

Closing the food access gap in rural Mississippi: Evaluation of the Grocery Online Ordering Distribution Service (GOODS) program using an assets-based framework

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Abstract

Rural Mississippi faces severe health challenges, ranking lowest among all U.S. states in health outcomes and highest in diet-related chronic diseases. The state's rural communities in particular struggle


with fruit and vegetable consumption, largely due to limited access to full-service grocery stores and the high cost and perishability of fresh produce. To address these challenges, community members in Sunflower County, Mississippi, developed and implemented the Grocery Online Ordering Distribution Service (GOODS), an innovative food access program. A process evaluation of GOODS demonstrated that creative solutions to rural food access barriers can increase convenience for residents while reducing grocery shopping time and costs.

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rural health, food access, assets-based framework, online grocery shopping

Introduction

Nationally, the use of online grocery ordering and delivery has increased to \$96 billion,¹ a 55% growth in online grocery sales between 2019 and 2020 (Restrepo & Zeballos, 2024). Early adopters of online grocery shopping have tended to be affluent urban consumers, whereas in low income and rural households, the adoption of online shopping has lagged. This delay was likely due to the inability to use Supplemental Nutrition Assistance Program (SNAP) benefits, and was compounded by costly grocery delivery fees not covered by SNAP and insufficient access to delivery services in rural areas (Brandt et al., 2019; Martinez et al., 2018). In response, community programs have emerged to support adoption of these food acquisition options by hard-to-reach populations, which includes lower income and rural consumers. Evaluation data from such programs, however, is limited (Appelhans et al., 2013; Lagisetty et al., 2017; Meslin, 2018). Additionally, these studies have broadly used survey and interview data alongside food purchasing metrics to assess outcomes related to participant satisfaction, food purchasing behavior, cost and time savings, and barriers to implementation. Because accessibility to technology is ever-changing in low-income and rural communities, evaluations of programs that include technology also need to evolve.

While digital technology can improve food access, barriers to adoption still exist. Some studies document that consumers can be risk averse to purchasing perishable foods online, while others suggest a general distrust of virtual shopping and a reticence to share financial information while making purchases over the internet (Meslin, 2018; Rogus et al., 2020). Limited technological skills, as well as insufficient computer and internet access are also major barriers to engagement in online grocery ordering and delivery services (Meslin, 2018).

Relevant literature describes a perceived increased cost associated with food shopping over

the internet, such as the added expense of delivery fees and tipping costs (which SNAP benefits do not cover), and the perception of fewer discounts, promotions, and coupons. (Cohen et al., 2020; Meslin, 2018). SNAP acceptance by online retailers is a critical consideration that affects the use of grocery services over the internet by lower-income consumers. One study noted that “successful implementation [of the online grocery service] hinged on accepting ... Supplemental Nutrition Assistance Program (SNAP) benefits” (Lagisetty et al., 2017, p. 6). Policy advocacy for the ability to use SNAP to cover delivery fees, coupled with new strategies by retailers to reduce or cover delivery costs, are important steps for scaling online grocery use among target populations, including people in rural communities, older adults, and people with disabilities (Brandt et al., 2019).

This paper presents the results of a process evaluation of the Grocery Online Ordering Distribution Service (GOODS), a community-driven program in rural Sunflower County, Mississippi. GOODS aims to improve access to fresh, healthy, and affordable food in disinvested rural communities while simultaneously creating opportunities for workforce development and strengthening local economies. The program achieves these goals by leveraging existing community assets, including nonprofit organizations, local financial institutions, and community networks, to facilitate online grocery ordering and delivery services for residents who face significant barriers to food access. By partnering with retailers who accept SNAP benefits online and providing no-cost delivery options, GOODS has demonstrably altered grocery habits for program participants in rural Mississippi by reducing travel time and transportation costs for grocery shopping, as well as adding convenience through a closer pick-up location or home delivery. This study also presents food purchase data from online grocery shoppers using SNAP in two low-income rural communities, demonstrating healthy patterns of food purchasing that counter damaging stereotypes and misconceptions about food behaviors and food purchasing in low-income communities.

¹ All amounts in this article are in US\$.

Background and Program Evaluation

Contexts

Mississippi consistently has the worst health outcomes and highest burden of diet related chronic diseases of all 50 states. Mississippi has the nation's highest cardiovascular death rate (363.2 per 100,000 deaths), the highest adult obesity rate (39.5%), and the third highest rate of Type 2 diabetes (Fastring et al., 2021). Furthermore, diet-related health problems are exacerbated by rurality and race, with Black communities facing the highest disease burden of the previously mentioned health outcomes (Office of Health Surveillance and Research, The Office of Preventive Health and Health Equity, 2024).

Rural Americans consistently fall short of United States Department of Agriculture (USDA) dietary guidelines, which recommend 1.5-2 servings (cup-equivalents) of fruits and 2-3 servings of vegetables daily (Kukendall, 2010; USDA & U.S. Department of Health and Human Services [USDHHS], 2020). This inadequate consumption stems from widespread poverty and limited access to fresh, healthy food. The problem is worsening as local grocery stores in rural areas increasingly close or are replaced by distant regional and national chains (Stevens et al., 2021). When residents must travel farther to reach chain stores in larger towns, they face increased time and transportation costs. These closures also harm local communities by reducing tax revenue and economic investment (Miller, 2020). Throughout Mississippi, the shortage of full-service grocery stores, combined with the expense and perishable nature of fresh fruits and vegetables, makes produce accessibility particularly challenging for families with limited budgets (Kukendall, 2010). As a result, only 12.8% of Mississippi residents meet the recommended daily fruit intake and just 7.2% meet daily vegetable requirements, far below the respective national averages of 20.9% and 14.4%. (USDA Agricultural Marketing Service [USDA ARS], 2020).

Online purchasing through the federal SNAP program offers one potential solution to food access challenges for low-income households. In fiscal year (FY) 2023, online SNAP redemptions grew significantly nationwide, reaching 8% of total

redemptions and increasing from approximately \$8 million in FY 2022 to \$10 million in FY 2023 (USDA Food and Nutrition Service [USDA FNS], 2024). However, this expansion has lagged in rural areas, where communities often lack the infrastructure to support regular home delivery services (Brandt et al., 2019). In Mississippi, while 8% of SNAP households use their benefits online, rural residents face specific challenges with "last mile" delivery, the final step of getting groceries to consumers' homes. These delivery obstacles further compound existing food access problems in rural communities (Brandt et al., 2019; USDA FNS, 2024).

Sunflower County

Sunflower County, the program implementation site, reflects many of the challenges faced by rural communities across Mississippi. The county has a population of approximately 23,000, with a significant Black/African American population (U.S. Census, 2023a). Economic indicators highlight substantial challenges: the median household income is \$40,265 and 32.5% of the population lives below the poverty line, a rate that is significantly higher than both the state (19.1%) and national (11.5%) averages (Benson, 2023; Shrider & Creamer, 2023; U.S. Census Bureau, 2023a). In 2023, 33.6% of Sunflower County residents were estimated to be enrolled in SNAP (U.S. Census Bureau, 2023b). This high poverty rate directly impacts food security, with 22.8% of households experiencing low or very low food security, meaning they must "reduce the quality, variety, and desirability of their diets" and may need to reduce food consumption due to resource constraints (Feeding America, n.d.; USDA Economic Research Service [USDA ERS], 2024b).

Food access presents a significant challenge for Sunflower County residents. Approximately 36.2% of residents have low access to grocery stores, defined as living more than 10 miles from the nearest store (U.S. News and World Report, 2021; USDA ERS, 2024a). This geographic barrier is compounded by limited transportation options, as the county lacks a comprehensive public transportation system. Many residents must rely on family members or paid transportation services, with some reporting costs of \$25-40 for one-way trips

to grocery stores in neighboring communities.

Technology access, which is crucial for online grocery ordering, varies across the county. Between 2019 and 2023, an estimated 87.6% of households had a computer; however, only 70.4% of households had a broadband internet subscription, making internet access in the county substantially below the national average of 87% (U.S. Census Bureau, 2023a; U.S. News and World Report, 2021). The digital divide particularly affects older residents, who often have limited computer literacy or express concerns about online transactions.

Despite these challenges, Sunflower County has several notable assets that create opportunities for community-based interventions. The county benefits from strong community networks and high levels of civic engagement, demonstrated through active participation in town meetings and community planning initiatives. Additionally, the area has received strategic investment for community development from institutions active in the Mississippi Delta, such as the Hope Enterprise Corporation. The county also has physical infrastructure assets, including government-owned buildings (The Armory in Drew), which can be repurposed for community programs. Two active community organizations—We2gether Creating Change in Drew and Delta Hands for Hope in Shaw—provide crucial social infrastructure through their work in community education, engagement, and youth development.

Asset-Based Framework

The demographic and economic realities of Sunflower County make traditional solutions, such as establishing new brick and mortar grocery stores, financially difficult, if not unfeasible. However, the existing community assets and infrastructure do provide a foundation for alternative and innovative approaches that can leverage technology and community partnerships to address food access challenges. This evaluation employs an asset-based framework to analyze the GOODS program, representing a deliberate shift away from deficit-focused approaches that primarily highlight community needs through discussions of disparities and inequity. An asset-based framework instead centers on the skills, knowledge, and resources that

communities *already possess* as primary tools for reducing disparities and achieving positive change (Roy, 2017). This approach recognizes that all communities, regardless of economic or social challenges, have built-in assets that can be leveraged to develop and sustain beneficial programs.

In Sunflower County, these assets manifest across multiple dimensions. The community's social and human capital is evident in its strong networks and high levels of civic engagement. This engagement is further strengthened by local organizations like We2gether Creating Change and Delta Hands for Hope, whose staff are deeply rooted in the community and understand its needs and dynamics. The county also benefits from significant institutional resources, including regional financial institutions like Hope Enterprise Corporation, local nonprofit organizations, and educational partnerships with area universities. These institutions provide not only financial support but also technical expertise and programmatic capabilities that can be mobilized for community benefit. Government relationships at local and regional levels further enhance this institutional framework.

Physical infrastructure assets play a crucial role, with facilities like The Armory complex in Drew providing a foundation for program operations. This government-owned building, repurposed for community use, exemplifies how existing infrastructure can be adapted to meet current needs. The county's internet infrastructure, reaching 70.4% of households, provides a technical foundation for online ordering systems (U.S. Census, 2023a).

Economic assets, while sometimes overlooked in communities with high poverty rates, are significant when viewed through an asset-based lens. SNAP enrollment provides substantial purchasing power, while local financial institutions offer investment capacity. The collective purchasing power of community members, even in a lower-income area, represents a meaningful economic force that can support program sustainability.

This asset-based framework informed both program development and evaluation in fundamental ways. Rather than focusing solely on what the community lacked (a full-service grocery store), GOODS built upon existing assets—community

networks, institutional partnerships, and physical infrastructure—to create an innovative solution. This implementation strategy also leverages community knowledge and relationships by hiring local staff, and aids in building trust and ensuring cultural competence in program delivery.

The evaluation approach examines how effectively GOODS mobilizes and strengthens community assets, rather than focusing solely on addressing deficits. Future program expansion plans similarly build on identified community assets, such as using existing space at The Armory for nutrition education classes and computer literacy training. This approach ensures that program growth strengthens rather than replaces existing community resources. Using this framework allows us to understand GOODS not just as a response to food access challenges, but as an initiative that builds upon and strengthens existing community resources. This perspective reveals how the program's success stems from its ability to effectively leverage local assets while addressing community needs, creating a sustainable model for community-driven change.

Program Design

The Centers for Disease Control and Prevention (CDC)'s Mississippi Action Guide on Fruits and Vegetables recommends developing food hubs and large-scale aggregation and distribution programs to improve fruit and vegetable access in underserved rural areas (National Center for Chronic Disease Prevention and Health Promotion, Division of Nutrition, Physical Activity, and Obesity, 2018). Following this guidance and responding to the COVID-19 pandemic's disruption of food systems and household incomes, several organizations partnered to create the Grocery Online Ordering Distribution Service (GOODS) program. The initiative was led by Hope Enterprise Corporation and Hope Credit Union (HOPE), a financial institution that provides services, resources, and advocacy. HOPE collaborated with two local community organizations: We2gether Creating Change (We2gether) in Drew, MS, and Delta Hands for Hope (Delta Hands), a nonprofit organization in Shaw, MS. According to We2Gether Creating Change's website, its mission is to empower low-

income communities by helping residents to use their talents, skills and passions for community improvement (We2gether Creating Change, n.d.). Delta Hands also focuses on strengthening community assets, and its website explains more fully its objective to provide enriched opportunities in education, spiritual development, health, and recreation of school-aged children in the Mississippi Delta region (Delta Hands for Hope, n.d.).

Community members in both Drew and Shaw identified a grocery store as a top priority during strategic planning discussions. In response, HOPE and community organizations and individuals conducted a comprehensive assessment that included community meetings, shopping habit surveys, and a targeted market analysis to evaluate the feasibility of various store sizes and locations. The final analysis, however, revealed that a traditional brick-and-mortar grocery store would not be financially sustainable in either community. Drew's population of just over 2,000 was too small to generate sufficient weekly sales or meet wholesalers' minimum order requirements. Neighboring towns like Shaw face similar challenges, with comparably small populations and limited institutional resources. While Cleveland, MS (population 11,082) offers larger retailers like Walmart and Vowell's, it is approximately 17 miles away (a 20-minute drive) in Bolivar County, and its stores do not deliver to Drew or surrounding communities. Given these constraints, HOPE worked with community members to explore alternative solutions. They ultimately developed the GOODS program, an online ordering and delivery model supported by private foundation funding, state/federal grants, and existing infrastructure from city and nonprofit owned buildings.

GOODS is a community-led and operated online ordering and grocery delivery initiative that addresses a critical service gap in the area created by the lack of retailer delivery services. The goal of GOODS is to improve access to fresh, healthy, and affordable food in disinvested rural communities in the Mississippi Delta while simultaneously creating opportunities for residents to support local businesses. Operating from within a former National Guard facility that was donated to the city, The Armory complex in Drew provides resi-

dents and the surrounding rural communities with affordable and convenient access to fresh, healthy food without requiring travel to distant towns. The program is designed to promote consistent online shopping from local food retailers, encourage use of community organization support services, and enhance workforce development and capacity.

GOODS enables participants to order groceries online from Walmart in Cleveland, MS—the nearest retailer offering online SNAP purchasing. Program staff coordinate with Walmart to arrange batch pick up of multiple orders at scheduled times. A GOODS driver collects the orders from Walmart and delivers them to The Armory, where they are held in cold storage until community members pick them up, all at no cost to residents. For elderly or disabled patrons, the GOODS driver sometimes provides home delivery, a service otherwise unavailable since Drew is outside the delivery zones of Walmart and delivery services like UberEATS and DoorDash. Participants pay Walmart directly online using credit cards or electronic benefits transfer (EBT) cards, with no financial transactions occurring between participants and GOODS staff. This model efficiently addresses the “last mile” delivery challenges faced by small towns that lie beyond traditional delivery zones, while also solving the transportation and

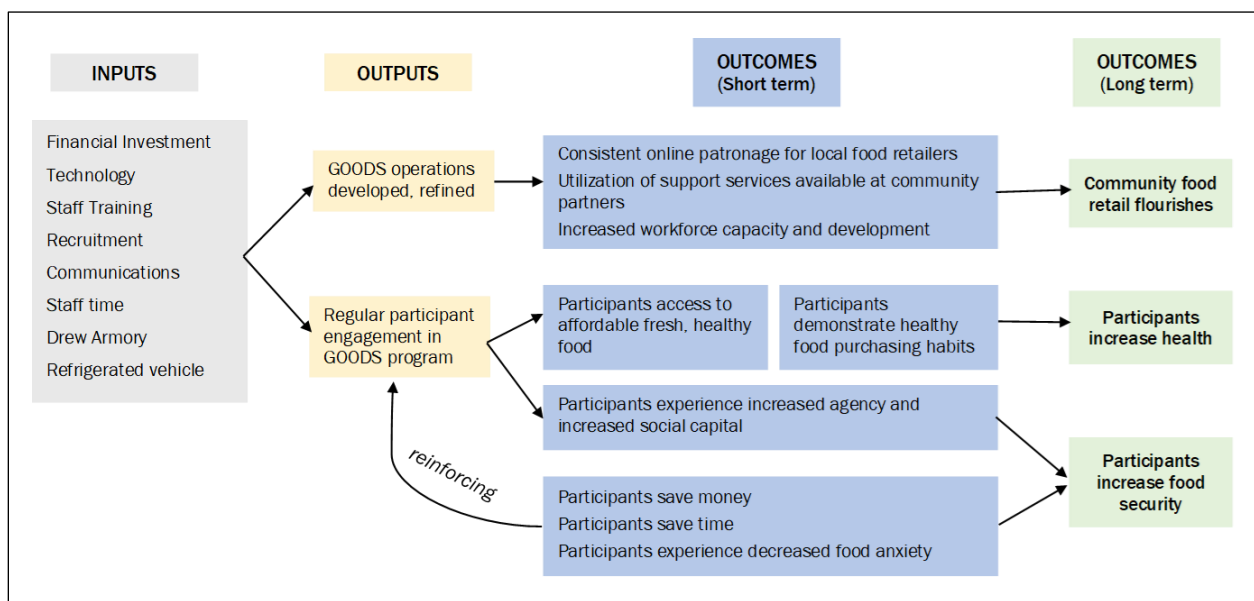
safety concerns that became salient during the COVID-19 crisis.

The CUNY Urban Food Policy Institute (CUFPI), based at the City University of New York (CUNY) Graduate School of Public Health and Health Policy in New York City, was contracted to evaluate the pilot implementation of GOODS. The GOODS evaluation used a mixed-methods approach to document community engagement with the GOODS program (Figure 1), including participant access to affordable, fresh, and healthy foods; participant food purchasing habits; participant perceived cost and time savings related to the program; community workforce development; barriers and facilitators to program implementation; and changes to self-reported food related anxiety, food hardship, and food insecurity. The evaluation also sought to document characteristics of community outreach that successfully sustain community participation and generate engagement.

Methods

The research team partnered with HOPE and GOODS staff from We2Gether and Delta Hands to design and conduct a multiyear mixed-methods study across multiple sites. The evaluation tools were continually refined to meet evolving project needs, with all study protocols reviewed and

Figure 1. Grocery Online Ordering Distribution Service (GOODS) Evaluation Framework



approved by the CUNY Institutional Review Board. In Drew and Shaw, MS, we collected data through surveys, focus groups, key staff interviews, and participant receipt analysis to comprehensively assess the program. The evaluation aimed to assess and measure the program's impact on community food access needs, analyze participants' purchasing patterns, and understand staff experiences within their communities. This comprehensive approach combined qualitative and quantitative methods to evaluate program outcomes and implementation.

Online Survey

The online survey sought to explore food consumption and purchasing behaviors and food access patterns of community members. A 42-question survey was administered in Drew (June 22–July 23, 2022) and Shaw (March 1–May 31, 2023) using the online Qualtrics platform. The survey was also designed to measure participant food access, food purchasing habits, food security, time and cost savings related to the program, overall program satisfaction, and dietary habits. To evaluate dietary quality, modified questions from the Rapid Eating Assessment for Participants—Shortened Version (REAP-S) were used (Segal-Isaacson et al., 2004). REAP-S generates scores ranging from 13 to 39, with higher scores indicating better diet quality (Segal-Isaacson et al., 2004). Before distribution, We2gether and Delta Hands staff reviewed the survey questions to ensure appropriate language and tone for the community. Data analysis was conducted using Microsoft Excel and Qualtrics to generate descriptive statistics.

GOODS staff recruited program participants to complete the survey by using a combination of in-person, email, and paper flyer recruitment methods. The only inclusion criterion for the survey was that individuals had to have used the GOODS program at least once. GOODS staff included informative paper flyers about the survey in grocery pickup and delivery orders, which provided important details, incentive information, and a QR code for interested participants to access the survey. GOODS staff also sent email reminders to program participants to invite survey participation. Program participants who completed the survey and provided contact informa-

tion received a \$20 electronic gift card as compensation for their time.

Focus Groups

The research team conducted focus group sessions to examine three key aspects: how GOODS participants interact with their food environments, their experiences with the GOODS program, and potential opportunities and barriers to program expansion. Two in-person focus groups were conducted: one in Drew on March 23, 2022, and another in Shaw on May 19, 2023. GOODS staff recruited participants through verbal invitations during grocery pick up and through telephone calls. The only requirement for participation was to have used the program at least once. Both focus groups addressed identical questions about the GOODS program, which covered the participants' reasons for joining, their satisfaction with online ordering and pick up services, and their recommendations for program expansion. Participants received a \$40 electronic gift card via email as compensation.

The research team and GOODS staff collaboratively developed a focus group script to guide discussions in both communities. The script contained 15 primary questions and additional prompts to encourage thorough discussion of key concepts. Both sessions were recorded and transcribed using Zoom. The research team reviewed and cleaned the transcriptions to enhance quote clarity by removing filler words or repetitions, while also preserving participants' original grammar. The analysis followed standard qualitative methods, using both deductive and inductive coding in two phases. One researcher performed the initial coding, which was then reviewed by another team member. The coding scheme used both predetermined categories and themes that emerged during analysis. All in-person data collection followed COVID-19 safety precautions as required by the host site, GOODS staff, and the CUNY School of Public Health Institutional Review Board.

Interviews with Key Staff

Staff interviews were conducted to assess two key aspects: staff perspectives on the current GOODS program and their views on opportunities and

barriers to program expansion. HOPE, GOODS, and CUFPI collaboratively developed a semi-structured interview guide, and participants were selected through purposive sampling. Key program implementation staff from HOPE, We2Gether, and Delta Hands were invited to participate in 60-minute interviews conducted via Zoom. All participants provided oral consent before their interviews, and no compensation was offered for participation. The research team reviewed and cleaned interview transcriptions to enhance quote clarity by removing filler words and repetitions, while preserving original grammar. The analysis followed standard qualitative methods, using both deductive and inductive coding in two phases. One researcher performed the initial coding, which was then reviewed by another team member. The coding scheme included both predetermined categories and themes that emerged during the analysis.

Receipt Collection

The research team analyzed online grocery receipts with two objectives: to characterize the grocery purchasing patterns of rural consumers and to examine how online shopping access influenced their food shopping habits. The analysis included digital receipts from GOODS program purchases made between April 2022 and August 2023 in Drew and Shaw. During this period, participants were invited to share their GOODS purchase receipts with local staff as they placed orders. For shared receipts, GOODS staff removed identifying information and assigned unique participant codes before sharing them with CUFPI for analysis. The analysis used the pre-pandemic USDA *What We Eat in America* Food Categories classification system, which is designed for dietary research. This system categorizes foods and beverages in the American diet across 165 distinct categories (USDA ARS, 2022).

To ensure comprehensive data collection, CUFPI and GOODS organized a “receipt event” in Drew during May 2023. At this event, participants met with research staff to access their Walmart accounts and download their complete GOODS purchase history. All receipts for purchases made through May 31, 2023, were

included in the analysis. Participants received a \$40 electronic Visa gift card as compensation for participation.

Results

Online Survey

The survey collected responses from 56 responses (Drew, $n = 50$; Shaw, $n = 6$), representing approximately 85% of all GOODS program enrollees at the time of survey administration. Due to the limited number of responses from Shaw residents, statistical comparisons between the two communities were not feasible. Therefore, all survey data were analyzed and presented as a combined dataset. Since respondents could skip questions, response rates vary across the survey, with some questions receiving fewer than 56 responses.

GOODS Participant Characteristics

Survey results showed that participants were predominantly from Drew (88%), and most often were regularly shopping at Walmart located in Cleveland (54%). The program serves a high proportion of families with children, as 71% of GOODS households included children aged 0–18 years, reaching a total of 74 children. Internet access among participants was primarily through personal devices, with 56% using mobile phones and 32% using computers or tablets for home access.

Regarding self-reported health status, participants were evenly split: 50% rated their health as either “good” or “very good,” while the other half reported less favorable health, with 44% rating their health “acceptable” and 6% as “poor.” Table 1 provides additional baseline characteristics of participants, including their shopping habits prior to GOODS participation.

Participant Grocery Shopping Habits and Experiences at Brick-and-Mortar Stores

Respondents were asked about their *offline* shopping habits at brick-and-mortar stores prior to the start of the program. Most participants (72%) reported shopping 2–3 times per month, while 18% shopped weekly, and 10% shopped monthly. A large majority (85%) indicated they typically felt

Table 1. Survey Participant Characteristics

| | Count | Percentage |
|--|-------|------------|
| Zip code | | |
| Drew (38737) | 49 | 88 |
| Ruleville (38771) | 0 | 0 |
| Cleveland (38732) | 1 | 2 |
| Shaw (38773) | 6 | 11 |
| Total | 56 | 100 |
| Number of children in household | | |
| None | 16 | 29 |
| One | 19 | 34 |
| Two | 8 | 15 |
| Three or more | 12 | 22 |
| Total | 55 | 100 |
| Primary brick-and-mortar shopping destination ^a | | |
| Kroger (Cleveland) | 17 | 17 |
| Walmart (Cleveland) | 54 | 54 |
| Vowell's (Cleveland) | 17 | 17 |
| Sullivan's Grocery (Ruleville) | 10 | 10 |
| Other | 2 | 2 |
| Total | 100 | 100 |
| Previous online grocery shopping frequency | | |
| All the time | 19 | 34 |
| Many times | 14 | 22 |
| A few times | 15 | 27 |
| Once | 5 | 9 |
| Never | 3 | 5 |
| Total | 56 | 100 |
| Access to the internet ^a | | |
| From smartphone | 48 | 56 |
| From a computer or tablet at home | 27 | 32 |
| From a computer or tablet from my work | 6 | 7 |
| From a computer or tablet from my school | 2 | 2 |
| From a computer or tablet from library or community center | 2 | 2 |
| Total | 85 | 100 |

^a Participants were allowed to choose more than one answer, therefore total counts are larger than the number of total respondents.

well enough to shop and cook. Monthly grocery expenditures varied by household size, ranging from \$100 to \$1,500, with an average of \$338 and a median of \$300. Most participants reported these amounts as their typical monthly spending. The time investment spent on brick-and-mortar shopping was substantial. Among the 52 respondents who answered this question, 81% spent more than one hour on travel and shopping combined, with nearly half (44%) spending over two hours per trip.

Participants' evaluations of brick-and-mortar shopping was mixed. While 85% rated food quality as "good" or "very good," the satisfaction level was lower regarding value and variety. One-third rated value as "acceptable" or "poor," and 35% reported similar ratings for variety. Most respondents (64%) rated the healthfulness of available food as "good" or "very good" while 29% considered it "acceptable."

Typical Travel Patterns to Purchase Groceries

Nearly one-third (31%) of respondents ($n = 52$) reported having difficulty traveling to brick-and-mortar stores for food shopping. Using participants' residential zip codes, reported shopping frequency, and preferred grocery store locations, the research team estimated monthly travel times.² The analysis showed that survey participants ($n = 56$) spent an average of 1.6 hours per person per month traveling for grocery shopping before joining the GOODS program.

² Total travel time (round trip) between Drew and Cleveland approximately 48 minutes, total travel time (round trip) between Drew and Ruleville approximately 18 minutes, total travel time (round trip) between Drew and Greenwood approximately 94 minutes, and between Shaw and Cleveland approximately 30 minutes. Travel times were quantified using Google maps estimates during periods of low or no traffic. In instances when multiple routes were suggested, an average trip time was calculated. Typical shopping frequency was coded based on participant response to the survey question: "In an average month, how many times do you or a family member shop for groceries?"

Respondent Food Access

Survey respondents provided information about their level of food access and food security, addressing their ability to purchase foods, changes in eating habits due to food inaccessibility or limited resources, and worry, anxiety, or stress related to food purchasing constraints (USDA ERS, 2024b). While most respondents (88%) “somewhat” or “strongly” agreed that they found it easy to find needed food items in their preferred brick-and-mortar stores, many faced challenges due to limited financial resources, revealing significant food insecurity. Notably, 42% of respondents reported some level of anxiety or stress (“occasionally” [19%], “often” [2%] and “always” [2%]) with regard to their food access. Furthermore, 45% of respondents stated that they “sometimes” or “often” worry about whether their food would run out before they got the money to purchase more. Participants reported the following changes in eating habits due to insufficient money to purchase adequate food: 8% of children in respondent families sometimes do not eat for the entire day due to lack of money to purchase food; 15% of respondents have had to cut down on meals or skip meals because of a lack of funds; and 12% of respondents have gone a full day without a meal.

Participant Eating Habits

To assess diet quality among program participants, researchers used the REAP-S analysis tool, which provides scores ranging from 13 to 39 with higher scores indicating better diet quality. The consumption pattern of GOODS participants exceeded national averages, with scores between 17 and 34, with an average of 26. This suggests moderately healthy diets among participants, though lower than the U.S. omnivorous diet average of 32. The USDA recommends that adults eat at least 3 servings of whole grains, 1.5-2 servings (cup-equivalents) of fruits and 2-3 servings of

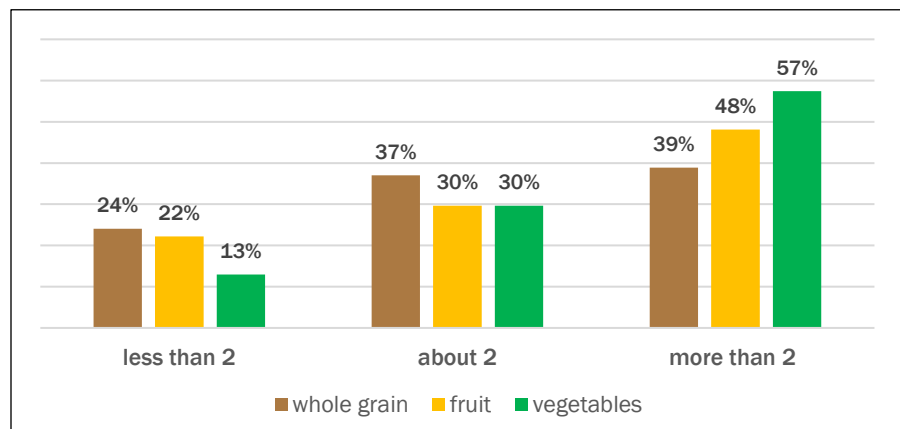
vegetables daily. However, according to USDA’s dietary guidelines, 98% of Americans overall do not meet recommendations for whole grains, 80% fail to meet the recommendations for fruits and 90% fail to meet the recommendations for vegetables (USDA ARS, 2020).

Figure 2 shows that most GOODS respondents consume at least 2 servings per day of whole grains (76%), fruits (78%), and vegetables (87%) in an average week. Analysis of other food subgroup consumption revealed that in an average week, 75% of respondents “usually” or “often” consumed 8 ounces of meat daily, and 35% “usually” or “often” ate fried foods. Additionally, 28% “usually” or “often” ate 2 or more sweets daily, and 19% “usually” or “often” drank 16 ounces of sugary beverages like soda or fruit punch. These findings indicate that while GOODS participants maintain healthier consumption of fruits, vegetables, and whole grains compared to national averages, they also frequently consume high levels of meat, fried foods and ultra-processed foods.

Respondent Online Shopping Habits

Prior to joining GOODS, participants reported their experiences with online grocery shopping. Most were already utilizing the service, with approximately 35% shopping online “all the time,” and an additional 25% having shopped online “many times.” Of those who shopped online for groceries, 74% had previously ordered groceries online for pick up multiple times, while 70% had

Figure 2. Number of Servings Respondents Consumed Per Day in an Average Week (n = 56)



ordered groceries online for home delivery more than once. Customer satisfaction with online shopping was high, with 96% of participants rating their online grocery experience “good” or “very good.” Only 6% reported never having shopped for groceries online, and these individuals cited a preference for seeing food items in person before buying. These findings suggest that GOODS recruited participants who were already comfortable with online shopping and experienced in grocery pickup and delivery options.

Online Ordering Receipt Collection and Analysis

GOODS participants from both sites ($n = 34$) submitted 489 receipts totaling \$33,522.32 for purchases made between April 2022 and August 2023. These receipts included 6,004 items for GOODS purchases made online at Walmart through the program. The number of receipts per participant ranged from 1 to 47, with seven participants shopping only one time. The median number of receipts was 9 and the average number of receipts per participant was 12. One participant (a statistical outlier) made 103 purchases during the study period. The frequency of participation in the program ranged between fewer than five shopping trips (13 participants) to over 21 shopping trips (9 participants). Recognizing that average spending per individual participant varies widely, the average receipt total was \$68.85. Most purchases were made with credit or debit cards (22%), EBT cards, (22%) and over-the-counter (OTC) benefits (18%).

Table 2. Descriptive Comparison of Drew vs. Shaw Receipts

| | Drew | Shaw |
|---|-------------|------------|
| Total Number of Receipts | 481 | 8 |
| Total Number of Items purchased | 5,827 | 177 |
| Total Number of Participants | 31 | 3 |
| Total US\$ Spent | \$32,514.85 | \$1,007.47 |
| Range of US\$ Spent on Receipts (Minimum) | \$2.28 | \$55.28 |
| Range of US\$ Spent on Receipts (Maximum) | \$795.85 | \$364.39 |

³ Most frequently substituted foods: Bottled water, watermelon, orange juice, lemon lime soda, almond milk, apple juice.

⁴ Most frequently unavailable items: Biscuits, crew socks, sports drink, seasoning blend, spring water.

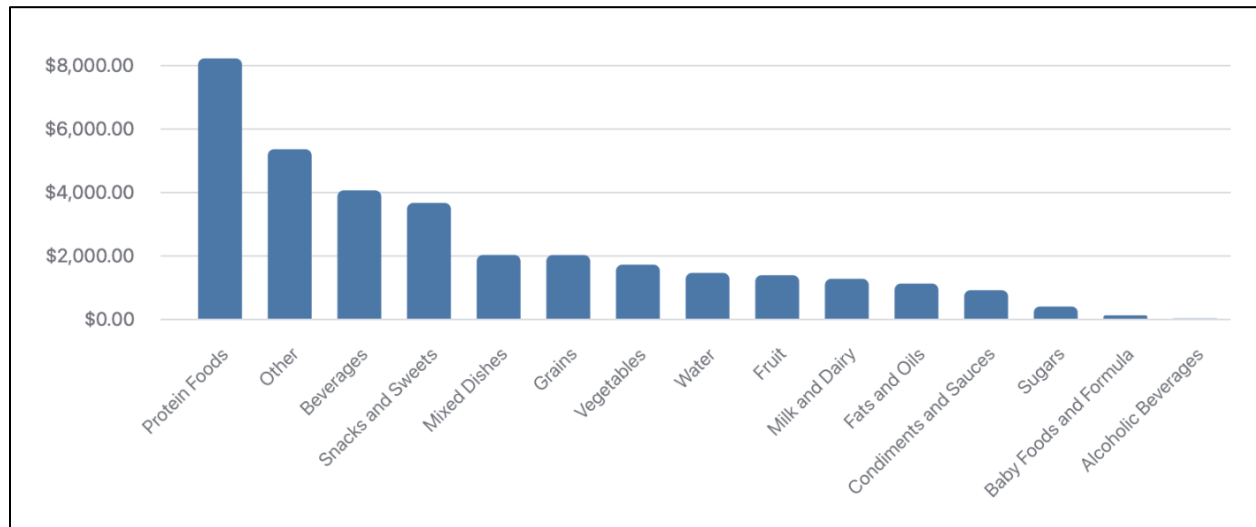
⁵ Comprehensive list of returned items: chicken breast, mushrooms, coffee pods, snack variety mix, granola bars, red radish, green cabbage, ice pops, country sausage.

While limited receipt data from Shaw (2%) prevents statistically significant comparisons between communities, descriptive comparisons are provided in Table 2.

Walmart staff fulfilled most GOODS orders, with 92% of items being “shopped” for by Walmart staff and received by customers (including weight adjusted products). Only 5.5% of purchases made required substitutions³ and only 3% of requested items were reported as unavailable.⁴ Customer returns were minimal, affecting less than 1% of orders.⁵ Figure 3, along with Table 3, summarizes percent of food purchased and total \$USD spent within each of the broad USDA food categories (USDA ARS, 2022). Table 3 also provides comparisons to national averages for spending as a share of total food budget. Among GOODS participants, the most commonly purchased products included beverages, proteins, snacks and sweets, which were reflected in both percent of total purchases and by \$USD spent. Products in the “other” category include non-edible items purchased (such as light bulbs, aluminum foil, etc.), and edible items that do not fall within a category (such as seasonings, over-the-counter medicines, etc.).

Compared to the national averages, GOODS participants spent more on fruits and vegetables, beverages (including alcoholic beverages, water, baby formula), fats and oils, grains, and proteins. Figure 4 provides a closer look at the amount spent on specific food categories. Among the total spent on proteins (approximately \$8,000), about 25% was on “meats,” 25% on “poultry,” and 25% on “cured meats and cured poultry.” About 12% of the total amount was spent equally on “seafood” and “eggs,” and the remaining amount (1–2%) on plant-based proteins.

While the study lacks pre-program receipt data for comparison, the collected data sug-

Figure 3. Total US\$ Spent on Food Purchased by GOODS Customers by Broad USDA Food Category

gest that low-income rural communities make healthy food choices when given access to SNAP benefits that are redeemable online and offered delivery from food retailers. The receipt data collected can also be a baseline for future program evaluations as the program expands in both reach and services provided.

Focus Groups

The research team conducted focus groups at two sites, one in Drew and one in Shaw, to explore participants' experiences during the program's early implementation. While survey data primarily examined food access before program participation, the focus groups provided insights into participants' direct experiences with GOODS. Drew hosted the larger focus group with 13 participants, while Shaw's focus group had 6 participants. Analysis of the focus group discussions revealed three primary themes: program convenience; time and money savings; and improving selection of healthier food options.

Program Convenience

Focus group participants described their primary motivations for participating in GOODS as

convenience and ease of use. For example, Participant 3D (who works but does not live in the community), noted the significant time saving benefits: "You order, and you have [it] delivered. You know I can just go straight home [after work rather than spend time shopping]. It is timesaving for me,

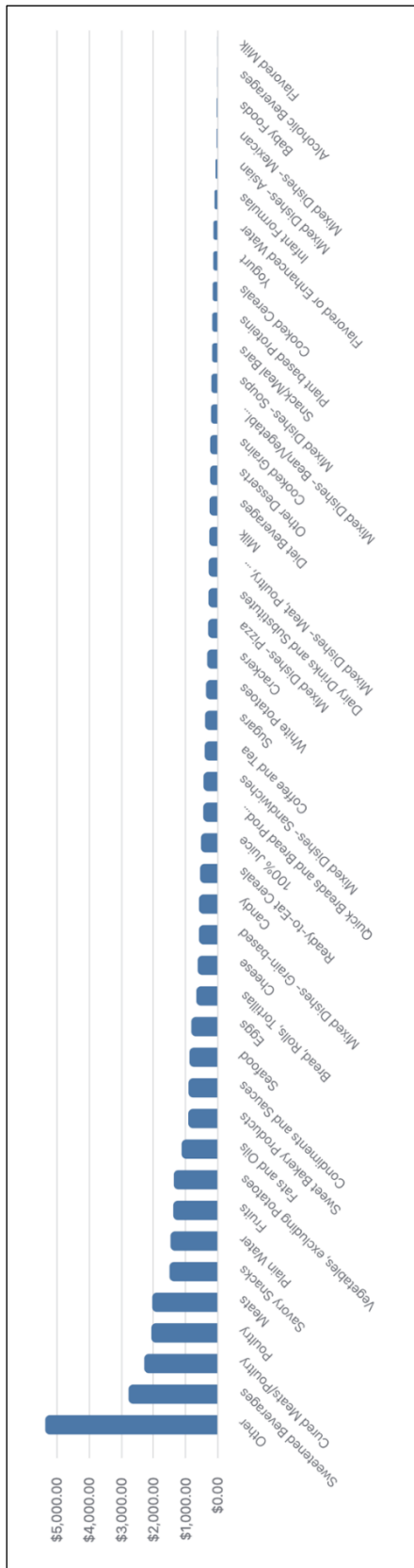
Table 3. Percent of Food Purchased by GOODS Customers by Broad Food Category

| Food at Home category | % of GOODS purchase | U.S. Households 2020 (%) ^a |
|--|---------------------|---------------------------------------|
| Beverages (including alcoholic beverages, water, baby formula) | 16.0 | 7.8 |
| Proteins | 14.6 | 13.4 |
| Grains | 9.0 | 6.7 |
| Vegetables | 9.0 | 6.5 |
| Fruit | 6.2 | 5.6 |
| Milk and dairy | 5.0 | 5.0 |
| Fats and oils | 4.0 | 1.6 |
| Other Food at Home ^b | | |
| Snacks and sweets | 11.0 | — |
| Other | 13.3 | — |
| Mixed dishes | 5.5 | — |
| Condiments and sauces | 4.5 | — |
| Sugars | 1.5 | — |

^a Okrent, A., & Zeballos, E. (2022, December). *COVID-19 Working Paper: Consumer food spending changes during the COVID-19 Pandemic (AP-110)*. U.S. Department of Agriculture, Economic Research Service. <https://doi.org/10.22004/ag.econ.333545>

^b Detailed data for "other food at home" not available.

Figure 4. Total US\$ Spent on Food Purchased by GOODS Customers by Specific Food Category



and ... it takes the thought out of having to go to and pull something off the shelves.” Another participant (2D) mentioned vision impairments: “I can’t see good so [GOODS staff member] helps me out a lot. She helps me out a lot.” Physical limitations were another key motivator, with some participants citing mobility and vision challenges that make traditional grocery shopping difficult. Participant 1D explained, “...Walmart make me tired. I get tired when I go to Walmart ... so that motivated me to sign up [for GOODS to receive deliveries].” The program also helped those without transportation; as Participant 1D added, “I don’t drive so I would have to call on somebody to take me. But now, just go online and make it easy.”

Despite early logistical challenges (such as missing items, incorrect order details, or unordered extra items), participants remained committed to the program. They credited the GOODS program staff in both Drew and Shaw for quickly resolving logistical hurdles early in the program and ensuring positive ordering experiences. Staff support helped build trust and maintain participation, and customers credited the GOODS staff with the program’s convenient and accommodating services. As Participant 1S noted, “I mean, any time I had a question she was readily available to answer and to assist, and that’s real special for a small town.” Participant 2S added that the staff were “so sweet about [helping], and any time you had a question, no matter the hour, she would always answer.”

The online ordering system was praised for its flexibility. Participants appreciated being able to order “from anywhere” using their phones. Participant 3D mentioned placing orders at the gym, while Participant 2S highlighted the convenience of the Walmart platform’s order history feature:

When I go in and purchase ... some things, when I go back, it’ll bring up remembrance of what I purchased in the past. So that’s helpful, too ... they already know pretty much what I’m going to be looking for, so I don’t have to go scroll through all that information and find it. I can start with those things that I previously purchased. And then, if I need something else, I can go into the system and put those into my cart.

The program also demonstrated flexibility in other ways. For customers who were unable to place orders online, a GOODS staff member would help place Walmart orders on their behalf. As Participant 2S described:

... My first order was very good. I didn't have anything that was not available. It was brought in when it said that it was gonna arrive. It was picked up, delivered. They even held it a couple of days because I was out of town. So that was real convenient for me to have the things I needed when I got back into town, and it really worked well.

The pick-up process also was reviewed positively, particularly the willingness of GOODS staff to bring orders to customers' cars. As Participant 4D noted, "when I pick up the order and [GOODS staff member] said 'oh, you get back into car, I bring it out to you' and I smiled. Chivalry ain't dead today!"

Money and Time Savings

All focus group participants stated that participation in the program helped them save time, in part due to less time spent traveling to the store. Participant 3S explained:

... Having a program like this in this community, I think it's very beneficial, especially for me and my wife. 'Cause, you know, we be on the go a whole lot, and we sometimes we don't have the time for running to Cleveland to make groceries, and this program really helps out the whole lot.

Participants noted time savings from spending less time navigating brick-and-mortar groceries searching for items, and avoiding the need to arrange transportation.

The program also provided financial benefits. Focus group participants highlighted the significance of saving money on gasoline by making fewer store trips. They also explained that ordering online helped them to avoid adding impulse purchases and unplanned items to their carts, which often happened when browsing store

aisles or shopping with children.

Participants also spoke positively about the prices of their purchases, as they found that ordering online was more reasonable than expected. Participants found Walmart's online prices through GOODS to be more competitive than brick-and-mortar stores, and one participant reported receiving help from GOODS staff to make budget-friendly selections. While GOODS became the primary shopping method for many participants, some focus group participants still continued to shop at brick-and-mortar stores once or twice per week. Vowell's, Kroger, Stop n' Shop, and Spain's were named as conventional supermarkets frequented by Drew and Shaw community members.

Eating More Healthfully

Participants praised the food quality and variety available through GOODS' Walmart online ordering. They reported that the program helped them to eat more healthily by encouraging them to choose healthier foods via the "suggestions" feature in the Walmart app and also by the need to try alternatives when preferred items were out of stock. One participant described discovering blood oranges through the app's suggestions, noting, "they looked cool, so I got them. If I was in the store, I would have never picked it out."

Participant 5S emphasized the program's role in bringing healthy options into the community: "I'm surprised that people have not been more active using GOODS. Simply for all these reasons where we ... don't have access to real healthy nutritious kinds of food. It's coming right to the community and to the door."

When discussing GOODS' community impact, participants were enthusiastic about its benefits. Participant 3S highlighted its broad accessibility:

And just having this option here in Shaw, it does, it opens up a world of opportunity for people who may be disabled, or people who may not have transportation, people who can't drive, older people who may have health reasons of not getting out in public. All of those reasons are important, and it adds to GOODS being in the community.

And then it opens up another resource for the community, so it's an asset.

Participant 4S expressed surprise at the program's limited scale given local transportation challenges:

I'm just amazed that more people are not taking advantage of it and using this service because it, like I said, it is a win for our community when we talk about the struggle of transportation issues, struggle of getting to grocery stores, and a lot of people have to pay people to take them to Cleveland, which is only about 15 miles. But [transportation services] charge [US]\$25, [US]\$30, [US]\$40, even just one way to go to Cleveland. So, knowing that you've got the ability to get everything you would get from a grocery store right here in your community, and it's not being thoroughly utilized. That's the shocking part to me.

Staff Interviews: Perceptions of Barriers and Facilitators to Program Growth and Sustainability

Staff interviews in Drew and Shaw provided insights into the program and its challenges, considering retailer experiences as well as exploring the barriers that prevent food accessibility. Staff were aligned in their understanding of the goals of GOODS, and attentive to the program's positive impact on local food habits and increased accessibility to affordable and healthy food. Some staff stated that the program also existed to support the local community to think outside of the box to find sustainable and creative solutions to community concerns.

Barriers to Accessing Food

GOODS staff emphasized that food access barriers in Drew and Shaw are interconnected, with transportation being one of the most significant barriers to food access for both Drew and Shaw residents. Without an effective public transportation system, car ownership is necessary. Residents without a vehicle must rely on friends and family with cars for grocery shopping and other errands. For these residents who depend on others, time

becomes a major constraint. GOODS staff noted that many program participants are working parents whose job and family responsibilities make grocery store trips difficult to schedule. Some community members face mobility challenges that make getting to and around grocery stores physically difficult. The GOODS model addresses these overlapping barriers by providing free delivery of online grocery orders to either a local hub or directly to homes, improving food access for residents of Drew and Shaw.

Program Challenges

The primary challenge identified by GOODS staff is changing established grocery shopping habits. Many residents, particularly older adults, are skeptical about online ordering. Some question whether others can select the right products for them, while others are uncomfortable with technology or lack access to computers or high-speed internet. As one focus group participant noted, "The senior citizens [in this community] ... I believe most of them, they're not computer literate ... and they don't have help to go on computers to order food to eat." Privacy concerns are another barrier, with potential program participants hesitant to share credit card and other personal details online. Participants, however, do report feeling secure when shopping with GOODS staff support. One focus group participant explained:

A lot of older people don't trust, the trust factor with their [credit] card. But once they meet [the GOODS staff] they would feel that sense of trust. No one is going to ... this system is set up, so can't nobody steal their identity.

Participant 2S suggested reaching out to local elder groups to build trust and increase program participation:

And I'm just trying to think about how we could get the word out to our elders and encourage them to, to use the service. I don't know, we do have an elder group that started back to meeting in town, so maybe they could sort of spread that word about the service being available and maybe network to some of

the elders that they know and try to build the usage of the program through there. But again, it was, it's, it's real shocking that we have a lot of young people who could easily use the service, and I mean, I don't claim to know how many have used it. But I'm just saying that it just looks like it would be more people taking part in the service.

In Shaw, staff noted that grocery shopping also serves as a social activity, particularly for older residents. Participant 3S explained: "Socialization around here is so low, that the people look forward to going to Walmart and shopping just socialized. If you go in, Walmart, right now, most of them are not shopping. They're talking and eating. And they're gonna shop last."

The program's implementation revealed different challenges in Drew and Shaw. Drew benefited from an existing *explicitly food-focused* community network through We2Gether, whereas Shaw lacked similar established connections, highlighting the importance of building on existing assets like strong community ties. Staff also mentioned that many people do not enroll in the program and instead combine grocery trips with other errands in Cleveland, making GOODS less attractive since they still need to travel for other necessities.

GOODS staff have made concerted efforts to ensure that residents know about GOODS and to recruit them. Outreach strategies have included in person door-knocking and on-the-street discussions, as well as online promotion of the program through Facebook. GOODS staff in Drew have also used direct mailers to provide residents with information and have partnered with local churches to spread the word about the program. In Shaw, outreach has included sharing program information with the community at a City Hall meeting and multiple events and gatherings (including two town halls, a meeting in the largest apartment complex in Shaw, and an Easter egg hunt). Beyond these gatherings, individual outreach continues, and information is shared via door-knocking, tabling in front of a doctor's office along the main highway, and distributing flyers at the local Head Start.

GOODS staff noted that recruitment was

slower than anticipated, but that new efforts are in the works to enroll participants. Staff have received positive feedback about the program from those that they reach out to, but this has not often translated to enrollment. Shaw staff in particular note that enrolling participants and keeping them enrolled was a major challenge. In Shaw, staff noted that those engaging with the program consistently had already been ordering online from Walmart and picking up their groceries in Cleveland prior to enrolling in the GOODS program, so home delivery provided by GOODS would be a clear benefit of continuing to participate.

Having overlapping concerns and challenges from both the staff interviews and focus groups illustrates just how deeply connected to the community the GOODS staff are from both sites, and the extent to which they understand community needs. Having a community rooted staff is an important asset and is key to overcoming challenges, and GOODS staff members strive to be attentive to hesitations and concerns from current and potential participants.

Grocery Retailer Experiences

All GOODS staff reported generally positive experiences with Walmart, although several challenges exist. Staff noted having some difficulty getting in touch with store management or supervisors on orders or pick-up logistics, sometimes never hearing back from management after calling. Two of the staff, who work closely and consistently with both program participants and Walmart, reported that although there were some early "growing pains" (such as missing items in orders), those concerns were easily addressed through increased direct communication with Walmart staff. Additionally, staff noted some logistical challenges related to the standard Walmart pick-up process in which Walmart's app-based check-in system does not allow delegation to GOODS staff who are picking up groceries on behalf of participants, thus creating inefficiencies as staff must coordinate with customers to complete the check-in process. Despite these challenges, GOODS staff are confident that they can remedy the problems. One staff member expressed hope for evolving the relationship from a basic consumer-retailer dynamic to a

more collaborative partnership benefiting both Walmart and the GOODS program.

Vowell's Marketplace, a regional family owned and operated grocery chain with approximately eight stores across Mississippi and Alabama, represents a promising partnership opportunity. Vowell's offers affordable food via weekly deals and promotional coupons. From an enrollment and programmatic perspective, staff reported that many community members not currently enrolled in GOODS report a preference for shopping at Vowell's and would likely join GOODS when Vowell's becomes a partner. Staff also mentioned the perception among community members is that Vowell's offers fresher and better-quality products than Walmart. As a smaller company, staff anticipate and hope for smoother communication and simpler logistics when a partnership is established with Vowell's.

Because of this deep community tie and built-in trust, Vowell's was invited to join the program at the program's start. Vowell's, however, did not have the capacity to take online orders at the time, nor was it able to take SNAP benefits for online orders, which is a requirement of participation. With support from GOODS, Vowell's has been working to create and implement these needed aspects of program participation, with the hope that they can be included in the program in the near future.

Discussion

GOODS is an innovative food access program in Sunflower County that leverages existing community assets to improve food accessibility, promote healthy food purchasing behaviors, and produce cost and time savings for rural residents. The program's success stems from its strong foundation in community engagement and asset-based development, rather than a focus solely on deficits or gaps in services.

The program's development process exemplifies the value of community-driven planning. Prior to GOODS' implementation, community meetings were held to understand local needs, identify potential barriers, and develop viable solutions. When community members expressed a need for improved food access, traditional grocery store

development proved unfeasible. Instead, GOODS emerged as an innovative solution that capitalized on existing community resources and strong ties with local networks, building meaningful relationships with nonprofit organizations, regional corporations and available government buildings.

A key strength of the program is its staffing model, which prioritizes hiring local community members. This approach has fostered trust among participants and facilitated effective collaboration between HOPE and organizations like We2gether Creating Change and Delta Hands for Hope. The program's location in The Armory also provides a physical space for planned expansions beyond food access, responding to additional community needs. Future program developments include nutrition education classes, computer classes, and technology access initiatives targeting older adults and others affected by the digital divide.

Food Purchasing Behavior

Previous studies show that online grocery programs can improve participants' food purchasing behavior (Appelhans et al., 2013; Lagisetty et al., 2017). While participants typically reported buying more healthy foods overall, these studies also note an increase in high-calorie beverage purchases like soda and juice (Appelhans et al., 2013; Lagisetty et al., 2017). The GOODS program showed similar patterns, with beverages, protein foods, snacks and sweets among the most frequently purchased items.

Despite these mixed results, GOODS customers reported that the program supported healthier eating habits through features like in-app produce recommendations. Customers also reported high levels of fruit, vegetables and whole grains consumption. While the absence of baseline receipt data limits direct comparisons of purchasing behavior before and after program participation, the available data suggests that improved food access through SNAP online payments can support and increase healthy food purchases relative to national averages.

Research emphasizes the importance of combining food access initiatives with nutrition education, particularly addressing the health impacts of sugary drinks (Appelhans, 2013; Lagisetty, 2017).

Studies show that nutrition education helps increase consumption of fruits, vegetables, and proteins while decreasing processed food intake across all age groups (Lua & Wan Putri Elena, 2012; Meyers et al, 2014; Weinstein et al., 2013). Although the initial GOODS pilot focused on participant recruitment and enrollment rather than nutrition education, future program phases will include nutrition classes led by local university students. This addition aims to further improve participants' food purchasing habits and the quality of their diets.

Cost Savings and Time Savings

Previous research by Cohen et al. (2020) on SNAP-enabled online grocery delivery found significant time savings for participants. However, that study found no direct cost savings for participants shopping online when compared to brick-and-mortar stores. This was due to in-store discounts and promotions that the physical stores provided. Without those promotions, the online store mentioned in the study would have been 22.1% cheaper on average. GOODS participants report similar time savings along with cost savings primarily related to reduced transportation expenses, including gas costs and payments to family members for rides. These savings are particularly valuable for rural residents who lack access to affordable public transportation and live further away from brick-and-mortar stores.

In Sunflower County, residents view Vowell's Marketplace as a valuable community asset that offers competitive prices through regular discounts and benefit programs. While GOODS customers expressed interest in adding Vowell's as a retail partner, market basket analysis showed comparable unit prices between Walmart and Vowell's. However, Vowell's participation in Double Up Food Bucks—a program offering additional savings on fruits and vegetables purchased using SNAP and EBT—could make overall costs comparable between the two retailers.

Barriers and Facilitators Regarding Future Use

Previous studies found that consumers are cautious about online food shopping, particularly sharing personal and payment information online and

receiving inferior products (Cohen et al., 2020; Meslin, 2018). Community members in Shaw and Drew expressed similar concerns. These concerns, coupled with limited technological capacity among some residents, have affected program enrollment. Further iterations of the program could explore whether partnering with trusted, community-based grocers would build consumer confidence and reduce these concerns.

Early program adoption has been highest among residents already familiar with Walmart's online pickup service. SNAP acceptance is crucial for participation; focus group participants emphasized that they could not use GOODS without SNAP-accepting retailers (Brandt et al., 2019; Meslin, 2018). The significance of SNAP integration is reflected in use data, with EBT benefits used in 22% of pilot period purchases.

Community trust and engagement are key factors in program sustainability (Cohen et al., 2020; Lagisettey, 2017). GOODS has successfully built trust by using local staff members who understand and are compassionate towards community needs and concerns. These staff members play an important role in making the program appeal to Drew and Shaw residents and helping hesitant community members feel more comfortable with changing their shopping habits. The program's success, particularly in Drew, demonstrates the substantial value of building on existing community engagement and partner organizations.

Limitations


The study had two main limitations. First, this evaluation lacks baseline data on participants' food buying and eating practices. While the post-first-order survey included questions about previous shopping habits, collecting comprehensive baseline data would have enabled a deeper understanding of the population's food behaviors. Nevertheless, existing research on rural health patterns and local data from Sunflower County provides meaningful context for understanding the health and food access concerns in these communities. Second, the study involved a relatively small number of survey respondents and focus group participants. This limitation, however, should be considered in the context of the pilot program's size. With fewer

than 75 total program participants, the 56 survey respondents is equal to approximately 85% of the number of participants in the program and approximately 28% participation in focus groups.

Implications for Research and Practice

The challenges facing Sunflower County and the towns of Drew and Shaw reflect a broader trend in rural America, where declining numbers of local grocers and consolidation of larger retailers in cities have made food shopping increasingly costly and time-consuming. While previous research on online grocery shopping has primarily focused on urban food access, the GOODS evaluation addresses an important gap in understanding how these concerns and solutions function in rural communities.

GOODS demonstrates an innovative approach to rural food access by virtually connecting small towns to grocery retailers through online ordering and delivery. The program's success highlights the critical role of community engagement in develop-

ing and implementing food access solutions. By utilizing community-led outreach and building trusting relationships, the program is able to reach populations traditionally hesitant about online shopping, such as elderly residents. The GOODS model also offers valuable insights for other rural communities facing similar food access challenges. It demonstrates that innovative, community-driven initiatives can effectively increase food access while building on existing community assets and relationships. This evaluation also provides a deeper understanding of how technology-enabled solutions can be successfully adapted to meet the unique food needs of rural communities. 

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