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Strengthening nutrition incentive and produce prescription projects: An examination of a capacity building and innovation fund

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Abstract

The Gus Schumacher Nutrition Incentive Program (GusNIP), funded by the U.S. Department of Agriculture (USDA) National Institute of Food and Agriculture (NIFA), is a federal program designed to address financial barriers to fruit and vegetable (FV) purchases among consumers with a low income by using financial incentives. To further strengthen both nutrition incentive (NI) and produce prescription

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(PPR) GusNIP projects, the GusNIP Nutrition Incentive Training, Technical Assistance, Evaluation, and Information Center (NTAE) and its Nutrition Incentive Hub offer Capacity Building and Innovation Fund (CBIF) awards to GusNIP grantees and their partner organizations. The present study applies multiple methods to systematically understand the types of resources requested by CBIF applicants to expand the capacity and impact of their NI and PPR projects by rigorously analyzing the CBIF proposals submitted from 2020 to 2022. Applicants (N = 130) requested funds to build capacity and innovation around one or more domains: leadership and staffing (n = 72); communications (n = 67); diversity, equity, and inclusion (DEI; n = 57); and technology (n = 42). Three significant qualitative themes emerged around future needs: (1) staffing and technology to streamline applicants' projects; (2) training, resources, and funding to enhance DEI in their projects; and (3) improved NTAE support, including improvements to the CBIF funding mechanism. Findings from this study can increase awareness about the capacity building and innovation needs of NI and PPR projects for the NTAE, policymakers, and funders to consider when supporting healthy food financial incentive projects.

Keywords
nutrition financial incentive, produce prescription program, funding needs, capacity building, food insecurity, innovation, technical assistance center, U.S. Department of Agriculture National Institute of Food and Agriculture

Abbreviations

CAB	Community advisory boards
CBIF	Capacity Building and Innovation Fund
FFN	Fair Food Network
FINI	Food Insecurity Nutrition Incentive
FV	Fruit and vegetable
GSCN	Gretchen Swanson Center for Nutrition
GusNIP	Gus Schumacher Nutrition Incentive Program
HIP	Healthy Nutrition Incentives Pilot
NI	Nutrition incentive
NTAE	Nutrition Incentive Program Training, Technical Assistance, Evaluation, and Information Center
PPR	Produce prescription
RFA	Request for application
SNAP	Supplemental Nutrition Assistance Program
USDA NIFA	U.S. Department of Agriculture National Institute of Food and Agriculture

Introduction and Literature Review

To orient readers to key concepts throughout this paper, we will first describe healthy food financial incentives and then provide background on the funding mechanism and technical assistance center that supported this capacity building innovation grant program.

Healthy Food Financial Incentives

Healthy food financial incentive projects, including nutrition incentive (NI) and produce prescription (PPR) projects, can help address disparities in diet quality among populations with low income by increasing their purchasing power and access to fruits and vegetables (FV) (Engel & Ruder, 2020; Leng et al., 2022). Throughout this paper, both NI and PPR projects will be collectively referred to as "healthy food financial incentive projects." There is growing evidence that supports the effectiveness of healthy food financial incentives on increasing participant FV intake and food security (An, 2013; Atoloye & Durward, 2020; Moran et al., 2019; Parks et al., 2021) as well as support highlighting the economic benefits for local food economies and retailers (An, 2015; Basu et al., 2013; Choi et al., 2017; Dimitri et al., 2015).

Gus Schumacher Nutrition Incentive Program (GusNIP)

One promising federal program to support healthy food financial incentive projects and improve the diet quality among populations with low income is the Gus Schumacher Nutrition Incentive Program (GusNIP), funded through the U.S. Department of Agriculture (USDA) National Institute of Food and Agriculture (NIFA). GusNIP was appropriated

in the 2018 farm bill and provides federal funding to implement and evaluate healthy food financial incentive projects that aim to increase the purchase and consumption of FV among populations with low income. GusNIP builds on the success of prior federally supported healthy food financial incentive projects—namely, the Healthy Nutrition Incentives (HIP) Pilot, launched in 2011 and supported by the 2008 farm bill, and the Food Insecurity Nutrition Incentive (FINI) grant mechanism, appropriated in the 2014 farm bill. In the first three years of awards, GusNIP reached 37 states across the U.S. to support nutrition security, with a significant total investment of about US$100 million in 2019, 2020, and 2021 (Parks et al., 2019; USDA NIFA, n.d.). There are two main types of GusNIP projects. First, NI (or SNAP incentive) projects increase the value of Supplemental Nutrition Assistance Program (SNAP) benefits at the point of purchase. This is done by providing the shopper with matching funds to use at participating food retail sites, such as grocery stores and farmers markets, to purchase more FV. For instance, if a shopper spends US$10 worth of SNAP benefits on GusNIP-eligible FV, they get US$20 of GusNIP-eligible FV at participating sites (a 2:1 match). Of note, GusNIP NI-eligible FV are defined as FV in almost any form (fresh, canned, dried, or frozen, and whole or cut) and must not have added sugars, fats or oils, and salt.

Second, PPR projects prioritize participants (that is, patients) who experience low income, food insecurity, and have or are at risk for a diet-related chronic disease (e.g., diabetes or overweight). Participants are prescribed GusNIP-eligible FV by a healthcare professional, and these prescriptions can be redeemed at participating sites, including grocery stores, farmers markets, and other food retailers. No SNAP purchase is required for a participant to receive a PPR incentive. As opposed to NI-eligible FV, PPR-eligible FV are limited to fresh FV only.

GusNIP National Training, Technical Assistance, Evaluation, and Information Center (NTAE)

In addition to competitive grants for NI and PPR projects, an important component of the GusNIP program is the provision of support and resources for GusNIP grantees through the National Training, Technical Assistance, Evaluation, and Information Center (NTAE). Established in 2019, the NTAE is led by the Gretchen Swanson Center for Nutrition (GSCN) in partnership with Fair Food Network (FFN). GSCN and FFN are supported in their work by a coalition of partners, grocery and farmers market experts, and researchers and evaluators, collectively known as the Nutrition Incentive Hub. These partners serve as a coordinating center to assist active and prospective GusNIP grantees in navigating program implementation, reporting, and evaluation. Major goals of the NTAE and Nutrition Incentive Hub include providing technical assistance and implementation support to existing and prospective grantees, aggregating NI and PPR project data to demonstrate overall program impact, and conducting an internal process evaluation to improve the Nutrition Incentive Hub's functionality and processes.

There is a range of capacity levels across GusNIP grantees in terms of program implementation and evaluation experience and expertise. In public health practice, building capacity is related to a myriad of constructs: human, financial, and infrastructure resources; knowledge to develop strategies and resolve issues; leadership; diverse partnerships; project management; engagement with communities; and workforce capacity and competency to deliver the program (Baillie et al., 2009). These capacity constructs are unique to each project type. For example, to support a PPR project, cross-sector partnerships are required between healthcare, food and agriculture, funders, policymakers, and payers such as insurers. For NI projects, engagement with communities for local buy-in and implementation with people who use SNAP is beneficial. These factors require each project to build capacity in order to successfully implement and evaluate their projects. In many cases, building capacity requires additional funding that is beyond the scope of what a project initially proposed. Projects may also need additional funding to support the requirements of the GusNIP grant that were not anticipated at the time of award.

GusNIP NTAE Capacity Building and Innovation Fund (CBIF)

To support this identified need, the NTAE offers additional grant opportunities for GusNIP grantees and their partners through the Capacity Building and Innovation Fund (CBIF). For the purpose of the CBIF grant opportunity, capacity building is defined as *Initiatives that are designed to strengthen an organization's ability to implement a Nutrition Incentive or Produce Prescription project in their community. Capacity building is an investment in the effectiveness and future sustainability of a nutrition incentive program.* As described in the CBIF request for application (RFA), "innovation" is defined in the following ways:

- **General innovation** introduces something new to an organization to address a specific need within the NI or PPR project.
- **Transformational innovation** has a profound and lasting effect on the NI or PPR project's core structure or operations.
- **Groundbreaking innovation** introduces something few other organizations are doing with their NI or PPR projects. Groundbreaking innovation represents not just innovation within the organization, but within the NI and PPR environment at large.

Since the inception of CBIF in 2020, FFN has facilitated a semi-annual RFA; conducted rigorous, rubric-guided evaluation and scoring of each application; and awarded recipients based on their score. An overview of each round of the RFA can be found in Table 1.

With each CBIF application come changes to the RFA, based on feedback from previous applicants. In order for the funding opportunity to be more accessible to programs with varying grant-writing experience, the length and number of questions in the application has become shorter with each round. Many CBIF applicants are also GusNIP grantees, meaning that they have already completed an extensive federal grant application

Table 1. Themes, Goals, and Dollars (in US$) Awarded for Each Year of GusNIP NTAE CBIF Grant

Date	Funding Round	Funding Amounts	Focus Areas	Total Awarded	Number of Awards
May 2020*	Round 1 (COVID-19 Mini Grants)	up to $10,000	• Supported innovations and adaptations in rapid response to the COVID-19 pandemic • Grantees focused on protective equipment and hand-washing stations to comply with public health needs and standards	$300,000	31
Nov. 2020	Round 2	$5,000–$50,000	Invested in programmatic capacity and sustainability, inclusive planning and co-creation of projects, and organizational leadership and partners that center and elevate the voices of the communities served	$500,000	13
Dec. 2021	Round 3	$5,000–$50,000	Invested in community engagement, upgrading technologies, better internal tracking systems, and supporting local food economies	$400,000	9
Aug. 2022	Round 4	$5,000–$50,000	• Introduced separated Capacity Building and Innovation-focused RFAs • Partnered with reporting and evaluation team to conduct evaluation of CBIF applicants	$1,000,000	24

RFA = request for application; CBIF = Capacity Building and Innovation Fund
*May 2020 applications were not included in the dataset for this evaluation because of the uniquely focused COVID-19 RFA. These applications are noted in this table only as to provide a complete representation of the evolution of CBIF.

with information about their program goals and deliverables. Allowing applicants to repurpose existing narratives on their project decreases the burden of crafting the CBIF application, and developing questions where this information can be reused is a central goal of the CBIF development team.

The most significant change came in the 2022 RFA when the capacity building and innovation initiatives were separated into two RFAs: capacity building and innovation. Separating the two topics meant creating RFAs, rubrics, and review teams that were focused on the unique goals and characteristics of capacity building projects versus innovation-focused projects, which yielded a more streamlined process. Capacity building applications request support for projects that need additional assistance to maintain operations of their programs, whereas innovation applications request support for projects that were experimental and applied creative enhancements to existing work.

Purpose of Present Study

Although each CBIF awardee submits final documentation at the end of their grant period (e.g., impact and financial reports) to the FFN team, to date there has been no rigorous evaluation of the funding mechanism in terms of the requested needs of the applicants. While there is a growing body of evidence on the impacts of healthy food financial incentives on participants and local economies, understanding what is needed by NI and PPR practitioners to operate and evaluate their projects more effectively is understudied. The CBIF mechanism, designed to help GusNIP grantees optimize the implementation and evaluation of their projects, provides a unique opportunity to assess such needs. Therefore, the purpose of this study was to systematically evaluate the CBIF funding mechanism and answer the following research questions: (1) *What are the capacity building and innovation funding needs and requests of organizations who apply for NTAE CBIF funding?* and (2) *How can the NTAE and other technical assistance centers support NI and PPR projects?* Answers to these questions are applicable to the NI and PPR fields at large as there are many funders, policymakers, and program implementers who are external to GusNIP and can apply these findings to their own planning and programming. The authors chose to use the CBIF applications as the dataset to answer these questions because all applications (not only those funded) were available, and to our knowledge, this is the largest auxiliary funding mechanism (that is, funding can only be awarded to organizations with active NI or PPR grants) of its kind. Of note, the authors hope the findings presented in this paper can inform other (i.e., non-GusNIP) public health–focused technical assistance and evaluation centers to improve their services (e.g., Centers for Disease Control and Prevention technical assistance centers).

Applied Research Methods

To answer these research questions, FFN and GSCN collaborated to design a multiple-methods evaluative study. After the study authors met to discuss goals, research questions, deliverables, and analytic strategies, one author emailed former CBIF applicants to seek permission to include their previously submitted applications in the dataset; applicants were given the choice to opt their proposal in or out of this dataset. None of the applicants opted their CBIF applications out of the study.

Dataset

The dataset included submitted applications (N = 130) from three rounds of CBIF funding: 2020 (n = 45), 2021 (n = 43), and 2022 (n = 42). The first round of the 2020 RFA was for COVID-19 emergency response needs; therefore, these applications were omitted from this analytic dataset given their unique focus. However, to be inclusive and tell the complete story of the evolution of CBIF, these first-round 2020 applications for COVID-19 response are noted in Table 1, but they are omitted from the rest of the analysis. Although the RFA changed slightly from year to year, the core application item that was central to this analysis was: "*Please provide a brief description of how you propose to use the funds requested through this opportunity and how the funds you are requesting will build the capacity or innovation needs of your nutrition incentive or produce prescription project now and beyond the period of this grant."* The suggested response to this item was no more than 600 words. In total, applications ranged from 6 to 8

pages and included attachments for a budget. This research did not require institutional review board approval as it does not meet the requirements of human subjects research.

Qualitative Analysis

The lead qualitative researcher developed a deductive codebook based on language from the RFAs and the research questions. Next, using document-based thematic content analysis methods (Vaismoradi & Snelgrove, 2019), the researcher coded five applications with this codebook and added inductive codes during the process (Saldaña, 2012). Another researcher then independently coded the same five transcripts and added inductive codes as needed. Each transcript was independently double-coded by two researchers. If new codes were added, researchers re-coded all previously coded transcripts to include the newly added codes. After all transcripts had been double-coded, the lead researcher collapsed redundant codes, grouped like-codes, and named them (e.g., category names). Throughout this iterative process, salient themes emerged which provide clear cross-cutting answers to the research questions posed (Vaismoradi & Snelgrove, 2019). Researchers used Atlas.ti (Mac Version 8.1.1) to digitalize the analytic process (Paulus et al., 2014).

Quantitative Analysis

Several questions in the RFA were best analyzed quantitatively; therefore, two researchers abstracted data from the applications into a spreadsheet using a predetermined codebook. Variables that were summarized quantitatively include organization size; number of full equivalent (FTE) organization staff involved with the NI or PPR project; proportion of underrepresented groups (e.g., African American, American Indian, Alaska Native, Asian, Hispanic/Latino, Pacific Islander, refugee, immigrant) among the applying organization's leadership budget request for the application; and content areas of the proposed work (communications planning; community building and partnerships; diversity, equity, and inclusion (DEI); evaluation; financial management; fundraising; governance; leadership and staffing; professional development; strategic planning; technology; volunteer development). Descriptive results from these quantitative variables were calculated by the senior author on this project and were computed in Microsoft Excel.

Results

Both descriptive quantitative results and qualitative findings provide a detailed description of the CBIF applications included in this dataset.

Quantitative Results

We analyzed CBIF applications across three years of funding (2020, 2021, and 2022). Across 130 applications over three rounds of RFAs, there were a total of 87 unique applicant organizations, while 29 organizations applied more than once. The number of applications per grant year remained consistent with a range of 40-47 each year (Table 1). The size of the organizations that applied ranged from one to over 100 full-time staff members (Table 2). In addition, the number of full-time staff involved in implementing the healthy food financial incentive projects ranged from less than one to 20 (Table 2). The annual budgets for incentive programs were most commonly reported to be US$250,000–US$499,999 (n = 30; Table 2). Over a quarter of applications (28%) indicated their leadership is composed of at least 50% members of unrepresented groups (e.g., African American, American Indian, Alaska Native, Asian, Hispanic/Latino, Pacific Islander, refugee, immigrant; Table 2). The CBIF application began asking for demographic information about each organization's leadership in Round 2, November 2020. Applicants were asked to select which areas they wanted to build capacity in, and the most commonly selected topic areas were leadership and staffing (n = 72), communications (n = 67), DEI (n = 57), and tech nology (n = 42). Applicants were able to select more than one content area.

Qualitative Findings

Three salient themes emerged based on the CBIF applications and research questions. The first theme, "Applicants need staffing and technology to streamline their programs," focuses on the CBIF applicant's program goals, how they are proposing to actualize these goals with CBIF funding, and what they need to meet their goals (e.g., resources,

Table 2. Summary of CBIF Applications Quantitative Data

	N (%)
Size of organization (# of staff)	
Less than 1 FTE	7 (5.8%)
1–2 FTE	62 (51.7%)
3–5 FTE	39 (32.5%)
6–10 FTE	8 (6.7%)
11-20 FTE	4 (3.3%)
Percentage of leadership from underrepresented groups	
0%–24%	58 (45.3%)
25%–49%	35 (27.3%)
50–74%	23 (18.0%)
75%–100%	12 (9.4%)
Content areas proposed in CBIF applications[a]	
Leadership and staffing	72 (55.4%)
Communications	67 (51.5%)
DEI	57 (43.8%)
Technology	54 (41.5%)
Strategic planning	42 (32.3%)
Grant writing	28 (21.5%)
Professional development	28 (21.5%)
Evaluation	25 (19.2%)
Fundraising	25 (19.2%)
Financial management	24 (18.5%)
Community building	21 (16.2%)
Governance	7 (5.4%)
Incentive program annual budget	
<$100,000	26 (21.7)
$100,000–$249,999	29 (24.2%)
$250,000–$499,999	30 (25.0%)
$500,000–$999,999	14 (11.7%)
$1,000,000+	21 (17.5%)

[a] Note: applicants could select more than one content area, percentages shown are of applications
CBIF = Capacity Building and Innovation Fund, FTE = full-time equivalent staff position, DEI = diversity, equity, and inclusion

expertise). The second theme, "Applicants need training, resources, and funding to enhance DEI in their programs," focuses on capacity building needs requested by applicants that emphasize racial equity. The third theme, "Opportunities for the NTAE to strengthen support of GusNIP grantees and strengthen the CBIF funding mechanism," provides insight as to what resources are frequently requested by CBIF applicants and which of these resources could be offered through the NTAE as part of core services in the future for efficient capacity building available to a wider audience. Each theme is described in detail with exemplifying excerpts from the applications. Figure 1 provides a visual representation of themes and their supporting categories and codes.

Theme #1: In order to build capacity, applicants need staffing and technology to streamline their programs. Applicants requested CBIF funding to expand, sustain, and streamline their healthy food financial incentive projects. In order to do this, applicants requested a myriad of resources, the majority of which focused on staffing and technology. The staffing funding requests would primarily support hiring expert consultants and increasing FTEs specifically around positions related to leadership, implementation, and evaluation. Many applicants indicated that their sole need for capacity building and implementing innovative solutions to address challenges relied on increasing the FTE of their existing staff (such as increasing part-time staff to full-time). These existing staff members needed more time to engage in strategic planning, fiscal management, marketing, promotion and partnership development, fundraising, and grant writing, among others. One applicant requested:

> [Name of Organization] would use funding from this capacity building grant to increase allotted staff time for this program. With increased time, our staff will be able to reach more individuals through advertising and marketing campaigns, outreach to community partners to provide their clients education about using SNAP benefits to purchase boxes and include their locations as alternate box distribution sites, have a dedicated staff person at farmers' markets who will distribute boxes and be thoroughly trained to educate customers about CalFresh, and facilitate the onsite purchase of boxes with SNAP benefits, as well as seek grants for future funding.

Few applicants requested funding to hire an entirely new staff position, but many proposed to hire hourly workers such as program navigators (e.g., community health workers or *promotoras*) to help bolster patron engagement. Many also requested funding to hire expert consultants such as strategic-planning or fiscal-management experts. Finally, some requested funding for short-term

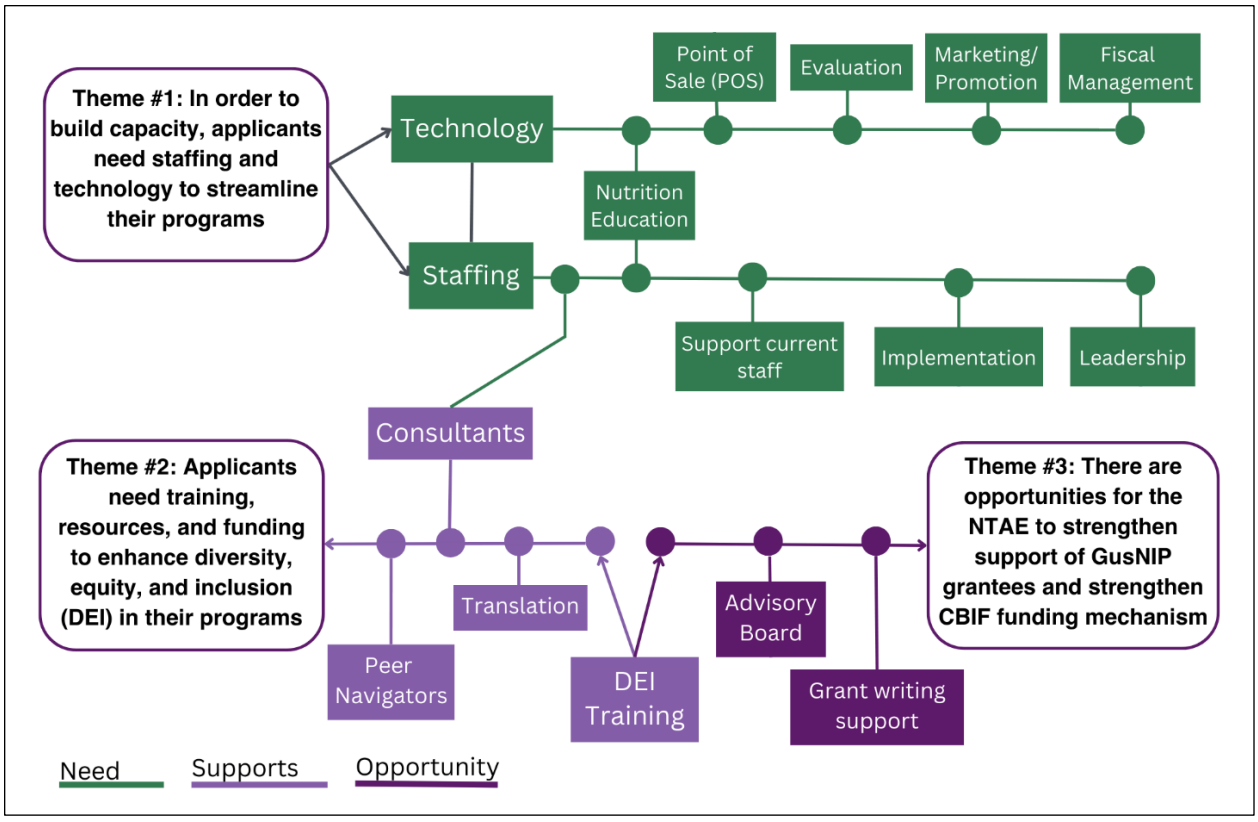
staff, such as grantwriters and fundraising consultants, presumably with the role to secure funding for longer program implementation during their brief tenure (usually 2–3 months) with the organization.

In addition to funding to bolster staffing, applicants requested support for technological advancements to expand, sustain, and streamline their programs. The technology funding requested would support upgraded point-of-sale (POS) and fiscal-management technology. POS technology is central to healthy food financial incentive projects because the incentive is earned and redeemed at the time of purchase after a shopper swipes their electronic benefit transfer (EBT) card. Technology for POS exchanges was the most frequently requested, given the limitations and time intensity of using paper or token-based voucher systems at point of sale. One applicant wrote:

> We are determined to pilot an electronic token redemption system [for incentives]. We are constantly dealing with token issues, including token loss and hoarding. In addition, we believe with an electronic system we would be able to better collect data from our SNAP participants. We would like to test an electronic system to improve our overall customer and community partner experience and it is our belief we will be able to adapt fully after working on a pilot. We have identified a technology consultant who will provide his time and expertise pro-bono but we need the financial support to pay for cloud services, swipe-able cards, card readers and salesforce integration.

Applicants also requested technology support that included fiscal management software, online nutrition education platforms, marketing and promotion (e.g., social media) tools, and evaluation resources. One clinic-based applicant wrote:

Figure 1. Visual Representation of Three Salient Themes and Supporting Categories and Codes for Each Theme



> [Name of Organization] respectfully requests [US]$50,000 from the Nutrition Incentive Hub to increase the capacity of our Produce Prescription project (PPR) to reach a higher volume of eligible [organization] patients who are experiencing food insecurity. … [Name of Organization] is very interested in applying for a future round of GusNIP funding from USDA NIFA. However, we have realized that it takes a significant amount of time to identify eligible patients, outreach to those patients, administer the pre-post survey, and biometric values, teach patients how to use the Produce Prescription Program, and trouble shoot technical difficulties. We also need to track and monitor usage and collect data. It is with this in mind that we are requesting additional funds to increase the capacity to reach our numbers, collect all necessary data, track usage, and support evaluation efforts.

Applicants operationalized "capacity building" in two distinct ways. Approximately half of the applicants focused on building capacity by increasing reach and program engagement (that is, attracting more shoppers). These applications requested more staffing, technology, and resources to enhance use of their programs and reach previously unengaged audiences, to add new grocery or farm-direct retailers to stimulate expanded reach and improved access, and to strengthen their marketing, promotion, and community partnerships to increase participation.

The other half of applicants indicated that their program is well-patronized by eligible participants; however, they were currently at budget capacity with their programs regarding incentive redemption and needed more staffing, technology, and resources to meet the demand of their participants and ensure that systems (e.g., fiscal, reporting) were updated and advanced enough as not to stymie program growth logistically.

Theme #2: Applicants need training, resources, and funding to enhance DEI in their programs.

In order to offer more reflective and responsive programming, many applicants requested funding to support DEI training for their staff through expert consultants and workshop opportunities, as exemplified by this applicant:

> As [Name of Organization] increases its investment in and innovation around local food access through programs like Market Match, the organization recognizes that it must pay particular focus to diversity, equity, accessibility, and inclusion with regard to its leadership as well as the makeup of the market vendors. With funds from the Nutrition Incentive Hub's Capacity Building & Innovation Fund, [Name of Organization] aims to create a diverse, equitable, and inclusive market environment for shoppers and vendors, and build the organizational (staff and board) capacity and competency to effect that change. Through this project, the [Name of Organization] board, staff, and vendors will access targeted diversity, equity, accessibility, and inclusion (DEAI) training with qualified professional consultants while also seeking guidance and support in further developing DEAI goals and strategies for the organization. We believe that through these trainings, [Name of Organization] staff will be able to view the market spaces and programs through a new lens with the goal of identifying and removing barriers to access. … The farmers market is often misrepresented as a place for only high-income shoppers, so working with community partners to engage shoppers has increased our participation numbers amongst shoppers that receive SNAP benefits and [Name of Organization] staff is committed to enhanced outreach and engagement efforts to continue increasing those numbers.

To enhance program engagement by community members who are eligible for healthy incentive projects, applicants also requested funding to support the development of multilingual program marketing and advertising resources (e.g., flyers, bus wraps), multilingual and multicultural hourly staff to serve as navigators for underreached populations (e.g., immigrant communities), and funding to pay incentive program users for consultation and advice on reaching members of their community

(e.g., hourly community ambassadors, hourly navigators, or stipends for community advisory boards [CAB]). One applicant wrote:

> This grant will be used to fund the design and launch of [Name of Organization] pilot Good Food Ambassador program, a targeted, peer-to-peer outreach program with the goal of increasing usage of the incentive program across the network. [Name of Organization] will onboard 10 Good Food Ambassadors, who will be SNAP recipients that reach the communities in which they live. Ambassadors will receive a monthly stipend and work 20 hours per month, conducting outreach and feedback work. They will split their time at markets giving informational tours to SNAP shoppers and conducting consumer surveys, in the office analyzing consumer feedback, and at community organizations (family service centers, places of worship, etc.). … The Good Food Ambassador Program will ensure sustainability of the Good Food Buck SNAP incentive program by increasing visibility and awareness of the program, empowering local communities, and centering the needs of the community in how the program takes shape. Ambassador's will form the critical bridge between the incentive program and SNAP users.

In general, programs that were not led or managed by majority underrepresented groups had more requests for DEI support and training than those that were led or managed by underrepresented groups. However, those that were led or managed by underrepresented groups often already prioritized working with diverse audiences as a core principle of all of their programming. For example, Latinx-led or operated organizations inherently prioritized working with Spanish-speaking participants and likely did not need to request such DEI support.

Theme #3: There are opportunities for the NTAE to strengthen its support of GusNIP grantees and strengthen the CBIF funding mechanism.

The third theme provides insight about how the NTAE can improve resources provided to GusNIP grantees and their partners. For example, since some applicants requested similar expert consultation, such as with DEI experts, the NTAE could incorporate partnerships with DEI consultants to support grantees as part of the existing NTAE suite of services and resources. Many applicants also requested grant-writing support. Although the NTAE offers consultation for incoming GusNIP applicants about responding to the USDA NIFA RFA, offering a robust grant-writing workshop for existing and incoming grantees may build capacity for existing grantees and allow new organizations to gain the needed confidence and support to apply for federal grants. One applicant wrote:

> [We need] grant writing support. GusNIP grants are incredible for supporting SNAP incentive programs, but they are administratively cumbersome and require extensive planning and support to secure matching dollars and to successfully develop, compose, and submit. [Name of Organization] works with a contract grant writer who has already started preparing for cash and in-kind match for a robust 2023 GusNIP proposal. The ability to support the grant writer outside of general administrative funds would be an asset to building the Double Up program.

Finally, in response to many applicants requesting funding to support a CAB that includes members of the audience they intend to serve, it may be prudent for the NTAE to engage a CAB. A CAB—composed of GusNIP grantees, their partners, potential applicants, applicants who were not funded, members of the audiences these programs serve, among others—may inform NTAE strategic planning and decision making. At the time of writing this manuscript, the NTAE is actively addressing these salient grantee requests.

Discussion

Together, these findings provide insight as to how the NTAE (and other non-GusNIP–specific technical assistance centers), funders, and policymakers can support organizations implementing healthy

food financial incentive projects. Due to GusNIP's broad reach across the United States, the results of this work shed light onto food system and community development needs across the nation in order to implement, maintain, innovate, and sustain healthy food financial incentive projects. In response to these findings, as well as ongoing conversations with GusNIP grantees and their partners through technical assistance, the NTAE has refined the CBIF RFA annually to better meet the needs of the applicants.

As charged by USDA NIFA, the NTAE iteratively responds to the needs of CBIF applicants by intentionally designing support in response to requests. For example, since almost half of the CBIF applications (43.8%) requested capacity building for DEI, the NTAE offered a DEI workshop for NTAE technical assistance partners in the summer of 2022, which was well received by attendees. Because of this positive response, the NTAE offered a learning cohort focused on community engagement as part of its suite of services for GusNIP grantees and their partners in the fall of 2022, thus alleviating the need for individual organizations to request funding for such a training. Additional equity-focused trainings and learning opportunities are currently in development and will be offered free of charge to GusNIP grantees and their partners. Further, per grantee guidance, the NTAE is actively working to engage a CAB to inform strategic planning and decision-making and is also systematically collecting feedback from GusNIP grantees and their partners about recommendations for improvement in the reporting and evaluation processes required by the NTAE.

One key area to strengthen the CBIF mechanism is to require applicants to include a sustainability plan in their applications; therefore, a sustainability section was required on the latest CBIF RFA. This may be an area the NTAE addresses in future offerings to support capacity building since strategic planning (32.3%) and fundraising (19.2%) were commonly identified as areas of interest. The CBIF mechanism is not intended to provide sustained funding year after year, but rather to support a key capacity building or innovation effort that can launch the grantee to sustained program improvements, expansion, and innovations. Researchers of health, governmental, and education programs have long been exploring research questions concerning what happens in organizations adopting public health programs and their communities after external funding stops (Scheirer & Dearing, 2011; Shediac-Rizkallah & Bone, 1998; Shelton et al., 2018). Research focused on the sustainability of public health programs is well aligned with healthy food financial incentive projects in that until sustainable funding (e.g., private insurers, Medicare and Medicaid, food retailers) is established, most healthy food financial incentive projects will continue to operate on grant-funded budgets with limited resources and funding cycles. When programs operate in such an environment, it is difficult to consider long-term sustainability infrastructure, given that some organizations are unsure if their program will continue operating after any given funding cycle ends. Further, building robust teams of well paid, well trained, and committed employees is challenging with unstable funding cycles.

As supported by the literature (Schell et al., 2013), to establish sustainable funding, the entire network of healthy food financial incentive project partners need to collaborate effectively. Effective collaboration includes conducting robust cross-program evaluation to establish an evidence base to assure funders of the programs' effectiveness on food security, local economies, and human health. Principles of dissemination and implementation science are well suited to address concerns of program sustainability and should guide future directions for this area of research (Estabrooks et al., 2018; Glasgow et al., 2012).

As previously stated, one of the NTAE's key goals is aggregating NI and PPR data to demonstrate overall program impact, and the best way to accomplish this is to measure all programs the same way. However, there are differences in evaluation capacity among grantees, and CBIF funding represents a key opportunity whereby grantees can grow their evaluation capacity, such as through increased staffing, expert evaluation consultants, or technology to automate data collection activities. Over half of the organizations (57.5%) that applied for CBIF funding are operated by 2 or fewer FTE staff, indicating that these are small and lower-

capacity organizations, and capacity building is needed. The support provided by CBIF is meant to help grantees to meet GusNIP requirements for reporting and evaluation and situate themselves for sustainable funding into the future. Further, evaluating public health programs by centering the needs, goals, and values of any given community is essential to equitable, community-based participatory research. These findings underscore the importance of public health nutrition program researchers and evaluators to consider equitable approaches to program evaluation (Hayward et al., 2021; Qato, 2022; Rink et al., 2020; Wallerstein et al., 2008). Future work could be designed to assess the results by applicant groups to understand trends in needs based upon similar community characteristics. This type of approach would help to tailor support provided by a national technical assistance and evaluation center.

It is important to contextualize the CBIF funding mechanism with historical and socio-cultural events. Notably, the first CBIF RFA was released in direct response to the COVID-19 pandemic and was therefore omitted from this dataset, since eligible budget items (e.g., face masks, hand sanitizer, support for transportation) were specific to the immediate needs due to the pandemic. Subsequent RFAs were also released during the COVID-19 pandemic and during a time when food insecurity in the U.S. dramatically increased and had gained unprecedented awareness among the general public and policymakers alike (Hake et al., 2020; Niles et al., 2020). Further, decentralized food systems were disrupted during the pandemic. Local food suppliers were elevated as crucial solutions for their communities (Béné, 2020; Galanakis, 2020), and encouragement for choosing locally grown and supporting local food producers and suppliers was high among food aid organizations and consumers (Huang et al., 2021; Thilmany et al., 2021). In addition to the impacts of COVID-19 on public health, the racial reckoning of 2020 triggered by the murder of George Floyd affected how organizations across the U.S. prioritized DEI within their leadership, staff, and patronage (Nguyen et al., 2021; Odoms-Young & Bruce, 2018). The intersection of COVID-19, food insecurity, and disproportionate health disparities and outcomes related to COVID-19 and food insecurity among African American, American Indian, Alaska Native, Asian, Hispanic/Latino, Pacific Islander, refugee, and immigrant communities (Gundersen et al., 2021; Jernigan et al., 2013; Odoms-Young & Bruce, 2018; Paremoer et al., 2021) further contextualizes the environment in which the CBIF RFAs were released and applications were framed.

Conclusions

This analysis of CBIF funding applications demonstrated that there were common themes across organizations that applied for CBIF awards. Although organizations varied in their size and structure, the salient needs in the context of a worldwide pandemic and growing racial unrest highlight common resources needed to advance healthy food financial incentive efforts and impact. This study found that CBIF applicants require additional staff time, technology, and resources to enhance program usage, reach new audiences, and strengthen community partnerships. They also require funding for DEI training for staff and experts in workshop facilitation, and require technical assistance in areas such as strategic planning and fiscal management. In order for healthy food financial incentive projects to continue to grow sustainably and to increase the reach and scope of their impact, strategic investments in the areas described in this paper could be beneficial. Other centers that offer technical assistance and evaluation to public health nutrition programs can draw on these findings to build out their own center programming.

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