved safety or health in the community (n=1)
- ▲ Organized a new/improved community service to improve health, safety, or food access (n=1)

SUSTAINABILITY OF STRATEGIES AND OPPORTUNITIES FOR GREATER IMPACT

When asked about the sustainability of strategies to drive long-term impact within community networks, several focus group participants noted the importance of being a reliable resource for partner organizations, leveraging the strengths of partner organizations, and collaborating with one another to drive long-term success and sustainability. Sharing successful examples with other communities (such as the mobile market initiative) was also described as a way to help motivate other communities to do similar work that has proven to be successful. Providing nutrition education to students in schools was described by one focus group participant as a sustainable approach.

“I think sustainability comes when you’re still making yourself present even after you’ve completed services. So, still going to those coalition meetings because it may be an organization in that meeting that could use your services. So, just pretty much staying relevant with coalitions, because I think that’s a hub of networks that come together.” – Local staff member

“[B]uilding relationships, is key to both direct-ed and PSE work and then leveraging the strengths of our partners. We can’t do it all and that’s okay. I think that will really drive

success.” – Local staff member

“Each agency that serves on that steering committee takes a huge piece of making that network work. So, with it not being relied on just one person, I think that increases the opportunities for sustainability.” – Local staff member

“I think our staffing structure with our community workers going directly into the schools, I think that helps build sustainability of providing that nutrition education to students. I’m excited that we have expanded over the last few years, the curriculum available, so that we can teach older kids, reach older kids as well. I think that having that piece in schools takes that load off of the schools and the schools appreciate that we’re able to offer that.” – Local staff member

Focus group participants offered suggestions for enhancing or expanding healthy strategies for greater impact within their networks. One focus group participant suggested more collaboration and conversations between CPHP and University of Illinois Extension to share successful strategies and approaches. Several focus group participants suggested exploring new evidence-based curricula or allowing a broader selection of resources and tools to be used during direct education classes. Other suggestions included expanding to new settings, such as grocery stores, and expanding partnerships that have historically been difficult to establish, such as working with the local health department and WIC. One suggestion was to work to develop more choice pantries in the neighborhood, while another focus group participant suggested to continue the food pantry network initiatives while finding ways to coordinate and avoid duplication of efforts with partner organizations. Additionally, some focus group participants described successful partnerships with hospital systems and the work they have done around health screenings, screening for food insecurity, and referrals to food pantries – initiatives that could be expanded for greater impact in the future.

“I think we need to probably explore new evidence-based curriculum. The only reason why I say that is because some – the environment has changed... there are different ways that we could teach it that may have a more impact of interest to participants. So, not that what we’re teaching right now is outdated, but I think we should find evidence-based curriculum that’s pretty much a little bit maybe up-to-date, so to speak, to be relevant in this time.” – Local staff member

“In two neighborhoods, two of our most impoverished neighborhoods, there’s no longer a grocery store. We have the Dollar General or some corner stores, things like that. I’ve always thought corner store grocery store work would be a good place for us to be. I feel like that is definitely a collaboration effort just to try to work with entities like that. I’ve never done any work like that, but I think that would be a good place to be.” – Local staff member

“Maybe we don’t need 40 pantries, maybe we 20 pantries that are at different times rather than duplicating that effort. So just identifying within those spaces how we could further refine the work we’re doing.” – Local staff member

“We had started working with our food pantries to do health screenings and food pantries and mobile markets. They ended up in eight events screened over 100 community members. Two of them were sent directly to the ER with undiagnosed diabetes, and one was rationing blood pressure medication, but 78% of the people that

were screened needed health care follow-up. We heard stories like, “I haven’t been to the doctor in 15 years, this will make me go to the doctor.” So, they were very happy with the way that went.” – Local staff member

ENGAGING DIVERSE AUDIENCES IN DECISION-MAKING

Focus group participants were asked if voices of diverse SNAP-Ed eligible individuals affected by community efforts were present at the table during planning and decision-making. The majority indicated they were attempting to do this in one way or another. In some instances, members of the community have been asked to assist with needs assessments and prioritization processes or asked to offer their opinions through surveys. While many focus group participants described the importance of listening to diverse individuals, many believed there was room for improvement (both within the University of Illinois Extension and external to it) and that more training is needed.

“I think we have tried to do that. We might be able to do that a little bit better, but I do think there are definitely opportunities where we have listened to the SNAP-Ed voice in our communities.” – Local staff member

“I would say there needs to be more work done in that area. In Food Pantry Network, we have some, but in the broader community, coalitions, and partnerships, there isn’t.” – Local staff member

“We need diversity, I feel like, within Extension, and that is something that is starting to really pick up momentum. We are working on diversity inclusion efforts, but they might see us as just [for] certain communities.” – Local staff member

“I think that we probably need more of training on diversity or just different cultural practices...we had one several years ago called Navigating Differences, but I think it should be more often on learning how to diversify better.” – Local staff member

BARRIERS TO IMPLEMENTING HEALTHY STRATEGIES

Focus group participants described barriers to implementing healthy strategies within their community networks noting a variety of issues affecting community members, such as transportation issues, food access, limited incomes, inflation, and lack of childcare. Participants in one focus group described the difficulties staff members had in reaching out to specific diverse populations and noted the importance of having the right staff member implementing strategies in the community.

As for the strategies themselves, one focus group participant noted that they take a long time to produce results – they are not just one-off activities that are done after a few years. Some staff members have faced barriers to reestablishing relationships with partner organizations and connecting with program participants after the pandemic. Some focus group participants also described difficulty reaching adult program participants while they have more success reaching youth. A general lack of awareness of the University of Illinois Extension and SNAP-Ed within the community was described as a barrier by some focus group participants.

“Online is fine in certain instances, but sometimes I think it’s that we’ve got to make those personal connections with our people. A lot of times, I will go to a food pantry and I’m there and I had to reestablish myself after COVID because they weren’t used to seeing my face again.” – Local staff member

“I think part of it is that the SNAP-Ed program in Extension and Extension just in general, at least in [our city] is not a well-known program. It’s not a well-known name. We have 4-H and so people know a lot about 4-H, but I just think SNAP-Ed isn’t specifically something that you hear a lot of in [our city], so I think that affects it because they don’t really know maybe who we are, what we do and what that entails.” – Local staff member

Suggestions to overcome barriers to implementing healthy strategies and to better reach the SNAP-Ed eligible audience included offering incentives to program participants (e.g., grocery store gift cards, matching dollars to spend on produce), providing information in multiple languages, and returning to a choice model in food pantries. The statewide social marketing campaign was also described as something that could help reach more program participants, especially if the messages were tied back to what is happening locally.

In terms of PSE strategies, building strong relationships with partner organizations was noted as one way to overcome barriers. One focus group participant suggested supporting agencies as they apply for grants, as well as providing them with training and technical assistance.

“In terms of the PSE work and the coalition work and those sorts of partnerships, I think it takes building the relationship and then having the other partner or organization understand what’s in it for them, how they can contribute in making it beneficial for both entities.” – Local staff member

VALUE OF SNAP-ED WITHIN THE COMMUNITY

Focus group participants were asked to what degree SNAP-Ed is valued by the community and other organizations within their community networks. Participants generally agreed that SNAP-Ed programming is valued; however, the programming might not always be associated with SNAP-Ed. Furthermore, some organizations and community members might not be aware of SNAP-Ed or understand all that the program has to offer. Some focus group participants mentioned that members of the community might recognize the University of Illinois Extension or CPHP, but not SNAP-Ed itself. Program activities that focus group participants noted as being particularly valued by community members included representation on coalitions, task forces and advisory councils, and the identification and leveraging of resources.

“I feel like those partners that we work with within our network have a good understanding of our value and what we can offer. I think that’s true across the board from direct ed to PSE. We have a lot of longstanding relationships...” – Local staff member

“I just feel like whether it be kids or adults, it just seems like we’re always a staple in the community as far as a trusted source of education. We go there to teach, provide education, and people know us by that. So, if they need any other questions, they know they can contact us or ask us questions while we’re there. They know where to find us, generally. So, it’s good to be a trusted piece of the community.” – Local staff member

“I don’t think we’re valued greatly by those organizations that we’re not currently partnering with because [I] don’t think they even realize what we do. I mean, there are exceptions, places where we aren’t able to work and we’ll still give out our name and give out our information, but I think as a whole, I think it goes back to just not just being as well-known as maybe we could be or should be.” – Local staff member

Staff Focus Group Conclusions

Local staff members have established strong partnerships with a variety of organizations within their community networks.

Staff members working within their community networks, especially those who were in their positions prior to the pandemic, have established strong community partnerships. Newer staff members who started after the pandemic have struggled more with establishing partnerships, in part due to limited opportunities to network.

As the pandemic shed light on food access issues within community networks, a variety of successful initiatives emerged that were spearheaded by local staff members and their partners.

As local staff members noted, the pandemic brought food access issues to the forefront. This resulted in many successful initiatives that have the potential to improve food access within community networks. There were mixed reactions as to whether food access has actually improved, worsened, or stayed the same over the past three years, but strong partnerships and innovative approaches (e.g., mobile food pantries and more access points for healthy foods) indicate progress is being made in this area. In FFY 2022, a total of 31 goals identified in the Coalition Survey were achieved, most commonly including new/improved community service to improve health, safety, or food access. As local communities continue to be impacted by inflation and high food costs, strengthening these efforts should remain a priority.

While SNAP-Ed programming is valued by the community, there may be a lack of name recognition or association of the programming with SNAP-Ed.

Nearly all local staff members believe their programs are valued within their community networks. However, not all community members and partners recognize or associate the programming with SNAP-Ed. Many partners might associate the programming with the University of Illinois Extension or the CPHP, or with the initiatives themselves. While this was described as a barrier to implementing successful strategies by some, not all local staff members considered it a barrier since the work itself is valued. The greater barrier appears to be lack of recognition and awareness of overall programming, something that may be remedied by more cohesive branding and messaging across the state aligned with social marketing efforts.

There is an ongoing need to engage diverse audiences in decision-making.

While local staff members are working to engage community members in program planning decisions, most acknowledged a need to do more in this area. Having more diversity among staff members was recommended to better reflect audiences being reached by programming. Staff members may also benefit from more training and technical assistance in the areas of diversity, equity, and inclusion with an emphasis on how to conduct outreach and programming with diverse audiences.



Part 3: Impact Evaluation of the Community Network Approach

INTRODUCTION

Part 3 of the network evaluation (September 2021–April 2022) focused on determining the ways in which SNAP-Ed programming impacts eligible audiences living in SNAP-Ed networks. A population-level survey was developed to identify relationships between SNAP-Ed program exposure and individual health behaviors in relation to differences in networks, demographics, geography, or other socio-economic characteristics. Population-level indicators measured fruit and vegetable consumption, physical activity, food security, and quality of life. Individual-level indicators measured intent to change behavior and food resource management.

The survey was administered at two time points, six months apart (“baseline” and “follow-up”), to a group of eligible residents in sample networks as well as to a demographically similar comparison group of people not living within a SNAP-Ed network. The following is a description of the methodology, findings, and conclusions from the baseline and six-month follow-up evaluation.

METHODOLOGY

Instrument Development and Measures

In partnership with IL SNAP-Ed, Altarum developed baseline and follow-up impact evaluation instruments drawing from the *SNAP-Ed Evaluation Framework and Interpretive Guide*.² The instruments were programmed to be administered entirely online and made available in both English and Spanish to support engagement with growing Hispanic communities. The instruments were designed to be clear, culturally and linguistically appropriate, and to capture diverse opinions and experiences, while minimizing respondent burden. They also included previously validated or tested questions where available and met plain language standards.³ Specific indicators assessed included population-level measures related to fruit and vegetable consumption, physical activity, food security, and quality of life (see **Exhibit 3.1**). Individual-level indicators, such as intent to change behavior and food resource management, assessed intermediary changes in behavior that may not be detectable at the population level. See **Appendix F** for the baseline and follow-up survey instruments.

Exhibit 3.1. Community Network Impact Evaluation Outcomes and Measures

Outcomes (SNAP-Ed Evaluation Framework Indicator)	Survey Questions
Self-reported health status	<ul style="list-style-type: none"> • Would you say that in general your health is:
Fruit and vegetable consumption (R2)	<ul style="list-style-type: none"> • During the past month, how often did you... <ul style="list-style-type: none"> - Eat a green leafy or lettuce salad, with or without other vegetables? - Eat any kind of fried potatoes, including French fries, home fries, or hash browns? - Eat any other kind of potatoes, or sweet potatoes, such as baked, broiled, mashed potatoes, or potato salad?

² USDA, Food and Nutrition Service (FNS), June 2016. *The Supplemental Nutrition Assistance Program Education (SNAP-Ed) Evaluation Framework: Nutrition, Physical Activity, and Obesity Prevention Indicators, Interpretive Guide to the SNAP-Ed Evaluation Framework* (updated July 2018). Downloaded December 2019 from <https://snaped.fns.usda.gov/>.

³ Checklist for Plain Language found at <https://www.plainlanguage.gov/resources/checklists/checklist/>.

Outcomes (SNAP-Ed Evaluation Framework Indicator)	Survey Questions
	<ul style="list-style-type: none"> - Eat other vegetables not including lettuce salads and potatoes? • During the past month, how often did you... <ul style="list-style-type: none"> - Drink 100% fruit juice such as apple or orange juices? Do not include fruit-flavored drinks or fruit juices you added sugar to. - Eat fruit? Include fresh, frozen, or canned fruit. Do not include juices.
Healthy eating (Stages of Change) (ST1)	<ul style="list-style-type: none"> • How long have you been eating [fruit/vegetables] this often? • Which of the following statements do you agree with most? <ul style="list-style-type: none"> - I am not thinking about eating more [fruit/vegetables]. - I am thinking about eating more [fruit/vegetables] and planning to start within the next month. - I am definitely planning to eat more [fruit/vegetables] in the next month.
Access to healthy foods	<ul style="list-style-type: none"> • What are the main reasons why you do not eat more fruits and vegetables? • Do you agree or disagree with the following statements? <ul style="list-style-type: none"> - Near where I live, it is easy to buy fresh fruits and vegetables. - Near where I live, the produce is of high quality. - Near where I live, there is a large selection of fresh fruits and vegetables.
Food resource management (ST2a, ST2m)	<ul style="list-style-type: none"> • How confident are you that you can buy healthy foods for you or your family on a budget? • How confident are you that you can cook healthy foods for you or your family on a budget?
Physical activity (R7)	<ul style="list-style-type: none"> • In the last seven days, on how many days were you physically active where you breathed harder than normal for more than 10 minutes? • About how long did each of these physical activity sessions last?
Physical activity (Stages of Change) (ST3b)	<ul style="list-style-type: none"> • About how long have you been participating in this amount of physical activity? • Which of the following statements do you agree with most? <ul style="list-style-type: none"> - I am not thinking about being more physically active. - I am thinking about being more physically active and plan to start doing so in the next six months. - I am definitely planning to be more physically active in the next month.
Access to physical activity	<ul style="list-style-type: none"> • What are the main reasons why you do not get more physical activity? • Do you agree or disagree with the following statements? <ul style="list-style-type: none"> - Near where I live, there are safe outdoor spaces where I can be active (like parks, fields, roads, sidewalks, bike lanes, paths). - Near where I live, there are free or low-cost indoor spaces where I can be active (like gyms, community centers, fitness centers). - Near where I live, there are safe routes for walking.
Exposure to SNAP-Ed	<ul style="list-style-type: none"> • Baseline: Have you ever visited an informational table hosted by IL SNAP-Ed? Follow-up: Over the past six months, have you ever visited an informational table hosted by IL SNAP-Ed? • Baseline: Have you ever participated in a class taught by IL SNAP-Ed about nutrition, eating healthy, saving money on food, cooking, planning meals, or physical activity? Follow-up: Over the past six months, have you participated in a class taught by IL SNAP-Ed about nutrition, eating

Outcomes (SNAP-Ed Evaluation Framework Indicator)	Survey Questions
	<p>healthy, saving money on food, cooking, planning meals, or physical activity?</p> <ul style="list-style-type: none"> • Baseline: Has your child (children) ever participated in a class taught by IL SNAP-Ed? Follow-up: Over the past six months, has your child (children) ever participated in a class taught by IL SNAP-Ed? • Baseline: Have you ever visited IL SNAP-Ed’s website called “Eat.Move.Save.” (https://eat-move-save.extension.illinois.edu/)? Follow-up: Over the past six months, have you visited IL SNAP-Ed’s website called “Eat.Move.Save.”? • Baseline: Have you ever used the Find Food IL Map on the Eat.Move.Save. website to find food resources? Follow-up: Over the past six months, have you used the Find Food IL Map on the Eat.Move.Save. website to find food resources? • Baseline: Have you ever participated in the Eat.Move.Save. Healthy Text Program for Illinois Families? Follow-up: Over the past six months, have you participated in the Eat.Move.Save. Healthy Text Program for Illinois Families? • Baseline: Have you ever received the Eat.Move.Save. Healthy eNewsletter from IL SNAP-Ed? Follow-up: Over the past six months, have you received the Eat.Move.Save. Healthy eNewsletter from IL SNAP-Ed?
Healthy actions	<ul style="list-style-type: none"> • After participating in an IL SNAP-Ed class, visiting the Eat.Move.Save. website, using the Find Food IL Map, receiving a healthy text or eNewsletter, did it cause you to take any of the following actions?
Food insecurity (R6)	<ul style="list-style-type: none"> • For these statements, please indicate whether the statement was often true, sometimes true, or never true for you or your household in the last 12 months. <ul style="list-style-type: none"> - The food that we bought just didn’t last, and we didn’t have money to get more. - We couldn’t afford to eat balanced meals. - In the last 12 months, did you or other adults in your household ever cut the size of your meals or skip meals because there wasn't enough money for food? - How often did this happen? - In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money for food? - In the last 12 months, were you every hungry but didn't eat because there wasn't enough money for food?

Note: questions were identical between baseline and follow-up surveys unless otherwise noted.

To determine respondents' readiness to make positive dietary and physical activity changes, the Stages of Change model⁴ was used to place people on a continuum of change. Several questions were asked to put respondents into one of the five stages, as described below.

1. Pre-contemplation: respondent has no intention to change behavior in the next six months.
2. Contemplation: respondent intends to change behavior in the next six months.
3. Preparation: respondent intends to take action in the next 30 days and has taken some behavior steps in this direction.
4. Action: respondent has changed overt behavior for less than six months.
5. Maintenance: respondent has changed overt behavior for more than six months.

Fruit and vegetable consumption questions from the Behavioral Risk Factor Surveillance System (BRFSS)⁵, known to be reliable and valid measures, were adapted for self-administration. This approach has been used in similar evaluations.⁶ A composite variable for vegetable consumption was created by calculating daily consumption of each vegetable category included in the survey and summing all to obtain total daily vegetable consumption. For fruit, daily consumption of fruit and fruit juice was combined to get total daily fruit consumption.

The six-item Household Food Security Module was used to assess household food security.⁷ Body mass index (BMI) was calculated using respondents' self-reported height and weight. Demographic data, such as gender, age, race/ethnicity, and household composition were collected from respondents. Respondents were asked to indicate whether they participated in any assistance programs and their insurance status, and their answers were used as proxy measures to determine SNAP-Ed eligibility.

Exposure to IL SNAP-Ed was determined if a respondent indicated they were aware of any of the SNAP-Ed programming, including informational tables, direct education classes, classes delivered in their child's school, the **Eat.Move.Save.** website, Find Food IL Map, and the healthy text program and healthy eNewsletters. To distinguish between the overall impact and impact of more recent exposure, exposure to SNAP-Ed will be presented as 'Overall' exposure and exposure 'In the past 6 months'. Overall exposure includes any Illinois residents with lower incomes that reported exposure to SNAP-Ed at either or both survey time points. Exposure in the past six months includes any residents that reported exposure to SNAP-Ed at the follow-up time point.

All survey materials were reviewed and approved by the University of Illinois Institutional Review Board (IRB), including evaluation protocols, recruitment materials, and the survey instrument.

The following research questions helped guide this assessment:

1. In what ways do community networks impact fruit and vegetable consumption, food security

⁴ Prochaska, J., & DiClemente, C. (1983). Stages and processes of self-change of smoking: Toward an integrative model of change. *Journal of Consulting and Clinical Psychology*, 51(3), 390–395.

⁵ Centers for Disease Control and Prevention (CDC). 2019 BRFSS Questionnaire. Atlanta, GA: U.S. Department of Health and Human Services (HHS), CDC. 2013. <https://www.cdc.gov/brfss/questionnaires/pdf-ques/2019-BRFSS-Questionnaire-508.pdf>.

⁶ Durward, C.M., Savoie-Roskos, M., Atoloye, A., Isabella, P., Jewkes, M.D., Ralls, B., Riggs, K., LeBlanc, H. (2019). *Double Up Food Bucks* Participation is Associated with Increased Fruit and Vegetable Consumption and Food Security Among Low-Income Adults. *Journal of Nutrition Education and Behavior*, 51;342-347.

⁷ Economic Research Service, USDA. U.S. Household Food Security Survey Module: Six-Item Short Form. <https://www.ers.usda.gov/media/8282/short2012.pdf>. Accessed February 10, 2022.

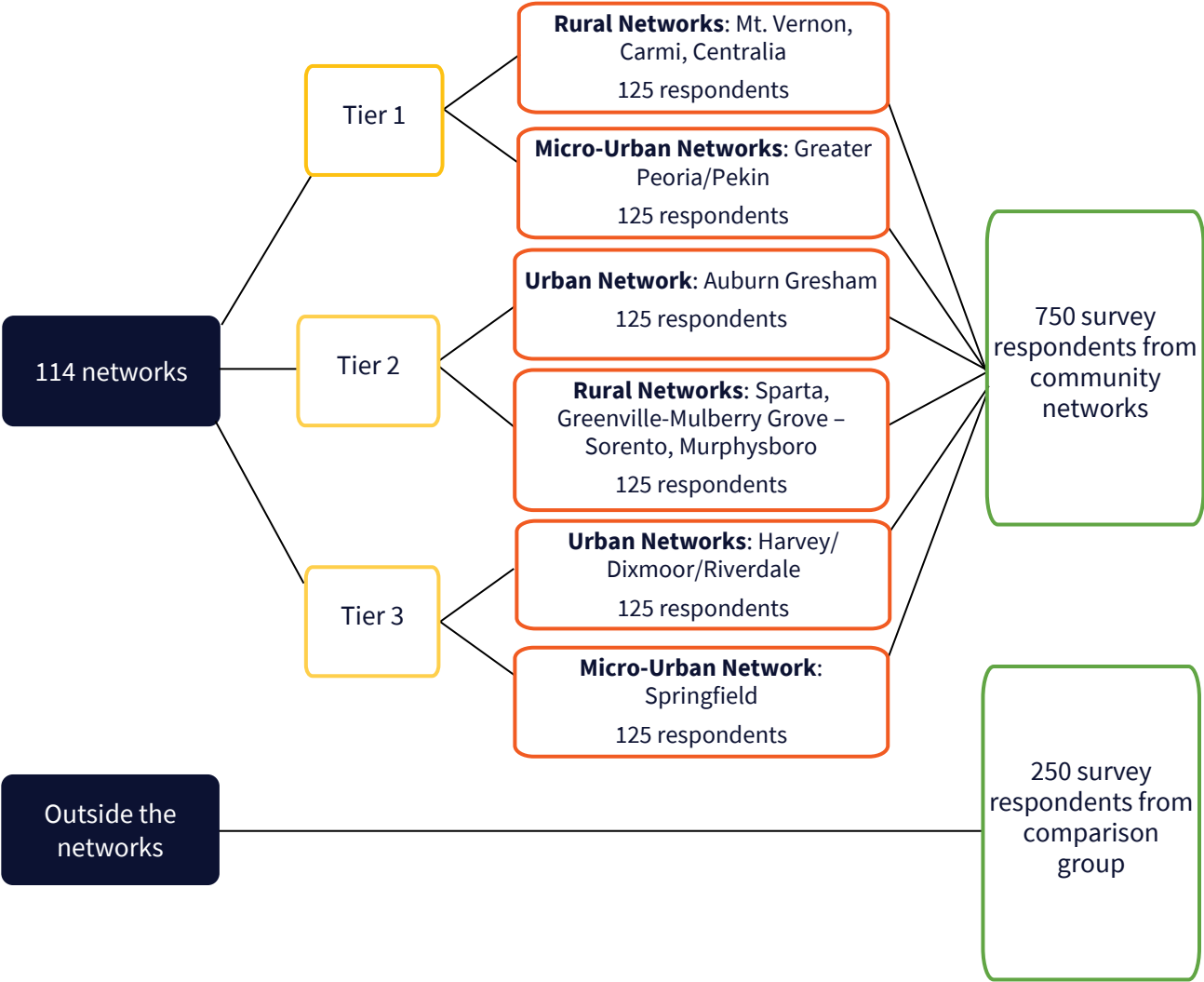
- status, physical activity, and quality of life of the target audience?
2. What is the relationship between exposure to different program components (direct education, indirect education, PSE strategies, and social marketing) and healthy behaviors in the target audience?
 3. Are there differences in the impact of community networks by demographic, geographic, or other socio-economic characteristics?

Network Sampling and Recruitment

As previously described, community networks were assessed and assigned into tiers based on the strength of the network (see Part 1). The desired sample size was approximately 1,500 respondents at baseline (providing a margin of error in measurements of $\pm 2.5\%$ and 95% confidence level). To have adequate sample size to compare across networks, a goal of 250 respondents per network was desired at baseline, allowing for two networks to be selected from each tier, for a total of six networks sampled, and 500 respondents per tier. Networks were selected within each tier to have representation of rural, urban, and micro-urban/suburban communities. To expand the rigor of the evaluation and inform hypothetical modeling analyses, Altarum attempted to identify a demographically similar group of people not living within a targeted SNAP-Ed community network and not participating in SNAP-Ed programming, to serve as a comparison group. Rural, urban, and micro-urban/suburban communities were also selected for the comparison group. The comparison group required a sample size of approximately 500 respondents.

Based on an estimated 50% response rate at follow-up, Altarum expected approximately 2,000 invitations would be sent out with the goal of obtaining up to 1,000 completed follow-up surveys (750 from community networks and 250 from comparison areas) (see **Exhibit 3.2**).

Exhibit 3.2. Desired Sample Size at Follow-Up, by Tier and Network



To achieve a total sample size of 2,000 completed surveys at baseline (1,500 community network group and 500 comparison group), Altarum purchased a sample list of SNAP-eligible households living within specified community networks, with the goal of obtaining up to 1,500 completed web surveys. This group received a mailed letter inviting them to take a survey online. To supplement data collection, Altarum also used an online research panel to obtain a goal of 500 additional completed surveys. Individuals who met certain criteria (i.e., household income below a certain threshold and residing within targeted communities) were contacted via email notification to complete the survey. Since these individuals were part of an online sample, they did not receive a paper mailing from Altarum.

Prospective respondents from the purchased list were mailed a letter explaining the purpose of the evaluation, an invitation to complete an online survey, and were provided a URL and a unique ID to access the survey online. The invitation content included the following:

- ▲ A letter explaining the purpose of the evaluation and an invitation to complete a web survey.
- ▲ A description of respondents' rights, explaining that their decision to participate or decline would not affect their SNAP benefits in any way. The materials also explained that the respondent would receive a \$10.00 gift card upon completion of the 10-minute survey.⁸
- ▲ A toll-free number for respondents to contact help desk personnel if they had technical or content-related questions.

In September 2021, Altarum mailed 25,000 baseline survey invitations to prospective respondents from the purchased list in both English and Spanish, followed by a reminder letter eight business days later. Altarum monitored the survey completion rate, and an additional reminder postcard was mailed 19 business days following the reminder letter to further boost responses.

In March 2022, Altarum mailed survey invitations to 1,461 respondents who completed the baseline survey and agreed to take a follow-up survey. Using the same approach as the baseline survey, respondents were mailed a letter in both English and Spanish explaining the purpose of the evaluation and an invitation to complete a follow-up online survey. The letter contained \$2.00 in cash as a sign of good faith to help entice survey completion. Additionally, the letter explained that respondents would receive a \$10.00 gift card upon completion of the survey. Respondents who provided email addresses were also emailed a reminder letter.

A total of 1,578 individuals completed the baseline survey (1,480 from the purchased list and 98 from the web panel) and 907 completed the follow-up survey (see **Exhibit 3.3**). Any respondent who completed the survey through the questions about exposure to IL SNAP-Ed were included in the final sample. Following data cleaning, 857 respondents were included in the final sample. Of respondents included in the final sample, 572 were residing in a community network area (community network group) and 285 were residing in comparison communities (comparison group).

⁸ These payments are meant to offset any unintended costs associated with completing the survey, such as the use of mobile data to complete a web survey.

Exhibit 3.3. Number of Survey Responses by Mode

	Number Completed	Response Rate
Baseline		
Purchased list	1,480	5.9%
Online research panel	98	-
Follow-Up		
All respondents	857	58.7%
Community Networks	572	
Mt. Vernon, Carmi, Centralia	113	
Greater Peoria, Pekin	116	
Auburn Gresham	58	
Sparta, Greenville-Mulberry Grove-Sorento, Murphysboro	133	
Harvey, Dixmoor, Riverdale	40	
Springfield	112	
Comparison Group	285	
Rural (Iroquois, Jo Daviess, Mercer)	87	
Suburban (Evanston, Skokie)	73	
Urban (Uptown, Rogers Park area)	125	

Data Analysis and Reporting

The data were weighted to match the profiles of SNAP recipients in Illinois based on their area of residence (sampled community network and comparison region), gender, age, and race/ethnicity using post-stratification weights and accounting for probability and non-probability sampling techniques. Significance tests yielding a p-value of less than 0.05 were considered statistically significant for this evaluation. Altarum produced univariate descriptive statistics (e.g., frequencies, means) to describe the sample population and outcome variables of interest, such as fruit and vegetable consumption.

Additionally, Altarum analyzed the data to determine whether there were any statistically significant differences in outcomes when analyzed by demographic characteristics of interest by comparing design-adjusted confidence intervals. This method provides a conservative estimate of statistical significance. Bivariate analyses using t-tests and chi-square tests were used to determine significant differences between groups of interest. Logistic regression and Difference-in-Differences modeling were used to examine differences in outcomes across tiers and networks, and also to examine interactions between SNAP-Ed exposure and community network group on outcomes of interest. Further modeling was conducted to examine differences in outcomes by groups, controlling for demographic differences.

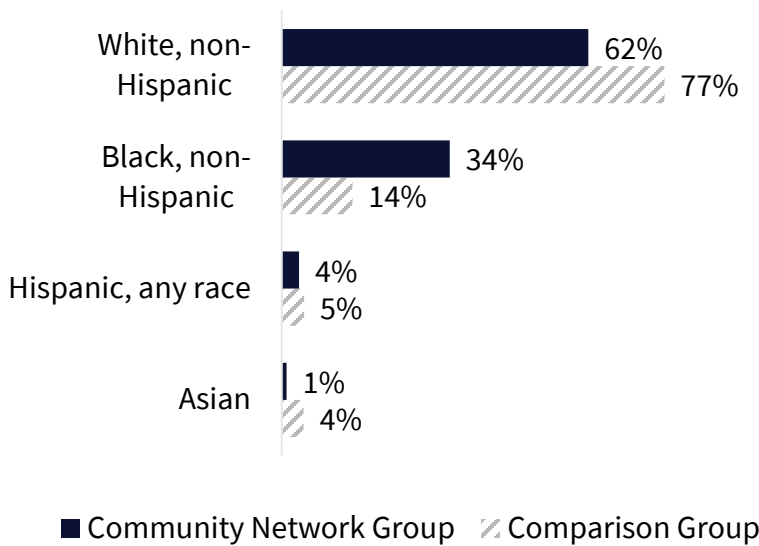
The population size reflected in the final dataset is 70,096 SNAP enrollees aged 18 years or older residing in the sampled regions of Illinois. This includes only respondents who replied to both baseline and follow-up surveys. See **Appendix G** for a more in-depth description of the weighting procedures. In the following section, sample sizes are reported for each figure and reflect the weighted estimates of the entire sample (unless otherwise noted). All percentages are weighted except for those presented under the description of the sample. Throughout this report, comparisons are made between low-income Illinois residents living within community networks included in this assessment and those living outside of community networks, referred to as the comparison group.

FINDINGS

Demographics

Most Illinois residents with lower incomes that responded to the survey at baseline and follow-up identified as White, non-Hispanic. Additionally, a significantly greater percentage of the comparison group identified as White, non-Hispanic than in the community network group ($p < .001$). More than half of respondents in each group identified as female and were 18 to 54 years old (see **Exhibits 3.4–3.6**).

Exhibit 3.4. Race and Ethnicity by Community Network and Comparison Groups ($n=794$; weighted $n=65,304$)



There was a **significantly higher** percentage of IL residents with lower incomes that **identified as White, non-Hispanic** in the comparison group than in the community network group ($p < .001$).

More than half of IL residents with lower incomes in both the community network and comparison groups **identified as female**.

Exhibit 3.5. Sex by Community Network and Comparison Groups ($n=856$; weighted $n=70,005$)

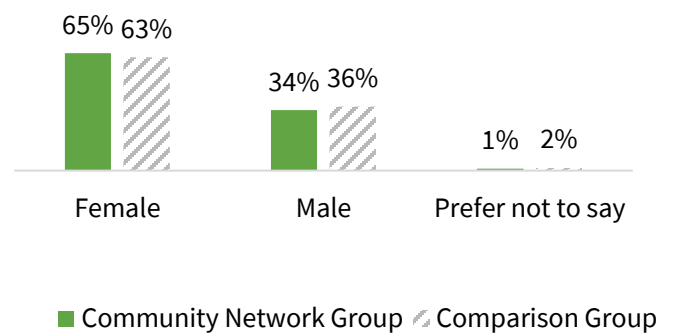
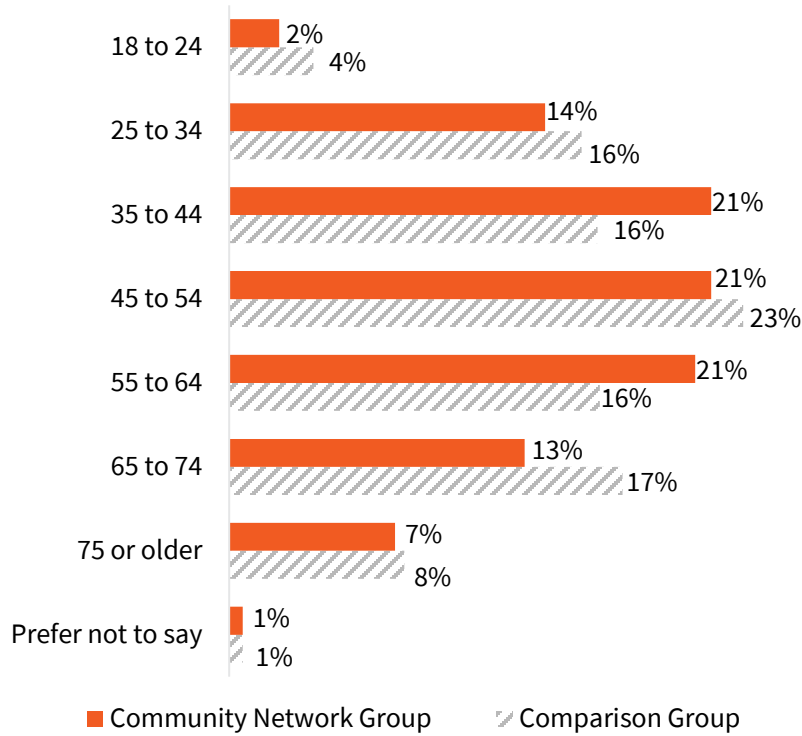


Exhibit 3.6. Age by Community Network and Comparison Groups (*n=856; weighted n=70,040*)



More than half of IL residents with lower incomes were **18 to 54 years old** in both the community network and comparison groups.

Significantly more residents from community networks had children in their households when compared to the comparison group residents (37% compared to 27%, $p=.028$). Significantly more residents from community networks reported being food insecure than residents from the comparison group (40% compared to 29%, $p=.022$). Additionally, significantly more residents from community networks participated in assistance programs than residents from the comparison group (48% compared to 34%, $p=.002$) (see **Exhibits 3.7–3.9**).

Significantly more IL residents living within a community network had **children in their households** than in the comparison group ($p=.028$).

Exhibit 3.7. Household Composition by Community Network and Comparison Groups (*n=855; weighted n=70,016*)

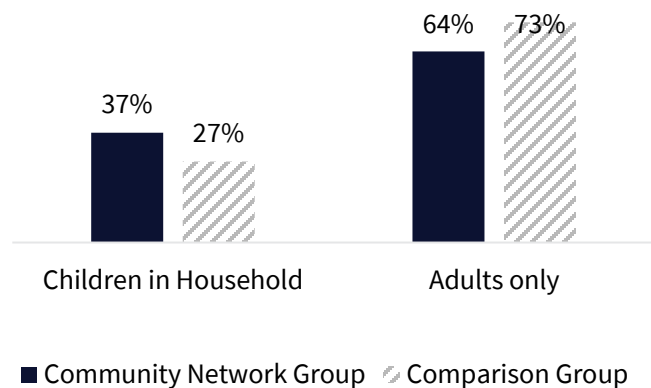
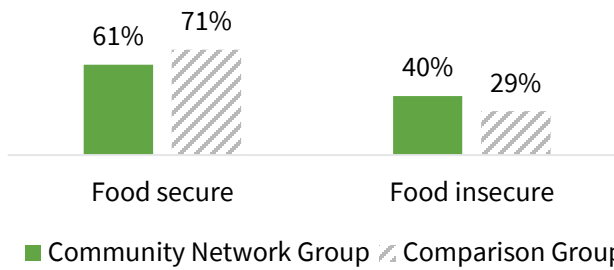


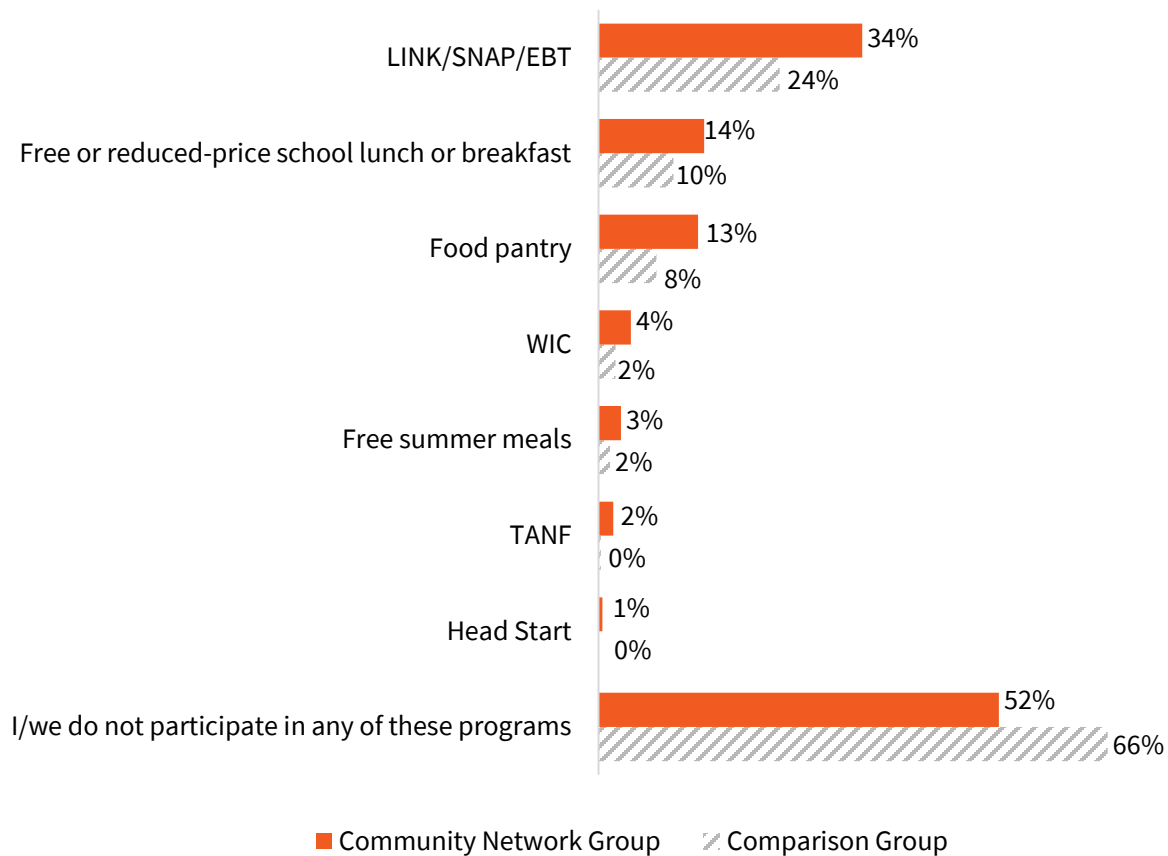
Exhibit 3.8. Food Security by Community Network and Comparison Groups (*n=857; weighted n=70,096*)



Significantly more IL residents with lower incomes living within community networks were **food insecure** than in the comparison group ($p=.022$).

Significantly more IL residents with lower incomes living within community networks **participated in assistance programs** than in the comparison group ($p=.002$).

Exhibit 3.9. Participation in Assistance Programs by Community Network and Comparison Groups (*n=857; weighted n=70,086*)



Note: TANF (Temporary Assistance for Needy Families)

Approximately half of the residents from both the community network and comparison groups reported having Medicare or Medicaid for health insurance. Significantly more residents from the community network group reported having a BMI that was considered overweight or obese than the comparison group residents ($p=.007$). Most of the residents from both groups reported a good, very good, or excellent health status (see **Exhibits 3.10–3.12**).

Exhibit 3.10. Health Insurance by Community Network and Comparison Groups ($n=814$; weighted $n=66,551$)

Approximately half of IL residents with lower incomes in both the community network and comparison groups reported **having Medicare or Medicaid for health insurance.**

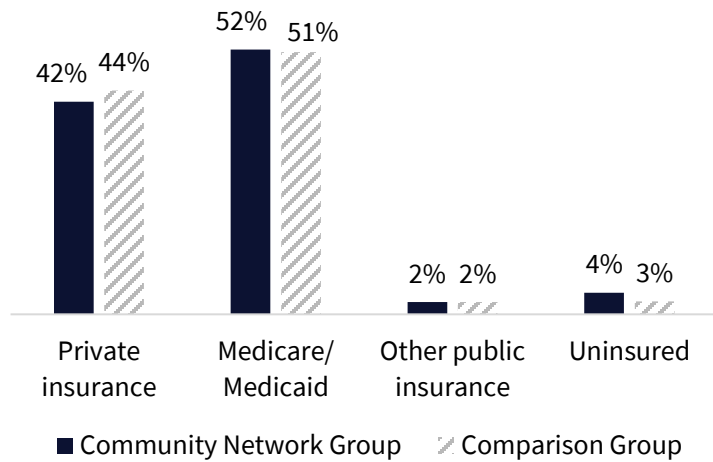
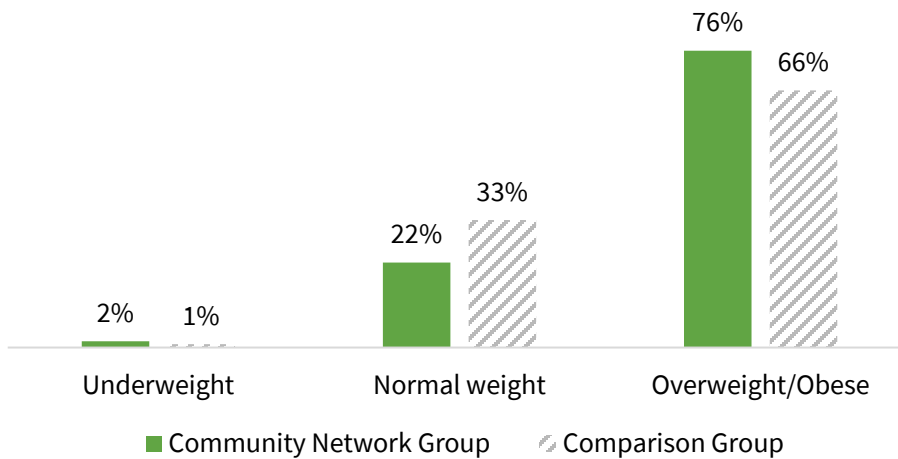


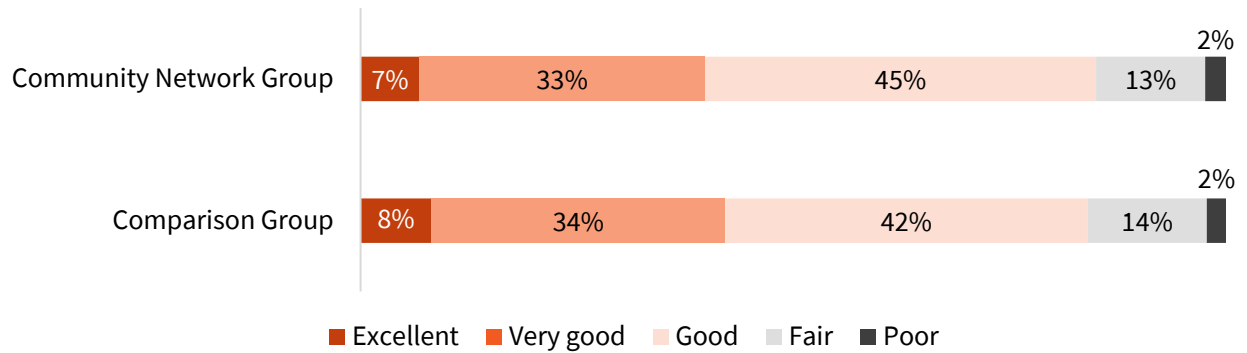
Exhibit 3.11. BMI by Community Network and Comparison Groups ($n=735$; weighted $n=59,037$)



Significantly more IL residents living within community networks had **BMI**s that were **considered overweight or obese** than in the comparison group ($p=.007$).

Most IL residents with lower incomes in both the community network and comparison groups reported a **health status of good, very good, or excellent.**

Exhibit 3.12. Health Status by Community Network and Comparison Groups (*n=854; weighted n=69,909*)



Exposure to IL SNAP-Ed

To distinguish between the overall impact and impact of more recent exposure, exposure to SNAP-Ed will be presented as ‘Overall’ exposure and exposure ‘In the past six months’. Overall exposure includes any Illinois residents with lower incomes that reported exposure to SNAP-Ed at either or both survey time points. Exposure in the past six months includes any residents that reported exposure to SNAP-Ed at the follow-up time point.

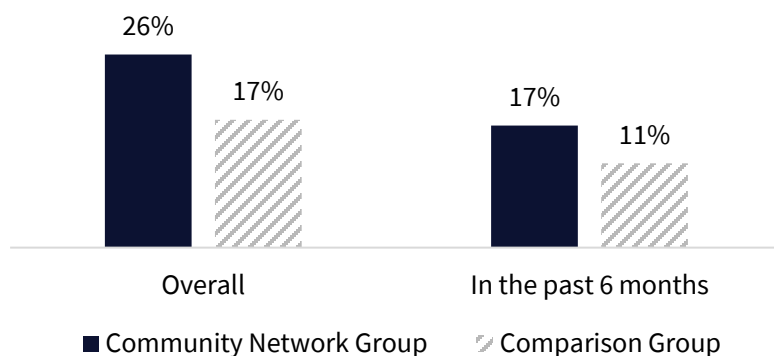
EXPOSURE TO SNAP-ED

Within the community network group, 26 percent of Illinois residents with lower incomes were exposed to SNAP-Ed overall compared to 17 percent within the comparison group (see **Exhibit 3.13**). Illinois residents with lower incomes living within a community network were 1.7 times more likely to report being exposed to SNAP-Ed programming than those in the comparison group (p=.019). However, after accounting for demographic factors (i.e., food security status, race, household composition, BMI, assistance program participation, and sex), results were no longer significantly different. Within the past six months, 17 percent of Illinois residents with lower incomes living within community networks and 11 percent of comparison group residents reported being exposed to SNAP-Ed. There were no significant differences between community network and comparison residents in exposure rates in the past six months.

Exposure to SNAP-Ed was similar between the Community Network and Comparison groups, but priority populations are being reached in both groups.

26%
of residents living within a community network were exposed to SNAP-Ed overall.

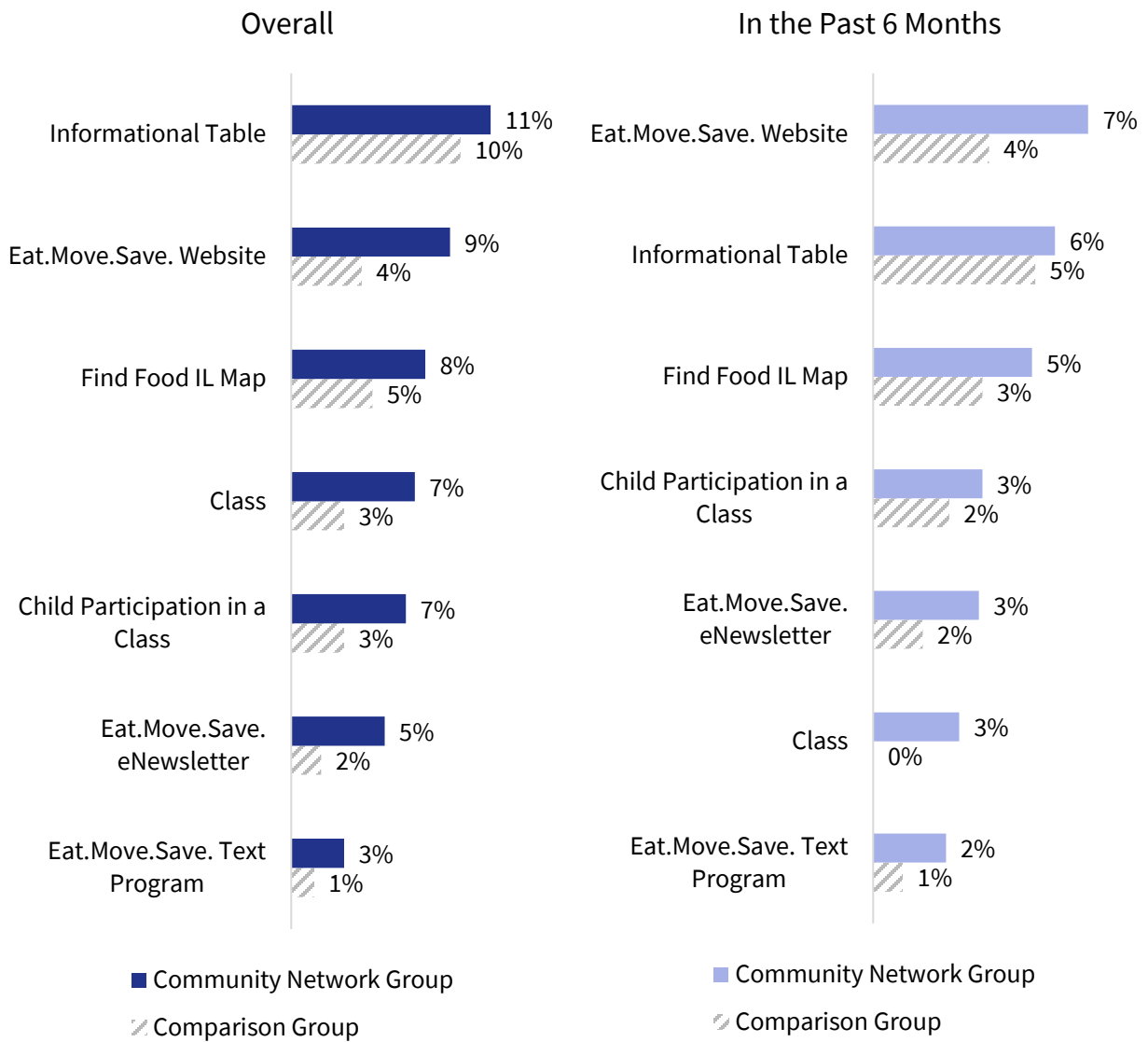
Exhibit 3.13. Exposure to SNAP-Ed Programming by Time Point (overall: n=857; weighted n=70,096; 6 months: n=835; weighted n=68,259)



The most common type of SNAP-Ed programming that Illinois residents with lower incomes were exposed to overall in both the community networks (11%) and comparison (10%) communities was visiting an informational table (see **Exhibit 3.14**). In the past six months, the most common exposure for residents of community networks was visiting the **Eat.Move.Save.** website (7%), and for the comparison group it was visiting informational tables (5%).

The **most common type of exposure to SNAP-Ed overall** was visiting an **informational table**. In the past six months, it was visiting the **Eat.Move.Save. website**.

Exhibit 3.14. Exposure to SNAP-Ed Programming through Various Channels of Delivery by Time Point (n=857; weighted n=70,096)



Additional comparisons across demographic characteristics, tiers, and networks for individual types of exposure to SNAP-Ed programming can be found in **Appendix H** Data Tables.

Overall exposure to SNAP-Ed across tiers ranged from 24 to 28 percent with the greatest level of exposure in Tier 1 residents (see **Exhibit 3.15**). For exposure to SNAP-Ed in the past six months by tier, exposure rates ranged from 13 to 23 percent and Tier 3 residents reported the greatest level of exposure. Differences in exposure to SNAP-ed overall and in the past six months across tiers and networks were not statistically significant.

Exposure to SNAP-Ed overall or in the past six months was **similar** across Community Network tiers.

Exhibit 3.15. Exposure to SNAP-Ed Programming by Time Point, Tier, and Network (overall: n=857; weighted n=70,096; 6 months: n=835; weighted n=68,259)

	Overall (%)	In the past 6 months (%)
Community Network Group	26%	17%
Tier 1	28%	17%
Mt. Vernon, Carmi, Centralia	33%	17%
Greater Peoria, Pekin	26%	16%
Tier 2	24%	13%
Auburn Gresham	32%	20%
Sparta, Greenville-Mulberry Grove-Sorento, Murphysboro	18%	9%
Tier 3	28%	23%
Harvey, Dixmoor, Riverdale	29%	29%
Springfield	27%	19%
Comparison Group	17%	11%
Rural (Iroquois, Jo Daviess, Mercer)	14%	9%
Suburban (Evanston, Skokie)	18%	8%
Urban (Uptown, Rogers Park area)	24%	18%

Amongst IL residents with lower incomes living in community networks, **exposure to SNAP-Ed** varied by **race, household composition, food security status, sex, BMI, and assistance program participation.**

Within community networks, residents' overall exposure to SNAP-Ed varied by race, whether a child was present in the household, food security status, sex, BMI, and assistance program participation. Results were similar for exposure to SNAP-Ed in the past six months, with the exception of sex.

Exposure to SNAP-Ed overall:

- ▲ Residents who identified as Black, non-Hispanic were 1.7 times more likely to be exposed than residents who identified as White, non-Hispanic (p=.028).

- ▲ Residents who had children in their household were 2.4 times more likely to be exposed than residents who did not have children in their household ($p < .001$).
- ▲ Residents who were food insecure were 1.8 times more likely to be exposed than residents who were food secure ($p = .010$).
- ▲ Residents who identified as female were 2.5 times more likely to be exposed than residents who identified as male ($p = .001$).
- ▲ Residents who had an overweight/obese BMI were 2.1 times more likely to be exposed than residents who had a normal weight BMI ($p = .018$).
- ▲ Residents who participated in at least one assistance program were 4.2 times more likely to be exposed than residents who did not participate in assistance programs ($p < .001$).

Exposure to SNAP-Ed in the past six months:

- ▲ Residents who identified as Black, non-Hispanic were 2.3 times more likely to be exposed than residents who identified as White, non-Hispanic ($p = .004$).
- ▲ Residents who had children in their household were 2.7 times more likely to be exposed than residents who did not have children in their household ($p < .001$).
- ▲ Residents who were food insecure were 2.4 times more likely to be exposed than residents who were food secure ($p = .002$).
- ▲ Residents who had an overweight/obese BMI were 2.5 times more likely to be exposed than residents who had a normal weight BMI ($p = .030$). Additionally, respondents who had an underweight BMI were 11.2 times more likely to be exposed than residents who had a normal weight BMI ($p = .007$).
- ▲ Residents who participated in at least one assistance program were 4.2 times more likely to be exposed than residents who did not participate in assistance programs ($p < .001$).

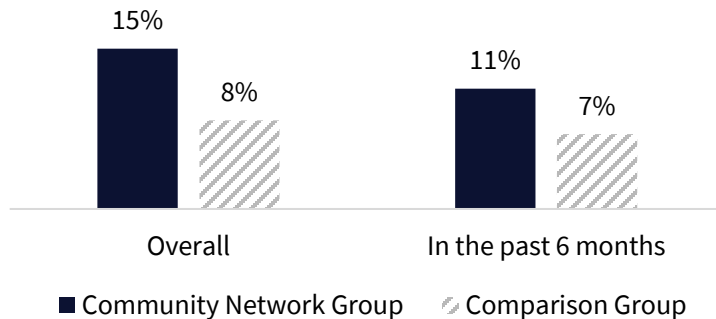
DIGITAL EXPOSURE TO SNAP-ED

Within the community network group, 15 percent of Illinois residents with lower incomes experienced exposure to SNAP-Ed through digital content (including the **Eat.Move.Save.** website, Find Food IL Map, **Eat.Move.Save.** healthy text program, and **Eat.Move.Save.** eNewsletter) compared to 8 percent within the comparison group (see **Exhibit 3.16**). Residents living within a community network were 1.9 times more likely to report being exposed through digital content than residents from the comparison group ($p=.030$). However, after accounting for demographic factors (i.e., food security status, race, household composition, BMI, assistance program participation, and sex), results were no longer significantly different. Within the past six months, 11 percent of residents from community networks and 7 percent of residents from comparison communities reported being exposed to SNAP-Ed through digital content. There were no significant differences between community network and comparison residents in exposure rates in the past six months.

Exposure to SNAP-Ed through digital content was similar between the community network and comparison groups, but priority populations are being reached in both groups.

15%
of IL residents with lower incomes living in community networks **were exposed to SNAP-Ed through digital content overall.**

Exhibit 3.16. Exposure to SNAP-Ed through Digital Content by Time Point (overall: n=857; weighted n=70,096; 6 months: n=834; weighted n=68,125)



Overall exposure to digital SNAP-Ed content across tiers ranged from 14 to 18 percent with the greatest level of exposure in Tier 3 residents (see **Exhibit 3.17**). Results were similar for exposure to digital SNAP-Ed content in the past six months across tiers with exposure rates from 9 to 17 percent, and Tier 3 residents reporting the greatest level of exposure. Differences in exposure to digital SNAP-Ed content overall and in the past six months across tiers and networks were not statistically significant.

Exposure to digital SNAP-Ed content overall or in the past six months was similar across tiers.

Exhibit 3.17. Overall Exposure to Digital SNAP-Ed Content by Time Point, Tier, and Network
(overall: n=857; weighted n=70,096; 6 months: n=834; weighted n=68,125)

	Overall (%)	In the past 6 months (%)
Community Network Group	15%	11%
Tier 1	14%	11%
Mt. Vernon, Carmi, Centralia	13%	11%
Greater Peoria, Pekin	15%	10%
Tier 2	14%	9%
Auburn Gresham	20%	13%
Sparta, Greenville-Mulberry Grove-Sorento, Murphysboro	11%	7%
Tier 3	18%	17%
Harvey, Dixmoor, Riverdale	23%	25%
Springfield	15%	13%
Comparison Group	8%	7%
Rural (Iroquois, Jo Daviess, Mercer)	7%	6%
Suburban (Evanston, Skokie)	11%	6%
Urban (Uptown, Rogers Park area)	11%	10%

Amongst community network residents, exposure to digital SNAP-Ed content varied by race, food security status, BMI, and assistance program participation.

For Illinois residents with lower incomes living within community networks, overall exposure to digital SNAP-Ed content varied by race, food security status, BMI, and assistance program participation. Results were similar for exposure to SNAP-Ed in the past six months.

Exposure to digital SNAP-Ed content overall:

- ▲ Residents who identified as Black, non-Hispanic were 2.5 times more likely to be exposed than residents who identified as White, non-Hispanic (p=.002).
- ▲ Residents who were food insecure were 2.8 times more likely to be exposed than residents who were food secure (p<.001).

- ▲ Residents who had an underweight BMI were 8.8 times more likely to be exposed than residents who had a normal weight BMI ($p=.013$).
- ▲ Residents who participated in at least one assistance program were 2.7 times more likely to be exposed than residents who did not participate in assistance programs ($p=.001$).

Exposure to digital SNAP-Ed content in the past six months:

- ▲ Residents who identified as Black, non-Hispanic were 2.9 times more likely to be exposed than residents who identified as White, non-Hispanic ($p=.001$).
- ▲ Residents who were food insecure were 2.7 times more likely to be exposed than residents who were food secure ($p=.002$).
- ▲ Residents who had an underweight BMI were 16 times more likely to be exposed than residents who had a normal weight BMI ($p=.003$).
- ▲ Residents who participated in at least one assistance program were 3.4 times more likely to be exposed than residents who did not participate in assistance programs ($p=.001$).

Action Taken After Exposure to IL SNAP-Ed

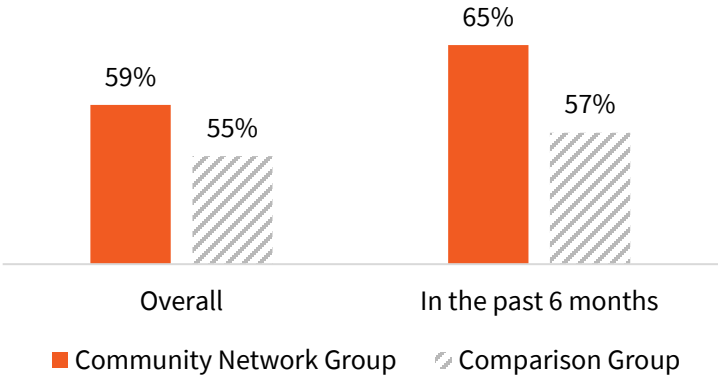
Illinois residents with lower incomes who were exposed to SNAP-Ed interventions were asked whether participating in an IL SNAP-Ed class, visiting the **Eat.Move.Save.** website, using the Find Food IL Map, or receiving a healthy text or eNewsletter caused them to take any healthy actions. A list of predetermined options was provided. As in the previous section, actions taken after SNAP-Ed exposure will be presented as ‘Overall’ and ‘In the past six months’.

More than half of residents in the community network (59%) and comparison (55%) groups took a healthy behavior action after exposure to SNAP-Ed overall (see **Exhibit 3.18**). Results were similar for exposure in the past six months, with 65 percent of community network residents and 57 percent of comparison community residents reporting taking a healthy behavior action after exposure. There were no significant differences between Illinois residents with lower incomes from the community networks and comparison group in actions taken after SNAP-Ed exposure overall and in the past six months.

IL residents with lower incomes living in community networks and comparison communities were **similar in likelihood of taking action overall or in the past six months after exposure to SNAP-Ed.**

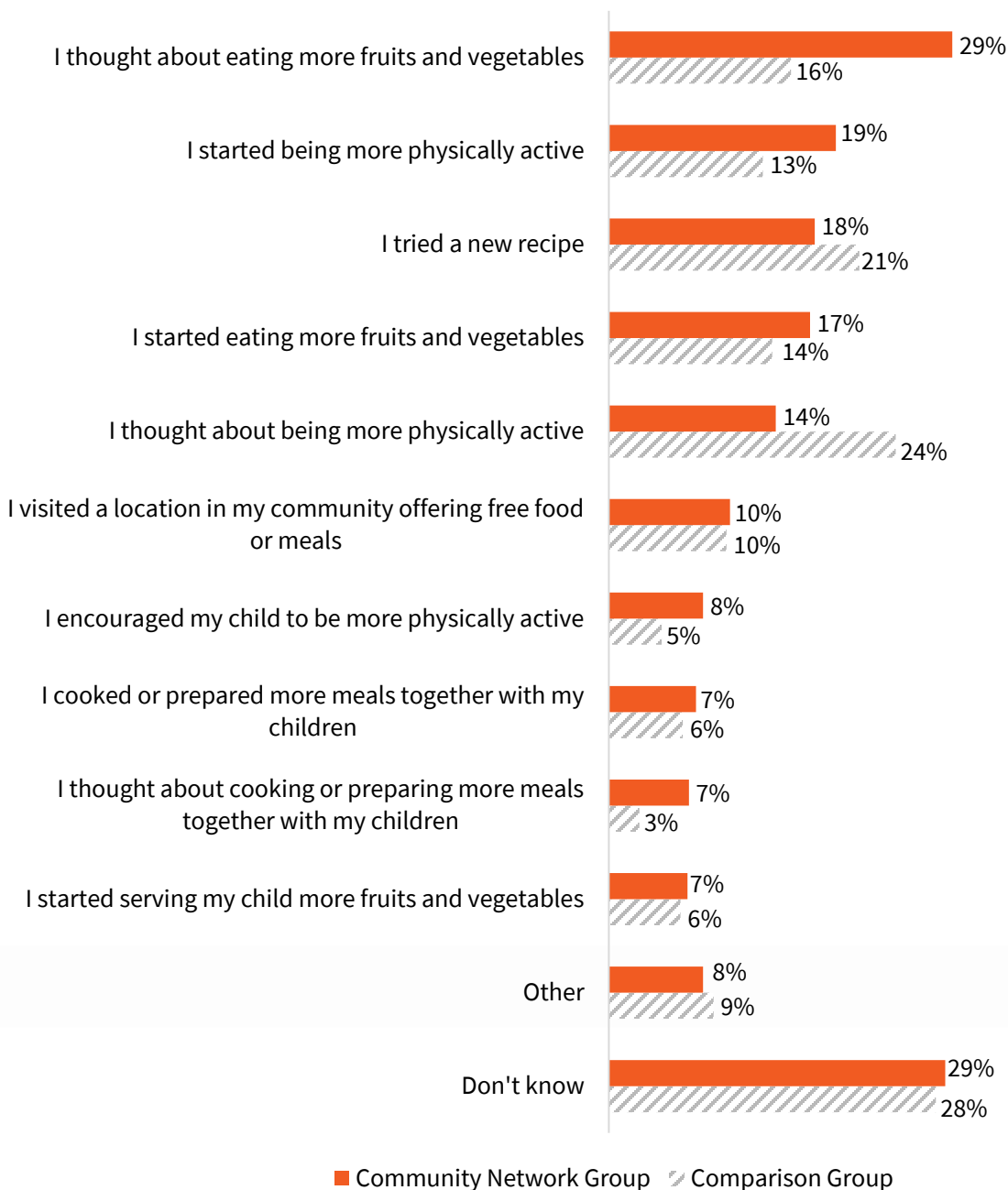
Exhibit 3.18. Action Taken after Exposure to SNAP-Ed Programming by Time Point (overall: n=187; weighted n=15,945; 6 months: n=111; weighted n=9,918)

59%
of IL residents with lower incomes living in community networks **took action after SNAP-Ed exposure overall.**



The most common actions taken after overall SNAP-Ed exposure differed slightly across community networks and comparison communities (see **Exhibit 3.19**). Amongst residents from community networks, the most common actions taken were thinking about eating more fruits and vegetables (29%), starting to be more physically active (19%), and trying a new recipe (18%). Amongst residents from comparison communities, the most common actions were thinking about being more physically active (24%), trying a new recipe (21%), and thinking about eating more fruits and vegetables (16%). Results were similar for actions taken after SNAP-Ed exposure in the past six months.

Exhibit 3.19. Actions after Exposure to SNAP-Ed Programming Overall (n=167 weighted n=14,201)



Additional comparisons across demographic characteristics, tiers, and networks for individual actions after exposure to SNAP-Ed overall and in the past six months can be found in **Appendix H** Data Tables.

A majority of residents reported taking action after exposure to SNAP-Ed across tiers (see **Exhibit 3.20**). After overall exposure, taking action ranged from 52 to 67 percent across tiers, with the greatest levels in Tier 2. After exposure in the past six months, taking action ranged from 49 to 78 percent, with the greatest levels in Tier 2. Differences across tiers and networks were not statistically significant.

Additionally, a majority of respondents reported taking action after exposure to digital forms of SNAP-Ed across tiers. After overall exposure to SNAP-Ed digital content, taking action ranged from 67 to 95 percent across tiers, with the greatest levels in Tier 2. After exposure in the past six months, taking action ranged from 60 to 100 percent, with the greatest levels in Tier 2. Differences across tiers were not statistically significant, and network sample sizes were too small to determine statistical significance.

Action taken after exposure or digital exposure to SNAP-Ed was similar across tiers.

Exhibit 3.20. Action after Exposure to SNAP-Ed Programming or Digital Content by Time Point, Tier and Network (overall: n=187; weighted n=15,945; digital: n=99; weighted n=8,860)

	Exposure		Digital Exposure	
	Overall (%)	In the past 6 months (%)	Overall (%)	In the past 6 months (%)
Community Network Group	59%	65%	81%	78%
Tier 1	52%	49%	67%	60%
Mt. Vernon, Carmi, Centralia	54%	49%	68%	45%
Greater Peoria, Pekin	50%	49%	67%	67%
Tier 2	67%	78%	95%	100%
Auburn Gresham	72%	73%	100%	100%
Sparta, Greenville-Mulberry Grove-Sorento, Murphysboro	62%	84%	90%	100%
Tier 3	58%	68%	76%	72%
Harvey, Dixmoor, Riverdale	64%	68%	81%	80%
Springfield	54%	67%	71%	66%
Comparison Group	55%	57%	68%	73%
Rural (Iroquois, Jo Daviess, Mercer)	53%	47%	78%	74%
Suburban (Evanston, Skokie)	24%	24%	8%	16%
Urban (Uptown, Rogers Park area)	66%	74%	82%	86%

Amongst community network residents, action taken after exposure varied by exposure to digital content, food security status, and BMI.

For Illinois residents with lower incomes living within community networks, results varied by exposure to SNAP-Ed digital content, food security status, and BMI.

- ▲ Residents who had been exposed to SNAP-Ed digital content overall were 10.1 times more likely to report taking action after exposure than those not exposed to digital content (p<.001). After adjusting for demographic characteristics and phase in the Stages of Change

model, results remained significant with residents who had been exposed to SNAP-Ed digital content 8.7 times more likely to take action after exposure compared to those who were not ($p=.001$).

- ▲ Residents who had been exposed to SNAP-Ed digital content in the past six months were 7.4 times more likely to report taking action after exposure than those who were not ($p<.001$). After adjusting for demographic characteristics and phase in the Stages of Change model, results remained significant with residents who had been exposed to SNAP-Ed digital content in the past six months 7.7 times more likely to take action after exposure compared to those who were not ($p=.044$).
- ▲ Residents who were food insecure were 3.1 times more likely to take action after SNAP-Ed exposure overall than residents who were food secure ($p=.005$).
- ▲ Residents with a BMI classified as overweight/obese were 8.4 times more likely to take action after SNAP-Ed exposure in the past six months than residents with a BMI classified as normal ($p=.011$).

Eating Behaviors

FRUIT AND VEGETABLE CONSUMPTION

Mean Consumption Frequency

At both baseline and follow-up, residents from comparison communities had a significantly higher mean consumption frequency for both total fruit ($p<.001$) and total vegetables ($p<.001$) than residents from community networks (see **Exhibit 3.21**). Within community networks, from baseline to follow-up there was a significant decrease in total fruit consumption frequency ($p<.001$) and total vegetable consumption frequency ($p<.001$). Results were similar for residents from comparison communities with significant decreases in total fruit consumption frequency ($p<.001$) and vegetable consumption frequency ($p<.001$) from baseline to follow-up.

IL residents with lower incomes from **comparison communities** had **significantly higher** mean fruit and vegetable consumption frequencies than those from community networks at both **baseline and follow-up**.

When evaluating the difference-in-differences (i.e., the difference in change) between the community network and comparison groups, there were no significant differences in the baseline to follow-up change in total fruit or total vegetable consumption frequency (see **Exhibit 3.21**).

Community network and comparison communities were **similar** in **change in fruit and vegetable consumption frequency** from baseline to follow-up.

Exhibit 3.21. Frequency of Fruit and Vegetable Consumption as Times Per Day Amongst Community Network and Comparison Groups by Time Point (*baseline: n=855; weighted n=70,003; follow-up: n=857; weighted n=70,096*)

	Community Network Group (Mean ± SD)		Comparison Group (Mean ± SD)		Difference-in-Differences	
	Baseline	Follow-Up	Baseline	Follow-Up	DID ⁵ (Mean ± SE)	p-value ⁵
100% pure fruit juice ^{2,3,4}	0.28 ± 0.42	0.28 ± 0.39	0.22 ± 0.37	0.25 ± 0.41	-0.14 ± 0.24	0.561
Fresh, frozen, or canned fruit ^{1,2,3,4}	0.53 ± 0.51	0.49 ± 0.46	0.63 ± 0.58	0.60 ± 0.61	0.15 ± 0.22	0.484
Green, leafy or lettuce salad ^{1,2,3,4}	0.31 ± 0.36	0.32 ± 0.34	0.37 ± 0.44	0.36 ± 0.35	0.09 ± 0.19	0.639
Fried potatoes ^{1,2,4}	0.19 ± 0.20	0.19 ± 0.19	0.18 ± 0.20	0.19 ± 0.18	0.13 ± 0.16	0.402
Other kinds of potatoes ^{1,2,3,4}	0.19 ± 0.21	0.22 ± 0.23	0.17 ± 0.19	0.17 ± 0.18	0.04 ± 0.15	0.786
Other vegetables ^{1,2,3,4}	0.58 ± 0.51	0.52 ± 0.46	0.72 ± 0.56	0.66 ± 0.56	0.14 ± 0.19	0.459
Total fruit^{1,2,3,4}	0.81 ± 0.74	0.77 ± 0.65	0.85 ± 0.72	0.85 ± 0.83	-0.03 ± 0.08	0.739
Total vegetables^{1,2,3,4}	1.08 ± 0.79	1.02 ± 0.73	1.27 ± 0.92	1.21 ± 0.81	0.05 ± 0.08	0.529

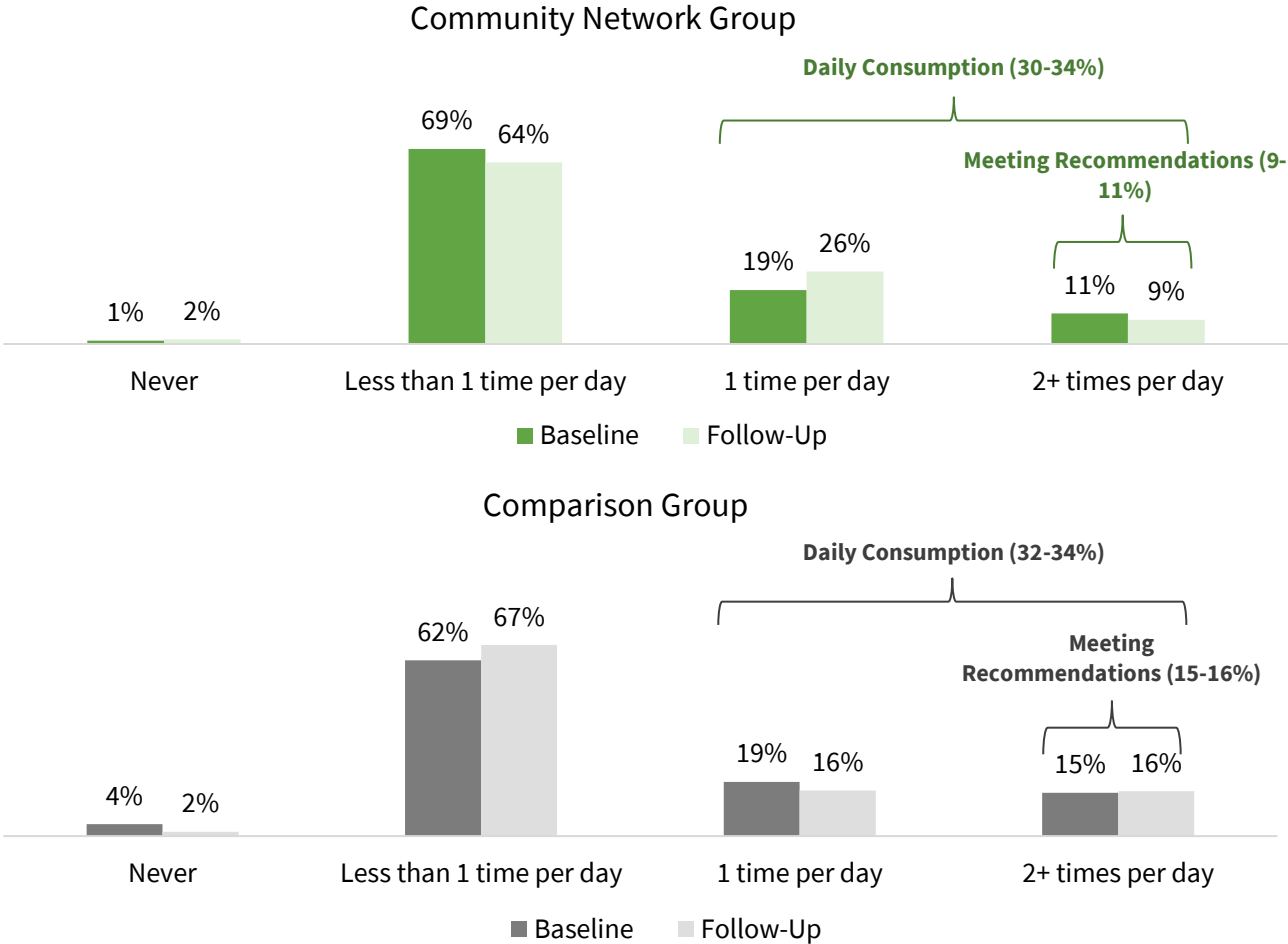
¹Significant difference between baseline and follow-up in the community network group determined by Related Samples Wilcoxon Signed Rank Test. ²Significant difference between baseline and follow-up in the comparison group determined by Related Samples Wilcoxon Signed Rank Test. ³Significant difference between community network and comparison groups at baseline determined by Independent Samples Mann-Whitney U Test. ⁴Significant difference between community network and comparison groups at follow-up determined by Independent Samples Mann-Whitney U Test. ⁵Difference-in-Difference models were adjusted for food security status, race, whether children were present in the household, participation in assistance programs, and exposure to SNAP-Ed overall.

Daily Consumption

Approximately one-third of Illinois residents with lower incomes living in community networks (34%) and comparison communities (32%) reported consuming fruit at least one time per day at follow-up (see **Exhibit 3.22**). However, few residents in the community network (9%) and comparison (16%) groups were meeting dietary recommendations for fruit at follow-up. Despite differences in mean consumption frequencies for total fruit, there were no differences between residents from community networks and comparison communities in likelihood of consuming fruit at least one time per day. Additionally, there were no significant changes in the percent of residents eating fruit at least one time per day between baseline and follow-up in either the community network or comparison groups.

Community network and comparison community residents were **similar** in likelihood of **eating fruit daily**.

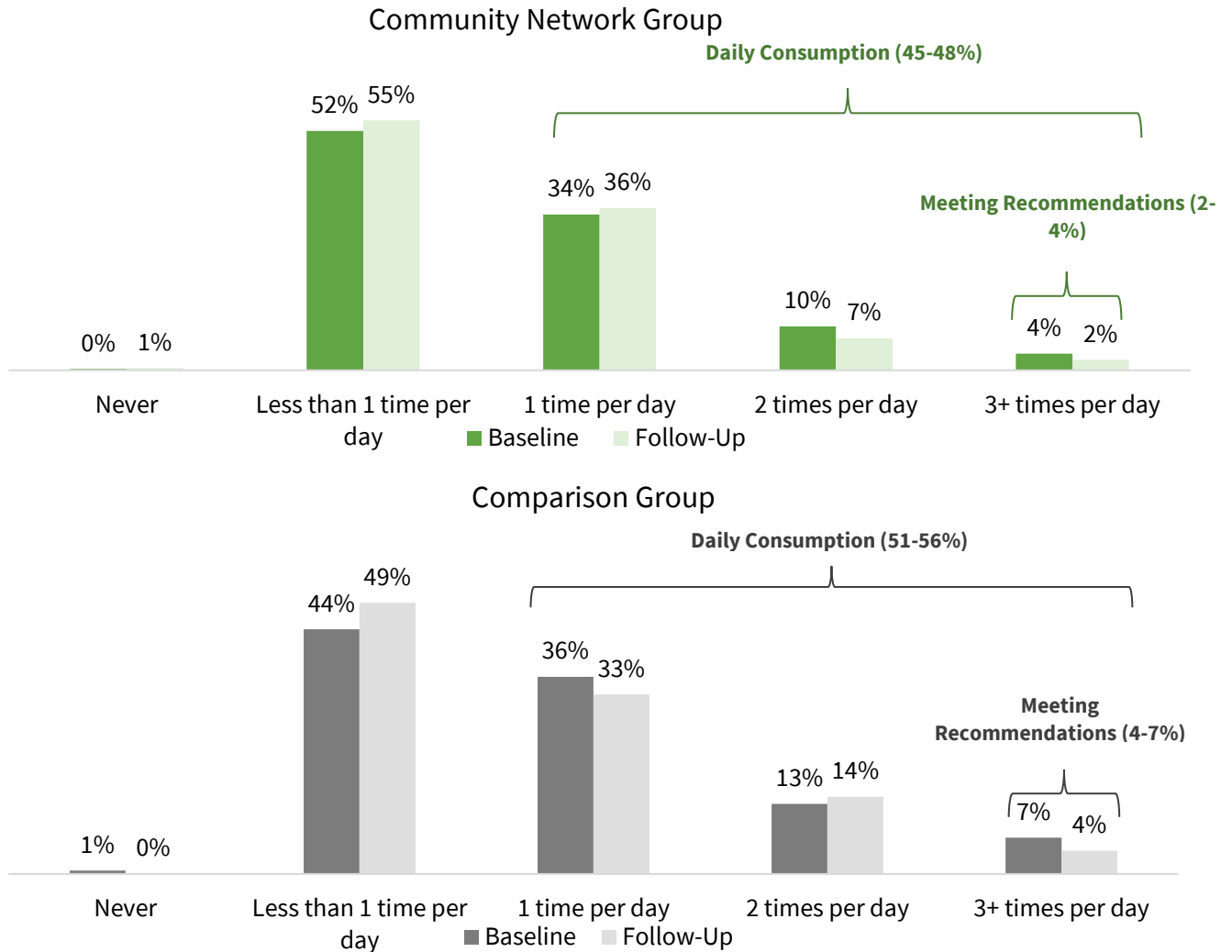
Exhibit 3.22. Daily Fruit Consumption at Baseline and Follow-Up (baseline: n=855; weighted n=70,003; follow-up: n=857; weighted n=70,096)



Slightly less than half of residents living in community networks (45%) reported eating vegetables at least one time per day at follow-up compared to slightly more than half of residents living in comparison communities (51%). However, very few residents in the community network (2%) and comparison (4%) groups were meeting dietary recommendations for vegetables at follow-up (see **Exhibit 3.23**). Results were not statistically different between the two groups. Additionally, there were no significant changes in the percent of residents eating vegetables at least one time per day between baseline and follow-up in either the community network or comparison group.

Community network and comparison community residents were **similar in likelihood of eating vegetables daily.**

Exhibit 3.23. Vegetable Consumption Frequency at Baseline and Follow-Up (baseline: n=856; weighted n=70,066; follow-up: n=857; weighted n=70,096)



Amongst community network residents, **likelihood of eating fruits or vegetables at least one time per day** varied by **food security status**.

For residents living within community networks, likelihood of eating fruits or vegetables at least one time per day varied only by food security status.

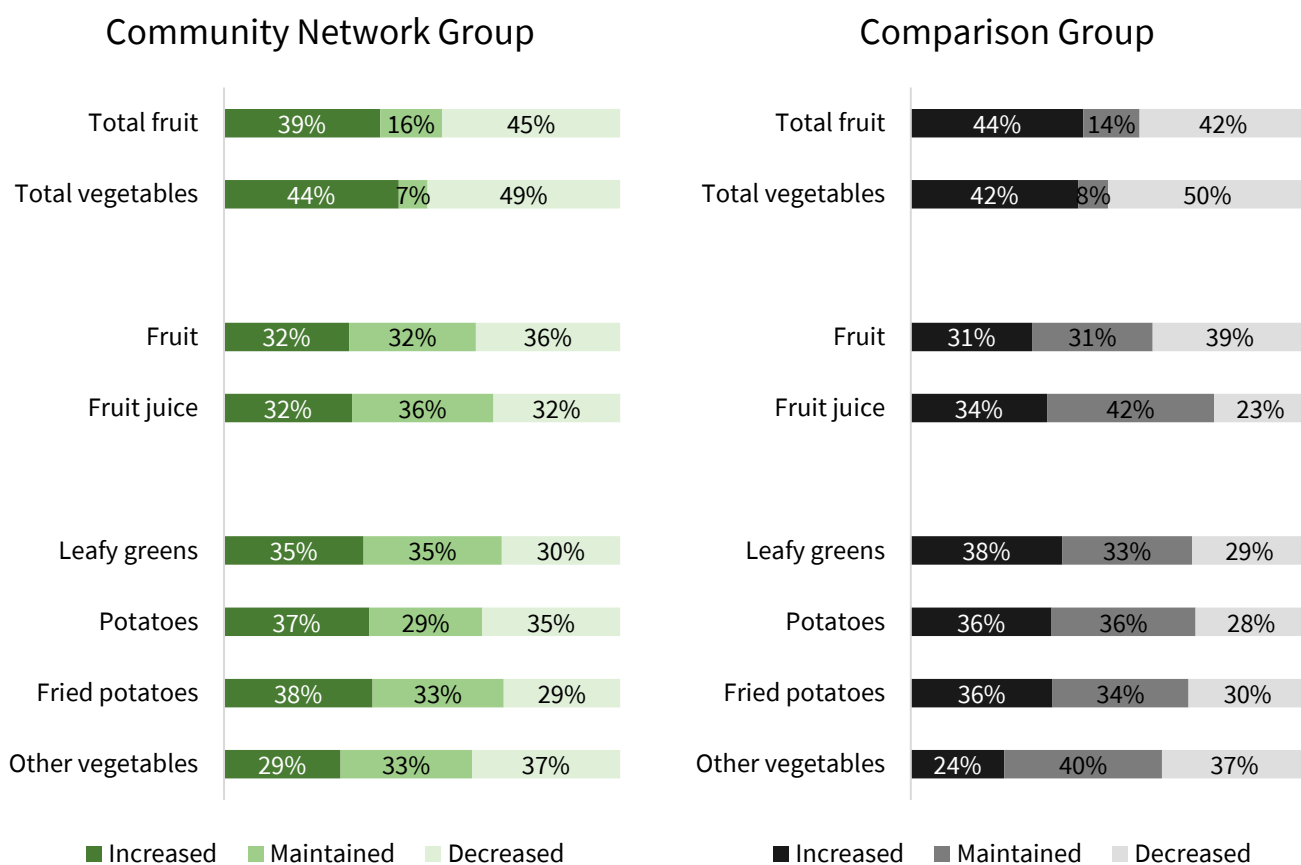
- ▲ Residents who were food insecure were 37% less likely to eat fruit at least one time per day than residents who were food secure ($p=.030$).
- ▲ Residents who were food insecure were 50% less likely to eat vegetables at least one time per day than residents who were food secure ($p<.001$).

Change in Consumption Frequency

Total fruit consumption frequency increased in 39 percent of residents living in community networks compared to 44 percent of residents living in comparison communities; however, this difference was not statistically significant (see **Exhibit 3.24**). Similar results were found for total vegetable consumption frequency, with 44 percent of residents from community networks reporting an increase and 42 percent of residents from comparison communities reporting an increase, with a non-significant difference between groups.

Community network and comparison community residents were **similar in likelihood of increasing fruit and vegetables** from baseline to follow-up.

Exhibit 3.24. Change in Fruit and Vegetable Consumption Frequency from Baseline to Follow-Up
(n=852; weighted n=69,827)



Among residents from community networks, there were no differences in likelihood of change in total fruit and total vegetable consumption frequency across tiers, networks, exposure to SNAP-Ed (overall or in the past six months), exposure to SNAP-Ed digital content (overall or in the past six months), or food security status.

Additional comparisons across demographic characteristics, tiers, and networks for change in consumption for individual food categories can be found in **Appendix H** Data Tables.

BARRIERS TO FRUIT AND VEGETABLE CONSUMPTION AND ACCESS TO HEALTHY FOODS

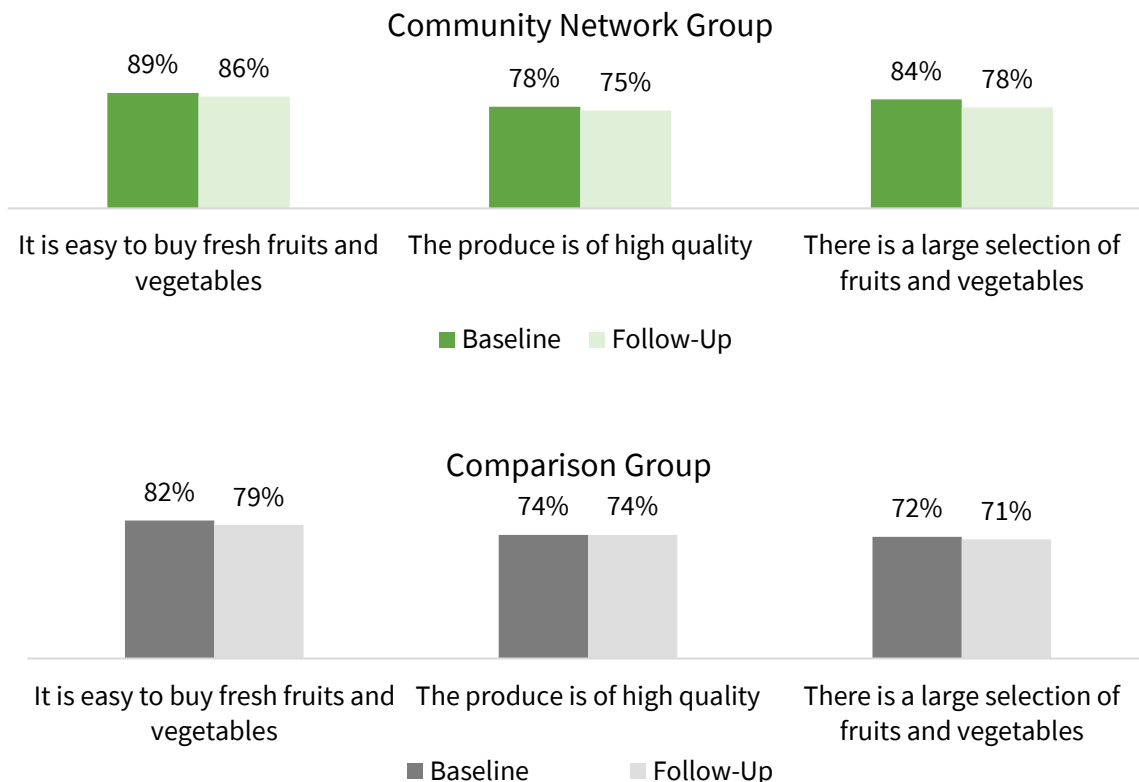
Most Illinois residents with lower incomes living in community networks and comparison communities felt it was easy to buy fresh fruits and vegetables near where they lived; the produce was high quality and there was a large selection of fruits and vegetables (see **Exhibit 3.25**). However, results varied between the community network and comparison groups for ease of buying fresh fruits and vegetables and the selection available.

- ▲ Residents living in community networks were 1.7 times more likely to report that it was easy to buy fresh fruits and vegetables near where they lived at baseline compared to comparison community residents ($p=.049$). After accounting for food security status, results remained significant with community network residents 1.8 times more likely to report that it was easy to buy fresh fruits and vegetables near where they live compared to comparison community residents ($p=.028$). Results were similar at follow-up after accounting for food security status. Community network residents were 1.8 times more likely to report that it was easy to buy fresh fruits and vegetables near where they live compared to comparison community residents ($p=.016$).
- ▲ Residents living in community networks were 1.9 times more likely to report that there was a large selection of fruits and vegetables near where they lived at baseline compared to comparison community residents ($p=.003$). After accounting for food security status, results remained significant with community network residents 2.0 times more likely to report that there was a large selection of fruits and vegetables near where they live compared to comparison community residents ($p=.002$). Results were similar at follow-up after accounting for food security status. Community network residents were 1.6 times more likely to report that there was a large selection of fruits and vegetables near where they live compared to comparison community residents ($p=.040$).

Among residents living in community networks, there were no significant changes in ease of buying fresh fruits and vegetables and the quality of produce from baseline to follow-up. However, there was a significant decrease in the percentage of residents who reported that there was a large selection of fruits and vegetables near where they lived from baseline to follow-up (84% compared to 78%, $p=.022$). There were no significant changes from baseline to follow-up for comparison community residents.

Community network residents were **almost twice as likely** to report that it was **easy to buy fresh fruits and vegetables and that there was a large selection near where they lived** than comparison residents.

Exhibit 3.25. Access to Fruits and Vegetables Near where Respondents Live at Baseline and Follow-Up (baseline: n=846; weighted n=69,379; follow-up: n=855; weighted n=69,885)



Amongst community network residents, **access to fruits and vegetables** varied by **food security status and network**.

Among residents from community networks, there were some variations in access to fruits and vegetables across networks and among those experiencing food insecurity.

- ▲ Residents who were food insecure were:
- ▲ 74% less likely at baseline and 77% less likely at follow-up to report that it was easy to buy fresh fruits and vegetables near where they live than residents who were food secure at each time point (p<.001).
- ▲ 69% less likely at baseline and 66% less likely at follow-up to report that produce is high quality near where they live than residents who were food secure at each time point (p<.001).

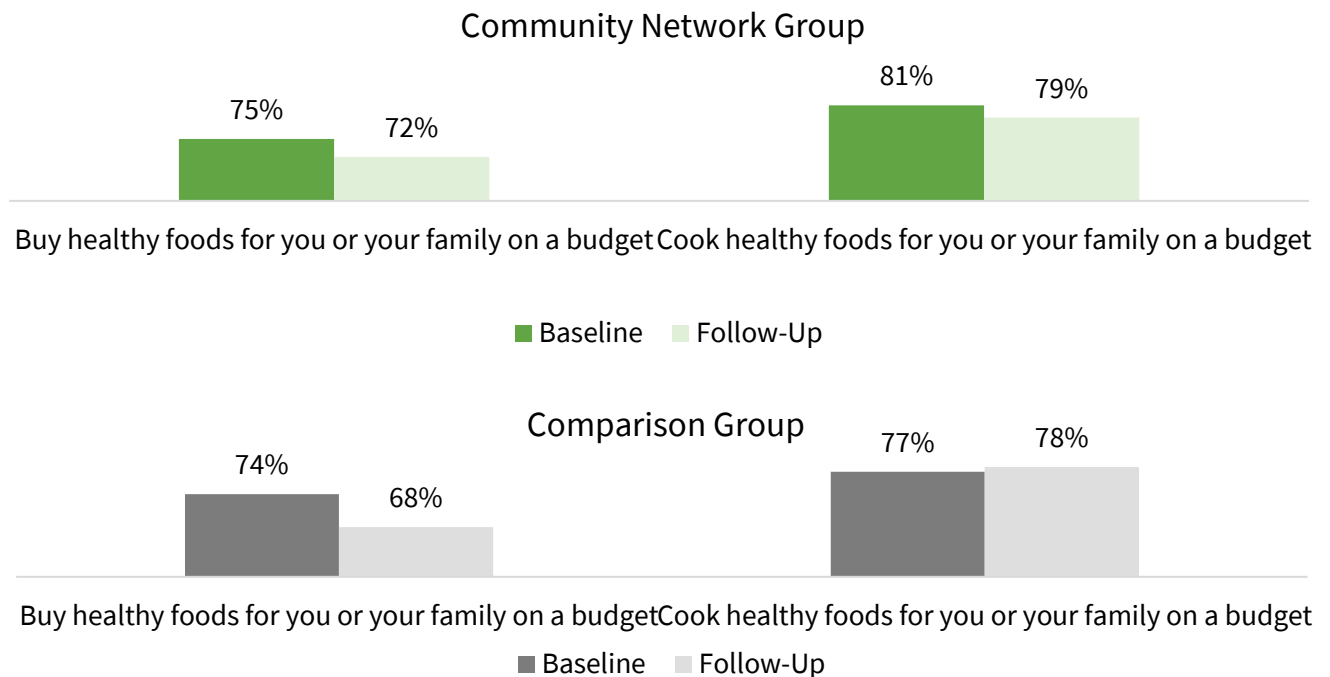
- ▲ 70% less likely at baseline and 67% less likely at follow-up to report that there is a large selection of fruits and vegetables near where they live than residents who were food secure at each time point ($p < .001$).

Additional comparisons across demographic characteristics, tiers, and networks for access to fruits and vegetables can be found in **Appendix H** Data Tables.

A majority of Illinois residents with lower incomes across the community network and comparison communities also reported being confident in buying and cooking healthy foods on a budget for their families (see **Exhibit 3.26**). Results were similar between the community network and comparison residents at both baseline and follow-up. Additionally, there were no significant differences between baseline and follow-up in buying or cooking healthy foods on a budget in either the community network or comparison groups.

Community network and comparison residents were **similar** in their **confidence in buying and cooking healthy foods on a budget**.

Exhibit 3.26. Confidence in Buying and Cooking on a Budget at Baseline and Follow-Up (baseline: n=841; weighted n=68,955; follow-up: n=845; weighted n=69,262)



Amongst community network residents, **confidence in buying and cooking healthy foods** varied by **food security status and network**.

Among residents from community networks, there were no significant differences in confidence to buy and cook healthy foods across tiers, exposure to SNAP-Ed (overall or in the past six months), or exposure to SNAP-Ed digital content (overall or in the past six months). However, results did vary by food security status and network.

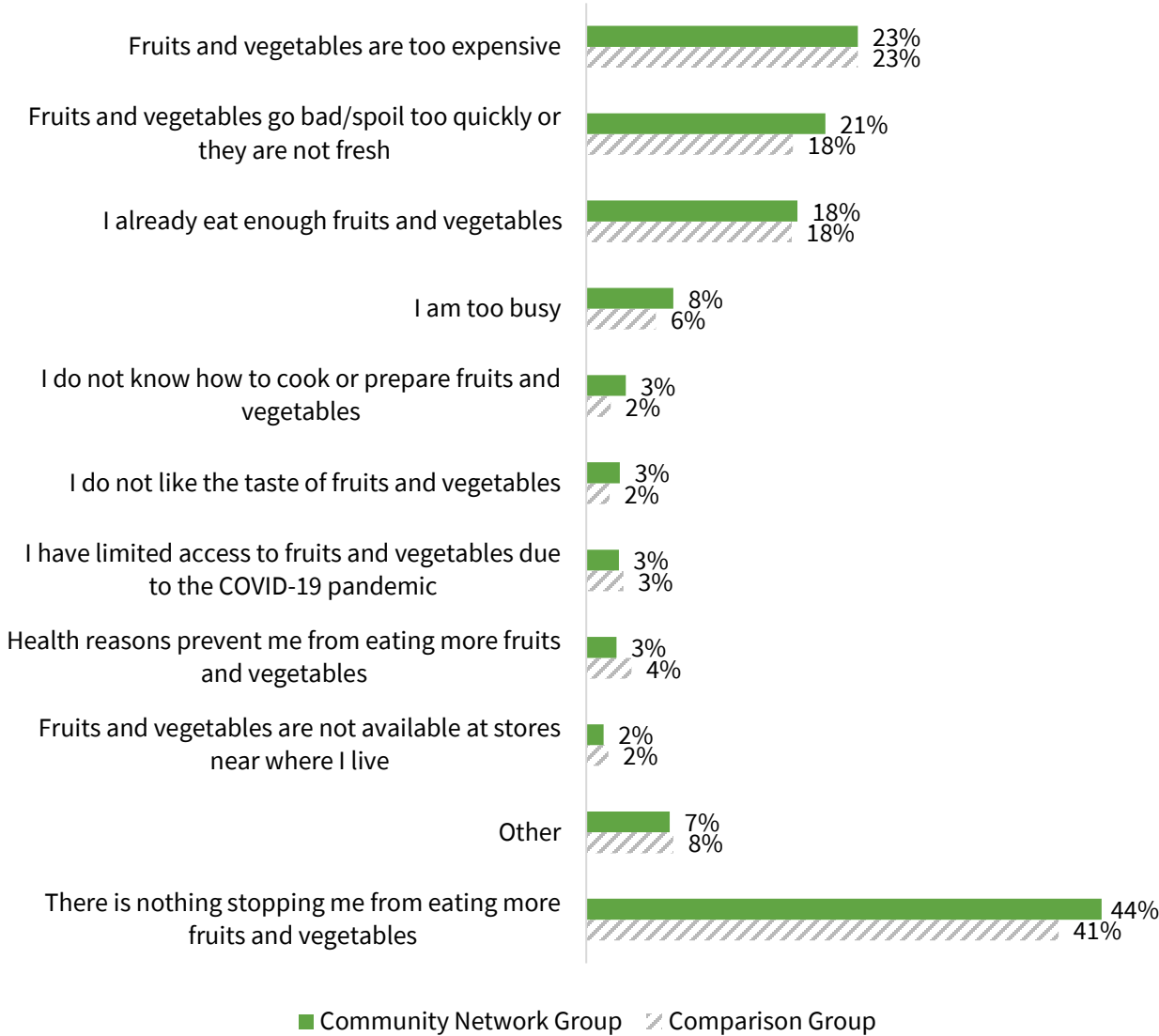
- ▲ Residents who were food insecure were:
- ▲ 77% less likely at baseline and 80% less likely at follow-up to report being confident in buying healthy foods on a budget than residents who were food secure at each time point ($p < .001$).
- ▲ 80% less likely at baseline and 77% less likely at follow-up to report being confident in cooking healthy foods on a budget than residents who were food secure at each time point ($p < .001$).

Additional comparisons across demographic characteristics, tiers, and networks for confidence in buying and cooking healthy foods on a budget can be found in **Appendix H** Data Tables.

Reasons that Illinois residents with lower incomes reported for not eating more fruits and vegetables were similar across the community network and comparison communities (see **Exhibit 3.27**). Over 40 percent of residents in each group reported there is nothing stopping them from eating more fruits and vegetables. The greatest barriers to consumption reported by residents from both groups were that fruits and vegetables are too expensive, fruits and vegetables go bad/spoil too quickly, and a perception that they already eat enough fruits and vegetables.

Top barriers to eating more fruits and vegetables in both community network and comparison residents were **cost, spoilage, and perceptions of already eating enough fruits and vegetables.**

Exhibit 3.27. Barriers to Eating More Fruits and Vegetables Across Community Network and Comparison Groups (n=805; weighted n=65,189)



Additional comparisons across demographic characteristics, tiers, and networks for individual barriers to fruit and vegetable consumption can be found in **Appendix H** Data Tables.

Amongst community network residents, **barriers to eating more fruits and vegetables** varied across **tiers and by food security status**.

Within community networks, barriers to fruit and vegetable consumption reported by residents varied by tier and food security status. Results did not vary by network, exposure to SNAP-Ed (overall or in the past six months), or exposure to SNAP-Ed digital content (overall or in the past six months).

- ▲ Residents from Tier 2 networks were 1.8 times more likely than Tier 3 network residents ($p=.032$) and 2.1 times more likely than Tier 1 network residents ($p=.001$) to report that there is nothing stopping them from eating more fruits and vegetables.
- ▲ Residents who were food insecure were 54% less likely to report that there was nothing stopping them from eating more fruits and vegetables than residents who were food secure ($p<.001$).

READINESS TO INCREASE FRUIT AND VEGETABLE CONSUMPTION

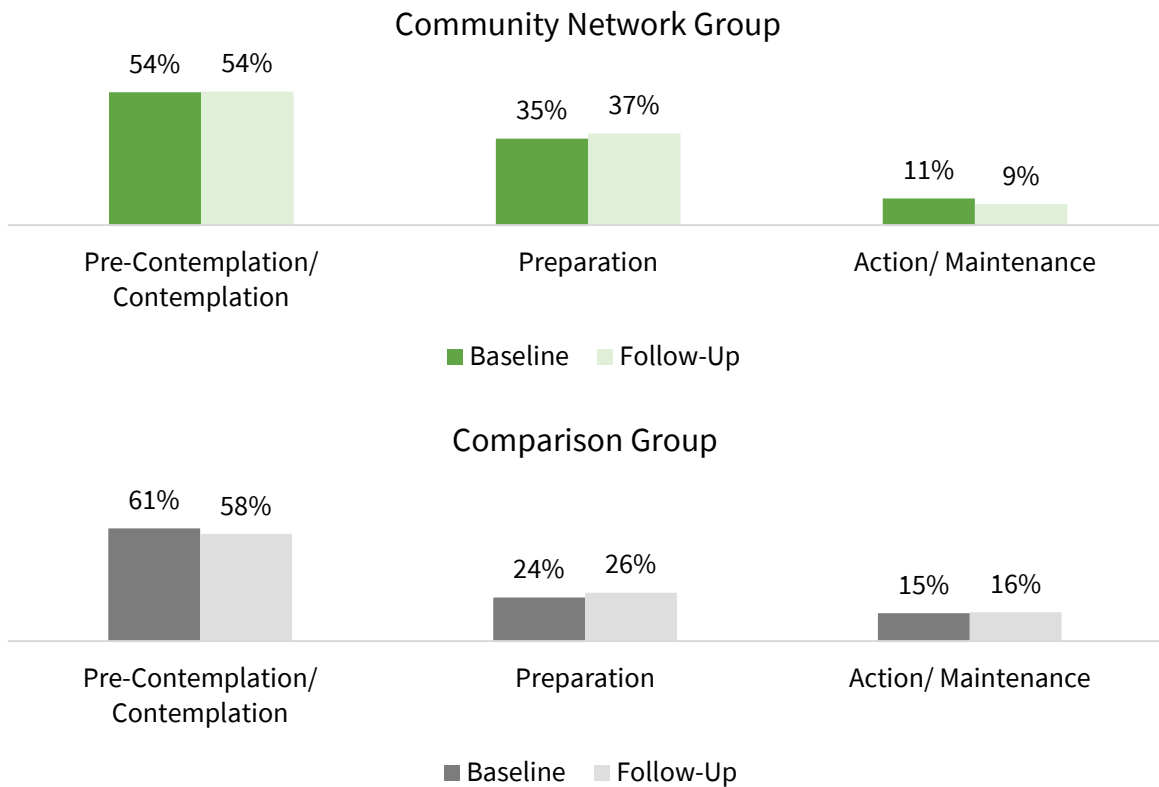
As described in the methodology section, to determine respondents' readiness to make positive dietary changes, the Stages of Change model was used to place people on a continuum of change (Pre-Contemplation, Contemplation, Preparation, Action, or Maintenance). Across both community networks and comparison communities, the majority of residents were in the Pre-Contemplation/Contemplation phase of the Stages of Change model when it comes to eating more fruit (see **Exhibit 3.28**). However, some differences between groups did exist.

- ▲ At baseline, community network residents were 1.7 times more likely to be in Preparation than in Pre-Contemplation/Contemplation than comparison community residents ($p=.014$). However, the comparison community residents were 2.1 times more likely to be in Action/Maintenance than in Preparation than the community network residents ($p=.008$). Relationships were similar after accounting for food security status and exposure to SNAP-Ed overall. Community network residents were 1.6 times more likely to be in Preparation than in Pre-Contemplation/Contemplation than the comparison community residents ($p=.036$), and the comparison community residents were 2.0 times more likely to be in the Action/Maintenance than in Preparation than the community network residents ($p=.015$).
- ▲ At follow-up, community network residents were 1.5 times more likely to be in Preparation than in Pre-Contemplation/Contemplation than comparison community residents ($p=.041$). However, comparison community residents were 2.6 times more likely to be in Action/Maintenance rather than in Preparation than community network group residents ($p<.001$). After accounting for food security status and exposure to SNAP-Ed overall, comparison community residents were 2.4 times more likely to be in Action/Maintenance than in Preparation at follow-up than community network residents ($p=.003$).

Between baseline and follow-up, there were no significant differences in the percent of residents in each phase of the Stages of Change model in either the community network or comparison groups.

Community network residents were **more likely to be preparing to eat more fruit** than comparison community residents, but comparison community residents were **more likely to be already eating more fruit and maintaining those levels** than community network residents.

Exhibit 3.28. Stages of Change from Fruit Consumption at Baseline and Follow-Up Across Community Network and Comparison Groups (baseline: n=855; weighted n=70,003; follow-up: n=857; weighted n=70,096)



Amongst community network residents, **phases of the Stages of Change for eating more fruit varied across tiers, networks, exposure to SNAP-Ed, and food security status.**

Within community networks, results varied by tier, network, exposure to SNAP-Ed (overall and within past six months), exposure to SNAP-Ed digital content, and food security status.

- ▲ Residents who were exposed to SNAP-Ed overall were 2.6 times more likely at baseline ($p < .001$) and 1.9 times more likely at follow-up ($p = .004$) to be in Preparation rather than in Pre-Contemplation/Contemplation than those who were unexposed.
- ▲ Residents who were exposed to SNAP-Ed in the past six months were 2.9 times more likely to be in Preparation ($p < .001$) and 2.8 times more likely to be in Action/Maintenance ($p = .013$) rather than in Pre-Contemplation/Contemplation at baseline than those who were unexposed. However, there were no significant differences at follow-up.
- ▲ Residents who were exposed to SNAP-Ed digital content were 2.1 times more likely to be in Preparation rather than in Pre-Contemplation/Contemplation at baseline than those who were unexposed ($p = .013$). However, there were no significant differences at follow-up.
- ▲ Residents who were food insecure were 1.6 times more likely at baseline ($p = .038$) and 1.7 times more likely at follow-up ($p = .012$) to be in Preparation than in Pre-Contemplation/Contemplation than food secure residents.
- ▲ Residents from Tier 3 networks were 2.1 times more likely to be in Preparation ($p = .008$) and 2.5 times more likely to be in Action/Maintenance ($p = .022$) rather than in Pre-Contemplation/Contemplation at baseline than residents from Tier 2 networks. However, there were no significant differences at follow-up.
- ▲ Residents from Tier 3 networks were 2.5 times more likely to be in Preparation rather than in Pre-Contemplation/Contemplation at baseline than residents from Tier 1 networks ($p < .001$). However, there were no significant differences at follow-up.

Additional comparisons across demographic characteristics, tiers, and networks for Stages of Change for eating more fruit can be found in **Appendix H** Data Tables.

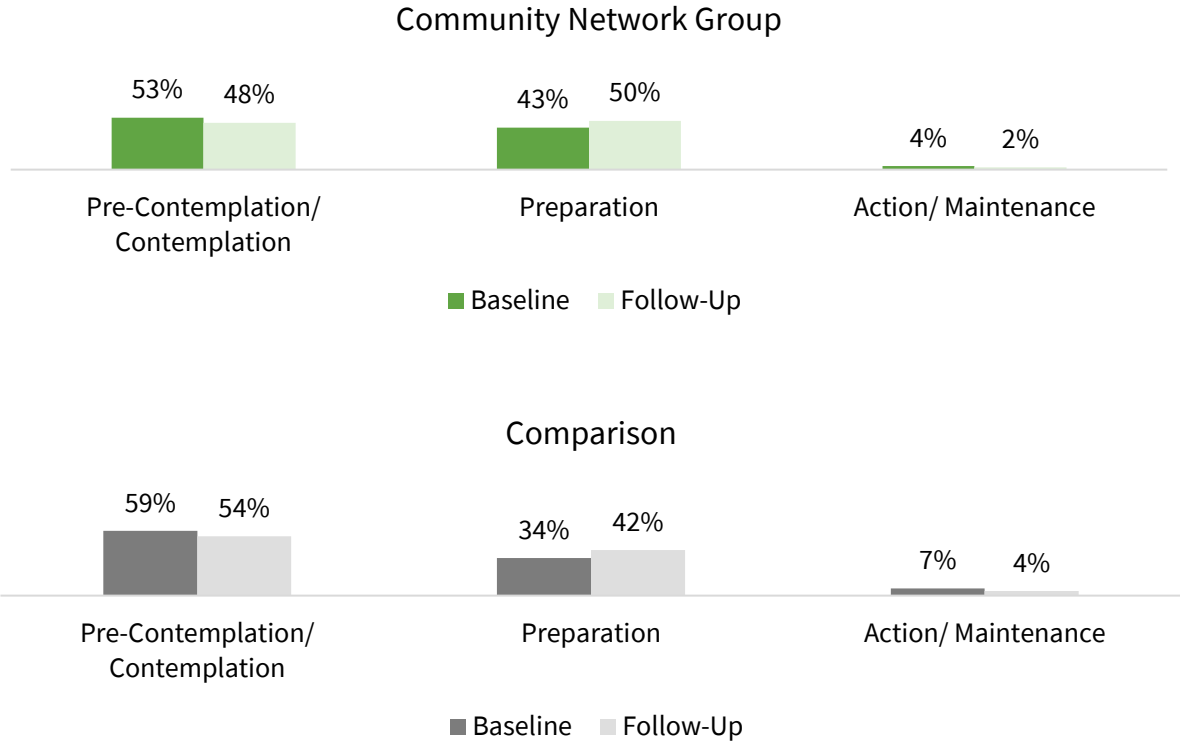
Within the community networks, residents were split primarily across Pre-Contemplation/Contemplation and Preparation phases of the Stages of Change model regarding vegetable consumption (see **Exhibit 3.29**). In the comparison communities, a majority of residents were in Pre-Contemplation/Contemplation. Some differences between groups did exist.

- ▲ At baseline, there were no differences between community network and comparison community residents for likelihood of being in Preparation rather than in Pre-Contemplation/Contemplation. However, comparison community residents were 2.3 times more likely to be in Action/Maintenance than in Preparation ($p = .026$) than community network residents. Relationships were similar after accounting for food security status and exposure to SNAP-Ed overall. There were no differences in likelihood of being in Preparation compared to being in Pre-Contemplation/Contemplation; however, comparison community residents were 2.3 times more likely to be in the Action/Maintenance than in Preparation than community network residents ($p = .033$).
- ▲ At follow-up, there were no significant difference across the Stages of Change model between community network and comparison community residents.

At baseline, comparison community residents were **more likely to have taken action and be maintaining increased vegetable consumption** than community network residents, but there were no differences at follow-up.

Between baseline and follow-up, there were no significant differences in the percent of residents in each phase of the Stages of Change model in either the community network or comparison groups.

Exhibit 3.29. Stages of Change for Vegetable Consumption at Baseline and Follow-Up Across Community Network and Comparison Groups (baseline: n=856; weighted n=70,066; follow-up: n=857; weighted n=70,096)



Amongst community network residents, **phases of the Stages of Change for eating more vegetables** varied across **tiers, exposure to SNAP-Ed, and food security status**.

With residents living in community networks, results varied by SNAP-Ed exposure overall, SNAP-Ed exposure in the past six months, digital SNAP-Ed exposure overall, digital SNAP-Ed exposure in the past six months, tiers, networks, and food security status.

- ▲ Residents who were exposed to SNAP-Ed overall were 1.9 times more likely at baseline ($p=.005$) and 2.2 times more likely at follow-up ($p<.001$) to be in Preparation rather than in Pre-Contemplation/Contemplation than those who were unexposed.
- ▲ Residents who were exposed to SNAP-Ed in the past six months were 2.3 times more likely at baseline ($p=.003$) and 2.5 times more likely at follow-up ($p=.002$) to be in Preparation rather than in Pre-Contemplation/Contemplation than those who were unexposed.
- ▲ Residents who were exposed to digital SNAP-Ed overall were 2.0 times more likely at follow-up ($p=.016$) to be in Preparation rather than in Pre-Contemplation/Contemplation than those who were unexposed.
- ▲ Residents who were exposed to digital SNAP-Ed in the past six months were 2.4 times more likely at follow-up ($p=.012$) to be in Preparation rather than in Pre-Contemplation/Contemplation than those who were unexposed.
- ▲ Residents from Tier 1 networks were 6.2 times more likely at baseline to be in Action/Maintenance than in Pre-Contemplation/Contemplation than residents from Tier 2 networks ($p=.020$). However, there were no differences at follow-up.
- ▲ Residents from Tier 3 networks were 1.8 times more likely at baseline to be in Preparation than in Pre-Contemplation/Contemplation than residents from Tier 2 networks ($p=.021$). However, there were no differences at follow-up.
- ▲ Residents who were food insecure were 1.8 times more likely at follow-up ($p=.002$) to be in Preparation rather than in Pre-Contemplation/Contemplation than residents who were food secure.

Additional comparisons across demographic characteristics, tiers, and networks for Stages of Change for eating more vegetables can be found in **Appendix H** Data Tables.

In both the community network and comparison groups, approximately half of residents (51% and 55%, respectively) had no change in their Stages of Change for fruit consumption from baseline to follow-up (see **Exhibit 3.30**). While 27 percent of community network residents progressed in the stages compared to 25 percent of comparison community residents, this difference was not statistically significant. More than half of residents in both the community network and comparison groups had no change in their Stages of Change for vegetable consumption from baseline to follow-up (see **Exhibit 3.31**). There were no differences between community network and comparison residents in likelihood of progressing along the Stages of Change for vegetable consumption, even after adjusting for differences in food security status between groups.

Community network and comparison residents were **similar** in **likelihood of progressing along the Stages of Change** related to **eating more fruit and vegetables**.

Exhibit 3.30. Change in Stages of Change for Fruit Consumption between Baseline and Follow-Up Across Community Network and Comparison Groups (n=855; weighted n=70,003)

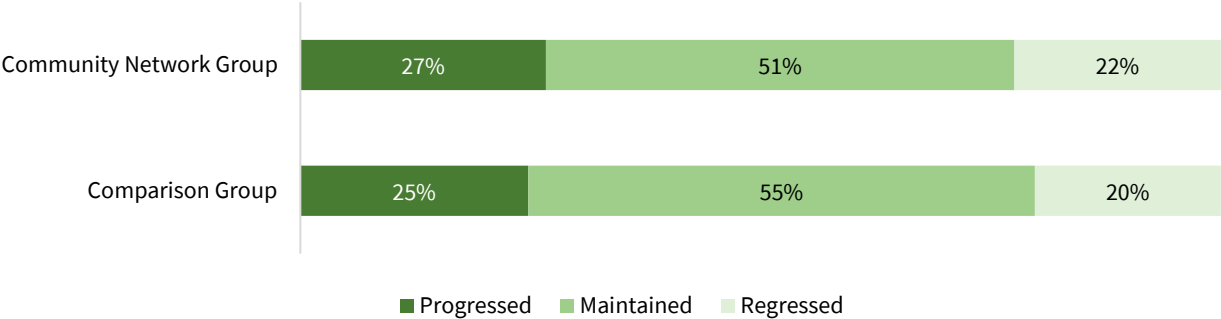
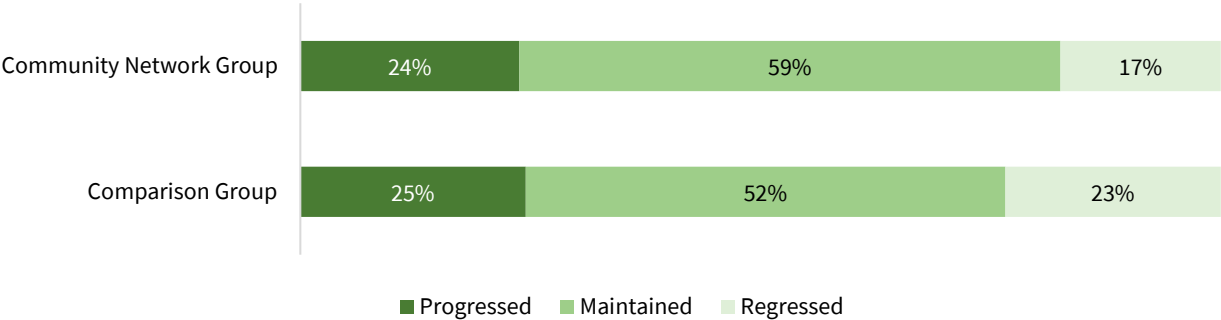


Exhibit 3.31. Change in Stages of Change for Vegetable Consumption between Baseline and Follow-Up Across Community Network and Comparison Groups (n=856; weighted n=70,066)



Additional comparisons across demographic characteristics, tiers, and networks for change in Stages of Change for eating more fruit and vegetables can be found in **Appendix H** Data Tables.

Physical Activity

LEVEL OF PHYSICAL ACTIVITY

Mean Participation

At both baseline and follow-up, comparison community residents had a significantly higher mean total minutes of physical activity per week ($p < .001$) than residents living in community networks (see **Exhibit 3.32**). Among residents living in community networks, from baseline to follow-up there was a significant decrease in total minutes of physical activity per week ($p < .001$). Results were similar for comparison community residents with significant decreases in total minutes per week ($p < .001$) from baseline to follow-up.

Comparison community residents reported **significantly greater total minutes of physical activity per week** than community network residents at baseline and follow-up.

When evaluating the difference-in-differences (i.e., the difference in change) between the community network and comparison groups, there were no significant differences in the baseline to follow-up change in total minutes of physical activity per week (see **Exhibit 3.32**).

Community network and comparison communities were **similar in change in total minutes of physical activity** from baseline to follow-up.

Exhibit 3.32. Physical Activity by Group ($n=826$; weighted $n=67,182$)

	Community Network Group (Mean \pm SD)		Comparison Group (Mean \pm SD)		Difference-in-Differences	
	Baseline	Follow-Up	Baseline	Follow-Up	Did ⁵ (Mean \pm SE)	p-value ⁵
Days per week ^{1,2,3,4}	3.0 \pm 2.2	3.0 \pm 2.2	3.2 \pm 2.1	2.7 \pm 2.0	0.5 \pm 0.2	0.023*
Minutes per session ^{1,2,3,4}	28.1 \pm 24.7	25.5 \pm 22.6	31.1 \pm 26.7	29.5 \pm 23.0	-1.0 \pm 2.8	0.725
Total minutes per week ^{1,2,3,4}	94.0 \pm 128.9	85.1 \pm 120.7	109.8 \pm 155.0	89.9 \pm 122.1	13.1 \pm 13.5	0.330

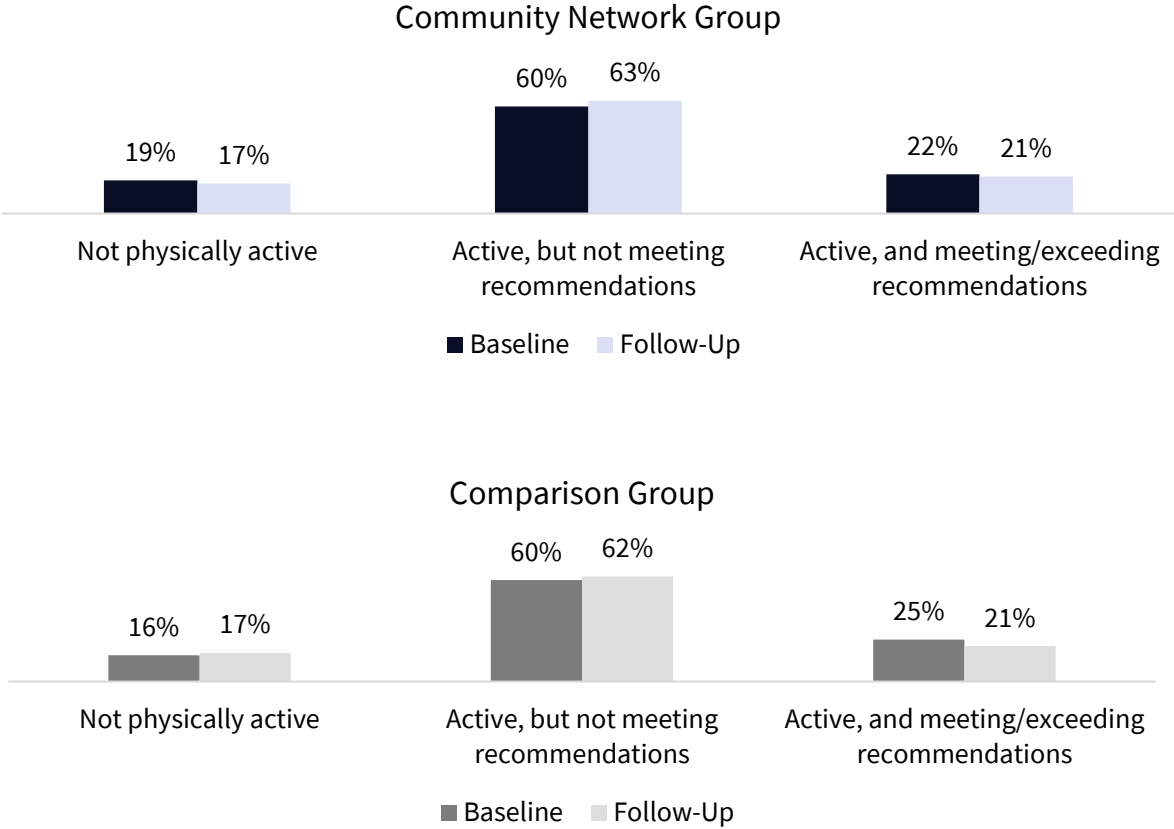
¹Significant difference between baseline and follow-up in the community network group determined by Related Samples Wilcoxon Signed Rank Test. ²Significant difference between baseline and follow-up in the comparison group determined by Related Samples Wilcoxon Signed Rank Test. ³Significant difference between community network and comparison groups at baseline determined by Independent Samples Mann-Whitney U Test. ⁴Significant difference between community network and comparison groups at follow-up determined by Independent Samples Mann-Whitney U Test. ⁵Difference-in-Difference models were adjusted for food security status, race, whether children were present in the household, participation in assistance programs, and exposure to SNAP-Ed overall.

Meeting Recommendations

Few Illinois residents with lower incomes living in community networks were meeting physical activity guidelines at baseline (22%) or follow-up (21%), and results were similar in comparison community residents (see **Exhibit 3.33**). Approximately 60 percent of both community network and comparison community residents reported less than 150 minutes of physical activity per week, regardless of time point. Additionally, almost one-fifth of residents reported no physical activity in both community networks and comparison communities. There were no significant differences between residents from community networks and comparison communities at baseline or follow-up in reporting 150 minutes or more of physical activity (i.e., meeting physical activity guidelines). Additionally, there were no significant changes in physical activity levels from baseline to follow-up in either the community networks or comparison communities.

Community network and comparison community residents were **similar in likelihood of meeting physical activity recommendations** at baseline and follow-up.

Exhibit 3.33. Physical Activity Levels at Baseline and Follow-Up (baseline: n=826; weighted n=67,182; follow-up: n=831; weighted n=68,097)



Amongst community network residents, **physical activity levels varied by tier, networks, and food security status.**

Among residents living in community networks, physical activity levels varied by food security status, tier, and network but did not vary by exposure to SNAP-Ed.

- ▲ At baseline, residents from Tier 1 networks were 2.3 times more likely than residents from Tier 3 networks ($p=.026$) and 2.1 times more likely than residents from Tier 2 networks ($p=.039$) to be meeting physical activity recommendations. Results were no longer significantly different at follow-up.
- ▲ At follow-up, residents who were food insecure were 2.0 times more likely to not be active than meeting physical activity recommendations than those who were food secure ($p=.012$).

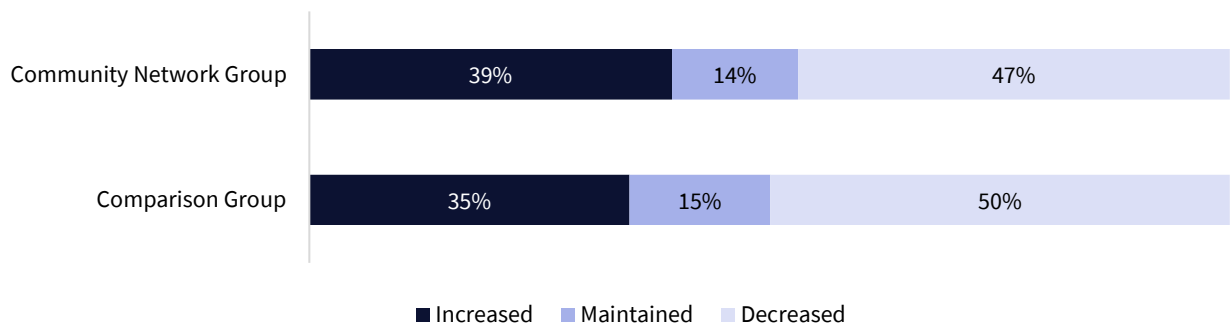
Additional comparisons across demographic characteristics, tiers, and networks for physical activity can be found in **Appendix H** Data Tables.

Change in Participation

From baseline to follow-up, 39 percent of community network residents and 35 percent of comparison community residents increased their physical activity (see **Exhibit 3.34**). There were no significant differences between the community networks and comparison communities in change in physical activity between baseline and follow-up.

Community network and comparison community residents were **similar in likelihood of increasing physical activity.**

Exhibit 3.34. Change in Physical Activity Levels between Baseline and Follow-Up ($n=801$; weighted $n=65,243$)



Additional comparisons across demographic characteristics, tiers, and networks for change in physical activity can be found in **Appendix H** Data Tables.

BARRIERS TO PHYSICAL ACTIVITY AND ACCESS TO SPACES TO BE PHYSICALLY ACTIVE

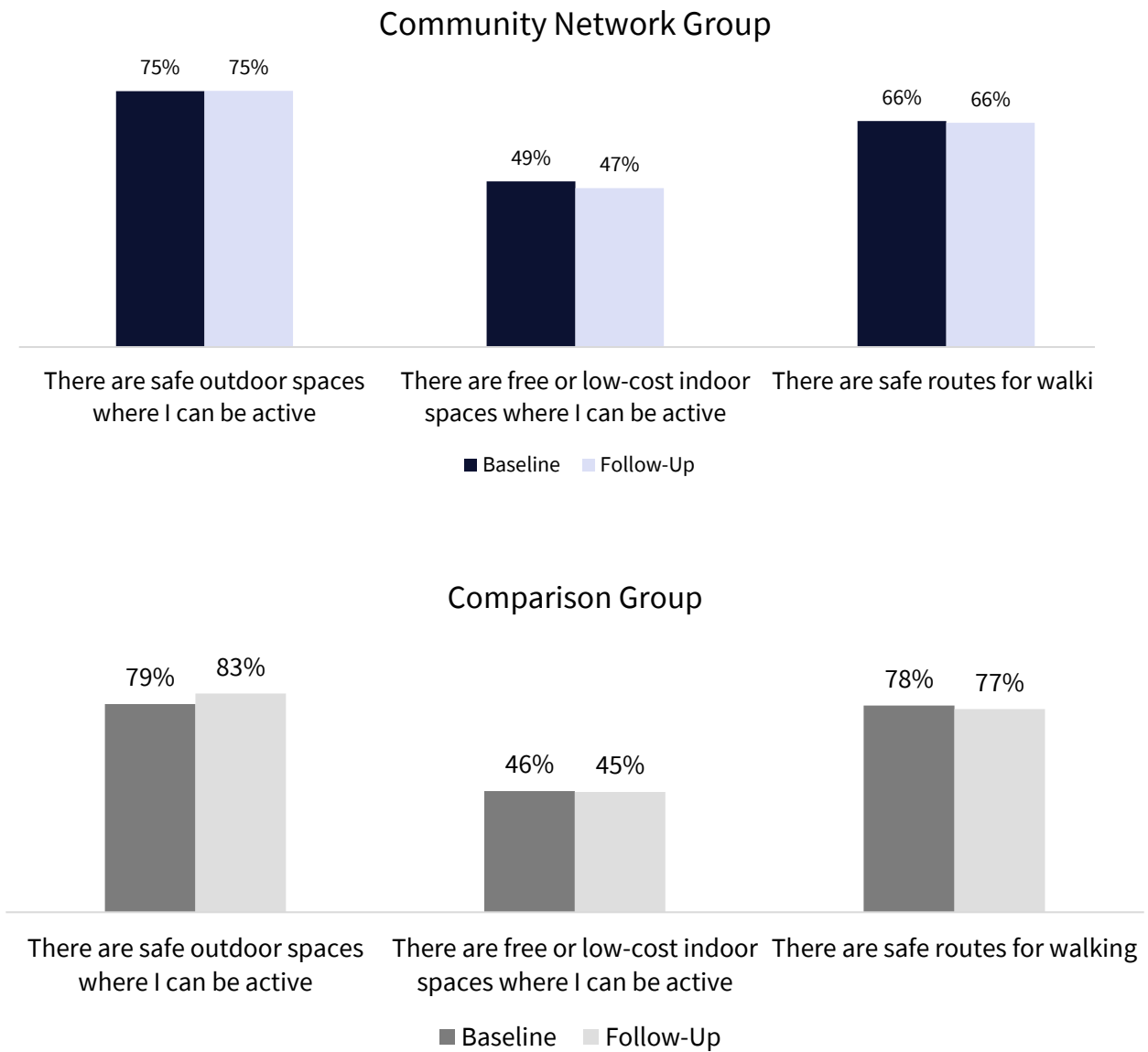
A majority of residents in both the community network and comparison communities reported that there are safe outdoor spaces where they can be active and safe routes for walking (see **Exhibit 3.35**). However, in each group, less than half of residents reported that there are free or low-cost indoor spaces where they can be active. Residents from community networks and comparison communities reported similar access to safe outdoor spaces and free or low-cost spaces to be active, but results varied for access to safe routes for walking.

- ▲ At baseline, residents from the comparison communities were 1.8 times more likely to report that there were safe routes for walking near where they live than residents from community networks (p=.007).
- ▲ At follow-up, residents from the comparison communities were 1.7 times more likely to report that there were safe routes for walking near where they live than residents from community networks (p=.011).

There were no significant differences from baseline to follow-up for perceptions of safe outdoor spaces, free or low-cost indoor spaces, or safe walking routes in either the community network or comparison community residents.

Comparison community residents were almost **twice as likely** to report that there were **safe routes for walking near where they lived** than community network residents.

Exhibit 3.35. Access to Physical Activity Near where Respondents' Live during Baseline and Follow-Up (baseline: n=850; weighted n=69,571; follow-up: n=852; weighted n=69,337)



Amongst community network residents, **access to physical activity varied by exposure to SNAP-Ed, food security status, and network.**

Among residents living in community networks, results varied by exposure to SNAP-Ed overall, exposure to SNAP-Ed digital content (overall and within in the past six months), food security status, and network.

Free or low-cost indoor spaces:

- ▲ Residents who were exposed to SNAP-Ed overall were 37% less likely to agree at baseline that there were free or low-cost indoor spaces where they could be active near where they lived than those who were unexposed ($p=.035$). Results were no longer significantly different at follow-up.
- ▲ Residents who were exposed to SNAP-Ed digital content overall were 46% less likely to agree at baseline that there were free or low-cost indoor spaces where they could be active near where they lived than those who were unexposed ($p=.028$). Results were no longer significantly different at follow-up.
- ▲ Residents who were exposed to SNAP-Ed digital content in the past six months were 49% less likely to agree at baseline that there were free or low-cost indoor spaces where they could be active near where they lived than those who were unexposed ($p=.036$). Results were no longer significantly different at follow-up.
- ▲ Residents who were food insecure were 40% less likely at baseline ($p=.008$) and 54% less likely at follow-up ($p<.001$) to agree that there were free or low-cost indoor spaces where they could be active near where they lived than those who were food secure.

Safe outdoor spaces:

- ▲ Residents who were food insecure were 60% less likely at baseline ($p<.001$) and 57% less likely at follow-up ($p<.001$) to agree that there were safe outdoor spaces where they could be active near where they lived than those who were food secure.

Safe routes for walking:

- ▲ Residents who were food insecure were 60% less likely at baseline ($p<.001$) and 62% less likely at follow-up ($p<.001$) to agree that there were safe routes for walking near where they lived than those who were food secure.

Additional comparisons across demographic characteristics, tiers, and networks for access to places to be active can be found in **Appendix H** Data Tables.

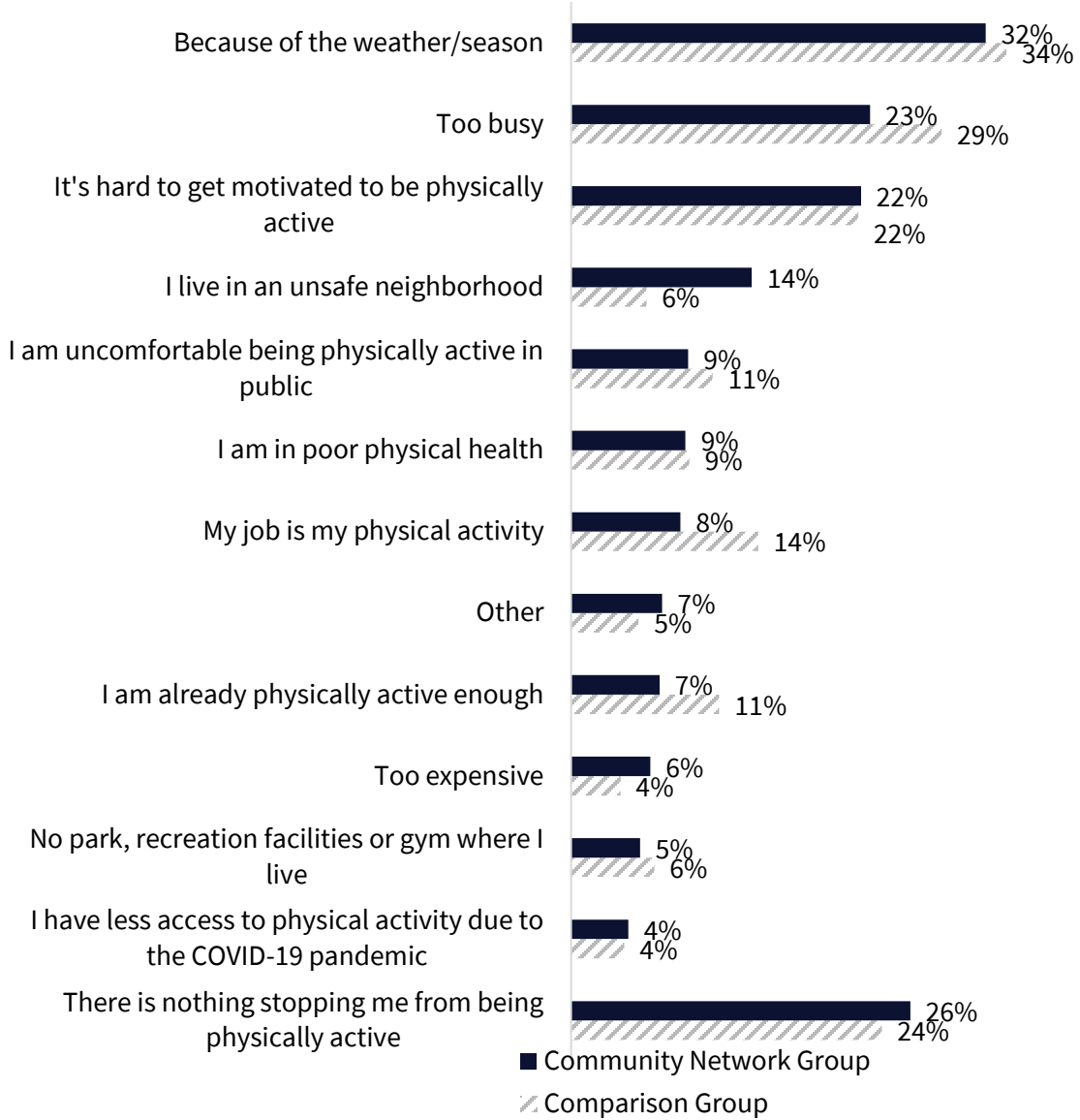
Top barriers to being more active reported by both community network and comparison community residents included **weather, lack of time, and lack of motivation.**

The top reasons that residents reported for not being more physically active were similar across the community networks and comparison communities, with the weather/season, lack of time, and lack of motivation as the top barriers for both groups (see **Exhibit 3.36**). A similar percentage of residents in the community network (26%) and comparison (24%) communities reported that there was nothing stopping them from being more active. However, results differed across perceptions of being active enough, having a job that is physically active, and living in an unsafe neighborhood as barriers to being more physically active.

- ▲ Residents from community networks were 43% less likely to report that they were already active enough than residents from the comparison communities ($p=.043$).
- ▲ Residents from community networks were 45% less likely to report that they had a job that is physically active than residents from the comparison communities ($p=.043$).
- ▲ Residents from community networks were 2.6 times more likely to report that they lived in an unsafe neighborhood than residents from the comparison communities ($p=.003$).

Community network residents were **2.6 times more likely** to report that **they lived in an unsafe neighborhood as a barrier to being more physically active** than comparison community residents.

Exhibit 3.36. Barriers to Increasing Physical Activity by Exposure Status (n=850; weighted n=69,433)



Among residents living in community networks, likelihood of reporting that there was nothing stopping them from being physically active varied by food security status.

- ▲ Residents who were food insecure were 56% less likely to report that nothing was stopping them from being more active than residents who were food secure (p<.001).

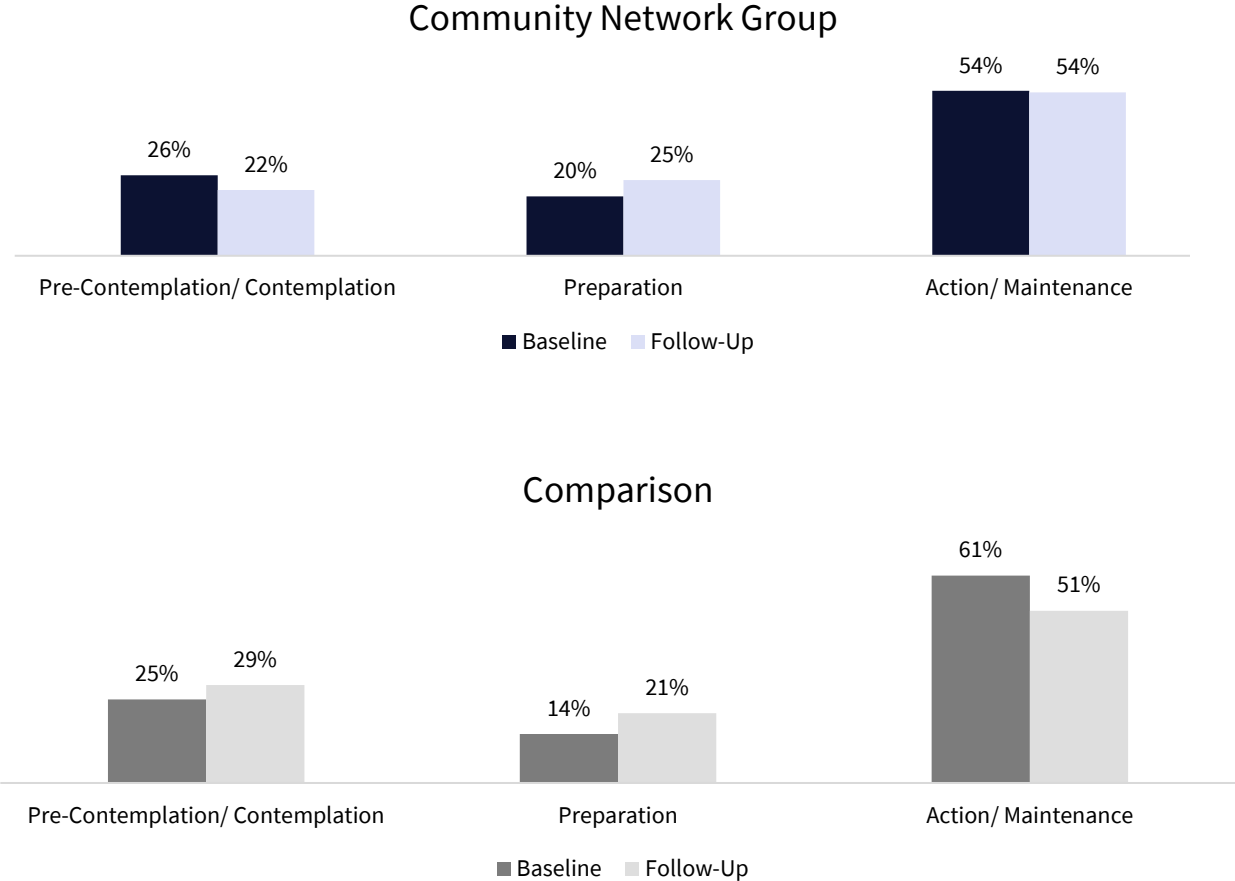
Additional comparisons across demographic characteristics, tiers, and networks for individual barriers to being physically active can be found in **Appendix H** Data Tables.

READINESS TO INCREASE PHYSICAL ACTIVITY

As described in the methodology section, to determine respondents’ readiness to make positive physical activity changes, the Stages of Change model was used to place people on a continuum of change (Pre-Contemplation, Contemplation, Preparation, Action, or Maintenance). Over half of residents in both the community network and comparison communities reported being in the Action/Maintenance phases of the Stages of Change model for physical activity (see **Exhibit 3.37**). There were no significant differences between residents from community networks and residents from comparison communities at baseline or follow-up for Stages of Change related to physical activity. Additionally, between baseline and follow-up, there were no significant changes in the percent of residents in each phase of the Stages of Change model in either the community network or comparison groups.

Community network and comparison residents were **similar** in their **likelihood to be in all phases of the Stages of Change for physical activity.**

Exhibit 3.37. Stages of Change for Physical Activity at Baseline and Follow-Up Across Community Network and Comparison Groups (baseline: n=857; weighted n=70,096; follow-up: n=855; weighted n=69,992)



Amongst community network respondents, **phases of the Stages of Change for physical activity** varied by **exposure to SNAP-Ed and across networks.**

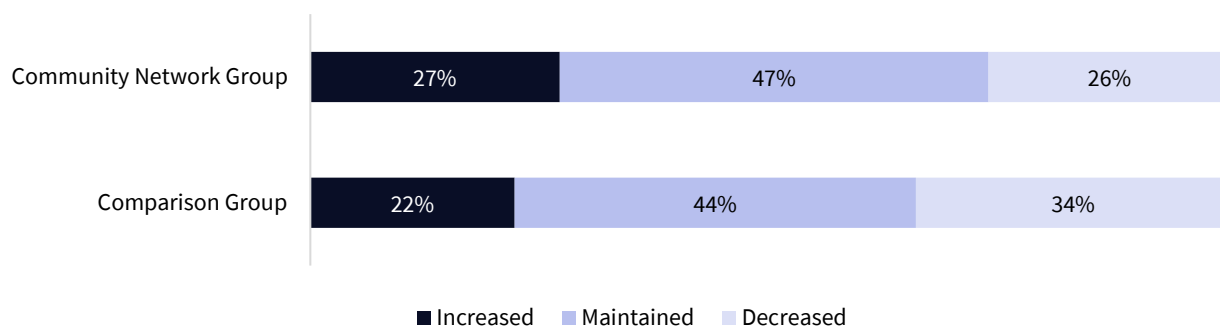
Among residents living in community networks, Stages of Change for physical activity varied by exposure to SNAP-Ed overall, exposure to SNAP-Ed digital content overall, and network.

- ▲ Residents who were exposed to SNAP-Ed overall were 2.3 times more likely to be in Preparation (p=.015) and 2.0 times more likely to be in Action/Maintenance (p=.023) at follow-up than those who were unexposed.
- ▲ Residents who were exposed to SNAP-Ed digital content overall were 2.3 times more likely to be in Preparation at baseline than those who were unexposed (p=.039).

Residents from the community networks (47%) and comparison communities (44%) most frequently reported maintaining their phase in the Stages of Change model from baseline to follow-up (see **Exhibit 3.38**). There were no significant differences between community network and comparison community residents in change from baseline to post in the Stages of Change for physical activity.

Community network and comparison community residents were **similar in likelihood of progressing along the Stages of Change model related to being more physically active.**

Exhibit 3.38. Change in Stages of Change for Physical Activity between Baseline and Follow-Up Across Community Network and Comparison Groups (n=855; weighted n=69,992)



Additional comparisons across demographic characteristics, tiers, and networks for change in Stages of Change for being more physically active can be found in **Appendix H** Data Tables.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

IL SNAP-Ed programming is reaching priority audiences in both community network and comparison communities.

Approximately one-fourth (26%) of Illinois residents with lower incomes living in community networks reported being exposed to SNAP-Ed programming compared to 17 percent of residents living in comparison communities. Within community networks, exposure was significantly higher among certain demographic groups, such as Black, non-Hispanic residents, residents with children in the household, residents experiencing food insecurity, residents with a BMI classified as overweight or obese, and residents participating in assistance programs. Similar results were found for exposure to SNAP-Ed through digital content. These findings indicate that priority populations are more likely to be exposed to SNAP-Ed than non-priority populations and that programming is reaching the intended audience.

When examining differences in exposure between residents within a community network and residents within a comparison community, exposure to SNAP-Ed programming was similar between the two groups after accounting for differences in demographic factors (i.e., food security status, race, household composition, BMI, assistance program participation, and sex). By adjusting for demographic characteristics that align with SNAP-Ed priority audiences (e.g., food insecure, participants of assistance programs), exposure was similar because programming intentionally tried to reach these audiences. In both the community network and comparison communities, residents who reflected priority audience characteristics were more likely to be exposed to SNAP-Ed programming. Similar results were found for exposure to SNAP-Ed through digital content. The most common type of SNAP-Ed programming that Illinois residents with lower incomes were exposed to overall in both the community networks (11%) and comparison (10%) communities was visiting an informational table. While this evaluation examined differences in SNAP-Ed exposure across tiers and networks, the findings were not significant. Similarly, exposure to SNAP-Ed digital content did not differ across tiers or networks.

Exposure to SNAP-Ed programming encouraged actions toward healthy behaviors for most residents.

A majority (59%) of community network residents are taking action after exposure to SNAP-Ed interventions, with the most common actions being starting to be more active, trying new recipes, and starting to eat more fruits and vegetables. Notably, among Illinois residents living within community networks, those who had been exposed to SNAP-Ed digital content overall were more likely to report taking action after exposure than those who were unexposed to digital content. Furthermore, residents experiencing food insecurity were more likely to take action than those who were food secure, and residents with a BMI classified as overweight or obese were more likely to take action than residents with a BMI classified as normal.

There were no differences found between residents living within a community network and those in a comparison community in terms of their likelihood to take action after exposure to SNAP-Ed. Similarly, there were no differences detected across tiers or networks within the community networks.

Likelihood of daily fruit and vegetable consumption was similar between community network residents and comparison group residents despite differences in barriers and food security.

Comparison community residents had significantly higher fruit and vegetable consumption frequencies than community network residents at baseline and follow-up. However, likelihood of daily consumption and likelihood of increasing consumption frequency of fruits and vegetables were similar between community network and comparison community residents. Furthermore, few residents in both community network and comparison communities were meeting daily recommendations for fruit and vegetable consumption. The top barrier to eating more fruits and vegetables among both groups was cost.

Residents living within the community networks were experiencing significantly higher rates of food insecurity than the comparison group. Food security status was a significant factor in most relationships related to fruit and vegetable consumption frequency, barriers to fruit and vegetable consumption, and readiness for change. However, this was not true for access to fruit and vegetables. In fact, community network residents were almost twice as likely to report that it was easy to buy fresh fruits and vegetables and there was a large selection near where they lived than comparison community residents.

Likelihood of meeting physical activity guidelines was similar between community network and comparison group residents despite barriers such as safe access to places to be active for community network residents.

The comparison group had higher levels of physical activity at baseline and follow-up than the community network group, but both groups were similar in likelihood of meeting physical activity recommendations, likelihood of increasing physical activity from baseline to follow-up, and readiness for change in physical activity.

There were clear differences in access to places to be physically active between the two groups. The comparison communities were more likely to report that there were safe routes for walking near where they lived whereas community network residents were more likely to report unsafe neighborhoods as a barrier to being more active. The top barriers to being active in both groups were weather, time, and motivation.

Within community networks, differences were observed between urban networks compared with rural and micro-urban networks. Residents living within the urban networks (Auburn Gresham and Harvey/Dixmoor/Riverdale) were less likely to be meeting physical activity recommendations and less likely to have safe outdoor spaces to be active and safe routes for walking than their micro-urban and rural counterparts; yet they were more likely to be preparing to make a change in their level of physical activity.

Strengths and Limitations

Strengths of this evaluation included:

- ▲ Use of validated survey questions for outcome measures where possible;
- ▲ Weighting of the sample data to represent the characteristics of the IL SNAP population;
- ▲ A pre-post design to determine differences over time;
- ▲ A comparison sample; and
- ▲ Adjustment of outcome analyses to take into consideration differences across demographic characteristics and how they may influence results.

Limitations of this evaluation included:

- ▲ Achieving only 76% of the community network sample goal;
- ▲ Respondent bias due to the fielding method (a mailed/paper option to complete the survey was not offered and could have limited possible participation for those without access to the internet); and
- ▲ An inability to define a ‘true’ comparison sample that was not exposed to programming due to the real-world nature of this evaluation.

Recommendations

Overall findings indicate that there are opportunities to impact food security, healthy eating, and physical activity behaviors within the IL SNAP-eligible population. Food security status was significantly related to almost all outcomes evaluated in this report, which indicates food security would be a point of great impact in changing health behaviors. While residents of community networks reported that it was easy to buy fruits and vegetables close to where they lived, cost and how quickly produce spoils remain barriers to eating more fruits and vegetables. Additionally, a lack of access to safe places to be physically active was identified by community network residents, in addition to other barriers such as time, weather, and motivation.

These are key opportunities to build upon the work already being done in community networks and focus specifically on what continue to be barriers to healthy behavior adoption. Based on the results of this evaluation, it is recommended that IL SNAP-Ed continue to expand partnerships with increased intention on community partners that can help address cost and quality of produce available in local communities and access to safe places to be active. Additionally, PSE change strategies can be mapped to community needs to identify strategies already being implemented that relate specifically to food security, affordable and fresh foods, and safe places for physical activity. These strategies could be an opportunity for growth or used as a model for communities who are seeking effective strategies.



Part 4: Return on Investment Analysis

INTRODUCTION

The final component of the network evaluation was a return-on-investment analysis measuring whether estimated economic benefits of the SNAP-Ed program exceed the upfront cost of administering the program. SNAP-Ed program data was used to estimate the population receiving various components of the program (i.e., direct education, indirect education, social marketing campaign messages, and PSE interventions) and prior literature was used to predict the number of obesity and food insecurity cases prevented. An economic model was then developed and used to estimate the total value of future health and economic improvements through decreased healthcare spending, improved life expectancy, and increased lifetime earnings.

Background

The implementation of the IL SNAP-Ed community network approach and the delivery of a suite of evidenced-based interventions offered through a variety of programmatic channels seek to improve diet, physical activity, and food resource management skills for Illinois residents. By providing the knowledge, skills, and resources to promote behavior changes towards a healthier diet, more physical activity and reduced sedentary time, and improved food resource management that decreases food insecurity, it is likely to expect that SNAP-Ed programming will confer significant benefits to the recipients' overall health status, health care spending, lifespan, education, and financial earnings. This expectation is based on the fact that similar nutrition, physical activity, and food resource management programming have previously been identified to bestow measurable, statistically significant improvements in healthy behaviors (e.g., consuming more servings of fruits and vegetables, increased time spent being active, and improved food resource management skills). Because these healthy behaviors are associated with important health and economic outcomes (e.g., obesity rates, food insecurity rates, educational outcomes, earnings), it is possible to estimate the plausible societal benefits of SNAP-Ed programming through these pathways.

To assess the broader societal and economic benefits of IL SNAP-Ed programming and calculate the potential value of community health improvements relative to the cost of administering the program, this evaluation estimated the total future societal economic benefits from expected increases in diet quality, increased exercise/physical activity, and increased food security and resource management. This estimate was constructed from an economic model that incorporated: (1) the population of SNAP-Ed participants partaking in programming, (2) the size of the expected change in healthy behaviors, and (3) the downstream expected changes in health and economic outcomes. The evaluation modeling uses an approach wherein short- and medium-run changes in individual behavior (such as increased fruit and vegetable consumption, increased activity days, and increased food resource management skills) observed from SNAP-Ed and similar programming are linked to longer-term health outcomes based on previous academic and government studies. These results are then monetized based on total expected societal health and economic benefits of reducing future disease and improving lifetime earnings.

Due to the cost and difficulty in tracking participants over long time periods (5- & 10-year timeframes), this evaluation was unable to directly measure individual changes in long-term health, health spending, or workforce outcomes, and, as such, this evaluation is referred to as "hypothetical modeling." All future health impacts and economic returns in this evaluation are based on the economic model that incorporates prior academic and government studies of interventions similar to SNAP-Ed programming. Some of these prior studies identified causal relationships between

interventions and outcomes, while others used population-based or retrospective analyses to identify associations between certain characteristics and outcomes of interest. Therefore, this research is useful in quantifying and exemplifying the type and relative size of potential economic benefits estimated through the proxy impacts of short-term changes in health behaviors.

However, it is important to note two limitations in the modeling: there is uncertainty as to the extent IL SNAP-Ed is sufficiently comparable to previous programs used to construct model coefficients and to assume the same impacts on behavior change would be seen; and there is uncertainty in the magnitude and permanence of the benefits of the IL SNAP-Ed programming. Studies used in the modeling were selected based on the similarity of the nutritional, exercise, and food resource management interventions in those studies to the typical IL SNAP-Ed programming; however potential differences remain. The specific studies selected are described in the methods section below. Assumptions made in the modeling and implications of the approach's limitations are detailed in later report sections. Future data collection efforts that might augment this evaluation and reduce the uncertainty in some of the estimates are also described at the end of this report.

While there are limitations to economic modeling, a key benefit of this approach is that it allows the creation of a generalizable connection between changes in diet, exercise, and food security that can be applied to data collected directly by IL SNAP-Ed on the number of individuals benefitting from the broad array of programming (e.g., SNAP-Ed direct education, indirect education, PSE strategies, social marketing interventions). Modeling allows the potential long-term economic benefits of improvements in health to be estimated, without waiting to track and monitor individual outcomes over a very long timeframe that benefits would be expected to accrue. Unfortunately, long-term surveys across decades tracking health changes of those benefitting from SNAP-Ed community networks and activities would be prohibitively expensive, administratively difficult, and produce extremely delayed findings. A modeling approach also allows for the generalized models to be used in other states and in future years to estimate the benefits of SNAP-Ed and related programming that impact healthy eating, physical activity, and food security. Further, the models will only need new or updated administrative and program participant data to estimate the new set of benefits. Whenever possible, this analysis was based on either the most current SNAP-Ed administrative data or the data likely to be most representative of SNAP-Ed programming going forward.

METHODS

Methodology Overview

The overall approach for this economic evaluation of IL SNAP-Ed programming was designed to provide the best possible estimate of the societal health and economic returns in the absence of direct, individual-level data on changes in health status and economic outcomes. An economic model was constructed to estimate the likely impacts of varying IL SNAP-Ed initiatives on healthy behavior changes and the downstream effects of these behavior changes on health status and economic outcomes. This approach leverages the data available from SNAP-Ed on estimates of the number of individuals receiving each type of programming activity (by focus area), and then uses prior studies to estimate how that programming is likely to be impacting outcomes such as obesity rates and food insecurity prevalence in Illinois. This analysis is similar in its approach to a few other prior analyses of SNAP-Ed and similar nutritional programming in that it estimates a return on investment based on savings from future improved health and economic outcomes ([Wessman et al., 2001](#); [Rajgopal et al., 2002](#); [Hradek et al., 2017](#)). These prior works found benefit-to-cost ratios of similar programs to be between \$2.48 to \$10.64 dollars per dollar invested.

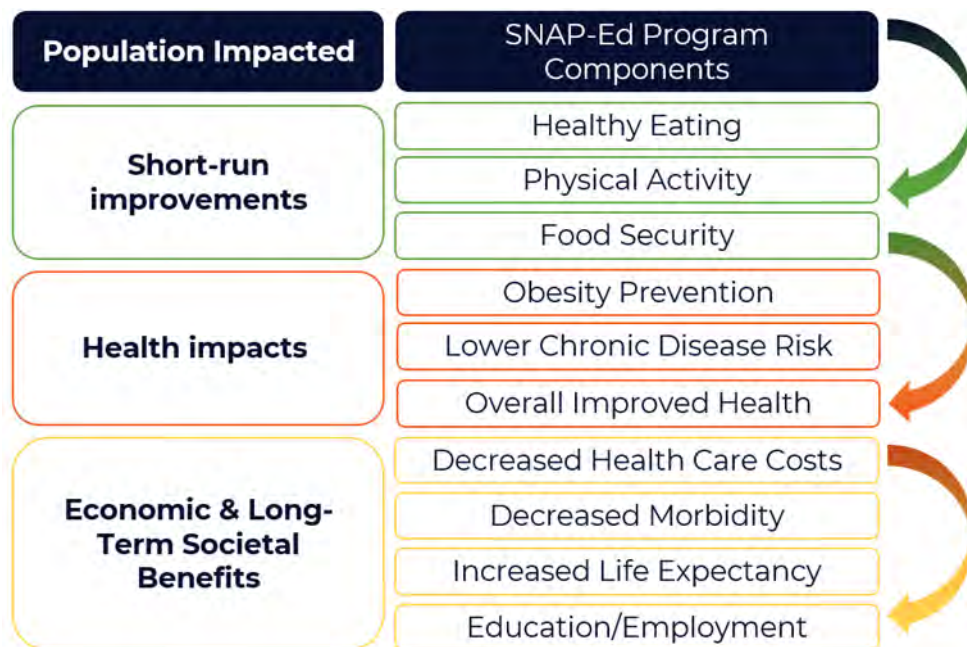
The model generates an estimate of the number of cases of obesity and food insecurity that were prevented as a result of the SNAP-Ed programming (relative to a hypothetical case in which SNAP-Ed programming did not exist). To compute the economic impact of these prevented cases, two scenarios are defined: a “status quo” case where the current SNAP-Ed programming exists and some cases of obesity and food insecurity were prevented as a result, and an “alternative” hypothetical case where SNAP-Ed programming did not exist. The model is run on both the status quo and alternative hypothetical case, estimating the number of averted cases of obesity and food security as the difference between the two scenarios. The difference between these two scenarios is used to estimate the value of the total discounted future societal benefits of SNAP-Ed programming.

Altarum’s previously developed [Value of Health](#) tool was utilized in this evaluation to estimate the economic value of SNAP-Ed programming generated by reducing the number of Illinois residents with food insecurity or obesity. The tool employs a lifepath approach to compute the combined economic differences in health spending, mortality, and earnings outcomes between two hypothetical individuals with different health statuses (e.g., obese versus not obese). Based on a review of prior studies, it was assumed that health benefits from SNAP-Ed driven changes in healthy behaviors persist for either five or 10 years ([Hall & Kahan, 2018](#)). Findings for both of these assumptions were reported as a range of estimated impacts while all future benefits were discounted using a five percent rate. By comparing the estimated total societal discounted future benefits to data collected from IL SNAP-Ed, the expected net societal return in dollars of benefit per dollar invested can be estimated.

Developing Model Pathways

The first step in developing the estimates of the societal benefits of IL SNAP-Ed and community networks via economic modeling involved devising the theoretical pathways through which SNAP-Ed programming improves individual health behaviors in the short-term and then how it contributes to long-term health. Through literature review and discussions with IL SNAP-Ed administrators and external experts, a set of potential short-term improvements, medium-run changes in health, and long-term societal benefits that should be considered for inclusion in the economic modeling was identified (see **Exhibit 4.1**). After identifying the potential set of short-term behavior to long-term outcome pathways, a formal literature review was conducted to clarify which pathways contained sufficient programmatic, health, and economic evidence to incorporate into the formal economic benefits model and to estimate the magnitude of the impacts. Research was targeted that could aid the modeling in connecting programming to short-term behavior change, to expected impacts on long-term health, and to health spending and economic outcomes.

Exhibit 4.1. Potential Pathways of Economic, Health, and Societal Benefits of SNAP-Ed Activities and Community Networks



For changes in behavior attributable to participating in SNAP-Ed, existing program evaluation literature was used. For the impacts of those behavior changes on health indicators and outcomes, medical research and retrospective studies of health outcomes were used that found correlations with or (ideally) causal relationships between behaviors and health. Finally, studies from the population health and health economics literature were utilized to estimate how changes in health and economic status (such as obesity incidence or food security status) were connected to long-term health and to determine the specific economic outcomes that could be incorporated into Altarum’s *Value of Health* economic model. This literature review also sought to identify any interactions between the multiple health pathways, such that overlapping or reinforcing benefits of multiple types of SNAP-Ed programming could be occurring. If sufficient evidence for a particular theoretical benefit pathway was not found (e.g., sufficiently robust studies or evidence for impacts could not be identified) these pathways were then excluded from the final model. As such, the modeling of the final benefits is intended to be a conservative estimate of total benefits of SNAP-Ed programming and community networks.

The three pathways that sufficient evidence existed on SNAP-Ed programming improving long-term health that could be applied to the final hypothetical economic models included impacts on: (1) Diet Quality, (2) Food Security/Resource Management, and (3) Exercise/Physical Activity. Based on the available literature, the generic pathway connections described above are made more specific using the following short-term behaviors, medium-term health indicators, and long-term outcomes shown in **Exhibits 4.2–4.4**.

Exhibit 4.2. Diet Quality Pathway

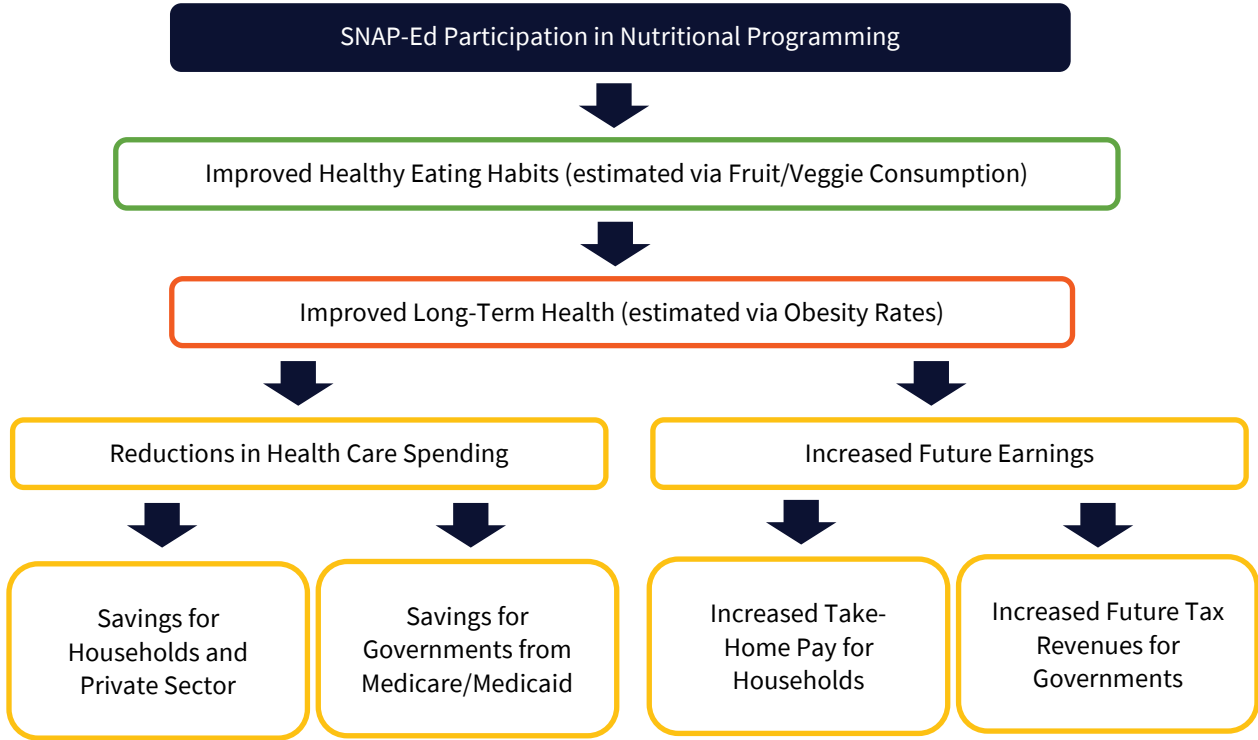


Exhibit 4.3. Food Security/Food Resource Management Pathway

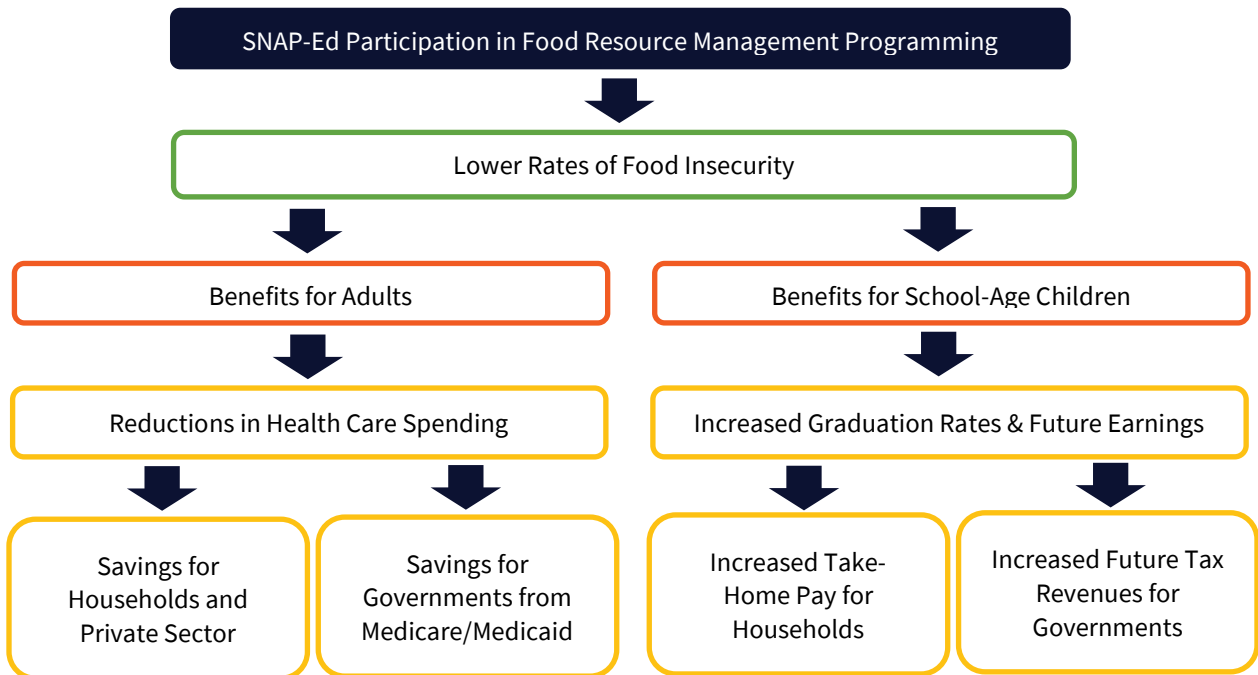
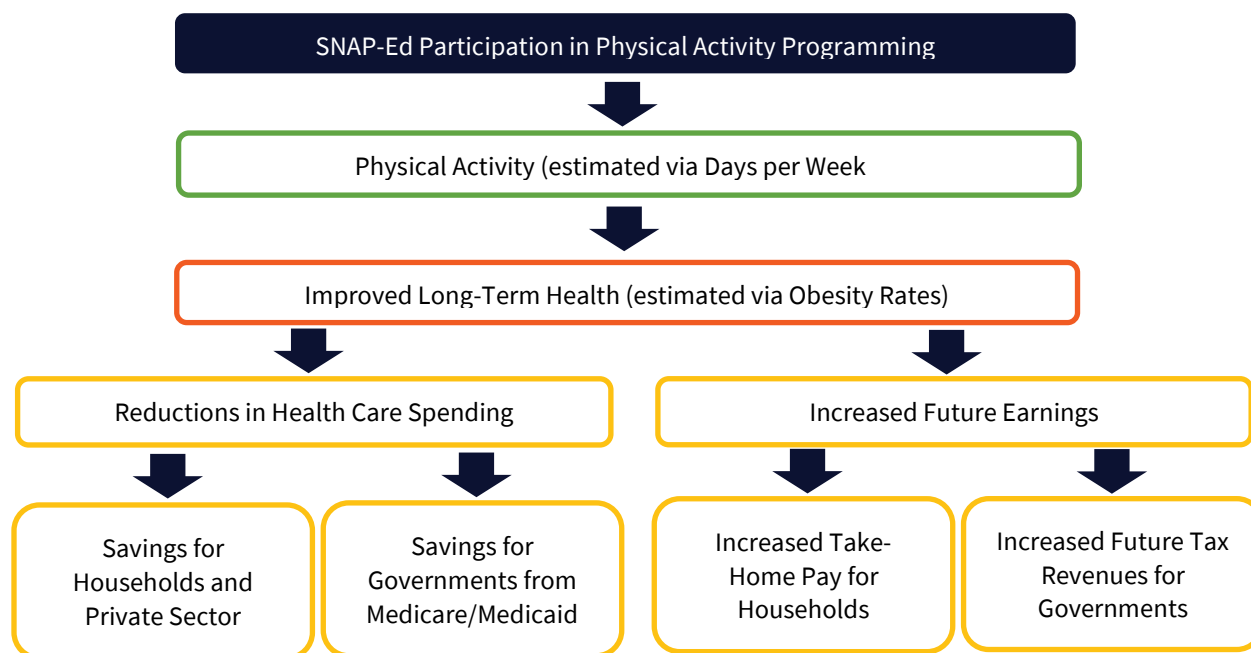


Exhibit 4.4. Exercise and Reduced Sedentary Activity Pathway

For pathways (1) and (3) the health status of obesity is the main outcome of interest that is used to project future health care costs and earnings. Nutrition and physical activity interventions are likely to confer a broad range of health and wellness benefits that are broader than obesity status (Ruegsegger, 2018). Additional health benefits of these interventions likely include improved cardiovascular health, decreased cancer risk, decreased diabetes risk, and other reductions in chronic conditions. For physical activity interventions, there may be additional benefits of cardiovascular fitness. This evaluation focused on obesity status as the key health indicator in this modeling because it represents a well-studied health outcome that can be linked to changes in behavior prioritized by SNAP-Ed programming and to downstream health spending and economic outcomes. Where additional health care conditions such as cardiovascular disease are associated with obesity, the observed health and economic outcome differences monetized in this economic model will account for some, but likely not all, of these additional costs. As a result, the model likely somewhat conservatively underestimates the total benefits of the improved health status of those participating in SNAP-Ed programming. More details on the limitations of the model are discussed in the limitations section of this report.

Population of Illinois Residents Exposed to SNAP-Ed Programs

IL SNAP-Ed programming data were used to estimate the number of people exposed to (1) direct education classes, (2) indirect education (such as informational booths, flyers, or informational packets), (3) PSE change strategies, and (4) social marketing campaign messages. While more recent data were available at the time of analysis (e.g., FFY 2020 and FFY 2021), these years were not reflective of a typical year of IL SNAP-Ed programming due to dramatic reductions in in-person classes as a result of the COVID-19 pandemic. Therefore, data from FFY 2019 were used to estimate a typical population served in one year by IL SNAP-Ed for direct education programming. For indirect education

and PSE strategies, FFY 2020 data were used, and for social marketing FFY 2022 data were used.

To align programming with specific topic areas so that the health benefits of behaviors could be incorporated into the economic model, data collected on the type of class or educational outreach topic area and estimates of the number of individuals reached by age categories were incorporated. For direct and indirect education activities, “population reach” estimates were adjusted downward by 19.5 percent for adults and 27.1 percent for children to account for individuals who were repeat participants to similar classes to prevent double-counting of benefits. The share of repeat adult and child class participants was estimated based on a survey taken from a convenience sample of SNAP-Ed program staff.

Program activity data were used to estimate the number of individuals by age and topic area for the direct education programming. To identify the number of individuals receiving direct education classes that encouraged increased fruit and vegetable consumption, the activities associated with healthy eating behaviors (MT1) were identified and the number of individuals who participated in activities with the intervention topic, “eating sufficient fruits and vegetables” were summed. To identify the number of individuals who received relevant direct education classes that focused on food resource management that would impact food insecurity, program activity data were filtered based on food resource management behaviors (MT2). The number of individuals who had an intervention topic of “skills for food shopping and resource management” were then summed. Lastly, to identify the number of individuals receiving direct education relative to promotion of physical activity, data were filtered based on physical activity and reduced sedentary behaviors (MT3). The number of individuals who had an intervention topic area of either “reducing sedentary activities or screen time”, “participating in sports and recreational activities”, and “other engagement in physical activity” were then summed. The resulting counts of individuals by age and topic area are shown in **Exhibit 4.5**, after removing the estimate of repeat or duplicate attendees. The estimate of the proportion of duplicate or repeat attendees was found based on a survey of SNAP-Ed staff. In some cases, counts of participants in direct education and other classes may have already been “de-duplicated” to estimate a number of new and unique participants and in this case our estimates may conservatively undercount the number of actual participants by program area.

Exhibit 4.5. Direct Education Population Count Estimates, by Age and Topic Area

	MT1: Healthy Eating	MT2: Food Resource Management	MT3: Physical Activity	Total
Ages <5	22,617	175	6,608	29,400
Ages 5 to 17	41,540	1,087	23,198	65,825
Ages 18 to 59	22,977	4,833	3,869	31,679
Ages 60+	5,312	1,011	465	6,788
Total	92,447	7,106	34,140	133,693

A similar approach was used to estimate the population of individuals receiving indirect education from SNAP-Ed programming. Using program activity data, the indirect education activity description labels were categorized into four categories: healthy eating, food resource management, physical activity/exercise, and “Eat. Move. Save.” A sum of the estimated reach for each of these four categories was computed using the FFY 2020 indirect education data. While the FFY 2020 data included a period of the COVID-19 pandemic that limited some indirect education activities, the activity categorization data were more complete for this fiscal year, allowing for more precise

estimates of the topic areas of indirect education offerings. The “Eat. Move. Save.” category was a combined messaging approach that incorporated the three major focus areas; therefore, the total number of individuals receiving the “Eat. Move. Save.” messaging were apportioned equally into the three topic areas (healthy eating, food resource management, and physical activity). To estimate the number of individuals reached with indirect education activities by age, the proportion of ages by topic area were applied from shares of ages of adults the direct education classes to the indirect education activities to estimate age groups. Children were assumed to not be recipients of indirect education programming as it is targeted towards adults. The resulting counts of individuals for the indirect education by age and topic area are shown in **Exhibit 4.6**, after applying the same estimate of removing repeat, duplicate attendees from the data.

Exhibit 4.6. Indirect Education Population Count Estimates, by Age and Topic Area

	MT1: Healthy Eating	MT2: Food Resource Management	MT3: Physical Activity	Total
Ages <5	-	-	-	0
Ages 5 to 17	-	-	-	0
Ages 18 to 59	147,989	59,401	50,544	257,934
Ages 60+	34,212	12,424	6,077	52,714
Total	182,202	71,825	56,621	310,648

To estimate the number of individuals impacted by PSE change strategies, SNAP-Ed programming data collected from FFY 2020 were used to estimate reach. In the available data, priority area categorizations were not available; therefore, strategy topic area indicators were used to estimate the number of individuals receiving each type of strategy based on author’s crosswalk between topic areas and priority areas. While the outcomes of PSE change strategies are associated with different indicators within the SNAP-Ed Evaluation Framework (MT5 and MT6), for the purpose of this model, these data were translated to impact at the individual behavior change level (MT1, MT2, and MT3). For PSE change strategies that had topic area indicators in multiple priority areas, the sum of those individuals was apportioned evenly between the priorities. To estimate the number of individuals reached with the PSE strategies by age, flags within the PSE data on “intervention setting” were used to estimate age groups: PSE interventions marked as “learn” were assumed to take place in schools and impact only children, while all others were assumed to be targeted at adults. The resulting counts of individuals for PSE change strategies by age and topic area are shown in **Exhibit 4.7**.

Exhibit 4.7. PSE Change Strategies Population Count Estimates, by Age and Topic Area

	MT1: Healthy Eating	MT2: Food Resource Management	MT3: Physical Activity	Total
Ages <5	34,481	1,150	873	36,504
Ages 5 to 17	63,331	7,147	3,065	73,543
Ages 18 to 59	117,386	8,143	36	125,565
Ages 60+	27,137	1,703	4	28,845
Total	242,335	18,144	3,979	264,457

The final SNAP-Ed programming population estimated for this analysis was the number of individuals who received and recalled IL SNAP-Ed social marketing messages. This analysis only included the

campaign messages aligned with healthy eating behaviors (MT1) as it was the only component for which literature was identified that estimated the expected behavior change from social marketing messages. The population-level survey of SNAP-eligible IL residents conducted by Altarum in FFY 2022 was used to estimate message recall. The proportion of individuals who recalled the social marketing message was applied to the total SNAP-eligible adult population by age in Illinois to estimate the number of individuals receiving a social marketing message. **Exhibit 4.8** shows the results of this population analysis.

Exhibit 4.8. Social Marketing Population Count Estimates, by Age and Topic Area

	MT1: Healthy Eating	MT2: Food Resource Management	MT3: Physical Activity	Total
Ages <5	-	-	-	0
Ages 5 to 17	-	-	-	0
Ages 18 to 59	61,098	-	-	61,098
Ages 60+	25,015	-	-	25,015
Total	86,113	-	-	86,113

Estimated Status Quo Counts of Obesity and Food Insecurity

Counts of individuals with obesity and food insecurity for the “status quo” case of SNAP-Ed programming – where SNAP-Ed programming existed as it was actually implemented over the year(s) of study – were computed by applying obesity and food insecurity rates to SNAP-Ed population data.

Data on the rate of obesity for Illinois was captured from the 2019 and 2020 [Behavioral Risk Factor Surveillance System](#) (BRFSS) for the state, by age category. Obesity rates from 2019 BRFSS data were applied to the SNAP-Ed direct education population data, and 2020 data were applied to the remaining three programmatic types to determine the status quo counts of obesity across ages and the two relevant priority areas (Healthy Eating and Physical Activity). These obesity rates ranged from 15.4 percent for 18–24 year-olds to 37.5 percent for 55–64 year-olds. When the age categories in the SNAP-Ed data did not perfectly align with the age categories used in the BRFSS data, the nearest category’s obesity rate was applied to the SNAP-Ed data.

Food insecurity rates for SNAP-Ed participants were collected from the United States Department of Agriculture Economic Research Service [Household Food Security in the United States](#) annual report. Again, the 2019 food insecurity rate was applied to the direct education population by age groups and the 2020 rate was applied to the remaining three program types. The food insecurity data were relevant only for the MT2 priority area on Food Resource Management. The rate among “children” in the ERS report was applied to the “<5” and “5 to 17” population, while the “adult” population rate was applied to the “18 to 59” and “60+” age groups.

The totals across the three priority areas and four program types are shown in the first section of **Exhibit 4.10** below.

Model Assumptions of SNAP-Ed Intervention Effects on Obesity and Food Insecurity

The future economic benefits from SNAP-Ed programming are estimated in the model based on the number of cases of obesity and food insecurity that were prevented in the status quo case, relative to the alternative “hypothetical” case where SNAP-Ed programming did not exist. To quantify this value, the number of averted cases were estimated based on the estimates of the effectiveness of SNAP-Ed nutrition, food resource management, and physical activity interventions in improving healthy behaviors and then in reducing adverse outcomes based on prior evaluations of similar programs. This process required two steps: (1) estimating the change in short-term healthy behaviors that occur after participating in programs as an intermediate outcome, and (2) linking the changes in those short-term behaviors to longer-term obesity and food insecurity outcomes of interest.

Whenever possible, literature that was specific to SNAP-Ed program evaluations were used for the modeling (although none of the studies found assessed an Illinois-specific SNAP-Ed population). When necessary, study findings were adjusted and standardized to one another to allow links between different study findings to be made (for example adjusting fruit and vegetable consumption between cups and servings per day, or physical activity from hours per day to calories burned).

DIRECT EDUCATION 1: DIET QUALITY

Based on the literature, the modeled nutrition direct education interventions are estimated to increase participant fresh fruit and vegetable consumption by 0.50 servings per day on average for both adults and children ([Caldwell 2021](#), [Long 2013](#), [Dannefer 2015](#)). For adults, each additional 0.5 serving of fruits and vegetables per day is estimated to be associated with a 6.1% reduction in obesity risk ([Yu 2018](#), [He 2004](#)). This is supported by similar research showing fruit and vegetable consumption is associated with lower average weight ([Dreher 2020](#), [Arnotti 2020](#), [Yuan 2018](#), [Molitor 2015](#), [Field 2003](#), [Rivera 2019](#)). For children, the association between fruit and vegetable consumption and obesity is somewhat weaker ([Epstein 2001](#)); therefore, the model estimates that each additional serving for those under the age of 18 years accrues a decreased obesity risk of 0.6%.

Direct Education 2: Food Resource Management

Based on the literature, the modeled food resource management direct education programming are estimated to decrease the risk of food insecurity in the home by 6.8% for adults and 6.2% for children after an educational class ([Rivera 2016](#), [Eicher-Miller 2009](#)). This relationship is further supported by research on the impact of food resource management education on the likelihood of running out of food before the end of the month ([Kaiser 2015](#)) and in assessments of food resource management skills ([Adedokun 2018](#)).

Direct Education 3: Exercise/Physical Activity

Based on the literature, the modeled direct education activities focused on increasing physical activity are also expected to decrease obesity risk for adults and children. Physical activity programs for adults are modeled in this work based on an increase of 0.43 days a week of physical activity from each class ([Caldwell 2021](#)), while children are expected to receive a benefit of 0.95 days a week of physical activity ([Molitor 2015](#)). Other work has identified links between SNAP-Ed physical activity interventions and cardiovascular fitness, another likely indicator of changes in health for kids ([Thompson 2020](#)). From each additional estimated day per week of physical activity, the model assumes an 8.8% reduction in obesity risk for both adults and children ([Ekelund 2011](#), [Britton 2012](#), [Tammelin 2004](#), [Hankinson 2010](#)).

INDIRECT EDUCATION AND PSE CHANGE

For each of the three major areas prioritized by direct education initiatives, IL SNAP-Ed also provides lighter-touch indirect education activities that reach larger audiences. These indirect education approaches may be passive education such as flyers and handouts or informal educational locations such as pop-up stands or booths. The impact of these approaches on behavioral change (and downstream benefits to obesity risk and food insecurity) are more difficult to quantify based on prior academic research as they are not as well studied. It was hypothesized that these SNAP-Ed activities did provide some benefits to those receiving the passive education materials, but at a lower effect size than the direct education work. To include the benefits of indirect education in the model, the predicted impact sizes on obesity and food insecurity based on the direct education components by age and priority area were estimated but assumed that an equivalent indirect education activity achieved 20 percent of the impact of the comparable direct education approach. We show in a later section of this report the effect on the model results of alternative assumptions for the relative impact of indirect education and also how future assessments could provide more clarity on this value.

For the IL SNAP-Ed PSE change strategies, a similar approach was taken to estimate the relative impact of these strategies. While indirect education is more similar to a less intensive form of direct education, PSE change strategies can look very different. These interventions can involve long-term structural and policy changes to support nutrition, physical activity, and food security that may be expected to have large impacts on those receiving those benefits, but to a more loosely defined population. As a result, it was assumed in this modeling that the predicted impact sizes on obesity and food insecurity for PSE strategies are proportional to the associated direct education components but that an equivalent PSE intervention achieves 50 percent of the impact that would result from the comparable direct education activity. Due to the fact that the proportional relative effects of indirect education and PSE activities are quite uncertain and not as well supported by prior research compared to Illinois' direct education programming, alternative assumptions for these sizes are tested in sensitivity analyses following the results section of this report.

SOCIAL MARKETING: DIET QUALITY

The final component of IL SNAP-Ed activities included in this model are social marketing activities promoting healthy habits around nutrition and diet quality. While IL SNAP-Ed social marketing included a broad range of messages during the period of study, nutrition-focused messages are the only component included in the modeling as they have the most robust evidence base for effecting real behavior change among those that recall the messages. Based on prior evaluations of social marketing and related communications ([Hofer 2021](#), [Glasson 2013](#)), it was estimated that for each individual recalling SNAP-Ed nutrition messages, there is an estimated increase of 0.5 servings per day of fruits and vegetables. Similar to the above, each additional 0.5 servings of fresh fruits and vegetables is associated with a 6.1% reduction in obesity risks for adults and 0.6% for children.

Model Assumptions of Impacts of Obesity on Health Spending and Earnings

Obesity is associated both with additional expected health care costs and lost potential future earnings. Additional health care costs come from greater risk of requiring short term health care expenditures as well as increased risks of developing costly chronic conditions such as heart disease and diabetes. Based on [work from the Congressional Budget Office](#) (CBO), it was modelled that each diabetes diagnosis is expected to increase health care spending by 22.8 percent. CBO estimated that average health care costs are 38 percent higher for those with obesity, but only 60 percent of those

costs are attributable directly to obesity-related conditions. As such, a 22.8 percent increase in health care spending was assumed. For the average 25-year-old in Illinois, this results in annual health care expenditures due to attributable obesity costs increasing from \$3,129 to \$3,843. For an average 55-year-old, spending would increase from \$8,779 to \$10,781. These increased health care costs were applied to all baseline child and adult health care spending estimates.

Obesity is also connected to lower expected future lifetime earnings, driven by increases in both absenteeism and presenteeism at work. Prior research has estimated the volume of increased expected sick days and lost productivity at work of an obese worker relative to a healthy weight worker, while controlling for other factors ([Ricci 2015](#), [Finkelstein 2010](#)). When lost productivity is expressed in lost earnings per obese worker, prior research has estimated that 2.8 percent future earnings were lost to presenteeism, and 1.1 percent future earnings were lost to absenteeism. These earnings impacts are applied only to the working-age adult population. These estimates do not incorporate additional possible lost earnings due to discriminatory practices, wherein obese workers are paid less, even when comparing workers with similar levels of productivity ([Lempert 2007](#)). These discrimination-related impacts are not included in this analysis as they are not connected to true lost productivity.

While not directly contributing to the economic impacts of obesity, also included in the model are differences in mortality risk for those with obesity ([Borrell 2014](#)). These mortality data compound the earnings and health care spending impacts, incorporating into the economic estimates the costs of lower expected future earnings for those with obesity and a small increased risk of premature death.

Model Assumptions of Impacts of Food Insecurity on Health Spending, Education, and Earnings

Household food insecurity status is also associated with future economic costs with pathways that vary based on age. For school-age children, food insecurity is correlated with lower standardized test scores and grades at a variety of grade levels ([Alaimo 2001](#), [Sharma 2017](#), [Jyoti 2005](#)). Additionally, food insecurity is connected to lower graduation rates ([Wolfson 2021](#)) for college students and lower rates of “on track” progress that are highly predictive of high school graduation ([Faught 2017](#)). As a result of these latter two estimates, it was estimated in the model that food insecurity for children ages 6 to 22 years decreases the likelihood of either graduation by 37.5 percent. For each of these forgone graduations, data from recent analyses ([Heckman 2018](#)) of the causal returns to education have estimated significant lost future earnings, a loss of 9.4 percent in annual earnings. This value is similar to prior studies that also estimated the causal impact of education and schooling on future earnings ([Card 1993](#), [Card 2001](#)).

Alternatively, for adults, the impacts of food insecurity are more closely associated with future health care costs. Assessments of food security status and subsequent total health care expenditures in the following year have shown that food insecure adults spend 19.5 percent more on health care than food secure peers ([Palakshappa 2023](#)). These additional health care costs accrue from increased spending on all types of care, but are only significant for adults – the following-year spending difference for children was negligible and insignificant in the prior evaluation. As such, the 19.5 percent increase in health care costs was applied for only the 18 and older population in the economic model.

Other Model Assumptions

The development and application of the economic model to estimate the benefits of IL SNAP-Ed requires additional economic data and assumptions about the State of Illinois, health care spending and earnings trajectories, and the permanence of the IL SNAP-Ed derived changes in healthy behaviors and health outcomes. This last assumption is perhaps the most impactful on the computation of the final total discounted benefits and return on investment calculations, as changing the assumed number of years health outcomes remain has the largest impact on the benefit-cost analysis. As a result of this outsized impact (and significant uncertainty given that, to date, longitudinal evaluations of SNAP-Ed interventions beyond a year of study have not been identified), the economic benefits and benefit-cost ratios as a range of findings between two assumptions are presented: a five-year window of future health benefits and a 10-year window of future health benefits.

The lower assumed value for the persistence of the SNAP-Ed impacts assumes the health benefits from the short-term healthy behavior changes expire after five years. This value is estimated based on prior research that found nutrition and behavioral interventions that resulted in significant weight loss eventually declined in effectiveness, and by Year 5, 80 percent of the weight lost on average had been regained ([Hall 2018](#)). The longer-term value of 10 years before SNAP-Ed behavioral impacts expire is taken from prior economic modeling research wherein cost effectiveness evaluations for varying childhood obesity interventions were run to estimate benefits over this time period ([Gortmaker 2015](#)).

In the analysis, economic benefits that occur in future years are discounted using a five percent discount rate and all findings are shown in 2020 U.S. dollars. Other critical base economic data and assumptions used as inputs in the *Value of Health* model are shown with references in **Exhibit 4.9**.

Exhibit 4.9. Table of Other Critical Economic Model Inputs and Data Sources

Data Point / Assumption	Value(s) Applied	Source
Baseline Annual Health Care Spending Totals*	\$2,192 to \$15,832	Agency for Healthcare Research and Quality (AHRQ) Medical Expenditure Panel Survey (MEPS)
Baseline Annual Earnings	\$0 to \$65,627	2019 American Community Survey Public Use Microdata Set (PUMS) Data for Illinois
Baseline Non-Obese Mortality Rate	0 to 304 per 1,000	CDC Wide-ranging ONline Data for Epidemiologic Research (WONDER) Causes of Death Data
Health Insurance Shares		Kaiser Family Foundation (KFF) Illinois Source of Medical Insurance data, 2019
Federal/State Split for Medicaid	50.3% Federal	KFF Federal Medical Assistance Percentage (FMAP) Estimates by State, 2019
Federal Effective Average Tax Rate	22.5%	National Bureau of Economic Research, Marginal Rate of Income Tax Paid, Illinois, 2019
State Effective Average Tax Rate	3.0%	National Bureau of Economic Research, Marginal Rate of Income Tax Paid, Illinois, 2019
Real Earnings Growth per Year	0.0%	Author Assumption
Real Health Care Cost Growth per Year	0.0%	Author Assumption
Future Benefits Discount Rate	5.0%	Author Assumption

* Estimates made per single age-year, fit with a cubic spline to smooth variation

RESULTS

Population, Obesity, and Food Insecurity Outcomes

Results of the total estimated impacted IL SNAP-Ed population, the status quo analysis of obesity and food insecurity cases, and the estimated attributable avoided cases of obesity and food insecurity are shown in **Exhibit 4.10**. Approximately 194,879 cases of obesity are estimated to have occurred amongst the total 697,836 unique IL SNAP-Ed participants taking part in the healthy eating and physical activity programming. As a result of these interventions, it is estimated that over 5,050 cases of obesity were prevented from occurring as a result of SNAP-Ed programming during the years of study. Of these 5,056 cases, 4,456 cases were estimated to have been avoided by programming focused on diet quality and 600 cases from programming focused on physical activity. Due to the mix of participant ages, the majority of the cases of obesity for the diet quality intervention were prevented for adults; in the physical activity programming, the majority of cases prevented were for those under the age of 18 years.

Similarly, for cases of food insecurity, it is estimated that among the 97,075 cases taking part in food resource management educational activities, the status quo scenario counts of food insecurity are 27,763. Without IL SNAP-Ed programming, it is estimated that there would have been 573 additional cases of food insecurity, all of which were prevented by either direct education, indirect education, or PSE change strategies.

Exhibit 4.10. Population and SNAP-Ed Averted Obesity and Food Insecurity Cases

	Programming	MT1: Healthy Eating	MT2: Food Resource Management	MT3: Physical Activity	Total
Total Population	Direct Education	92,447	7,106	34,140	133,693
	Indirect Education	182,202	71,825	56,621	310,648
	PSE	242,335	18,144	3,979	264,457
	Social Marketing	86,113	-	-	86,113
	Total	603,096	97,075	94,740	794,912
Status Quo Obesity Counts	Direct Education	18,633		5,924	24,558
	Indirect Education	58,168		18,094	76,262
	PSE	65,799		805	66,604
	Social Marketing	27,456			27,456
	Total	170,056	-	24,823	194,879
SNAP-Ed Prevented Obesity Cases	Direct Education	592		430	1,022
	Indirect Education	713		136	849
	PSE	1,469		33	1,502
	Social Marketing	1,682		-	1,682
	Total	4,456	-	600	5,056
Status Quo Food Insecurity Counts	Direct Education		2,032		2,032
	Indirect Education		20,542		20,542
	PSE		5,189		5,189
	Social Marketing		-		-

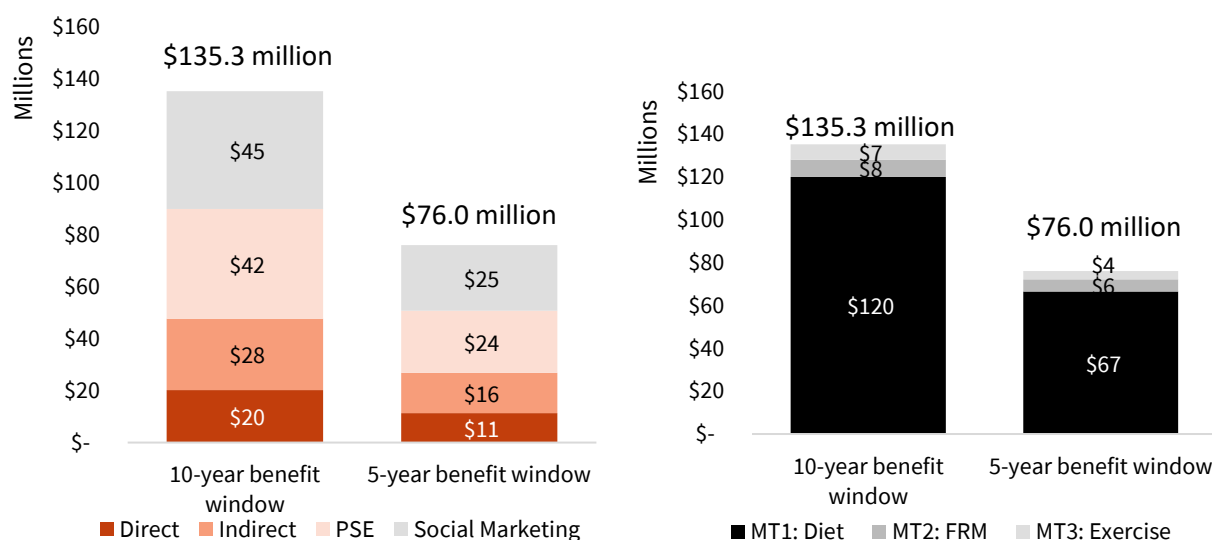
	Total	-	27,763	-	27,763
SNAP-Ed Prevented Food Insecurity Cases	Direct Education		133		133
	Indirect Education		280		280
	PSE		160		160
	Social Marketing		-		-
	Total	-	573	-	573

Future Economic Benefits of the Interventions

The total estimated future discounted societal benefit of these 5,056 prevented cases of obesity and 573 prevented cases of food insecurity in a single year of IL SNAP-Ed programming is estimated to generate a total societal value of between \$76.0 million and \$135.3 million dollars. The lower bound of this estimate assumes a five-year persistence of the obesity and food security benefits, while the upper bound assumes a longer, 10-year window of improved outcomes from those impacted by the programming. **Exhibit 4.11** shows these benefits split between the different programming types and priority areas, based on the source of prevented cases. Across all priority areas for the five-year assumption, the largest economic benefits were generated by the social marketing activities (\$25.3 million), followed by the PSE activities (\$23.9 million), indirect education activities (\$15.5 million), and direct education (\$11.3 million). These values are nearly double, but proportionally similar, when assessing the benefits over a 10-year window.

Across the different domains of the programs, we see that the largest component of the total economic benefit comes from the diet quality/healthy eating priority area (\$66.6 million), due to the fact that the greatest number of individuals received this type of programming. The next largest priority area was food resource management benefits (\$5.6 million), followed by physical activity benefits (\$3.9 million).

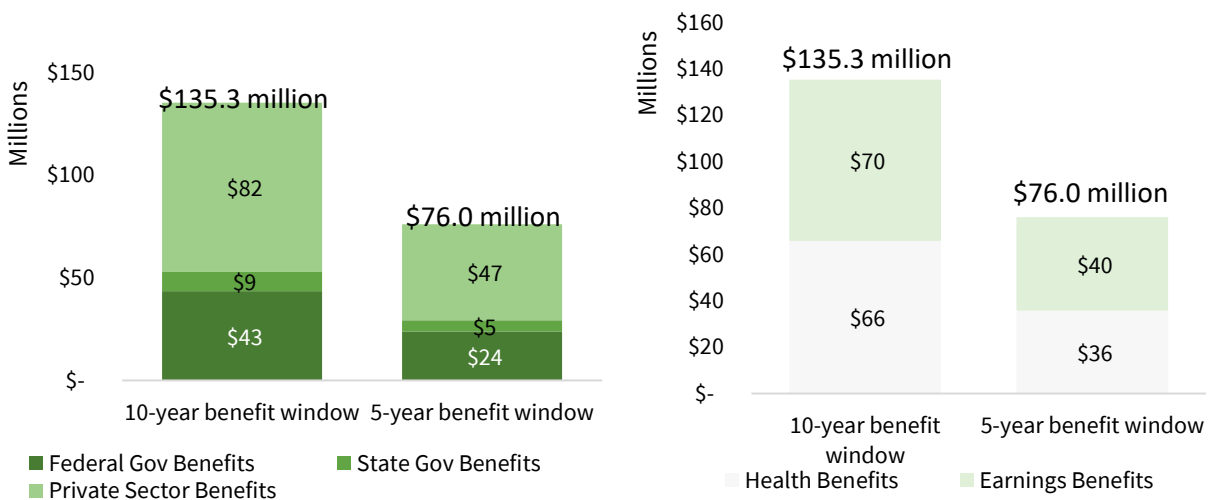
Exhibit 4.11. Future Discounted Economic Benefits, by Priority Areas and Program Types



Note: Food Resource Management (FRM)

Exhibit 4.12 shows the future economic benefits of IL SNAP-Ed programming of all three programming types and priority areas combined, but apportioned between the benefits that accrue to the three major societal stakeholders (Households and the Private Sector, the Federal Government, and State/Local Governments), as well as the split between health spending and earnings benefits. The largest benefitting stakeholder from IL SNAP-Ed prevented cases of obesity and food insecurity were households and the private sector (\$46.7 million), followed by savings to the federal government (\$23.9 million) and savings to state and local governments (\$5.4 million). When the benefits are split between health and earnings sources, the model results show that in the five-year benefit window, \$40.3 million of the total \$76.0 million benefits result from increased future lifetime earnings, while \$35.7 million result from reductions in future health care spending. For the 10-year benefit window, the results are again proportional to the five-year benefits with households and the private sector being the stakeholders receiving the greatest benefits (\$82.4 million) and earnings benefits just slightly outweighing health care cost savings (\$69.5 million compared to \$65.8 million).

Exhibit 4.12. Future Discounted Economic Benefits, by Stakeholder and Source of Benefits

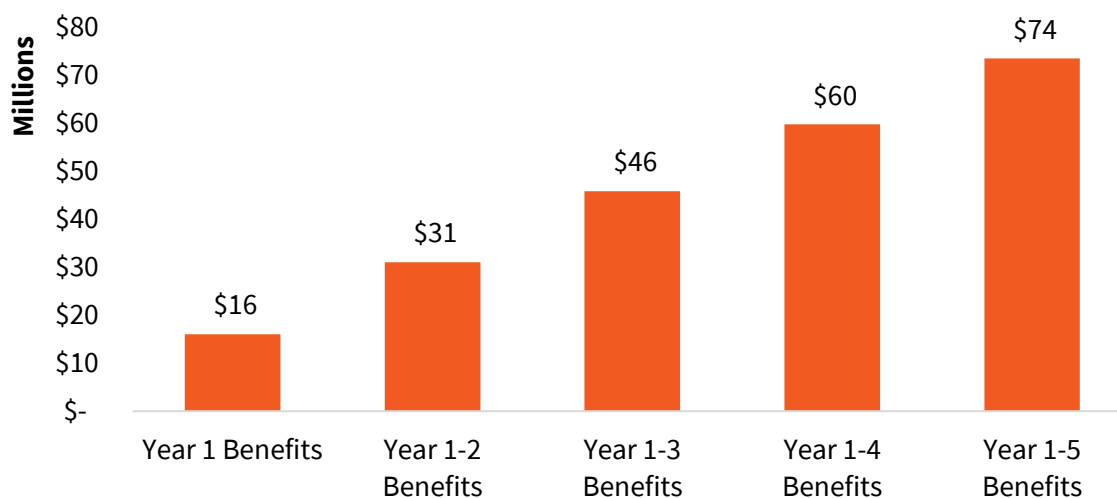


For households and the private sector, the primary benefits of SNAP-Ed programming are decreased future health care expenditures (from cost-sharing and those with private insurance) and increased future earnings and productivity that are retained by households and businesses. For state and local governments, the primary benefits from SNAP-Ed programming accrue from lower Medicaid health care costs and increased state income tax revenues resulting from higher state incomes. Lastly, for the federal government, the largest source of future economic benefits comes from increased future tax revenues and lower health care costs for those with Medicare or Medicaid. Of note, the federal government over the five-year window of benefits receives an estimated \$23.9 million in total economic benefits, while under the 10-year scenario, they are estimated to receive \$43.5 million. In each of these cases, these benefits exceed the upfront cost of providing and administering IL SNAP-Ed programs (\$14.2 million in year of study) as discussed in more detail below. Therefore, not only is SNAP-Ed societally beneficial, based on this analysis, SNAP-Ed also appears to return greater future savings to the federal government than the initial cost of administering the program.

Exhibit 4.13 shows the accumulation of future economic benefits over the initial five-year window of future benefits in the case that assumes all health care outcomes and associated benefits revert back to the baseline after the fifth year. Note that the economic benefits from increased graduation rates are not modeled to sunset at the five-year mark, which is why the five-year scenarios' total benefits

(\$76.0 million) exceeds the value provided at the end of the fifth year in this case (\$73.5 million). In the first year of future benefits, \$16.0 million in savings from avoided cases of obesity and food insecurity are produced, exceeding the initial investment in SNAP-Ed programming (\$14.2 million) in one year. By the second year of future benefits, savings have accrued to \$31.0 million. The Year 1 benefit-cost ratio is \$1.13 dollars per dollar invested and the Year 2 benefit-cost ratio is \$2.19.

Exhibit 4.13. Accumulation of IL SNAP-Ed Economic Discounted Benefits Over Time



Upfront Costs of the Interventions and Return on Investment

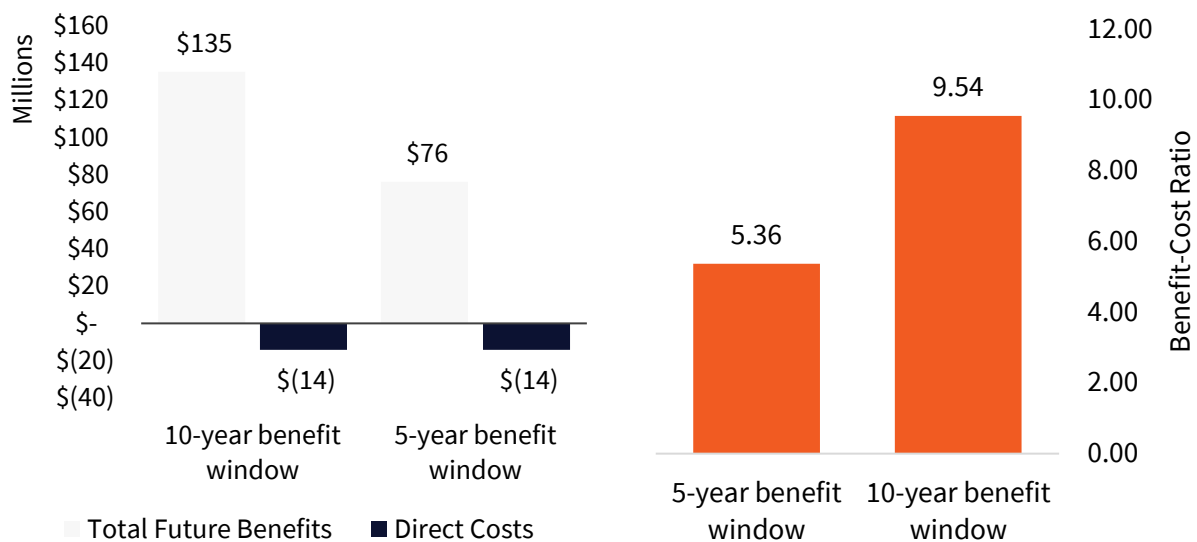
Exhibit 4.14 shows the total cost of administering IL SNAP-Ed in the year of study to compare to the benefits shown by project component above. These costs, taken directly from extracts of IL SNAP-Ed administrative data show that direct payroll accounts for the greatest share of total expenses, followed by direct education materials, social marketing, and administration expenses. Each individual program component's costs were not directly compared to the benefits each confers in this analysis as there is some overlap in how staffing costs are allocated for those who administer some of the direct education and PSE interventions. For this evaluation, FFY 2019 program costs for direct education, PSE, and administration costs were assessed, while incorporating the social marketing costs from FFY 2021 in order to be directly comparable to the population and health outcomes benefits estimated in the economic model above.

Exhibit 4.14. Total SNAP-Ed Program Costs in Year of Study, by Program Component

Expense Category	Cost in Year of Study
Direct Education Expenses	\$2,830,000
Direct Education Payroll	\$6,468,000
PSE Payroll	\$2,328,000
Social Marketing	\$1,326,000
Administration Expenses	\$1,227,000
Total	\$14,179,000

When these costs are contrasted against the estimated future economic benefits resulting from SNAP-E d driven reductions in obesity and food insecurity, the programs are expected to return greater future economic benefits than the upfront cost of administering the program. **Exhibit 4.15** shows the economic model results including the total future discounted benefits of SNAP-E d programming, the upfront cost in the first year and the resulting benefit-cost ratio for the 10-year and five-year assumptions. For the scenario where it is assumed health outcomes benefits return to zero after the initial five-year window, SNAP-E d programming would be expected to return \$5.36 dollars per dollar invested. If it is assumed that health outcomes persist until the end of a 10-year window, SNAP-E d programming would return \$9.54 dollars per dollar invested.

Exhibit 4.15. SNAP-E d Future Discounted Benefits and Costs, and Benefit-Cost Ratio, by Scenario



SENSITIVITY ANALYSES AND STUDY LIMITATIONS

The economic model assumptions with the greatest uncertainty are (1) the period of time for which health benefits from SNAP-E d programming persist and (2) the relative effectiveness of SNAP-E d indirect education and PSE change strategies in affecting behavior change. The first uncertainty arises because the nutrition, food resource management, and physical activity program evaluations used to construct the economic models are point-in-time assessments often completed in less than a year from the completion of the intervention. While it is likely the health and behavior changes persist beyond a year from programming, there is significant uncertainty as to the duration of health changes. This uncertainty is addressed in the report by using other literature on the persistence of weight-loss interventions ([Hall 2018](#)) and other modeling of childhood obesity interventions ([Gortmaker 2015](#)) to develop a plausible range of benefit duration: between five and 10 years. These analyses show that expanding the benefits window from five to 10 years nearly doubles the total discounted future benefits from SNAP-E d programming and increases the benefit-cost ratio from \$5.36 per dollar invested to \$9.54.

The second uncertainty on the effectiveness of indirect education and PSE change strategies arises due to the lack of available studies on representative nutrition, food resource management, and physical activity interventions that are similar to the SNAP-E d programming. Estimates of the effect

sizes are generated for the modeling based on a relative effectiveness factor between the indirect education and PSE change strategies and the direct education programming. The base assumptions in this report are that indirect education is assumed to be 20% as effective as direct education programming with equivalent reach, and PSE change strategies are assumed to be 50% as effective. To address the significant uncertainty in the accuracy of these two values, total benefits are estimated again as a sensitivity analysis by varying the indirect education relative effectiveness between 10% and 40% and PSE change strategies effectiveness between 25% and 100% of direct education programming. The results of these analyses are shown in **Exhibit 4.16**. Results show that changing these assumptions varies the specific program category benefits significantly, but has a much smaller effect on the overall five-year total SNAP-Ed benefits calculation and overall SNAP-Ed Benefit-Cost Ratio.

Exhibit 4.16. Sensitivity Analyses of Indirect Education and PSE Change Strategy Effectiveness

Indirect Education Relative Effectiveness	Indirect Education Benefits	Total SNAP-Ed Benefits (Five-Year)	Overall SNAP-Ed Benefit-Cost Ratio
Base Case (20% Effectiveness)	\$15.5 Million	\$76.0 Million	5.36
Lower Bound (10% Effectiveness)	\$7.8 Million	\$68.3 Million	4.81
Upper Bound (40% Effectiveness)	\$31.1 Million	\$91.6 Million	6.46

PSE Change Strategies Relative Effectiveness	PSE Change Strategies Benefits	Total SNAP-Ed Benefits (Five-Year)	Overall SNAP-Ed Benefit-Cost Ratio
Base Case (50% Effectiveness)	\$23.9 Million	\$76.0 Million	5.36
Lower Bound (25% Effectiveness)	\$11.9 Million	\$64.1 Million	4.52
Upper Bound (100% Effectiveness)	\$47.8 Million	\$99.9 Million	7.05

Other limitations of this modeling include the fact that some benefits of SNAP-Ed programming are excluded from this analysis due to either a lack of information or concern of double-counting health change impacts. These modeling results are intended to be conservatively estimated, producing total discounted future benefits estimates (and benefit-cost ratios) that undercount (rather than overcount) the total programmatic returns. To ensure this is true, some uncertain program impacts are excluded from the analysis. Examples of benefits that are not monetized in this modeling are the impacts of social marketing campaigns on food resource management (MT2) and physical activity (MT3) priority areas due to a lack of reliable estimates found in the literature.

Additionally, the benefits of nutrition and physical activity programming are modeled only through the intermediate health outcome of obesity, and food resource management benefits are modeled only through food insecurity status. As a result, the total benefits of SNAP-Ed programming are likely undercounted. While other health benefits of these interventions are highlighted qualitatively in this report, we cannot monetize them alongside the obesity benefits without risking double-counting benefits (e.g., benefits from a physical fitness pathway likely overlap significantly with the benefits from reduced obesity prevalence). As a result of this double-counting, other health impact pathways are not included in this analysis, undercounting total future benefits.

Lastly, the population modeled to estimate the benefits of SNAP-Ed programming is narrowly defined, potentially excluding some benefits to other participants. For example, participants in direct

education classes were filtered to classes with the particular priority indicator area (i.e., MT1, MT2, and MT3) and then by applicable topic areas of interest (i.e., specific topics covered in intervention materials) in order to ensure the classes they received were relevant to the obesity and food insecurity pathways modeled. When other types of classes were administered, those populations and benefits were not counted and may lead to an undercount of the total benefits of all SNAP-Ed programming. Furthermore, benefits for family members of class participants were not included even though it is possible some knowledge gained by one participant would transfer to other family members (e.g., food resource management skills). As a result, this would be likely to undercount total SNAP-Ed program benefits.

CONCLUSIONS

The results of this analysis provide an assessment of the economic value of improvements in healthy behaviors and health outcomes resulting from SNAP-Ed direct education, indirect education, PSE change strategies, and social marketing campaign messages in Illinois. This model incorporates FFYs 2019–2021 SNAP-Ed data and applies evidence collected in prior evaluations of similar nutrition, food resource management, and physical activity programming to estimate the number of cases of obesity and food insecurity that were likely prevented as a result of SNAP-Ed. The long-term economic value was then estimated, assuming healthy behaviors and health outcomes benefits persist for a range of five to 10 years, based on the known economic sequelae of obesity and food insecurity. This modeling found that a single year of SNAP-Ed programming produced between \$76.0 and \$135.3 million dollars in future discounted economic benefits. When compared to the \$14.2 million in estimated program costs within the year of study, SNAP-Ed programming in Illinois conservatively returned between \$5.36 and \$9.54 dollars per dollar invested in societal benefits. Also notable is the fact that total benefits not only exceed the upfront costs from a societal perspective, but also that the benefits to the federal government itself over the 5-year and 10-year timeframes exceed the upfront cost of administering the program. The benefits measured in this analysis include decreased health care spending, improved life expectancy, and increased future education and earnings, with benefits accruing to the households, the private sector, and state and federal governments.

The results of this economic analysis provide evidence in favor of the societal beneficial and likely cost-saving investments made in SNAP-Ed programming. This analysis, while limited by the fact that actual health outcomes were not tracked for the SNAP-Ed participating population, provides insight into potential economic return generated from population-based, education-focused investments to improve nutrition, food resource management, and physical activity.

RECOMMENDATIONS FOR FUTURE WORK

New Data for Future Economic Analyses

New data collection would enable more robust estimates of the benefits of SNAP-Ed programming. In particular, focused and longitudinal tracking of participants in high-quality SNAP-Ed programming (for a duration of multiple years) would be beneficial to close the gap in some of the uncertainty on the permanence of healthy behaviors and health outcome changes. Furthermore, additional data collected on SNAP-Ed participants' family and household sizes would provide the data necessary to estimate benefits from nutrition and food resource management skills for those living with SNAP-Ed participants. Data collected in future evaluations could also study the direct, individually-measured improvements in healthy behaviors, health, or economic outcomes and these could be collected and would improve the estimates of the monetized value of health and economic improvements for the

populations taking part in IL SNAP-Ed programming.

Lastly, additional qualitative data on the community network partners' non-SNAP-Ed activities would be helpful to better describe the overall value of the IL SNAP-Ed community network approach. The current data collected provide an excellent picture on the SNAP-Ed supported programming at partner sites, but we hypothesize these data might miss some of the ways a network partnership and relationship with SNAP-Ed confers additional benefits to network partners. As a way to begin this investigation, further qualitative and quantitative assessments of individual, high-quality network partners may help illuminate the potential scope of benefits that SNAP-Ed network collaborations offer to individual providers and consumers of their other non-SNAP-Ed services.

Additional Community Network-Focused Evaluations

With this additional data, future work could develop a more complete picture of the network partners' relationships with SNAP-Ed and generate better measurements of the benefits of the community network approach. While estimates of the value of SNAP-Ed programming taking place at partner sites have been incorporated in this report, there are potentially other benefits for network partners and the broader community network that have been missed in this analysis. A network approach may offer benefits of stability, interconnection, capacity sharing, information sharing, or other positive network effects, such that significant value is derived from the community network structuring and associated SNAP-Ed activities. However, with the information collected to date, at least three key hurdles remain that need to be overcome to estimate the economic value of these networks: 1) a better understanding of the relationships and how partners provide value to the community networks and vice versa, 2) a better quantification of the non-SNAP-Ed related activities occurring at the partner level such as data on how SNAP-Ed networks impact the delivery of partner services, and 3) a way to describe how partners operate within the community network that compares their experiences to a hypothetical case in which the community network model does not exist (a counterfactual). If this counterfactual can be well-articulated, and evidence can be collected as to the specific, quantifiable impacts the community networks have on partners' administration of SNAP-Ed and non-SNAP-Ed programming, it may be possible to estimate further economic and societal value generated by the network model and the economic benefit of specific partnerships.

To date, partnership data has been analyzed based on the strength of the relationship and connection to the network, but further evaluation is required to understand how these connections provide benefits to the partners and what the counterfactual case of how a "non-networked" delivery of services would differ from the IL SNAP-Ed status quo. This research, if undertaken, would be extremely valuable to help guide future organization and administration of SNAP-Ed services and networks. It is expected that this partnerships analysis (and estimates of the partnership benefits) will need to be conducted separately from the current economic models and will need to accept greater levels of uncertainty in initial estimation approaches given its expected novelty.