CHILDREN'S HealthWatch

White Paper

The Hunger Vital Sign™: Best practices for screening and intervening to alleviate food insecurity

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About Children's HealthWatch: *Children's HealthWatch is a nonpartisan network of pediatricians, public health researchers, and children's health and policy experts. Our network is committed to improving children's health in America. We do that by first collecting data in urban hospitals across the country on infants and toddlers from families facing economic hardship. We then analyze and share our findings with academics, legislators, and the public. These efforts help inform public policies and practices that can give all children equal opportunities for healthy, successful lives.*

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Executive Summary

Introduction:
The Hunger Vital Sign™ (HVS) is a validated 2-question food insecurity screening tool that allows clinicians to accurately identify households at risk of food insecurity and address patient needs appropriately. Endorsed by the American Academy of Pediatrics, the tool is being used by hundreds of clinicians in the US and is being incorporated into electronic health record systems.[1] As use increases, it is critical to identify best practices for screening appropriately and intervening effectively.

Methods:
An online survey was developed for professionals currently using the HVS and several key informant interviews were conducted. The survey was sent online to forty contacts that are currently using the HVS. Survey response rates were examined alongside open-ended answers to determine common themes.

Results (n=20):
Twenty respondents completed the survey. This preliminary research identified common practices for screening and intervening effectively, monitoring and evaluation strategies, sustainability concerns, as well as key lessons learned. Respondents represented health care - providers and anti-hunger advocacy organizations. While models for intervention varied, successful interventions were consistently attributed to strong partnerships between health care institutions and community-based organizations.

Conclusion:
Our results contribute preliminary evidence on how screening and intervening for food insecurity specifically, and for social determinants of health in general, are being conducted in clinical and community-based settings. These initial findings reinforce the need for systematic approaches to screening, the use of validated screening tools, and the need for building strong links between medical care and community-based resources. While this research highlights themes and feedback from the front lines of care, more research is needed to provide a deeper understanding that includes patient perspectives, rural settings, identifies response differentials based on different screening methodologies, and identifies reliable funding streams for supporting this work. In general, more and more systematic follow-up research will be needed as practitioners continue to develop and refine models for screening for and intervening in food insecurity.

[1] Epic has incorporated the Hunger Vital Sign™ into its Foundation System.

Introduction

Research has shown that patient health outcomes are greatly influenced by factors outside of clinical care, known as social determinants of health, including economic hardships like food insecurity. Many clinics and hospitals around the country are working to address upstream social determinants of health by actively screening for food insecurity, housing stability and quality, electric or gas utility needs, and other adversities. Patients who screen positively for hardships are then connected to appropriate resources and services to help address their needs. To identify patients living in households at risk for food insecurity, healthcare providers, social service providers, community-based outreach workers, teachers and others are using the Hunger Vital Sign™ (HVS). The HVS is a validated 2-question food insecurity screening tool based on the US Household Food Security Survey Module (Hager, et al, 2010; Coleman-Jensen, et al, 2015). The HVS measures families' concerns about and access to food, much the way health care providers check other key vital signs, such as pulse and blood pressure. As this preventive approach increases in use and popularity, a deeper understanding of best practices for screening and intervening in food insecurity is necessary.

Methods

To this end, we conducted an online survey for practitioners currently using the HVS that identified current practices for and attitudes towards food insecurity screening and intervention. The survey consisted of 65 multiple choice and short answer questions, and was sent via email to 40 practitioners across the country using the HVS.[2]

Results

I. Respondent profiles (Appendix, Table 1)

Twenty people (50%) responded to the survey, representing a range of organizations and settings including outpatient clinics, healthcare networks, food banks, nutrition organizations, anti-hunger advocacy organizations and other non-profits. Major US geographic regions (Northeast, Southeast, Southwest, Midwest, and Northwest) were evenly represented among

[2] The survey can be viewed here: (http://goo.gl/ypKNLe).

respondents, however the majority were from urban settings (75%), with only three respondents from suburban settings and one respondent from a rural setting. Most respondents reported that their patient and/or client population comes from a predominantly low socio-economic bracket.

II. Screening

Results indicated that screening for food insecurity is a new practice for many practitioners; half began screening between zero and two years ago. We found that 50% of the respondents screen their patients for food insecurity universally, while the other half only screen patients in certain demographic categories or with a particular health status (e.g. older adults, children, pregnant women, patients with diabetes, patients on Medicaid). Respondents who only screened sub-groups explained that their choice was dictated by grant funding, department interests, clinician priorities and/or competing demands. One third of respondents also screened for other social determinants of health, including housing instability and quality, utility needs, interpersonal violence, transportation needs and others (Appendix, Figure 1).

Just over half of the respondents screen their patients verbally (60%), while the remainder screen patients through a written or electronic form. Two respondents said that it is a challenging topic to discuss, while four others said that it is not challenging and can even give patients/clients relief to know their provider is concerned. Others said that the interaction requires training and often depends on the personalities and sensitivities of the patients and providers involved.

Respondents identified the types of health professionals that currently screen patients for food insecurity as well as those they believe would be optimally suited to screen patients. In most cases, nurse practitioners or physician assistants are screening patients, as well as primary care physicians, nurses, social workers, and community health workers. Respondents indicated that nurse practitioners, physician assistants, primary care physicians, social workers and community health workers are best suited to screen patients (Appendix, Figure 2).

In order to determine the role of electronic health records (EHR) in facilitating the screening process, we asked respondents if and how they are using EHR. Just over half (56%) of respondents currently use EHR (e.g. EPIC, Cerner, Nextgen). Among this group, one-third use the EHR system to track data on the use of the HVS and electronically refer patients to nutrition resources.

Finally, respondents shared some benefits and challenges of their screening process. Responses regarding the benefit of the screening process were open-ended. One respondent said they found patients screened positively 30% more often when the test was administered in writing, potentially indicating that written forms should be preferred. Another respondent mentioned the importance of educating and training staff; however the respondent noted that this is time-consuming. Another said that their ability to maintain patient confidentiality is a key success of their screening process. Finally, the importance of the EHR system in documenting screening and facilitating the referral process was mentioned as a key success.

Challenges of the screening process included lack of staff time and capacity to perform screening systematically, competing priorities, insufficient resources, and challenges with extracting data and reporting (in some cases because the HVS is not incorporated in the EHR). One respondent indicated that the HVS is incorporated in the EHR, but clinicians do not use it consistently or systematically.

"SCREENING FOR FOOD INSECURITY AND RESPONDING TO FAMILIES AT-RISK ARE CRITICAL COMPONENTS OF GOOD HEALTH CARE. PHYSICIANS WANT TO KNOW THAT WHEN THEY SCREEN FOR A HEALTH RISK, THEY ARE ABLE TO PROVIDE PROMPT REFERRAL AND TREATMENT."

III. Intervention

Two-thirds of respondents indicated that their organization has a systematic protocol for intervening when a patient/caregivers/client screens positively for food insecurity. Most respondents stated that staff from anti-hunger community-based organizations currently intervene in food insecurity. Case managers were the favored professionals for intervening, followed closely by patient navigators and social workers (Appendix, Figure 3). Seventy percent (11) of respondents provide patients/caregivers/clients with written materials as part of the intervention. Over 80% (13) encourage patients/caregivers/clients to sign-up for federal and local nutrition assistance and 70% (11) provide patients/caregivers/clients with active assistance with signing up (Appendix, Figure 4). Food prescriptions to farmers markets, food pantries, food banks, or food pharmacies were used by 44% (7) of respondents. While the majority of

respondents stated that their organization had nutrition services on-site or near their site, two stated that they had none (Appendix, Figure 5).

IV. Monitoring and evaluation

Most respondents monitored the screening process in some way; however, fewer than half evaluated the outcomes of the screening/ intervention process. Among those who conducted evaluations, reviews were conducted of changes in BMI, changes in food insecurity status and other social needs, changes in family risk or protective factors, patient satisfaction, and various health outcomes. Respondents used their monitoring data for a variety of practical purposes (Appendix, Table 2).

V. Sustainability

Almost all respondents (92%) stated that their peers and institutional leadership generally support screening for food insecurity. Fewer than half (43%) of respondents have a stable funding source for screening and even fewer (29%) have a stable funding source for intervention. The majority of respondents (77%) consider their patients' food environment (i.e., food access, quality, affordability) to be a challenging factor.

VI. Reflections

Successes: All respondents are motivated to screen/intervene in food insecurity because they can improve health outcomes. Other motivating factors include: ending hunger; the unique ability of the healthcare system to reach people who need help; and following AAP recommendations. When asked what factors contribute to a successful program, 100% of respondents stated that collaboration with partners and allies and that the passion of individuals were essential (Appendix, Figure 6).

Respondents shared the impacts of screening/ intervention they have observed:

- Helps reduce food insecurity by connecting patients with available resources, helping them recognize the importance of nutrition to their health
- Gives patients hope and stability, and helps them access help with other social needs (e.g. housing)

- Shows patients that their medical provider recognizes the challenges in their lives

Challenges: Half of respondents stated that screening consistently is difficult due to limited resources, lack of clinician reimbursements, lack of infrastructure for recording and monitoring, and competing priorities. One respondent explained that programs take time to develop because each system must be tailored to the unique infrastructure, workflow and available resources of a medical site. For example, compared to large hospitals, a small health center may need to invest a lot of time into building a volunteer base for the intervention process.

Lessons learned: Respondents shared many lessons learned and recommendations, including their recommendations to:

- Screen patients universally
- Standardize screening at intake
- Invest in clinical tools, a standard referral model, leadership support, communication training, and staff time for following-up on the referral process.
- Give consistent feedback to providers (e.g. number of referrals made and their outcomes, client stories)
- Auto-fax referrals through the EHR

Future goals: In order to improve and/or scale up their current operations, respondents stated that they may need more funding, more standardized systems for screening, more designated staff, on-site food resources, buy-in from large hospital systems, and integration in the EHR. The use of financial incentives to reward clinicians who screen are also needed, as well as better education on the prevalence and impact of food insecurity.

Many discussed the importance of building awareness to enhance support for their program. Others mentioned expanding the scale and scope of their impact, including expanding to rural settings. Others focused on quality improvement (e.g. developing more robust documentation, refining their screening/intervention strategy, measuring their impacts).

Discussion/Future Directions

This preliminary research comes in the context of a growing discourse around the role of the medical community to address social determinants of health (including food insecurity) through patient screening (Chung, et al., 2016;Theuri, 2015;Kaiser Permanente, 2015;No Kid Hungry, 2012;Gottlieb, Sandel, Adler, 2013). Currently, the Center for Medicare and Medicaid Services' (CMS) 'Accountable Health Communities Model' is building links between community services and clinical care; they are testing whether screening for social determinants of health can serve as an important way of reliably identifying patient needs. The model is based on evidence that "that addressing health-related social needs through enhanced clinical-community linkages can improve health outcomes and reduce costs" (CMS, 2016). Increasingly, there is debate about the benefits as well as consequences of screening for social determinants. A recent article in the *Journal of the American Medical Association* discusses the unintended consequences of screening for social determinants of health (Garg, et al, 2016). The authors recommend that clinicians ensure patients are joint decision makers in the screening process. The participation and consent of patients in the screening process is important for legal and ethical reasons.

This preliminary research is also useful for pointing to additional themes that should be more deeply explored in future research. In our survey, some respondents mentioned the importance of patient consent; however, a deeper understanding of the patient experience and perspective is also needed. Given the small sample of survey respondents, which only included professionals, the patient perspective and rural perspective will be important future directions for further research. Overall, the results indicate that there can be great flexibility in the way that an organization chooses to screen/intervene (e.g. universal vs. selective screening; one-time vs. repeated screening; physician vs. social workers screening). Our results do not show clear costs and benefits differentiated by each of these varied approaches, pointing to another area of further needed research. Notably, health professionals were favored for screening and non-medical professionals were favored for intervening, demonstrating the key role of coordination and collaboration with diverse professionals, stakeholders and partnering organizations.

Generally, our findings help to substantiate the common assertions that it is critical to develop a systematic approach to screening, forge strong links to community-based resources, and use validated screening tools (Garg, et al, 2016; Gottlieb, Sandel, Adler, 2013). Our findings

offer a first attempt to determine how practitioners are screening for /intervening in food insecurity and other social determinants of health. Notably, most respondents have been screening/ intervening for less than three years; therefore, subsequent surveys will be necessary to understand how best practices evolve as programs become established. We look forward to future investigations as these practices and innovations evolve and expand nationally.

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Additional Resources and Best Practices

Children's HealthWatch best practices and resources

- The Hunger Vital Sign™ policy action brief
  This policy brief explains how healthcare providers, social service providers, community-based outreach workers, teachers, and others can use the Hunger Vital Sign™ to identify individuals and households who may need assistance. While the Hunger Vital Sign™ was developed to identify young children in households at risk of food insecurity, it is successfully being used to screen for food insecurity across diverse patient populations.
- Cultivating Healthy Communities: Lessons from the Field on Addressing Food Insecurity in Health Care Settings policy action brief
  This policy brief explains how health care professionals can effectively screen for food insecurity and connect patients with available resources. A variety of health care-based approaches to addressing food insecurity – from easy entry to more complex, resource-intensive models – are included.
- The Children's HealthWatch Hunger Vital Sign™ web-page
  This web-page provides an overview of the Hunger Vital Sign™ along with examples of its use by location and patient population.

Federal Nutrition Assistance Resources

- USDA Federal Food Assistance Resources for the Medical Community
  This resource guide from the United States Department of Agriculture USDA's Food and Nutrition Service (FNS) is designed for healthcare professionals. The guide includes information on federal food assistance resources that provide direct assistance to eligible individuals and families in need.
- SNAP benefits
  This USDA resource provides detailed information on SNAP benefits, eligibility requirements, and offers links to additional resources.
- WIC income eligibility requirements
  This USDA resource explains the WIC program and eligibility requirements.
- Income eligibility requirements for school meal programs
  This USDA resource describes the annual adjustments to the Income Eligibility Guidelines to be used in determining eligibility for free and reduced price meals or free milk.
- Summer Meal Site Finder
  This USDA resource provides information via a mapping tool to find summer meal locations throughout the nation, which operate throughout the summer while school is out of session.

APPENDIX 1: Tables

Table 1 Demographic profiles of survey respondents

Category	Count	Percent (%)
Total Responses	20	100
Organization		
Out-patient clinic	5	26
Healthcare network	2	10.5
Food bank	4	21
Nutrition organization	2	10.5
Other	6	32
(ex: Hunger Policy and Advocacy Organization; Health insurer/wellbeing company; public healthcare system - hospitals, health centers, public health department, correctional health, health plan)		
Geographic region		
Northeast	8	42
Southeast	3	16
Midwest	7	37
Southwest	6	32
Northwest	4	21
Geographic area		
Rural	1	6
Urban	12	75
Suburban	3	19
Size (# of patients served annually)	1,300 - 1,300,000	n/a
Majority of patients' socio-economic status (SES)		
Low SES	15	83
Med SES	1	6
High SES	1	6

Table 2 Profiles of respondents monitoring the screening/intervention process

Category	Percent (%)
Respondents monitoring/ evaluating the screening process	86
Monitoring data collected	
Monitors total number of patients screened	71
Monitors number of patients with positive result	64
Monitors number of referrals	57
No monitoring	14
Other	36
Uses of monitoring data	
Advocacy	67
Institutional planning	67
Fundraising	50
Needs assessment	50
Research	50
Other	25

APPENDIX 2: Figures

Figure 1: Percent of respondents screening for various social determinants of health (among subgroup of respondents screening for social determinants of health)

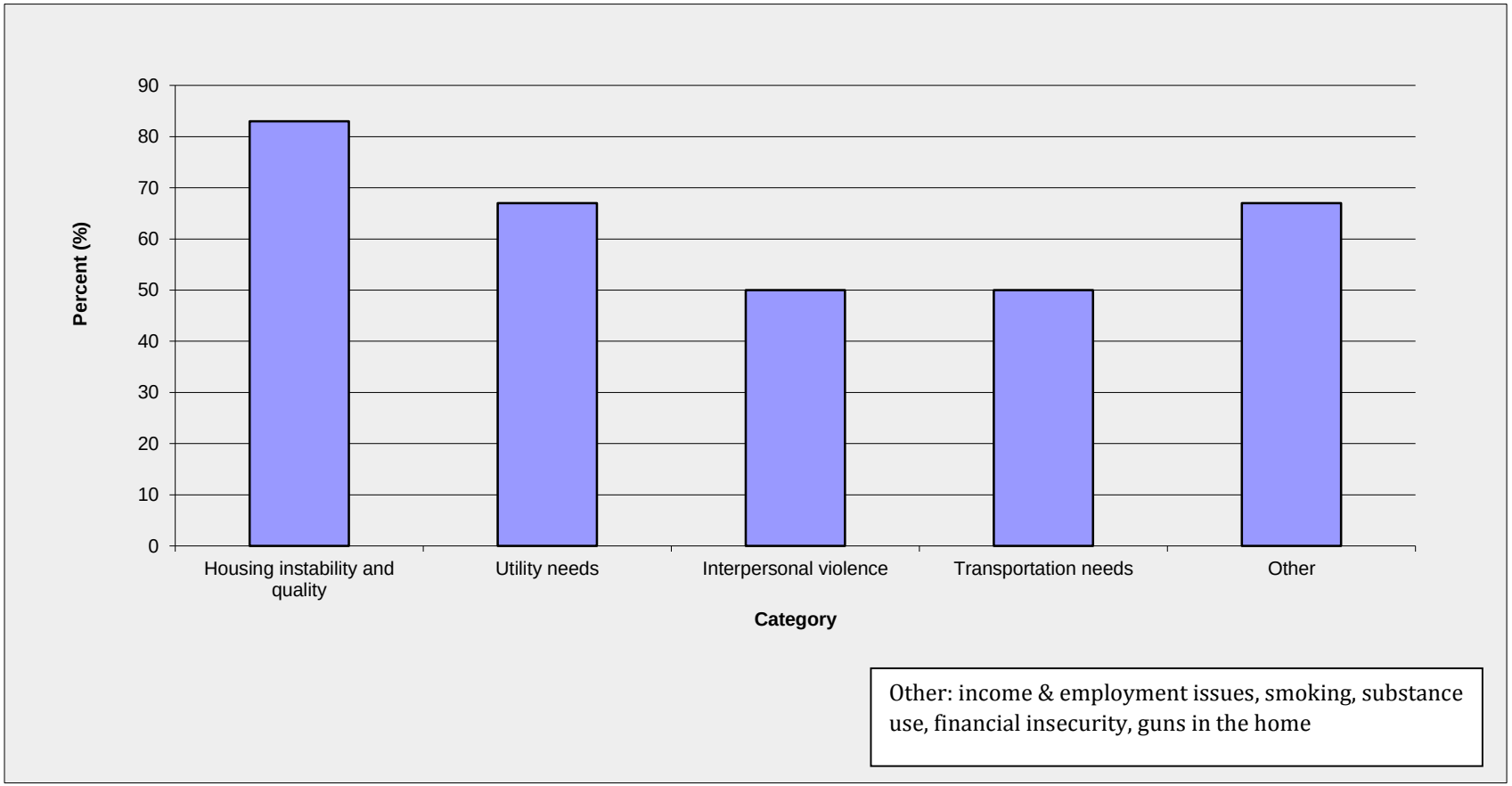

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Figure 2: The role of health professionals in screening for food insecurity

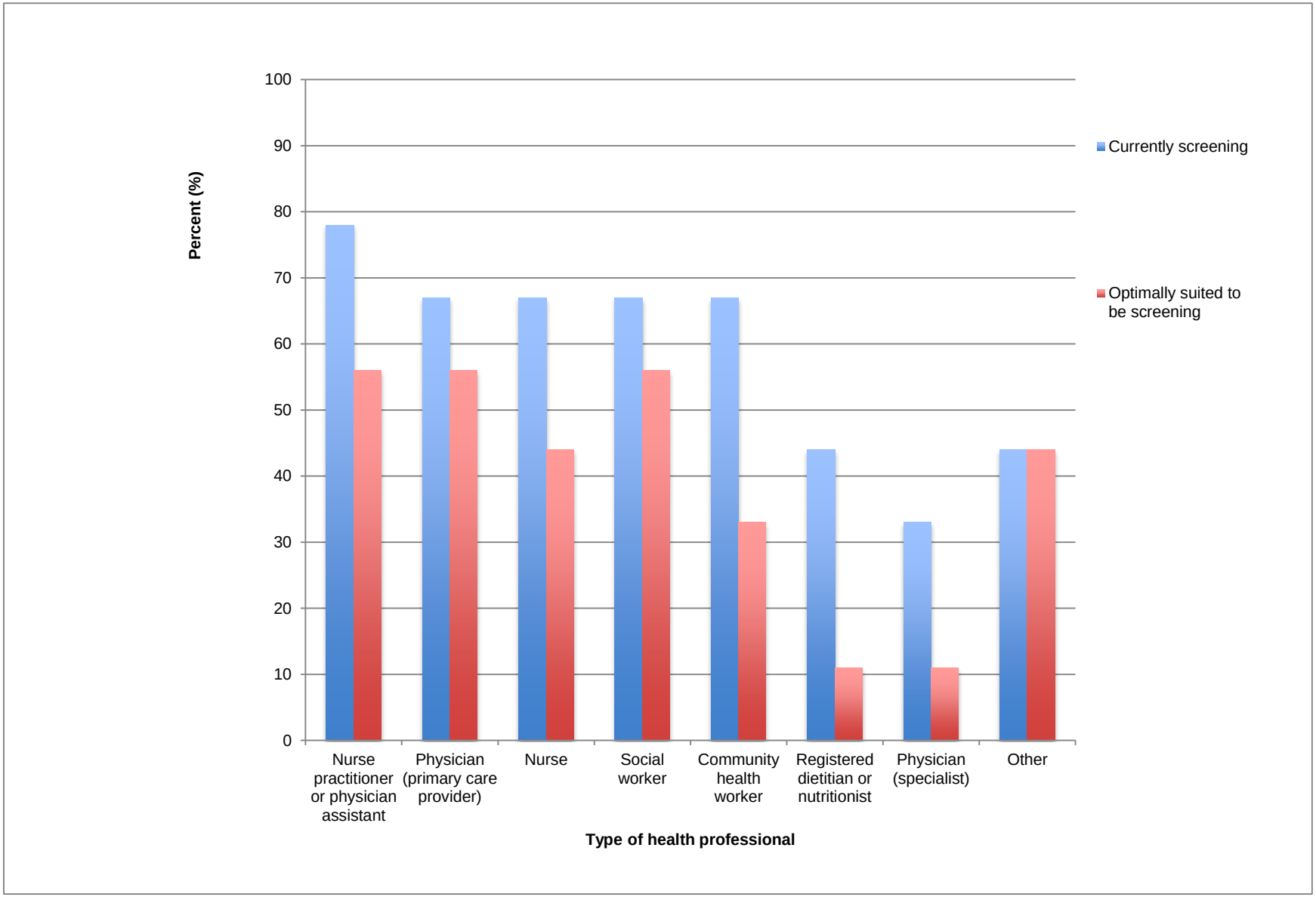

Figure 3: The role of health professionals in intervening in food insecurity

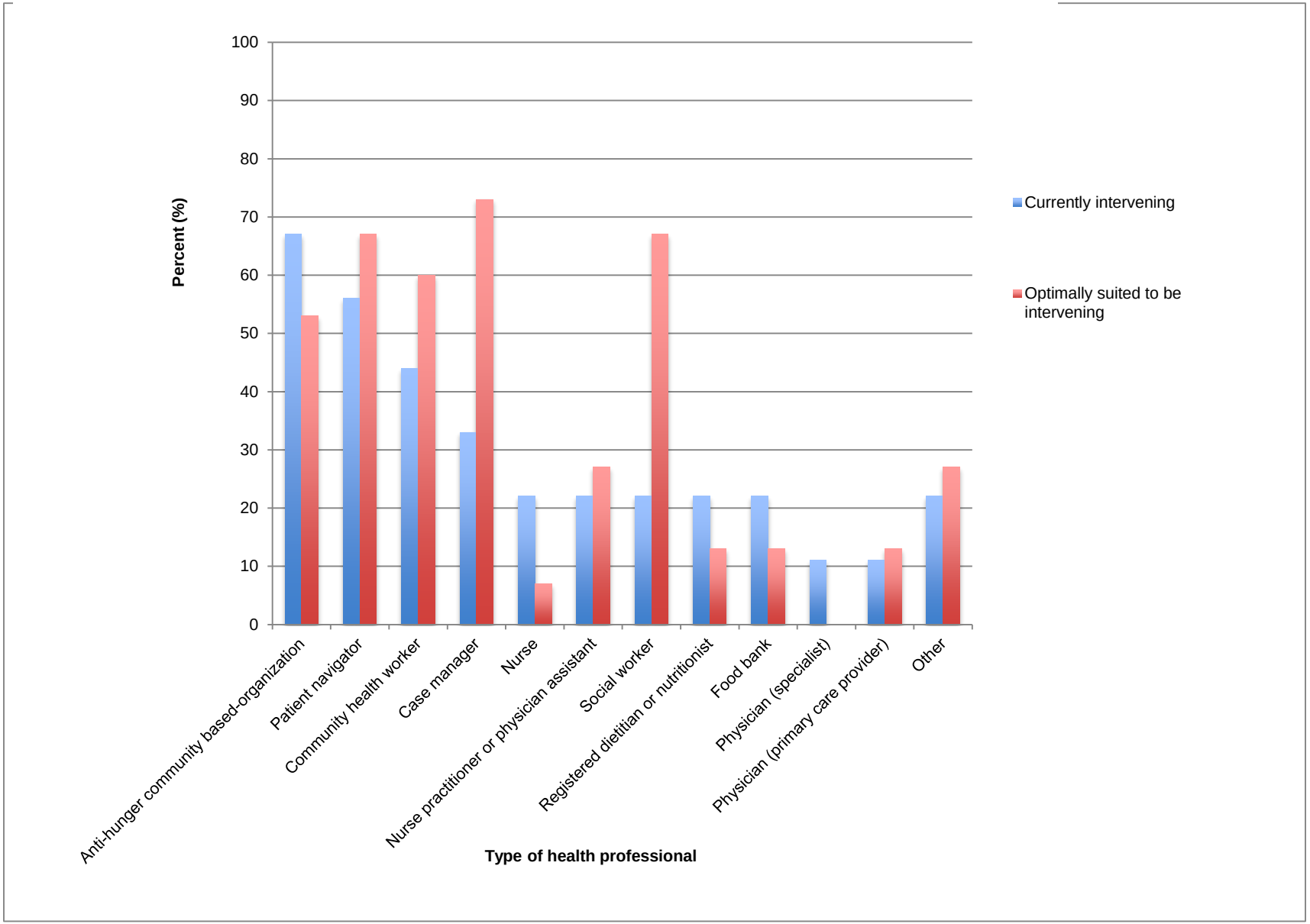

Figure 4: Programs and services that patients or clients are encouraged to or assisted with signing up for

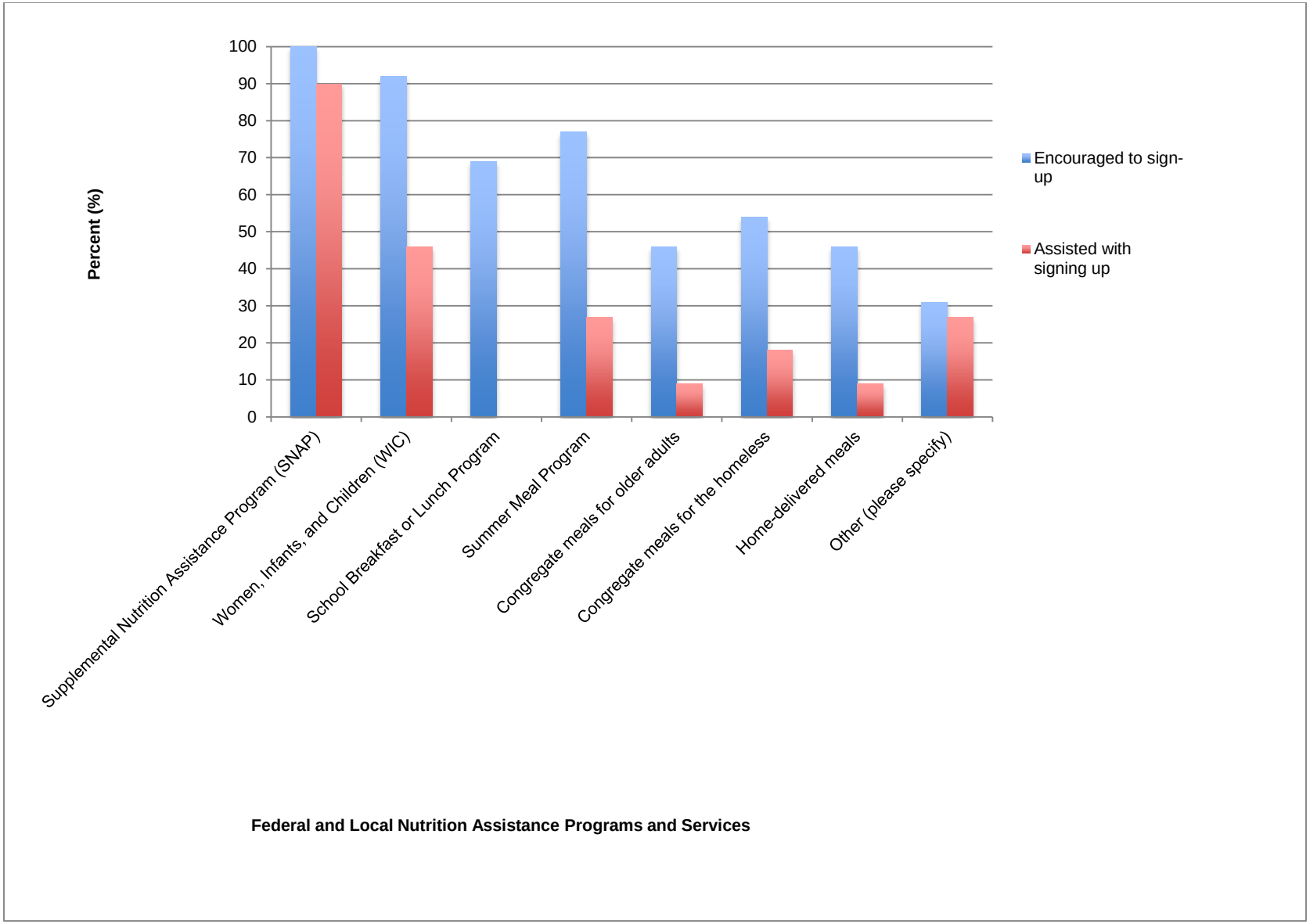

Figure 5: All available nutrition services at or near respondents' work site

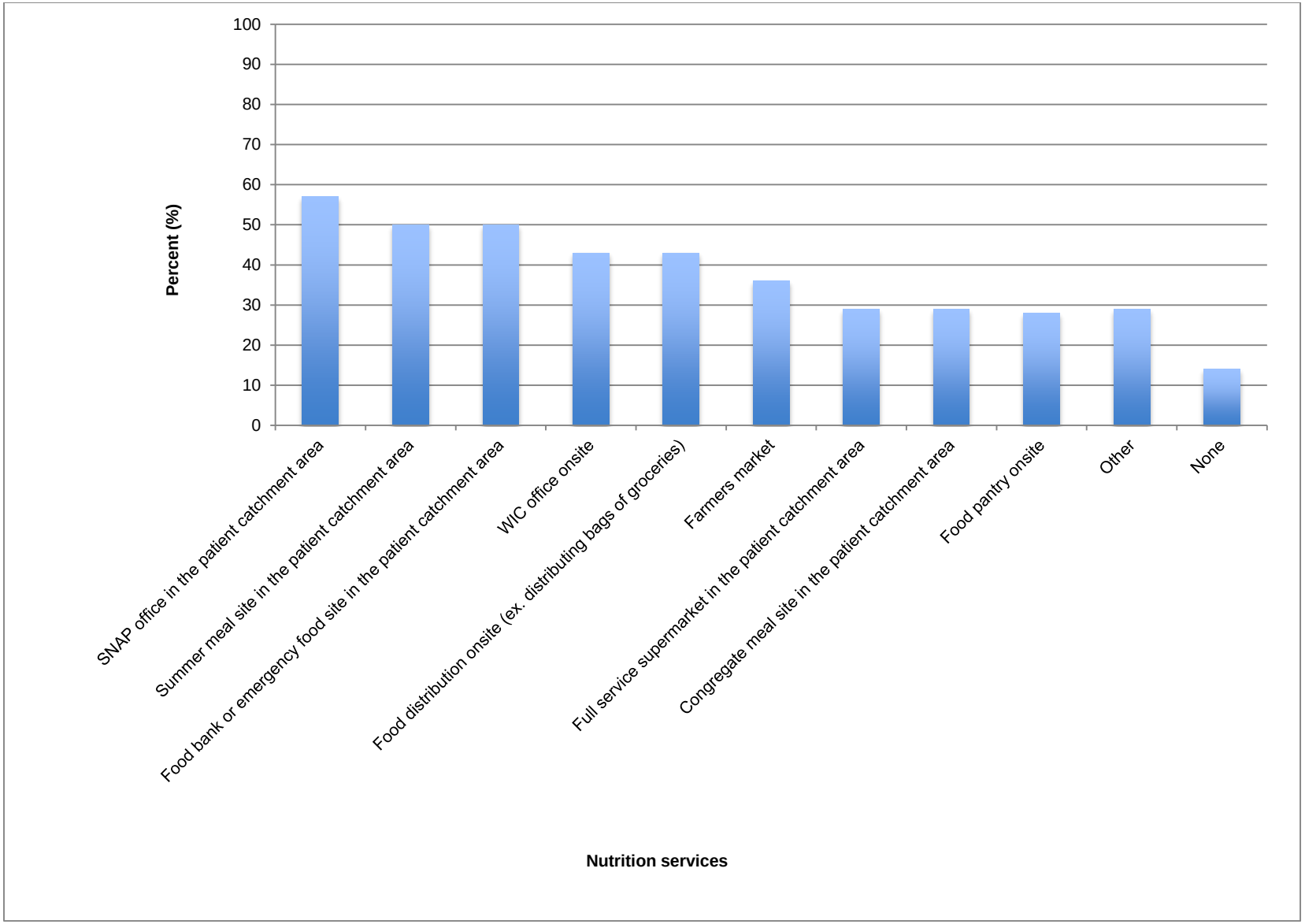
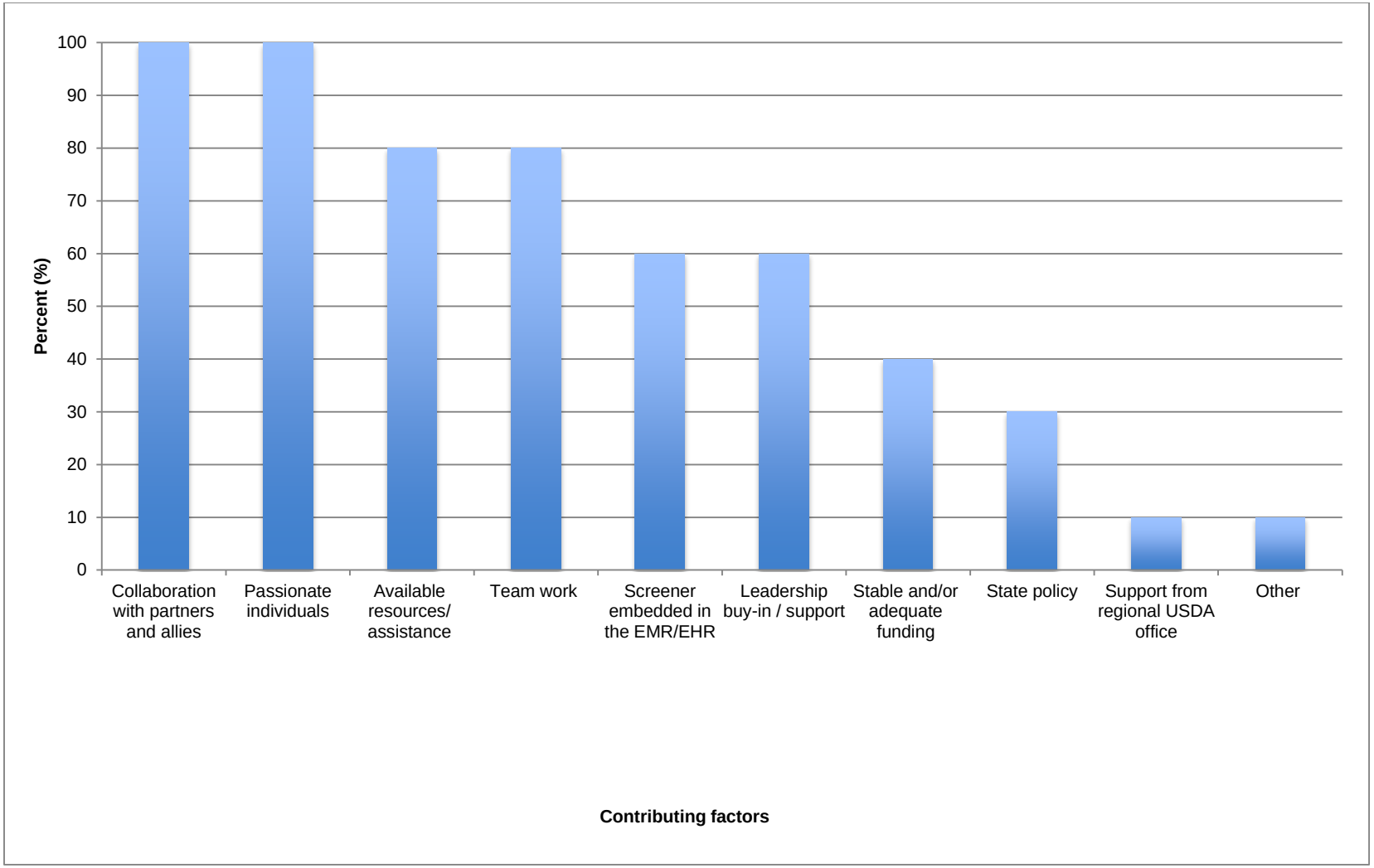
Figure 6: Factors that have contributed to program success