A PRACTICAL GUIDE:

Creating a Screening & Referral Program to Address Malnutrition

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FOREWORD:

Letter from Tim Platts-Mills and Zia Agha

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The need to address underlying social determinants of health cannot be overstated. We see the effects of unmet social needs every day. From scrimping on medication, to the environmental effects of unsafe housing, to the physical and mental exhaustion that comes from continual toxic stress, it can be overwhelming to consider the breadth of needs among seniors. Yet, finding ways to act is essential.

Food insecurity is a specific health-related social need that when unmet, is a direct risk factor for malnutrition. Food insecurity often coincides with other social needs such as isolation and lack of transportation and is common among seniors with chronic conditions such as diabetes, heart disease, and depression. (1) Though diet and medication adherence are known to support management of these chronic conditions, food insecurity interferes with positive health behaviors like these. (1,2)

As we write this guide, the COVID-19 pandemic has sent hunger into the headlines. The needs of older adults, who are already at heightened risk for adverse outcomes from COVID-19, may be compounded by the pandemic's economic fallout with income loss or loss of family support driving more seniors into food insecure situations. The good news is food insecurity is a health-related social need that can be assessed rapidly and can often be addressed by existing communicating resources, which allow for effective intervention. For food insecure seniors, intervention can have meaningful effects on their health status and quality of life.

Our journey to implement a food insecurity screening and referral program in an emergency department started with malnutrition research, which sought to identify which seniors were malnourished and what risk factors contributed to their condition. Our research taught us that a third of malnourished seniors were food insecure, and we were spurred to act. As we planned our screening workflow, outlined referral pathways, and established a partnership with an Area Agency on Aging to arrange services for patients, we learned many lessons along the way. We wrote this guide to help other acute care settings implement their own screening and referral programs.

Together, our research teams from West Health Institute and from the University of North Carolina, have laid out a roadmap to guide sites in assessing, preparing, implementing, and evaluating food insecurity screening and referral programs. As you move through the guide and your own implementation process, know that engaging stakeholders, seeking out diverse perspectives, and understanding your community's resources will strengthen and sustain your program. You may face skepticism and pushback as you get started. Our guide will help you make the case for the value of addressing food insecurity in your acute care setting. For example, you can make the case with numbers, since the research shows a decrease in healthcare utilization among recipients of home-delivered meals. But, our implementation process also taught us that sometimes patient stories carry the most weight. Consider the words of a 60-year old immunocompromised patient who was linked to Meals on Wheels after being screened for food insecurity in the ED:

> ***I feel like somebody cares for me. Just the fact they make meals available to me does a lot for my well-being…I can't think of the words to say how much I appreciate them.***

This patient's words encapsulate the value of creating partnerships between acute care setting and community-based organizations. Community-based services support both nutrition and emotional wellbeing and the right referral can be life-changing. We hope this guide helps you design community partnerships and internal workflows that allow your acute care setting to make a difference in the lives of many seniors.

Sincerely,

Zia Agha, MD & Tim Platts-Mills, MD, MSc

1. Berkowitz SA, Basu S, Meigs JB, Seligman HK. Food Insecurity and Health Care Expenditures in the United States, 2011–2013. Health Services Research 2017;0.

2. Bengle R, Sinnett S, Johnson T, Johnson MA, Brown A, Lee JS. Food insecurity is associated with cost-related medication non-adherence in community-dwelling, low-income older adults in Georgia. Journal of Nutrition for the Elderly 2010;29:170-91.

Who is This Guide For?

We wrote this guide for providers, clinical staff, and health care administrators working in acute care settings including Emergency Departments, Urgent Care Clinics, and other health care settings who care for a broad population of patients regardless of their ability to pay. Clinical staff who work in these settings are skilled at quickly assessing patients and their health histories, developing treatment plans, and understanding the complexities of social and environmental factors on patient health. This guide is intended to help acute care settings sustainably integrate a social determinants of health perspective into their work, starting with addressing food insecurity among older adults, one of the most vulnerable segments of the population.

While our experience implementing the processes described in this guide is in acute care settings, these materials may be helpful for other settings that want to identify and address food insecurity among older adults.

1.0 ASSESS
2.0 PREPARE
3.0 IMPLEMENT
4.0 EVALUATE

How to Use This Guide

In this guide, we offer a structured approach to preparing for, launching, and evaluating a screening and referral program to address food insecurity among older adults. The guide is organized into four sections: **Assess, Prepare, Launch, and Implement.** While we present these sections in order, in practice, launching a new screening and referral program is an iterative process and you will draw on skills and activities from prior sections as you move forward. We recognize that no two acute care settings are alike and offer suggestions for community partnerships, workflows, training, and evaluation that can be adapted to fit within a range of settings, resources, and communities.

As you navigate the guide you can click on the icon to return to the main menu. Throughout this guide you'll find additional tools, tips, and resources to help you develop and implement a strong screening and referral program.

Tech Tips

This logo provides guidance on how to use technology to strengthen your screening and referral program and special considerations related to use of Electronic Medical Record systems.

Making the Case

This logo offers insight into the value of screening and intervening on food insecurity to help you reach a wide range of stakeholders.

Practical Tips

This logo shares helpful ideas and hands-on tips based on our experiences implementing a food insecurity screening and referral program.

Throughout the guide we highlight our experience launching UNC BRIDGE, a food insecurity screening and referral program in the Emergency Department at UNC Chapel Hill, a large academic medical center in Chapel Hill, North Carolina. We share what worked and what didn't as we implemented UNC BRIDGE over the course of 2 years. Our experience is just that—our own! Every setting will be different, but we hope that sharing the challenges and opportunities we found along the way will be help other sites engage in similar work.

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Section 1: Assess

WELCOME TO SECTION 1:

Assess

This first section of the implementation guide will walk you through the initial steps of planning and implementing a food insecurity screening and referral program in your acute care setting.

This section covers the four key areas needed to conduct a thorough needs assessment to help you assess your unique context and get ready to implement a food insecurity screening program. A needs assessment is made up of:

1. An environmental scan
2. Stakeholder engagement
3. Understanding local context: staff, stakeholders, and community partners
4. Mapping community resources

But first, what is a needs assessment?

A needs assessment is "a systematic set of procedures undertaken for the purpose of setting priorities and making decisions about program or organizational improvement and allocation of resources. The priorities are based on identified needs."[1] A needs assessment helps organizations identify the prevalence of food insecurity in the population served by their acute care setting, examine causes, define priorities, find partners, and chart a course for future action. Conducting a needs assessment prior to implementing a new screening will help you best allocate available resources to provide value to your patients.

Why conduct one?

Conducting a needs assessment will help you integrate food insecurity screening into your unique acute care setting in a way that is efficient and sustainable. You will be able to learn about staff and stakeholder concerns and guide your staff through the process of identifying who should screen, analyzing workflows, and incorporating documentation into your electronic health record (EHR) system.

Who's involved?

Many different types of people and roles should be involved including site leadership (e.g. nurse managers, operations committees), clinical staff (from physicians to nursing/medical assistants), care management or social work, community partners, and patients. Seeking perspective and buy-in from all stakeholders will help ensure a smooth implementation.

PART 1:

ENVIRONMENTAL SCAN

Assessing the need for a food insecurity screening and referral intervention

An environmental scan is designed to identify the needs and priorities of your organization based on input from diverse stakeholders. It also helps determine the magnitude of food insecurity that presents a problem within your organization.[2] Nationwide, **7.3%** of older adults struggle to afford the food they need to stay healthy, with state-level prevalence ranging from **2.8%-14%**.[3] What is the burden of food insecurity among older adults in your community? Is addressing food insecurity a priority in your acute care setting or broader health care system? There are several methods to characterize food insecurity in your acute care setting and community.

- **Small convenience sample:** Surveying a small sample of the target demographic within your health care setting. Collecting data from a small number of patients (~50-100) over a few weeks can give you a sense of the prevalence of food insecurity in your local area. You might consider whether food insecurity is limited to a small group of frequent visitors (e.g. homeless patients) or if it is more diffused. If the former, a screening program might not be necessary or those patients might be better served by a more comprehensive intervention. If food insecurity is fairly common across the patients you serve then screening is probably appropriate. Do not assume you know who is food insecure – you have to ask patients.
- **Community-level data:** Explore previously collected data as a reference.
  - Data from the *American Community Survey* can provide a socioeconomic snapshot of the counties or zip codes served by your acute care setting.
  - The US Census *Household Pulse Survey* offers socioeconomic indicators including food insecurity
  - Organizations including *Food Research & Action Center* (FRAC) and *Feeding America* compile resources on hunger among older adults.
- **Convene local experts:** Talk with clinical staff, nurses, social workers, and community partners such as senior services or home-delivered meal programs about hunger among older adults. How is food insecurity impacting seniors in your care setting? Are programs in the community oversubscribed or undersubscribed? What drives food insecurity?
- **EHR-based query:** A free-text search for phrases related to food insecurity or the use of automated algorithms to identify food insecurity via documented risk factors and clinical notes may help you understand the prevalence of food insecurity among your health care setting's population.

PART 2:

ENGAGE STAKEHOLDERS

Engaging Internal Stakeholders

- Changes fail when buy-in from necessary leaders is not obtained.[4] Engage early with the partners and stakeholders who will put a screening program into action, by convening conversations about feasibility, exploring other food insecurity programs within your health system or at peer organizations, or simply finding interested stakeholders. Connect with a range of people and roles during early engagement efforts such as:
  - **Administrators and decision makers:** Nurse managers, operations committees, regulatory compliance managers
  - **Payers:** Insurers and Accountable Care Organization (ACOs). These groups don't have direct control over ED operations, but if there are substantial value-based care payment systems in place for older adults in your community, obtaining support and input from these entities may greatly increase the impact of the initiative.
  - **Clinical staff:** Physicians, advance practice providers (APP), and nurses. Are there individuals staff members who care a lot about this issue? If you can find these individuals and obtain their input and support, this will increase the odds of success.
  - **Other acute care setting team members:** Social workers, case managers, and medical assistants.
  - **Outside partners:** Community-based organizations that address senior needs. Consider county-level aging services departments, an Area Agency on Aging, State Aging and Adult services, or a home-delivered meal program.

Identifying external stakeholders and community partners:

- Developing a partnership with a community-based organization that can arrange or provide services directly will be a key component of your success. You'll learn more about steps to get this started later in this section.

Making the Case

- Consider the mission and priority of your stakeholders and tailor your message so they will understand how the program you are proposing will provide value and is aligned with their needs. Make sure you are prepared and have any necessary data to back up your value proposition, whether priorities are related to costs or health outcomes. You can find a useful roundup of ROI for programs that address health-related social needs *here*. [5]
- Present information on scope of food insecurity, its consequences, and the benefits of intervening which could include a strong return on investment, a reduction in healthcare utilization, improvement in patient quality of life, or better management of chronic conditions
- What are your organization's priorities? How does addressing food insecurity align with them?

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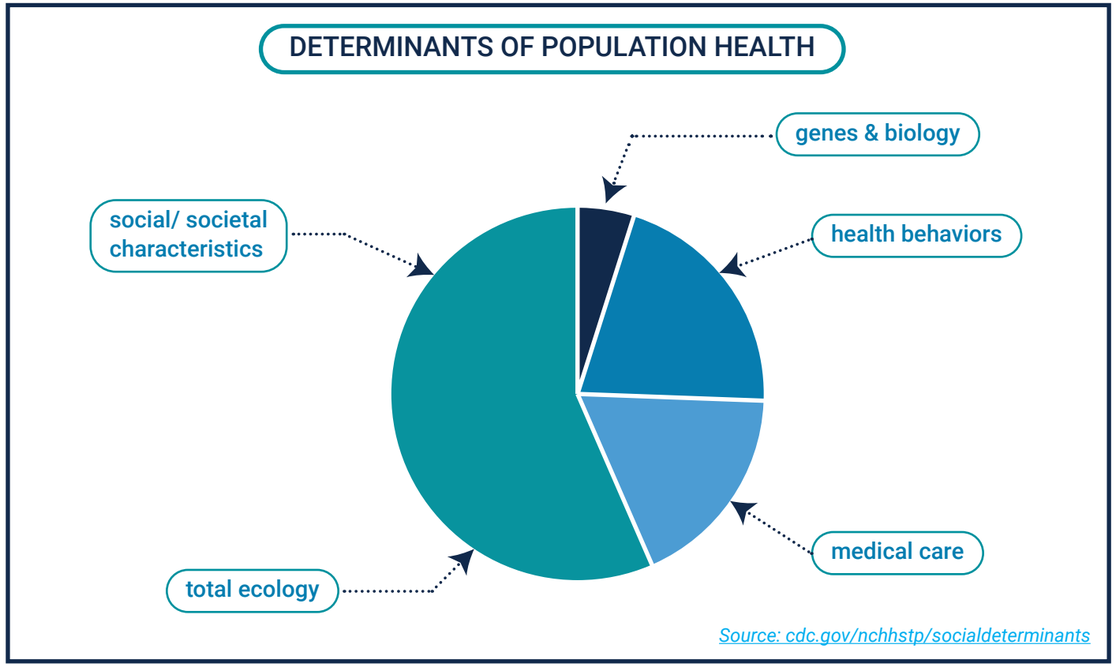
- *Do you have a substantial or growing Accountable Care Organization (ACO) population?* There's evidence that patients linked to home-delivered meals are less likely to use costly medical care [6]; more broadly, strong partnerships between health care systems and Area Agencies on Aging are associated with lower healthcare spending overall.[7]
- *Is there an organizational effort to reduce return ED visits or to reduce ED visits to hospital admissions?* Research suggests food insecure older adults struggle with medication adherence, which can lead to exacerbation of chronic conditions[8, 9]. Home-delivered meals interventions can also reduce the need for facility-based care.[10] Food insecurity is a significant risk factor for malnutrition among older adults, which leads to more frequent and longer hospitalizations.[11] Taken together, the evidence suggests that intervening on food insecurity has a downstream effect on health behavior and health care utilization.
- *Is there a growing acknowledgment of the need to identify social determinants of health?* Food insecurity is a critical social determinant of health and is linked to other social determinants including household income, access to transportation, and social isolation.[12] There are existing community resources that can mitigate food insecurity to some extent. While other unmet needs may be more challenging to address directly, food insecurity interventions can have a distal effect on overall wellbeing, including reducing household financial strain[13] and decreasing loneliness[14].
- *How will launching a food insecurity screening and referral program add value to your acute care setting?* Determining whether any new initiative provides value is the best measuring stick for judging the concept. It is important to define value up front and ensure all staff, especially leadership, understand how value is being defined. For example, value may be defined in terms of lower health care costs via reducing hospital admission and ED readmissions, and patient outcomes, like improved management of chronic disease. Understanding how value is defined in your organization will help you prepare to make the case for your food insecurity screening and referral program throughout the lifecycle of the program.

Practical Tip

Social Determinants of Health (SDOH or social determinants) are those environmental factors and behaviors that impact health outcomes through the lifespan. Health behaviors, social characteristics and an individual's "total ecology," meaning the places they live, work, play, learn, and interact are thought to account for the majority of health outcomes—more than genetic factors and medical care. (Source: cdc.gov/nchhstp/socialdeterminants)



REAL WORLD APPLICATION:

ENGAGING STAKEHOLDERS TO LAUNCH UNC BRIDGE

Throughout the Implementation Guide, we'll share lessons learned from the implementation of UNC BRIDGE, a food insecurity screening and referral pilot program launched at the University of North Carolina at Chapel Hill Emergency Department.

Engage Stakeholders:

UNC BRIDGE was spearheaded by a physician-researcher who practices in the ED, facilitating a strong clinical connection. From the outset, we engaged with key leadership in nursing, social work, and medical providers and cultivated buy-in from clinical staff in a large, academic Emergency Department. Once we gathered initial feedback and developed an outline of a screening and referral program, we pitched BRIDGE to the Emergency Operations Network, an interdisciplinary leadership team which handles department protocols and projects, and to the relevant IT organizations. Finally, we connected with a local *Area Agency on Aging* to understand the network of aging services.

The Value of Stakeholder Engagement

- **Learn and listen first:** We assumed that nurses would screen for food insecurity, but after talking with nurse administrators and clinical staff, we learned that nurses felt overtaxed and, while they felt food security was important, were reluctant to take on another screening. Asking "Which team members in the ED can take on this screening?" generated a lot of ideas, from volunteers to registration to nursing assistants, the last of which is where we landed for our pilot.
- **Learn about stakeholder values:** Client self-determination is a key value for social workers and is rooted in regulations that prevent social workers from referring patients to specific services providers that might benefit financially from the referral and might create incentives to encourage these referrals. Accordingly, we learned that our social work partners felt discomfort at the idea of an automatic referral to a community partner. It was important to them that we build in patient assent and patient choice into the referral process. Communicating that we understood and supported self-determination and building this into the referral process strengthened our partnership with social workers for this project.

PART 3:

UNDERSTAND YOUR LOCAL CONTEXT: STAFF, STAKEHOLDERS, AND COMMUNITY PARTNERS

Before launching a new screening in a busy acute care setting, take time to understand your local community's context. The population you serve, region you work in, and resources within your health care setting and in your broader community all influence the structure of your screening program and the model of service delivery you select. For example, what are the sociodemographic characteristics of patients you serve? Is there a high burden of social needs among your patients? Do patient primarily come from one or two counties or municipalities, or do patients arrive from a broader region in your state? Who, if anyone, addresses patients' social needs in your acute care setting—do you have social workers, case managers, or resource nurses on staff? What is the capacity of your staff to adopt new practices? To answer these questions, you will take a deep dive into the workflows, priorities, and needs of clinical staff and understanding how patients receive care, strategies for doing so will be described in the following paragraphs. Making an effort early on to understand your local context will help identify barriers. Uncovering potential problems early will make your food insecurity screening and referral program successful.

Getting Staff Input

The process of a formative evaluation—taking some time to assess themes like how your stakeholders perceive the issue of food insecurity, how receptive they are to adopting a new practice, who they consider to be leaders in the organization—can be instrumental in creating a successful implementation in your unique health care setting.[15] Elicit from staff the information that will help you plan and launch your screening and referral intervention. Implementation science resources like Consolidated Framework for Implementation Research (CFIR) may be a helpful starting place to figure out what to ask and how. CFIR is an overarching implementation typology that helps organizations figure out what works and why when it comes to implementing new practices.[15] *Resources* are available on their website to help you construct instruments that will give you the most insight into staff concerns, priorities, and values.

Taking time to learn from clinical staff will help you create a process that fits well into clinical flow and anticipate barriers to implementation.

For example, finding out that staff are initially skeptical about addressing food insecurity does not mean you shouldn't launch a food insecurity program.

If your environmental scan suggests a need for food insecurity screening and referral but staff are resistant, it just means that you'll have to devote time and resources to building awareness, understanding, and a sense of urgency around this issue.

UNC BRIDGE CASE STUDY:

EMERGENCY DEPARTMENT SEMI-STRUCTURED INTERVIEW GUIDE

Using CFIR constructs as our guide, we developed a semi-structured interview to elicit feedback from staff. Eager to avoid a top-down approach of dropping an intervention into clinical practice, we wanted to gather feedback on who should screen, where and when screening would take place, and how well the proposed food insecurity screening and referral program "fit" with ED culture and priorities.

CFIR Construct	Question
Knowledge and Belief About The Intervention	Based on the brief description I shared, what do you think about this project?
	When should screening questions be asked?
	Who should ask screening questions?
	What should happen if a patient screens positive?
	Should screening be embedded in the electronic health record? Where?
Tension for Change	Is there a strong need to screen older adults for food insecurity and link them to community based resources?
Compatibility	How well does this project fit with existing work processes and practices in the emergency department? ■ Will the intervention complement or duplicate a current program or process? In what ways?

Implementation Climate	Rate on a scale of 1-5, what is—or what do you think would be—the general level of receptivity in the ED to implementing this study of screening older adults for food insecurity and linking them to community-based resources, where 1=lowest level of receptivity and 5=highest level of receptivity.
Leadership Engagement	What kind of support or actions would you need from leaders in your department to help make implementation successful?
	What strategies could we use to build awareness and support for a food insecurity intervention?
Learning Climate	Can you tell me about another recent QI initiative or implementation of a new program in the ED? ■ What barriers were faced in getting it off the ground? ■ What were some aspects that made implementing the initiative successful? ■ Were people happy with the initiative? The outcome? Is this initiative still being used?

Consider your timeline and capacity to collect this information, as well as your access to staff. You can employ a variety of strategies to gather information from staff and may choose to combine some or all of these approaches!

- **Semi-structured one-on-one interviews:**
  - **In a nutshell:** In a semi-structured interview, the interviewer explores the same set of themes or concepts with a sample participants, allowing them to compare responses and draw conclusions. Usually working from a pre-determined set of questions, the interviewer remains open to other conversational themes and topics that may come up in the conversation.
  - **Pro:** Semi-structured interviews can elicit lots of feedback, explore ideas, and can be conducted spontaneously or at scheduled times.
  - **Con:** Semi-structured interviews may require bigger time commitment on behalf of implementation team in terms of scheduling, speaking to individuals, and reviewing responses.
  - **Resources:**
    - *Qualitative Research in Health Care, 4th Edition,* edited by Catherine Mays and Nicholas Pope. Chapter 4: Interviews.
    - Center for Implementation Research (CFIR): *Interview Guide Tool.*
    - *A Guide to Using Qualitative Research Methodology.* Edited by Michael Quinn Patton and Michael Cochran.
    - *Handbook of Practical Program Evaluation, 4th Edition*, edited by Kathryn Newcomer, Harry Hatry, Joseph Wholey. Chapter 4: Conducting Semi-Structured Interviews.

- **Focus groups:**
  - **In a nutshell:** Focus groups bring 6-12 individuals together to discuss a particular topic; though facilitated by a moderator, interactions among participants can shape the discussion and often lead to complex, nuanced findings.
  - **Pro:** Focus groups can generate rich discussion and ideas that may not have come up in one-on-one interviews. While there may be time spent arranging the focus group, you can gather a lot of information in one session.
  - **Con:** It can be a challenge to organize a focus group in a busy acute care setting; additionally, power dynamics among participants may affect participation—for example, a focus group that includes supervisors and supervisees may yield less information.
  - **Resources:**
    - *Qualitative Research in Health Care, 4th Edition,* edited by Catherine Mays and Nicholas Pope. Chapter 5: Focus Groups.
    - *Focus Group Methodology: Principles and Practice*, by Pranee Liamputtong.
    - *Doing Focus Groups*, by Rosaline Barbour.
    - Robert Wood Johnson Foundation Qualitative Research Guidelines Project: *Informal Interviewing.*
- **Emailed surveys:**
  - **In a nutshell:** Sending a survey to a large number of participants is quick, low-cost way to gather feedback from many participants. People can share anonymously, which may increase disclosure. Investing time to develop a strong survey will pay off in the data you gather. Think about the themes you want to cover and what you hope to learn from participants and pilot test your survey internally before distributing it to make sure questions are clear and comprehensible.
  - **Pro:** An emailed survey is easy to distribute and quick for participants to fill out, and can combine open and closed ended questions
  - **Con:** The response rate may be low and it is harder to follow-up and get additional information, whereas in a face-to-face setting, the interviewer or facilitator can probe for further input.
  - **Resources:**
    - *Methods in Health Services Research* edited by Boris Sobolev and Constantine Gastonis. Chapter 12: Survey Methods in Health Services Research.
    - Online survey tools include *Qualtrics* and *SurveyMonkey*

Staffing can vary widely in acute care settings. Use the table below to map out who is on your team, and to assess their capacity and readiness to screen. Feedback from your surveys, interviews, or focus groups will help you gauge capacity and readiness.

	Number Employed at Your Clinic	Capacity to Screen (1-5)	Readiness to Screen (1-5)
Physician			
Licensed Clinical Social Worker			
Pharmacist			
Nurse Practioner			
Registered Nurse			
Medical Assistant			
Nursing Assistant			
Community Health Worker			
Admin Support			

Consider your budget, existing team members, and the scope of your planned project before deciding if you need to hire any additional staff. For example, a social worker or community health work (CHW) may be a necessary addition to your practice. This individual could provide broader support as a team member and oversee the care navigation to address older patients' social needs.

Mapping Current and Future Workflows

During your discussions with staff and stakeholders, gather as much detail as you can about current staff workflows. Check your understanding with clinical staff and iterate your draft workflows as needed. Ideally, the food insecurity screening and referral process should create the fewest modifications possible. Understanding the flow of patients through your clinical setting—and where, when, and how different staff members engage with them—will help you identify opportunities to integrate this new screening.

Process Walk

A process walk is one approach to build understanding of workflows. A process walk is a procedure for observing and recording workplace activities to facilitate assessment of the complexities of work and burdens on staff. Through employee observation, you will be able to document how jobs are being performed (as opposed to how those jobs are described in a workflow document) and track the amount of time spent on critical activities.

This should lead to insights into bottlenecks and challenges that you can then mitigate. The benefits of a process walk include:

- Understanding how work is carried out in real time instead of looking at a written process or workflow. Processes in real life may be more convoluted than you expect.
- Getting feedback directly from employees about their challenges and barriers.
- Empowering employees to define their ideal process. [2]

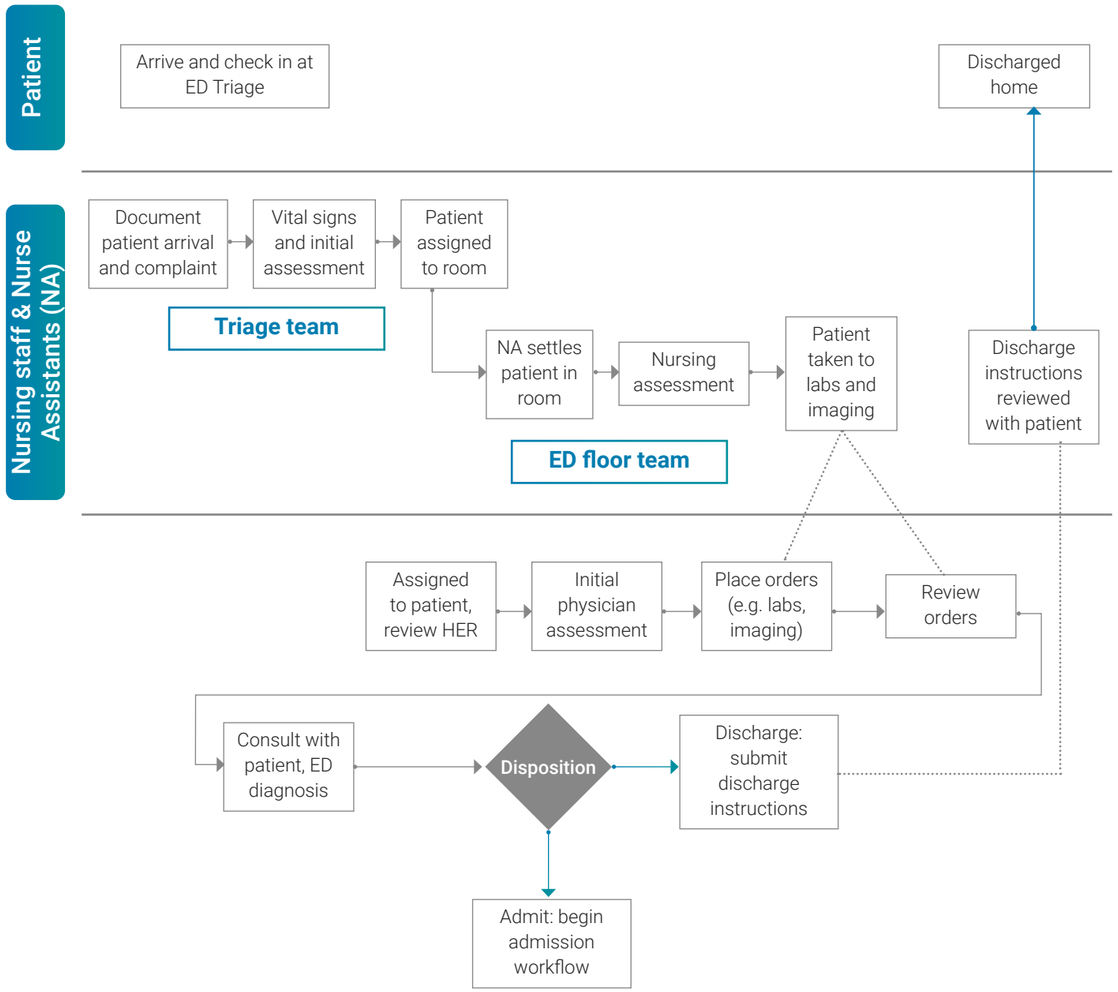
Tech Tip:

Workflow mapping can be accomplished with the help of software tools (like PowerPoint or Visio), however, you can also simply start with pen and paper or post it notes. To help start your process, check out the AHRQ's *guide to mapping workflows*.

OUR EXPERIENCE

Going through a Process Walk helped us understand clinical roles and responsibilities better and see where and when it makes sense to conduct a screening. Observing nursing assistant's day-to-day work, we learned that once a patient was settled in their room, they checked vital signs in person every 2 hours, which creates a logical opportunity to screen for food insecurity.

Simplified sample Workflow: Non-critical ED Visit



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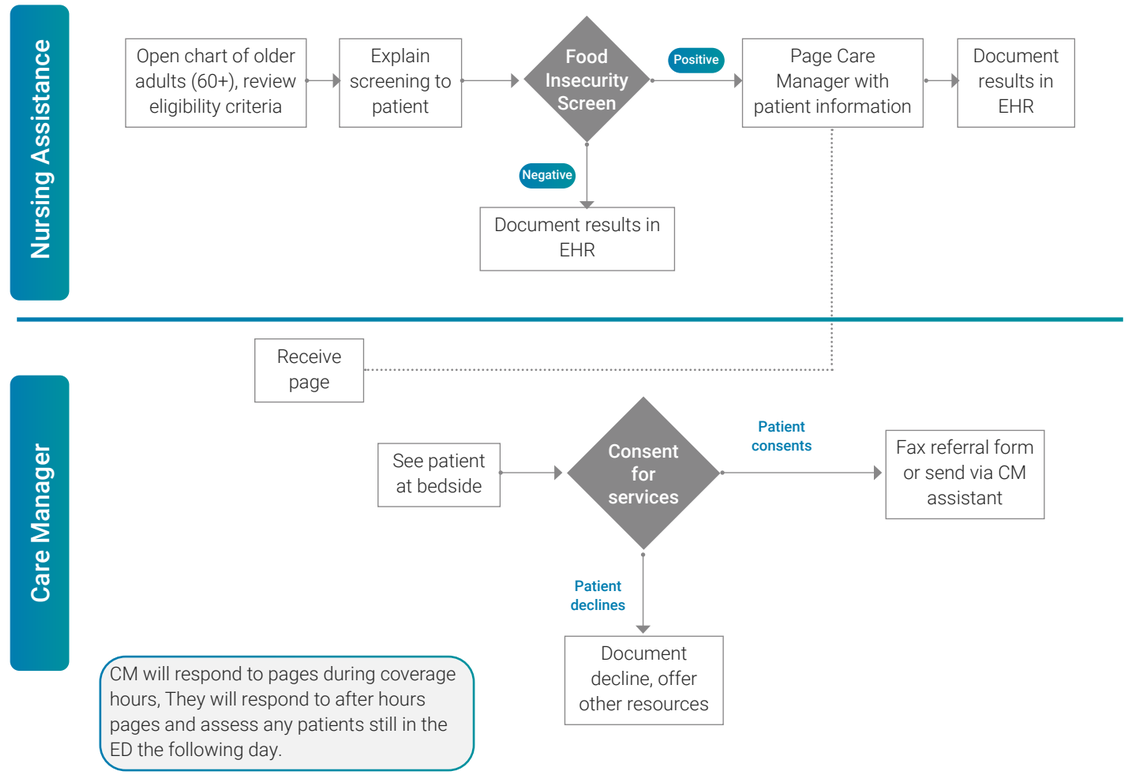
As you sift through staff feedback on food insecurity screening, you can start developing future workflows that incorporate a food insecurity screening.

Food Insecurity Screening and Referral Workflow



As you develop new workflows, continue to check in with stakeholders. Workflow development is an opportunity to build an open, collaborative atmosphere in which the perspective and ideas of all levels of staff are valued. When a first draft is ready, get feedback on how the proposed workflows would work in real time: seek feedback from leaders, clinical champions, and other frontline staff who might be involved in the screening.

It is likely that you'll go through multiple iterations to refine the workflows, and that they'll continue to change as you implement new processes.

OUR EXPERIENCE

While we mapped out the simple workflow seen above, we learned about potential bottlenecks, like a lack of familiarity with paging, which helped us anticipate training needs. We also built in steps that we'd previously overlooked. An initial version of workflows included an automatic referral to the community partner: this sparked a conversation about the role of consent in care management processes. We needed to include a step for care managers to seek consent to make a referral and document patient response.

Who are Your Patients?

Figuring out a profile of the older adults who receive treatment in your acute care setting will help you figure out the scope of screening (i.e. what proportion of patients will you screen) and which community-based organization(s) to partner with.

- Age
- Gender
- Language preference
- Location
- Insurance status
- Health conditions
- Healthcare use
- Housing status: independent living, assisted living, stable vs. unstable

Practical Tip

Food Insecurity Considerations for Immigrant and Limited English Proficiency Groups

If you serve significant populations of individuals who speak other language or have Limited English proficiency (LEP) take time to understand the specific concerns related to food insecurity and social service access among this population.

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Immigrants are at higher risk of food insecurity.

In 2018, 17.5% of non-citizens lived under the federal poverty line compared to 11.3% of U.S. citizens.[1] While food insecurity among immigrants is not measured on a national level, smaller studies have estimated food insecurity to be 30-60%, with higher rates in vulnerable subgroups.[2] Immigrants may face a variety of barriers accessing food, such as lack of familiarity with certain foods, language barriers, lack of transportation, and lack of familiarity with the US food system, among others.[3 4]

Language Considerations

- Though including participants with Limited English Proficiency (LEP) can create additional challenges for implementing a program, excluding these patients is problematic as they are at higher risk for food insecurity. Not offering them the same interventions can worsen health inequities.[5]
- If using a written questionnaire, it's best to have this and all other documents used translated into the languages you anticipate encountering in your health care setting.[5]
- Keep in mind that not all people have literacy in their preferred spoken language. If using a written questionnaire, offer interpreting services to help the patient complete the form in a non-judgmental manner.
- Avoid using friends or family members, especially children, as interpreters. These questions can be very sensitive and using someone close to the patient as an informal interpreter can result in errors, omission, and shame for the patient. Using a child as an interpreter can cause unnecessary burden and worry for the child.[6]
- The Hunger Vital Sign Screening Tool has been validated in both English and Spanish.[3] The 18-item U.S. Household Food Security Survey Module is available from the USDA in English, Spanish, and Mandarin.[7]
- When referring to an outside agency, consider the agency's ability to provide services to people with LEP.

Eligibility and the "Public Charge" Rule

- Eligibility for certain resources depends on an individual's immigration status. Undocumented immigrants are ineligible for most federal assistance programs, including Supplemental Nutrition Assistance Program (SNAP).[8]
- Immigrants with Lawful Permanent Resident (LPR) status are typically ineligible for programs such as SNAP, CHIP, and Medicaid until they have resided as a legal resident for five years.[9]
- As of February 2020, some people applying for (LPR) status or a visa will need to pass a "public charge" test, which looks at if an individual is likely to use government services in the future. Use of certain services, such as SNAP, Medicaid (with some exclusions), and cash assistance programs, can negatively affect a person's application. Use of WIC, CHIP, food banks, and many more programs will NOT affect a person's eligibility.[10]
- Confusion over the public charge rule, anti-immigrant rhetoric, and fear of deportation have a "chilling effect" on resources, meaning that immigrants may not be accessing resources for which they are eligible.[11]
- Consider partnering with a local immigrant-serving community-based organization. These organizations can help patients overcome barriers to accessing resources.[8]

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1.0 ASSESS
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EXAMPLES/CASE STUDIES:

How Might this Influence the Community Partnerships You Set Up?

- You work with an accredited Geriatric Emergency Department; after running a report about your patient population, you learn that 45% of your patient population are adults 60 and older, 70% of whom live independently in the community. The vast majority of these adults are insured by Medicare, and 50% are part of a Medicare Advantage plan.

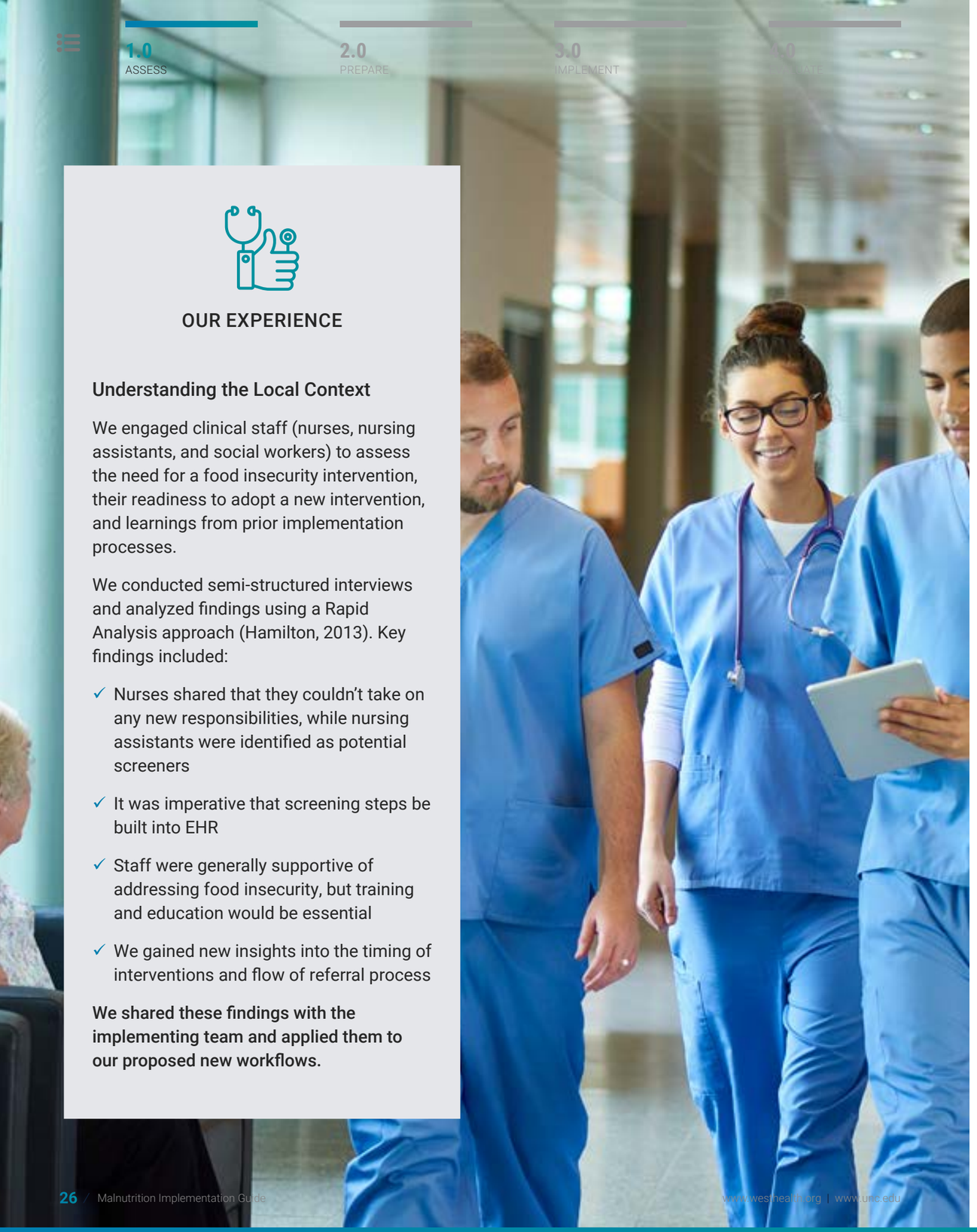
- **Considerations for community partnership:** Community-dwelling older adults are prime candidates for senior nutrition programs and senior center programming. Learn about what community-nutrition programs are active in your area. Consider inviting Medicare Advantage plan providers to the table for conversations about senior social needs, as their capitated model encourages the delivery of community-based services.

- Your acute care setting serves a diverse population including 15% of older adults who speak Spanish as their primary language. 25% of your older adult patients are dually eligible for Medicare and Medicaid.

- **Considerations for community partnerships:** Identifying partners that can serve non-English speakers will be essential. Similarly, making connections with your state's Medicaid program to learn about their case management and community referral programming, if any, will help you avoid duplicating work.

- Your Emergency Department is a large, level 1 trauma center at an academic medical center. 70% of your patients come from a six-county radius around your hospital, though you see patients from all corners of the state.

- **Considerations for community partnerships:** You'll want to develop a food insecurity and screening program that can assist patients from around the region. Consider connecting with a regional aging convener, like an Area Agency on Aging or making contact with your state's aging and adult services division to learn about cross-county partnerships.



OUR EXPERIENCE

Understanding the Local Context

We engaged clinical staff (nurses, nursing assistants, and social workers) to assess the need for a food insecurity intervention, their readiness to adopt a new intervention, and learnings from prior implementation processes.

We conducted semi-structured interviews and analyzed findings using a Rapid Analysis approach (Hamilton, 2013). Key findings included:

- ✓ Nurses shared that they couldn't take on any new responsibilities, while nursing assistants were identified as potential screeners
- ✓ It was imperative that screening steps be built into EHR
- ✓ Staff were generally supportive of addressing food insecurity, but training and education would be essential
- ✓ We gained new insights into the timing of interventions and flow of referral process

We shared these findings with the implementing team and applied them to our proposed new workflows.

Qualitative data obtained through semi-structured, open-ended dialogues helped us deepen our understanding of stakeholder concerns, potential challenges, and strategies that would help us be successful.

	Barrier to Implementing BRIDGE	Facilitator to Implementing BRIDGE
Nurse	"Ultimately it would be really easy if it was in Epic, but that's a barrier because it's hard to get things in Epic…"	Even though it's "not a huge change… education on the front end" is essential so staff "understand value and purpose."
Social Worker	If volume of patients is too high "then we would feel defeated and horrible!"	"Is this preventing patients from coming back to the ED? It's all about how you present it [to the SW team]"
Nursing Assistant	"We're spread…nothing is predictable. You never know who you're walking into…"	"If this were something we were instructed on how to do…we would be more than capable."

Understanding Our Patient Population

We conducted a patient testing period during the planning phase of BRIDGE. Clinical research staff surveyed 127 older adults between November 2018 and April 2019 and found that:

- 16% of the patients we surveyed were food insecure
- Food insecurity higher among younger older adults, women, patients with traditional Medicare, and patients with less than a college degree
- Patients reported additional social needs beyond food insecurity and were receptive to receiving assistance or care navigation.
- Key takeaways from this process were 1) confirming that patients were generally receptive to a screening and referral process and 2) learning about the scope of the problem, which helped us estimate the number or referrals and amount of effort required by our community partner.

Building a Partnership with the Community

Because UNC sees patients from around the state, we connected with a local *Area Agency on Aging* to learn from their expertise in aging and community resources during the early stage of BRIDGE. We convened conversations about their role as an aging services hub, learned how they interact with patients and other service providers, and identified workflows that would allow them to receive and manage referrals from acute care setting.

PART 4.

UNDERSTAND YOUR COMMUNITY'S RESOURCES

Once food insecure patients have been identified, how will you connect them with services? Start by compiling a list of senior services programs in your community, and when possible, their eligibility criteria, and their current waitlists for services. **You'll find a worksheet for mapping potential community partners in the companion toolkit.**

Defining Expectations and Making a Specific Ask

Consider what you've learned about your patient population up till now: how prevalent is food insecurity? How large is your population of older adults? How large a geographical catchment area does your health care setting serve? This information will inform what you need from a community partner and help them determine their readiness to partner with you.

For example: if you work in an urban ED that sees 30 older adults a day, primarily serves residents of a single city, and anticipate that 15% of your older adults are food insecure, you could estimate that you'd send up to 3 referrals a day. How equipped are community-based organizations to meet this demand? What resources would help support them?

Learning about your population and CBO capacity will help you develop a specific ask of a community partner that outlines anticipated referral volume and what would be expected of the partner.

Tech Tip:

More and more, communities are investing in referral platforms that streamline the process of connecting individuals with services. Nationwide referral platforms include *NowPow*, *AuntBertha*, or *Healthify*. Many states are also developing their own referral platforms. If you're considering incorporating an electronic referral platform into your process, this guide from SIREN is a helpful resource to sort through the platforms that are currently available, their functionalities, and user experiences with them.

Considerations for Community Services

Inner Setting Considerations

- What services will you link patients to? Will you focus on nutrition or offer a range of services for older adults?
- What funding can your health care organization allocate to Community Based Organization (CBO) for case management and service delivery?
- Is "closing the loop" a priority for your setting? Closing the loop means that patients who are referred get the services they need and that all service providers involved are aware of patient status and outcomes. Do clinicians or care managers at your acute care setting need or desire this type of follow-up on patient outcomes?

Community Partner Considerations

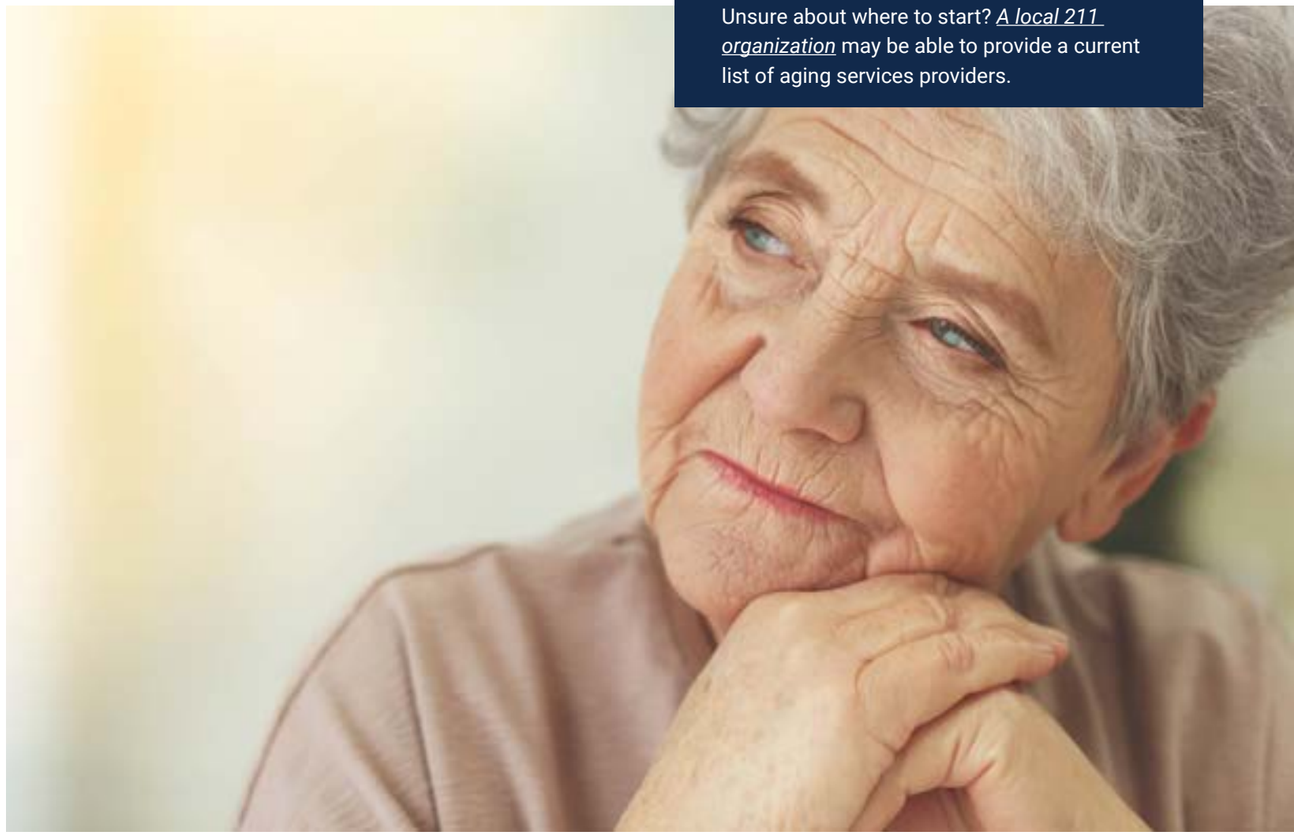
- What is the capacity of community-based organizations or resource hubs to respond to new referrals? Are there waitlists?
- What support or resources will community-based organizations need to serve patients referred from an acute care setting? What CBO are HIPAA-covered entities and able to receive referrals directly from health care settings?
- Can you 'close the loop' on referrals sent from your acute care setting?

Practical Tip

Look to local "resource hubs" or first call agencies to learn about services in your area. *Area Agencies on Aging* are federally-funded organizations that administer funds to a network of aging services in a designated region. They serve as conveners for aging organizations and can offer information about many services and their eligibility criteria.

A county department on aging may be another first stop. Many states fund county departments on aging to provide information and referrals, which keeps them up-to-date on resource availability.

Unsure about where to start? *A local 211 organization* may be able to provide a current list of aging services providers.



OUR EXPERIENCE

Understanding Community Resources

We identified a local Area Agency on Aging (AAA) as our primary partner. The AAA provided a bridge to the state's aging network, which provides a range of services (nutrition, transportation, homemaker services, legal advice) to all eligible older adults. Participating agencies in the aging network can be reimbursed by the state for providing services, as funds allow.

Together with the AAA, we assessed the availability of services in 6 nearby counties: nearly 80% of home-delivered meals programs had waitlists for services. We ascertained that additional funding would be needed for the timely provision of services for patients discharged from the ED.

As we wrapped up our needs assessment, we had a list of actionable resource needs that would help us launch BRIDGE and make it stick:

- ☐ **A.** Education in the ED: Why is food insecurity important and clinically relevant? *You can view some of our educational materials in the companion toolkit.*
- ☐ **B.** Training and support for new tasks: Nursing assistants were identified as the optimal screeners, but screening would entail new documentation steps as well as new communication channels with social workers. You can view some training guides in the companion toolkit.
- ☐ **C.** A streamlined referral pathway so that social workers could quickly refer food insecure seniors to the AAA.
- ☐ **D.** Funding and guidance for community partners to quickly provide meals or other services after an ED discharge.

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Section 2: Prepare

SECTION 2:

Prepare

In Part 1, you gathered a great deal of information about your patients, health care setting, and community to lay out a vision for a food insecurity screening and referral program. You're ready to make decisions about the nuts and bolts of your food insecurity screening program. This next section will help you consider some of the components of your program:

01	02	03	04
Selecting a Food Insecurity Screening Tool	Selecting Community Partner and Services	Financial Considerations: Upfront Investments and Long-term Benefit	Onboarding Staff and Preparing Them for Implementation

PART 1:

SELECTING A FOOD INSECURITY SCREENING TOOL

No need to reinvent the wheel: Who is working on food insecurity in your health system and how can you align your efforts?

Some health systems or payors have developed questionnaires for their members. For example, Kaiser Permanente Health has developed a *Total Health Assessment for Medicare Members* that includes two questions about senior food security.

- *Do you eat fewer than two meals a day? (yes/no)*
- *Do you always have enough money to buy the food you need? (yes/no)*

- Some health systems are incorporating a social determinants of health (SDOH) module into their Electronic Health Records. Connect with the teams that develop and use SDOH tools as you plan your food insecurity project.

- Find out if others in your health system are assessing and intervening on food insecurity. Aligning your screening and referral program with other ongoing efforts can help your health system to:
  - ✓ Have a clearer understanding of the scope of food insecurity among patients
  - ✓ Create strong partnerships to identify and address food insecurity across health care settings, demonstrating a commitment to addressing SDOH for older adults
  - ✓ Learn and improve screening and referral processes together

If this food insecurity is a new area for your health system, there are a range of options to screen patients for food insecurity.

- The **USDA** has an assessment for *adult food security* which asks about food insecurity worry, experience, ability to eat balanced meals, and resource constraint.[16] This adult assessment is based on USDA's comprehensive 18-item household food security survey, which considered the "gold standard" for food insecurity, but represents a considerable time burden for respondents and assessors.[17]
- **The Hunger Vital Sign Screening Tool (HVS)** is a 2-item tool that asks patients to respond to 2 statements with "often true," "sometimes true," or "never true"
  - *"We worried whether our food would run out before we got money to buy more."*
  - *"The food we bought just didn't last and we didn't have money to get more."*
  - HVS was validated against USDA's food insecurity screening tool as gold standard, with sensitivity of 97% and specificity of 83%.[18]
  - Because it has only two questions, HVS is well suited for ED. It has been validated for use with both children and adults.[19] However, because of its brevity, it offers little detail surrounding the patient's experience with food insecurity.

Health Begins Upstream

is a Social Determinants of Health Quality Improvement organization. They developed a comprehensive assessment of social needs which has been reviewed in the literature.[20] It includes a single item assessment of food insecurity:

- *Which of the following describes the amount of food your household has to eat? (enough to eat, sometimes not enough to eat, often not enough to eat)*

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PART 2:

SELECTING COMMUNITY PARTNERS AND SERVICES

Type of Services

Home-delivered meals

Considerations

What are the eligibility criteria? What are the most common counties of residence for older adults in your acute care setting? Are there waitlists for services?

Potential Partner

A county or municipal-level Meals on Wheels program.

Benefits

Services can be arranged quickly and directly from the ED by a case manager. If funding is available, services may be delivered within a few days.

Challenges

Not all patients may be eligible for home delivered meals: programs may require a patient to meet income criteria or be homebound, characteristics that don't apply to all food insecure adults.

UNC'S EXPERIENCE:

Chapel Hill-Carrboro Meals on Wheels is a privately funded non-profit that delivers meals to homebound seniors and disabled adults. Their Operations Coordinator receives referrals, initiates a preliminary assessment, and sets up meal delivery.

www.westhealth.org | www.unc.edu

Type of Services

A variety of nutrition services (e.g. home delivered meals, congregate meals, grocery delivery)

Considerations

What nutrition programs are available in your area? What services are appealing to older adults seen in your acute care setting? How large of a region does your acute care setting serve? What is your capacity for developing multiple partnerships?

Potential Partner

A county or municipal level senior services agency such as a county department of aging.

Benefits

Not all food insecure adults may qualify for (or want) home delivered meals or may transition from home delivered meals to other forms of nutrition support. This type of partnership can offer more resources and flexibility.

Challenges

Depending on the size of the geographic region your hospital serves, you may need to develop partnerships with a lead agency in multiple counties.

UNC'S EXPERIENCE:

The Durham Center for Senior Life (DCSL) is an independent non-profit funded by the Older Americans Act. Home to a variety of nutrition programs, they work closely with Meals on Wheels, have a congregate meal site, can assist with SNAP enrollment, and offer grocery delivery. A referral goes to the DCSL's Nutrition Program Director. She conducts an assessment and determines preferences and eligibility for different services. She completes a form to enroll clients in the state's aging services network, which allows DCSL to be reimbursed for services delivered.

Type of Services

A range of long-term services for older adults including nutrition, home care, transportation, and more

Considerations

What services are most needed by older adults in your acute care setting? Does your implementation team have the capacity to embrace a broad range of services? What funding is available? How essential is follow up or closing the loop?

UNC'S EXPERIENCE:

Piedmont Triad Area Agency on Aging is funded by the state and federal government to administer a range of aging programs across a specific region of the state.

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Potential Partner

An Area Agency on Aging (AAA) that covers a specific region of counties or a partnership with multiple AAA in your state.

Benefits

Food insecurity is linked to many other social determinants of health: isolation, transportation, functional limitations, and financial strain. The needs of older adults may evolve as they age or as illness progresses.

Challenges

Because an AAA works across counties and coordinates with many agencies, delivery of service may take longer than a partnership with a single organization.

They provide information and referral (I&R) to many programs: nutrition, transportation, home health/home care, and even legal services. The agencies with whom they partner are all part of the aging network, meaning they are funded by the state to provide services. An I&R team member receives referrals, completes an intake, and sends out as many referrals as needed.

Community Partners and Closing the Loop

Many metrics can provide insight into how well your screening and referral program is functioning. From the acute care setting side, you might look at screening rates, positive screens, or number of referrals made. From the community side, you may want to know the outcome of referrals: how many patients were reached, how many received services. You also may want more granularity to characterize program impact such as patient satisfaction or impact on health and wellbeing.

Each of these measures represents varying levels of effort for the healthcare system or community partner. In any case, it is critical to close the loop in some way to determine if patients were connected to services. Develop a clear, shared understand from the outset about what closing the loop will entail for your team and the community partner and a plan to make it happen. Decide how and when you want to follow up and how much you want to know about service delivery, patient satisfaction, and other outcomes. Some common scenarios might include:

- A member of your team follows up on each referral with community partners to determine if services have been delivered
- A point person at the community-based organization tracks outcomes of referrals (following up with other organizations and/or patients directly) and reports back at a designated interval
- A member of your team contacts patients directly to follow-up on satisfaction with service and impact on health and wellbeing.

Common Scenarios Include:

Patient is waitlisted for referral	Patient receiving supports/services from referral	Patient did not contact CB0 to initate services	Patient reports feeling satisfied/ needs met
• Identify interim solutions • Determine if patient can pay out of pocket • Schedule reminder to check-in	• Document and update patients medical record to inform broader team • Mark referral as complete • Follow-up to determine any additional social needs	• Offer to help connect patient directly • Probe to understand reasons the patient has not contacted CBO	• Document and update patient's medical record to inform broader team • Probe to determine if there are any additional social needs • Offer assistance as needed

PART 3:

FINANCIAL CONSIDERATIONS: UPFRONT INVESTMENTS AND LONG-TERM BENEFIT

Funding to Launch and Implement Internally

Once implemented, screening for food insecurity among older ED patients is inexpensive and is generally not a cumbersome addition to an acute care setting's processes.

- Staff investment of time is limited: the screener can be as short as two questions, which takes less than 1 minute to complete. Screening questions would only be asked to older adults (approximately 30 patients a day in an average sized ED seeing ~200 total patients a day with 15% older adults.) Assessment and referral by social workers/case managers typically takes about 15 minutes, but is limited to patients who screen positive, which is ~10% of older ED patients.
- Implementation of the screening process may have some additional upfront and maintenance costs related to training of clinical staff, providing feedback and monitoring to encourage screening, and also setting up process and training to support social workers/case managers in making referrals.
  - Costs might include: a small percent effort for one or more clinical champion to promote enrollment or incentives for staff as screening is implemented.

Practical Tip

Worth the Investment—success is highly dependent on your organization's ability to commit time and resources to launching a food insecurity screening program. Designating a staff person as a champion responsible for implementation is impactful—for example, among organizations launching worksite wellness programs, those with a staff person with dedicated time for implementing and leading wellness initiatives are 10x more likely to offer a robust worksite wellness program. [21]

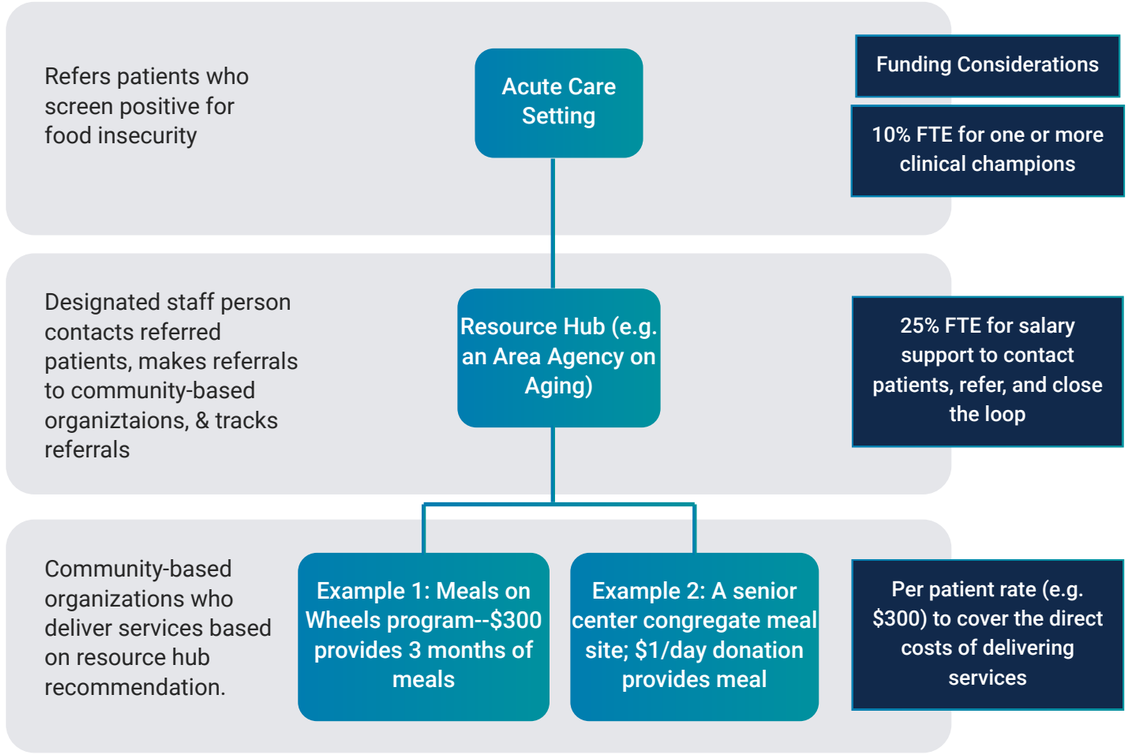
Funding for Community Partners

- **Providing Services:** In the U.S., many social services for older adults such as home-delivered meals are under-funded and have lengthy wait lists. In our foundation-funded feasibility study, up to $300 per patient was available to pay service providers directly so that patients could receive services immediately after discharge from the Emergency Department. For a typical home-delivered meals program, which costs about $5/day, these funds would cover patient costs for 2-3 months. If implemented broadly, including these funds would add substantially to the cost of implementation. For example, an average ED seeing 30 older adults a day might have 2 patients a day who screen positive and accept referrals.

Assuming funds were needed to support services for all of these patients, costs might exceed **$200,000 per year.**

- Other services a patient might benefit from typically come with a cost as well: transportation can cost up to $50 per day and for congregate meals, there may be a suggested donation.
- Funding streams vary; many services are funded by the Older Americans Act and capitated by county. However, funds are often limited and community-based organizations rely on donations, self-pay, and grants.
- How is your screening and referral program structured?
  - A single organization serving as a "resource hub" for a region may require additional funding for a staff person to receive referrals and arrange services among a range of community partners. The diagram below shows the structure of this type of partnership.

Resource Hub Referral Model and Funding Considerations



Lowering Costs

- There are two primary pathways by which an ED might avoid paying $200,000 annually to provide social services to patients.
  - Screen and refer patients to existing community-based services, utilizing the current networks of service providers, but not cover the costs of services. In this case, if there is a wait list for services or the patient doesn't qualify for coverage of services through their insurance or from state or federal funds, the patient would go on a wait list and may not receive services.
  - Identify a third party that would cover the cost of providing services after an ED visit. In most cases, the most obvious group to cover these costs would be an **insurer** or **accountable care organization.**

Practical Tip

Getting to know Alternative Payment Models: The prevalence of **Managed Care Plans** is growing across the country. As of 2020, 41 states are leveraging Medicaid Managed Care Organizations (MCO) to improve outcomes and address social determinants of health. Care coordination and services, including food assistance, may be a part of your state's Medicaid program. Half of all states have a Medicaid program that includes social needs screening, referral, or partnership with community-based programs for service delivery.[22]

Medicare Advantage is another growing part of the managed-care landscape. Beginning in 2020, Medicare Advantage plans may choose to offer **supplemental services** that enhance enrollee health, including meal-delivery or medically-tailored meals. Finally, nearly 10% of the US population is covered by **an Accountable Care Organization** (ACO)[23] and those ACO with care management programs showed reductions in ED visits and hospitalizations among beneficiaries.[24] The growth of alternative payment models is an opportunity for acute care settings to intervene on unmet social needs, such as food insecurity. Payors are incentivized to lower costs via a range of strategies that may include community-based services. By effectively making the case for a strong screening and referral program to address food insecurity, you may find funding and a partner in a managed-care entity operating in your health system.

MAKING THE CASE:

Benefits of Investing in a Food Insecurity Screening and Referral Program

- Available evidence suggests that providing social services to older adults to address unmet needs can results in substantial health benefits and costs savings. [6, 8, 12, 7]
- In the U.S., food insecurity and malnutrition cost an estimated $77 billion annually.[25]
- Food assistance programs such as Meals on Wheels substantially reduces food insecurity for recipients. In addition to direct effects of ensuring appropriate nutrition, Meals on Wheels and other social services may also help reduce the costs of medical care for older adults by reducing social isolation and falls.[14, 26]
- Following hospitalization, referral to food assistance for individuals with food insecurity reduced subsequent medical costs by an estimated 31%.[6]
- A study in Maine found a 6% decrease in 30-day readmissions corresponding to a 387% return on investment.[27]
- Emergency department patients have high rates of food insecurity and often have high healthcare utilization costs, and are likely to be a particularly important population for targeting social services.[27]

Weighing Costs and Benefits

- Available evidence strongly suggests that the benefits of screening and addressing food insecurity outweigh the costs of implementing such a program. Although capturing these cost savings within a fee for service payment models is challenging, capturing savings and justifying the expenditures on screening and referral to address food insecurity and other social determinants of health is achievable in value-based payment models, particularly comprehensive insurance models such as accountable care organizations.
- Upfront investments in clinical staff and community partners can pay off in the long-term and may be minimal compared to the value offered by the provision of community services to a vulnerable population.

1.0 ASSESS
2.0 PREPARE
3.0 IMPLEMENT
4.0 EVALUATE

PART 4:

ONBOARDING STAFF AND PREPARING THEM FOR IMPLEMENTATION

1. Develop Workflows:

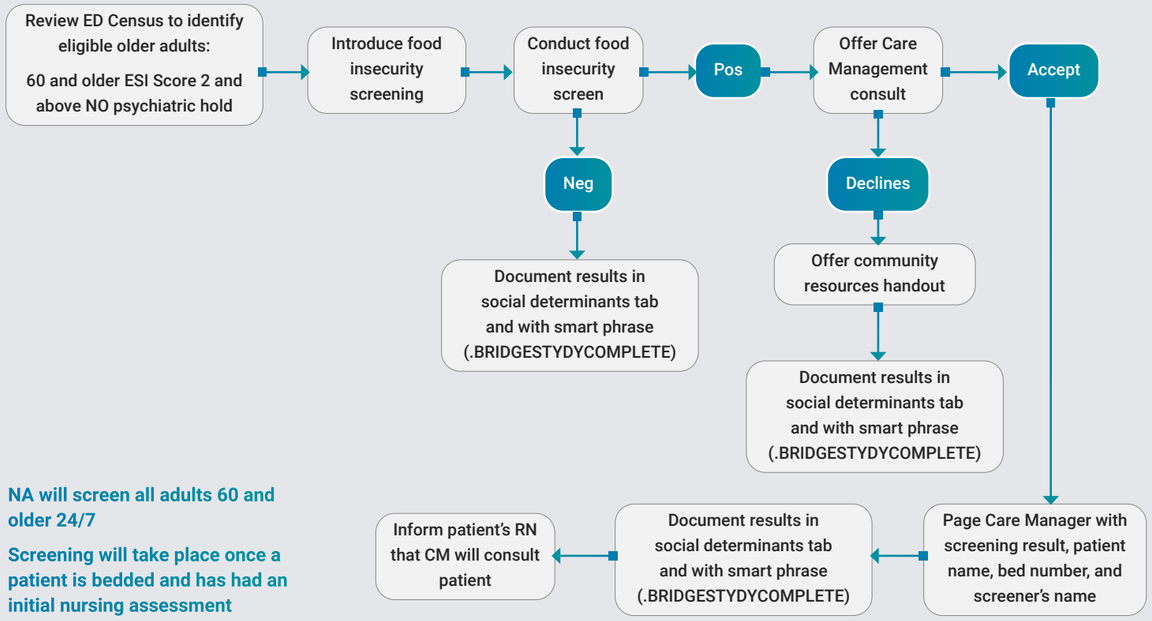
In Part 1, you learned about current responsibilities and work processes of clinical team members and began drafting potential future workflows that incorporate a food insecurity screening and referral process. You have an idea of **who** will screen and **when** and **what** will happen if a patient screens positive. **Now it's time to drill down and refine your workflow.** You'll want to create an **overall workflow** of your entire process as well as **individual workflow** for staff and community partners involved.

OUR EXPERIENCE

Because our Emergency Department serves patients from across the region, we partnered with an Area Agency on Aging that serves 7 counties in the state to assess for needs and services. Patients were eligible for a range of services provided by the aging network: home-delivered meals, congregate meals, transportation, homemaker services, and other.

We developed workflows for each component of the screening and referral program. The Nursing Assistant Workflow includes lots of details such as what to do if a patient declines, and reminders on how and what to document.

Screen Workflow: Nursing Assistants



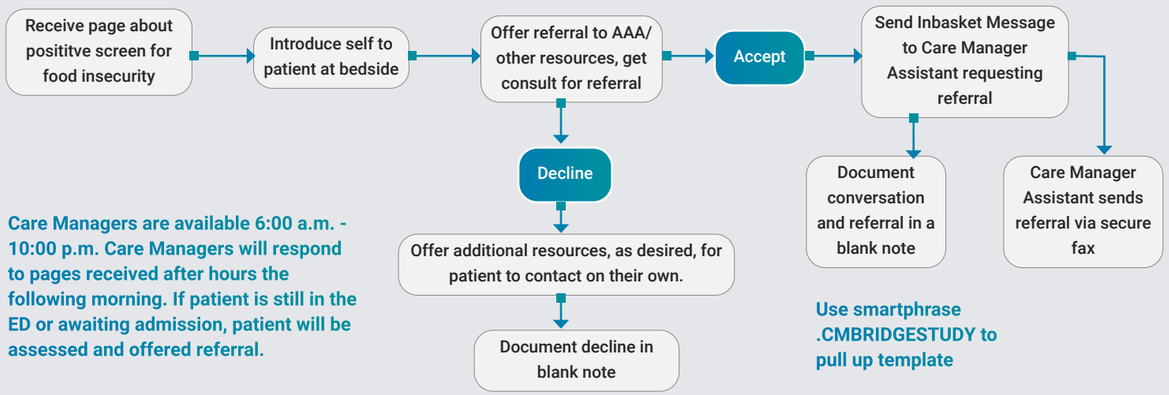
NA will screen all adults 60 and older 24/7

Screening will take place once a patient is bedded and has had an initial nursing assessment

This Social Worker Workflow outlines the specific steps by which a positive screen makes its way from the ED into the community.

Food Insecurity Screening & Referral Workflow: Care Managers

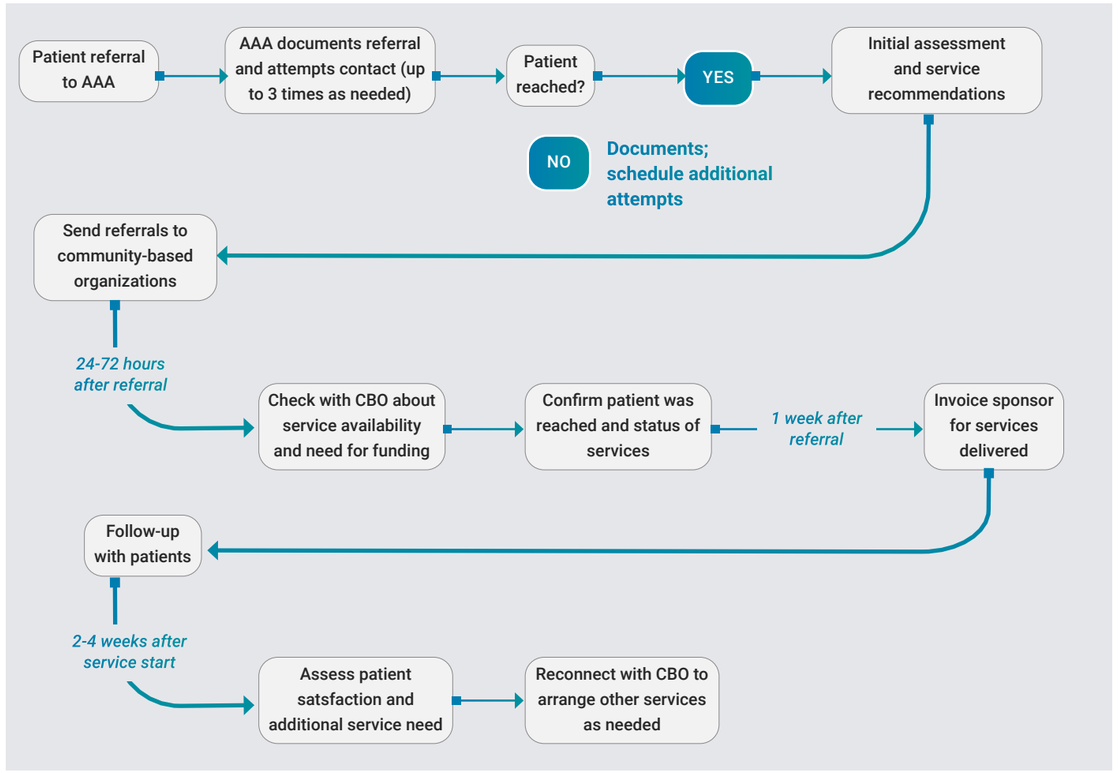
Note: your workflow may differ



Care Managers are available 6:00 a.m. - 10:00 p.m. Care Managers will respond to pages received after hours the following morning. If patient is still in the ED or awaiting admission, patient will be assessed and offered referral.

Use smartphrase .CMBRIDGESTUDY to pull up template

Finally, the Area Agency on Aging (AAA) workflow shows how the community partner interacts with patients and service providers to ensure that patients receive beneficial community services.



Technology Tip:

Incorporating screening and referral mechanisms into your acute care setting's electronic medical record may help ensure greater uptake and sustainability of your process. The process to have screening questions added to an EMR can be lengthy, so start making connections to IT early on in the process.

E. TRAINING STAFF

Providing ongoing education and training to clinical staff on food insecurity and the screening process accomplishes several important goals:

- ✓ Awareness: engaging staff early-on is an opportunity for education. Focusing on the need for your intervention builds a sense of urgency, which is crucial to sustaining change.[4]
- ✓ Self-efficacy: staff who understand the why and how of food insecurity screening are more likely to adapt the practice.
- ✓ Staff who feel the urgency to act on food insecurity and understand the vision and process will be key to success: they may be early adopters and informal leaders who become part of your guiding coalition.[4]

Consider the following knowledge areas when developing a training:

Script & Screening Questions	It can seem abrupt to launch into screening questions with a cursory intro and most staff won't feel ready to "wing it" with their own introduction. A simple script serves as a set of training wheels to help staff develop confidence with the screening. Devising a simple script will be an iterative process. Don't be afraid to test out a few versions. ***[see evolution of a simple script, below]***
How to document results	Develop very clear guidance about where results should be documented. If staff document in the EHR, create step by step instructions on where and how to document. Be ready to sit down with implementing staff and make sure your instructions are clear and straightforward before disseminating them.
What to do if a patient screens positive	In addition to documentation, a positive screen may require new processes and communication between teams. Test, refine, and develop protocols for positive screens. **In the companion toolkit, you will find an example one-pager with instructions on documenting screening results and steps to take if a patient screens positive.**
How to arrange handoff to community partner	How will you securely transmit patient information from your acute care setting to a community partner? What information does the community partner need to make contact with the patient? Create training materials that outline these specific steps.

Technology Tip:

Be aware of HIPAA compliance issues and community-based organization's ability to receive referrals. Community partners may need to be HIPAA-covered to receive referrals directly from a health care setting

1.0 ASSESS | 2.0 PREPARE | 3.0 IMPLEMENT | 4.0 EVALUATE

An Ongoing Process

Training will occur formally and informally over the course of your implementation. You will also learn what works and what doesn't work as you onboard staff and can adjust training accordingly. As you launch, observe screenings and get feedback from staff: you may be surprised about gaps in knowledge and areas for improvement!

Technology Tip:

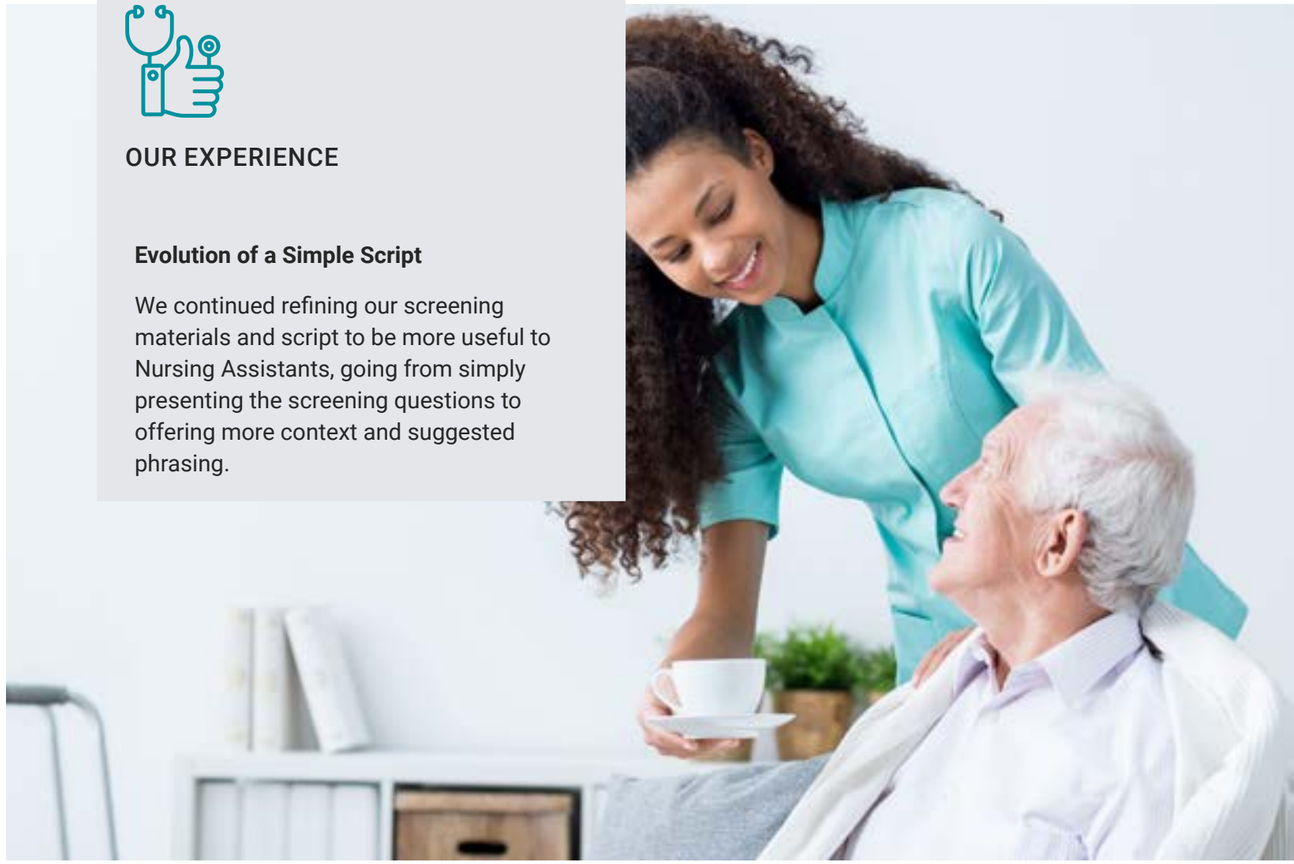
EHR documentation & system updates

EHR systems go through regular changes and updates, introducing documentation opportunities and challenges. Stay in touch with IT system administrators and sign up for email alerts to stay ahead of the curve on upcoming updates.

OUR EXPERIENCE

Evolution of a Simple Script

We continued refining our screening materials and script to be more useful to Nursing Assistants, going from simply presenting the screening questions to offering more context and suggested phrasing.



www.westhealth.org | www.unc.edu

Please tell me if each statement is often, sometimes, or never true for your household in the last 12 months.

1. We worried whether our food would run out before we got money to buy more.

☐ Often ☐ Sometimes ☐ Never true

2. The food we bought just didn't last and we didn't have money to get more.

☐ Often ☐ Sometimes ☐ Never true

***Scoring:** Positive if patien answers "often" or "sometimes" to either questi*on.

Version 1:

We noticed that staff seemed to have a hard time explaining what they were asking and why. It was confusing for both staff and patients.

Food Insecurity

"I'm going to read you two statements about food insecurity. Can you tell me if each statement is often, sometimes, or never true for you and your household in the last year?"

1. We worried whether our food would run out before we got money to buy more.

a. Is this often true, sometimes true, or never true?

2. The food we bought just didn't last and we didn't have money to get more.

a. Is this often true, sometimes true, or never true?

Patient is positive for food insecurity if they answer often or sometimes to either of the questions.

"Thank you for answering my questions today!"

Version 2:

It made sense to introduce food insecurity, and we also found that staff liked the softer ask to introduce the questions more. However, after observing a few screenings, we thought it would help staff to add some detail that established the screening as an ED-wide initiative.

BRIDGE Study Screening Questions for ED Nursing Assistants

"Hello! My name is ..... We are doing a new screening with all of our senior patients about nutrition and food insecurity. Is it okay if I ask you a few questions?"

"I'm going to read you two statements about food insecurity. Can you tell me if each statement is often, sometimes, or never true for you and your household in the last year?"

1. We worried whether our food would run out before we got money to buy more.

a. Is this often true, sometimes true, or never true?

2. The food we bought just didn't last and we didn't have money to get more.

a. Is this often true, sometimes true, or never true?

Patient is positive for food insecurity if they answer often or sometimes to either of the questions.

"Thank you for answering my questions today!"

If positive for food insecurity: **"Thank you for sharing that with me. One of my colleagues in care management will come down to talk with you about resources that might be available to you."**

Version 3:

We had softened the language, workshopped an intro, but observed that if a patient screened positive, sometime staff struggled to figure out how much to say: is it better to say thanks and leave or explain all the next steps, which could seem overwhelming! This version seemed to work well and helped staff get comfortable with the screening.

Thinking Outside of the Box (and Outside of the Conference Room): Training in an Acute Care Setting

Training in an acute care setting can be challenging! It may not always be easy to get a large group together for an in-person training. Below are some ways to find opportunities to train and educate staff. Also keep in mind the importance of having a guiding coalition: early adopters, clinical champions, and formal/informal leaders who are well-trained and can train other staff. Consider the opportunities for training in your setting:

- ✓ What standing meetings are on the calendar?
- ✓ Where do people gather to socialize, take breaks, or meet informally?
- ✓ What e-mail listservs does your department use? Who reads them?

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Section 3: Prepare

WELCOME TO SECTION 3:

IMPLEMENT

In this section of the implementation guide, you will apply learnings from Section 1 and your protocols and plans from Section 2 to launch and implement your food insecurity screening and referral program in a real-world setting. This section tackles implementation with the following steps:

01	02	03	04
Pilot Testing	Using Tools to Strengthen Implementation	Launching Your Screening: The Early Phase of Implementation	Closing the Loop and Follow-up

Following these steps will help you take the plunge from planning to screening.

PART 1:

Pilot Testing

Once you've developed workflows, you'll want to test them in real-time. When you test drive your process, you'll likely find unexpected challenges and room for improvement—this is a good thing. It is far easier to identify and adapt to problems early on than after you've launched widely.

Pilot Testing

Pilot testing is like a dress rehearsal for your intervention's launch; with just a small number of individuals, you can run through and study the planned intervention and identifying any challenges or barriers that arise when an intervention is tested in real time.1 With pilot testing you can quickly gather data about how well the screening works, identify areas for improvement, and make changes before a large-scale roll out.

Training Opportunity

As you learned in section 2, it is important to seek out ongoing opportunities to train and onboard staff. Your food insecurity screening and referral program likely involves new processes such as contacting a hospital case manager, making referrals to a community partner, new EHR documentation, and use of a new screening tool. Walk through any new steps with staff before you start your pilot test including the screening questions and documentation steps. Pilot testing in an acute care setting can be pragmatic—finding even a 10 minute block to do a training and screening can help onboard staff and provide you with valuable pilot data.

Pilot testing is an opportunity to further engage stakeholders and early adopters; by learning from the expertise of clinical staff, you offer an active role in co-designing the implementation of the screening. Select a few members of your clinical staff with whom you'll pilot test your screening process.

OUR EXPERIENCE

At UNC, we worked both one-on-one or in pairs when Nursing Assistants were available. We conducted repeat pilot testing with staff as small changes were made to processes. We created training materials to help with pilot testing, including detailed screening and referral training manuals, smaller one-page info sheets, and post-it note sized sheets with key contact information that could be taped to Nursing Assistant Work stations.

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Observing All Parts of the Screening Process.

Ask to shadow a member of the clinical staff as they screen several patients. Doing so will give you insight into how well the intervention functions: challenges staff may face, receptivity among patients, and the degree to which the screening and documentation fits in with staff's workflow. Observe with an eye towards logistical, technical, and communication issues. When possible, elicit feedback from patients and staff about the screening and trouble shoot any technical or logistical issues that arise (see Figure 1)

There is a lot to think about during a pilot test, and several questions that you'll want to answer across categories. Below are some questions to get you started as you go through the pilot testing process and observe screens. This information should be gathered by members of the implementing team or a clinical champion. Taking notes during and immediately after the screening will help keep observations fresh and it may be helpful to develop a template for pilot testing notes. Lastly, if possible, engage multiple individuals in pilot testing (both implementing team and clinical staff) as different people will likely have different observations and perspectives.

KEY QUESTIONS FOR PILOT TESTING

Observe the patient being screened. Although each patient is different, take note of how patients respond to the screening.

- How easy is it for the patient to understand the question?
- How receptive does the patient seem to answering?
- Which patients are screened? Are there patients who you won't be able to reach and if so, why? Are there patients the clinical staff seems reluctant to screen? If so, why? (Screening all ED patients is probably not appropriate or possible. Providing guidance to clinical staff regarding which patients are not appropriate for screening (e.g., critically ill) may be quite helpful).

Clinical Staff: To understand how staff approach the screening, it is helpful to both observe staff and ask them questions to better understand their perspectives.

- When during the course of a patient's ED visit do the staff screen (e.g. right away in triage, during hourly rounds, right before discharge)?
- How comfortable do staff seem with screening questions? What indicates their level of comfort to you?
- How do they introduce the screening and how comfortable do they seem doing so?
- How do they record answers (e.g. on paper, on a tablet, not recorded)?

Screening Process

- From start to finish, how long does it take to screen the patient?
- How streamlined is the documentation process? Are there shortcuts that might make it more efficient?
- What educational or training materials would help facilitate screening?

Responding to Positive Screens: Ideally, your pilot testing will include a patient who screens positive because testing the processes that link patients to the community is essential.

- What happens if a patient screens positive (e.g. does the patient agree to see a case manager or have a referral sent to a community partner)?
- How long does it take to inform the person responsible for responding to positive screens (e.g. a case manager or community partner)?
- What educational or training materials would help assist the staff who respond to positive screens?

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Referrals: Once a patient agrees to receive a referral for services, make sure that community partners can easily receive and act on referrals.

- What information is needed to complete the referral and what is the source of that information (e.g. patient, medical record, or provider)?
- How is patient information conveyed to the community partner?
- How is receipt of referral confirmed?

NEXT STEPS:

Pilot testing is an iterative process. It is important to keep track of your pilot testing efforts by taking notes, documenting observations from screening in a standardized way, and regularly sharing pilot testing data with the implementing team, administrators, and clinical champions.

Considerations

Pilot testing in an emergency department or acute care setting can be challenging due to high patient volume and unexpected high acuity events—for example, relatively quiet afternoon in an Emergency Department can change quickly if, for example, critically injured patients are brought in after an accident or an urgent care setting may have unusually high patient volume during flu season. Be flexible in your approach. Find out from stakeholders when the optimal time to pilot test might be. For example, if volume tends to be lower earlier in the morning, that may be the best to test and reflect with staff.

Consider having a few members of the implementation team take part in pilot tests so you can compare results and impressions. Additionally, as you reflect on your observations, be sure to check your impressions with clinical staff by engaging in member checking.

Member checking is simply a process of getting feedback on your impression or belief with frontline implementing staff. Before going forward with an adaptation or new plan, reach out to your stakeholders with questions such as:

- ✓ *"It seems like most of your team prefers not to carry a clipboard or roll a computer monitor into patient rooms (or this is not part of their usual workflow). Is that assumption correct? Would it be useful to have a small ID badge card with the questions and documentation instructions?"*
- ✓ *"We noticed that patients seemed to respond better when the reason for the screening was explained. Is that consistent with your experience? Would you and your team like to have a short script explaining the screening?"*
- ✓ *"During pilot testing, the nursing assistants we talked to hadn't used the hospital paging system before. What's the best way to disseminate step-by-step instructions on how to send a page?"*

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OUR EXPERIENCE

At UNC, we first pilot tested the screening with a few nursing assistants who were identified by nurse managers as reliable and highly motivated and later pilot tested with a range of clinical staff based on experience and willingness to contribute to a new project. Later testing with staff who were somewhat less receptive created an opportunity to develop buy-in. We found that most staff who were initially reluctant to screen were more open after they became more familiar with the process and learned that it was neither time intensive nor intrusive for patients.

From observations of patients, we observed that questions could be easily understood. However, we also noticed that there was a need for an introduction that explained and normalized the screening process to increase the comfort of patients and family members who were in the room. It was important to communicate that the screening was a universal screening for almost all patients 60 and older and an ED priority—not something for which the patient was being singled out. Analyzing the ED Patient Census showed us that about 15% of patients in the ED at any time were there for psychiatric complaints and altered mental status. Because we wanted to ensure that patients could reliably provide useful and accurate information and that the community partner was equipped to serve them. These patients were not included in the initial implementation.

Clinical staff varied in their comfort level with the screening questions. Prior to participating in UNC BRIDGE, most nursing assistants did not discuss social determinants of health with patients. Some nursing assistants were concerned that questions would be too intrusive to patients or that patients would be confused about why they were being asked; others agreed that there was significant need among senior patients and that screening for food insecurity was important. Another small cohort of nursing assistants were in nursing school, where topics like social determinants of health and food insecurity were covered in coursework. Our goal was to help those who were hesitant to screen develop a sense of efficacy with the BRIDGE process so that they would understand the process, see the value of UNC BRIDGE and screen consistently.

Screening questions were available in Epic, the hospital's EHR, but we learned through pilot testing that most nursing assistants did not bring a computer or tablet into patient rooms so they did not have access to the screening questions via the EHR when interacting with patients. We realized we would need a convenient way for them to access the screening questions while they got familiar with the process. Some clinical staff recorded answers on a small sheet of paper, or on their disposable gloves. Because the Hunger Vital Sign screening tool is only two questions, some nursing assistants preferred to just remember the answers and enter them into Epic after leaving the patient room. Most clinical staff combined food insecurity screening with routine patient care such as checking vital signs.

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They typically asked the questions once a patient was somewhat settled and had had an initial nursing or physician assessment.

It was occasionally challenging to assess the length of the entire screening process, because many nursing assistants completed other patient care tasks simultaneous with the completion of screening (e.g., asking screening questions while collecting the blood pressure measurement). However, the questions themselves generally took less than a minute to ask. Documentation (which in our system is a check box within a social determinants of health section in the EHR and a brief note) was also a relatively short process, particularly if staff were already documenting vital signs or other patient updates. We identified faster ways to access the notes section, where nursing assistants entered screening results, and we updated our guidance accordingly.

When it came to positive screens, we found a lot of room for improvement. Per protocol, nursing assistants paged Emergency Department Care Managers (either a social worker or RN) when a patient screened positive. We learned that Care Managers needed to know the patient's name and bed number, since bed number alone could lead them to the wrong patient. They also wanted to know which NA sent the screen, as it gave them a chance to learn more about the patient before going in, or to follow up with the NA afterward. Adding in the simple guidance to include the screener name in the page helped the nursing assistants and care managers function more as a team and "close the loop" on patients in the ED.

Changes Made After Initial Pilot Tests

- ✓ Develop a script with a standard introduction about the screening process—something as simple as "we're doing a new screening with all of our patients over 60" helped explain and normalize the process.
- ✓ Develop small cards with screening questions and documentation steps that nursing assistants clip onto their ID badges as an easy reference.
- ✓ Streamline directions for documentation.
- ✓ Develop a standard example page to care managers for positive screens that includes patient name, bed number, and the screener's name.

PART 2:

Using Tools to Strengthen Implementation

Adjustments are inevitably necessary when a new process is introduced. What works on paper often functions differently in real-world settings.

In this section we will describes strategies to help you stay on track as you make and track changes in the early implementation period.

PDSA Cycles

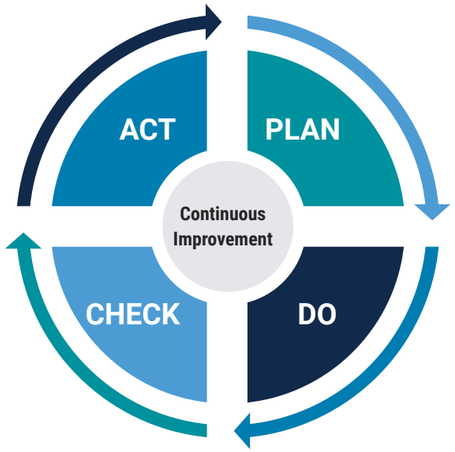
There are many quality improvement (QI) tools that will help you quickly iterate and effectively implement your food insecurity screening program. Rapid Plan-Do-Study-Act PDSA cycles are one of the most commonly used QI tools in healthcare organizations and help teams improve processes from surgery safety to Emergency Department waiting times. [28]

You can download PDSA tools from QI websites including the Institute for Healthcare Improvement (IHI).[29]

A PDSA Cycle helps you conduct a small test of change. For example, although we trained clinical staff to conduct the screens, a few months into implementation of our program, we had a hunch that motivation had waned. From reading about implementation, we learned that most new initiatives suffer from under-communication of their visions significantly.[4] To test our assumption, we conducted a PDSA Cycle test. We decided to test out a new communication strategy that involves weekly updates and reminders from trusted clinical leaders in the Emergency Department.

The worksheet below is available from the Center for Medicare and Medicaid Services (CMS). [30]

Note that an optimal PDSA approach requires data on screening rates obtained before and after a change is made. Ideally, you will be able to obtain screening data on a regular basis from your health care settings EHR or IT administrators. However, if your screening is not integrated into your site's EHR you can consider an audit of paper forms, staff feedback on the process, information on referral rates (which in our system are about 5%-10% of total screens), or spot checking some charts to assess screening completion to assess the process.



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Before you start, consider your objective. In this case, our objective was to **increase screening rates.**

PLAN:

what exactly are you going to do?

Plan	*List out action steps along with person(s) responsible and timeline for action.*
1. What change are you testing with the PDSA cycle(s)?	**1.** We are testing a new communication strategy based on feedback from clinical staff and guidance that most initiatives under-communicate significantly. Rather than getting messages and reminders from the study team, nursing assistants will receive regular email reminders from trusted leaders in their department including the clinical champion and the nurse manager.
2. What do you predict will happen and why?	**2.** We predict that messages conveying support for the screening from trusted internal staff will create a sense of motivation and set an expectation that screening for food insecurity is an essential part of department workflows.
3. Who will be involved in this PDSA? (e.g., one staff member or resident, one shift?). Whenever feasible, it will be helpful to involve direct care staff.	**3.** The study coordinator will draft emails and messages, as well as provide updated screening numbers and case studies. The ED Research Champion will send out weekly motivational emails. The Nurse Manager will send out additional reminders to reinforce the screening.
4. Plan a small test of change.	**4.** Small test of change: send out emails from ED Research Champion weekly and Nurse Manager bi-weekly.
5. How long will the change take to implement?	**5.** We will collaborate on messaging with ED Research Champion, Nurse Manager, and other clinical stakeholders. We will assess the screening rates 1 month from first email.
6. What resources will they need?	**6.** Resources needed will include data on screening to share with clinical staff and email messaging.
7. What data need to be collected?	**7.** Data collection needs include feedback from the staff (qualitative), and data warehouse report on screening rates (quantitative).

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DO:

Put your small test of change in place

Do	*Describe what actually happened when you ran the test.*
Carry out the test on a small scale. Document observations, including any problems and unexpected findings. Collect data you identified as needed during the "plan" stage.	**Study Coordinator** drafted email with messaging about screening: urgent need, success stories, and thanking staff who had screened. **Nurse Manager** sent out e-mail on 11/25/2019 with instructions and encouragement. **ED Research Champion** sent out a follow-up email on 12/6/2019 to encourage screening and singling out clinical staff who were screening regularly. An additional instructional message was sent out by ED Research Champion based on feedback from care managers.

STUDY:

Analyze your results. How do they compare to what you predicted at the start of the cycle?

Study	*Describe the measured results and how they compared to the predictions.*
1. Study and analyze the data. Determine if the change resulted in the expected outcome. **2.** Were there implementation lessons? **3.** Summarize what was learned. Look for: unintended consequences, surprises, successes, failures.	**1.** Feedback from staff showed us that people paid attention to the emails from the ED Research Champion and Nurse Manager; several people mentioned the email reminders as well as incentives discussed in the emails. We also observed behavior changes. For example, nursing assistants who were not regular screeners prior to small test of change were observed screening more regularly (e.g. having a list of eligible patients; making a plan to screen). Our **screening rate data** showed positive improvements as well: screenings increased from **49 in November to 87 in December and there were 5 positive screens in the first 2 weeks of December alone.** **2.** During a **periodic reflection**, a nursing assistant stated that the communication from the Nurse Manager was a turning point at which more nursing assistants started screening. **3.** For implementation moving forward, well-respected clinical staff and department leaders can be key messengers. Sending out communications via departmental listservs is an efficient way to continue reinforcing messages. Messages do not need to be long or highly complex—a simple reminder to screen, some data on screening rates, and thank you seems sufficient.

ACT:

Determine what modifications you will make moving forward. Did your test work well, leading you to adopt the change? Is more study and further adaptation needed? Or will you not incorporate this change into the standard process and try something new?

Act	*Describe what modifications to the plan will be made for the next cycle from what you learned.*
Based on what was learned from the test: Adapt – modify the changes and repeat PDSA cycles. ■ Adopt – consider expanding the changes in your organization to additional residents, staff, and units. ■ Abandon – change your approach and repeat PDSA cycle.	We will adopt this change and expand it. Clinical staff respond well to continued encouragement from respected nurses, whether or not the messages come from their direct supervisors. Repetition of the message is very valuable, and the more we can keep food insecurity screening on clinical staff's radar, the better. Regular communication from trusted departmental leaders is a good complement to the implementing team's one-on-one training efforts.

Adaptation Logs

Tracking adaptions is an essential part of implementation research. Understanding why an intervention works or fails in a particular setting requires a knowledge of the inner and outer context of the implementing site; as well as detailed observation of how the intervention was implemented—including site-specific changes that were made.[31] Adaptation is natural and necessary to ensure feasibility and cultural fit in your community; you'll learn as you go about what works and what doesn't.[21] Even for sites that are simply looking to implement a process (and not do research on the implementation), having some record of what changes were made, when they were made, and if they were helpful – is important to guide optimization of the process and ensure that future efforts can be informed by past experience.

Characteristics of your specific acute care setting as well as the community it serves will influence your implementation. These are described as Inner Setting Characteristics, those specific to your unique implementation environment, and Outer Setting Characteristics, those specific to the community and broader health care system.

Structural Characteristics:	Culture:	Relative priority:
the formal and informal organizations and hierarchy within your acute care setting, as well its age, maturity and size	the values and norms that mold your acute care setting	the perceived importance of screening for and addressing food insecurity in the organization.

Outer Setting Characteristics

Cosmopolitanism:	Patient needs and resources:	Peer pressure:
the degree to which your acute care setting is formally and informally connected to other health care organizations or community groups in your area	the extent to which the needs of patients, as well as barriers and facilitators to meeting those needs, are known and prioritized by your organization.	the degree to which your organization feels motivated to implement a food insecurity screening and referral program because of similar programs enacted in competitor or peer organizations.

An adaptation log is a simple, low-tech way of tracking changes to your food insecurity screening, allowing you to observe the evolution of your program from design to launch and beyond. A sample from our experience at UNC Chapel Hill is below and the worksheet is provided in the Toolkit.

Date	Adapted By (Initials)	Description of Adaptation	Phase of Intervention	Planned or Unplanned	Impact of Adaptation
7/27	Study Coordinator	Disseminated standardized EHR documentation to nursing assistants.	Early intervention/ feasibility testing	Planned	Standardized and streamlined EHR documentation; facilitated data extraction.
8/23	Nursing Assistant Champion	Screening patients during ED Triage Assessment. NA Champion conducted screening while in Triage, where previously planned not to screen because it would be too burdensome.	Early intervention/ feasibility testing	Unplanned	NA screened every older adult who presented in Triage during her shift. NA felt that triage afforded a consistent opportunity to screen patients. Will allow NA to encourage screening in Triage as they are available.

PART 3:

Launching your Screening: Early Phase of Implementation

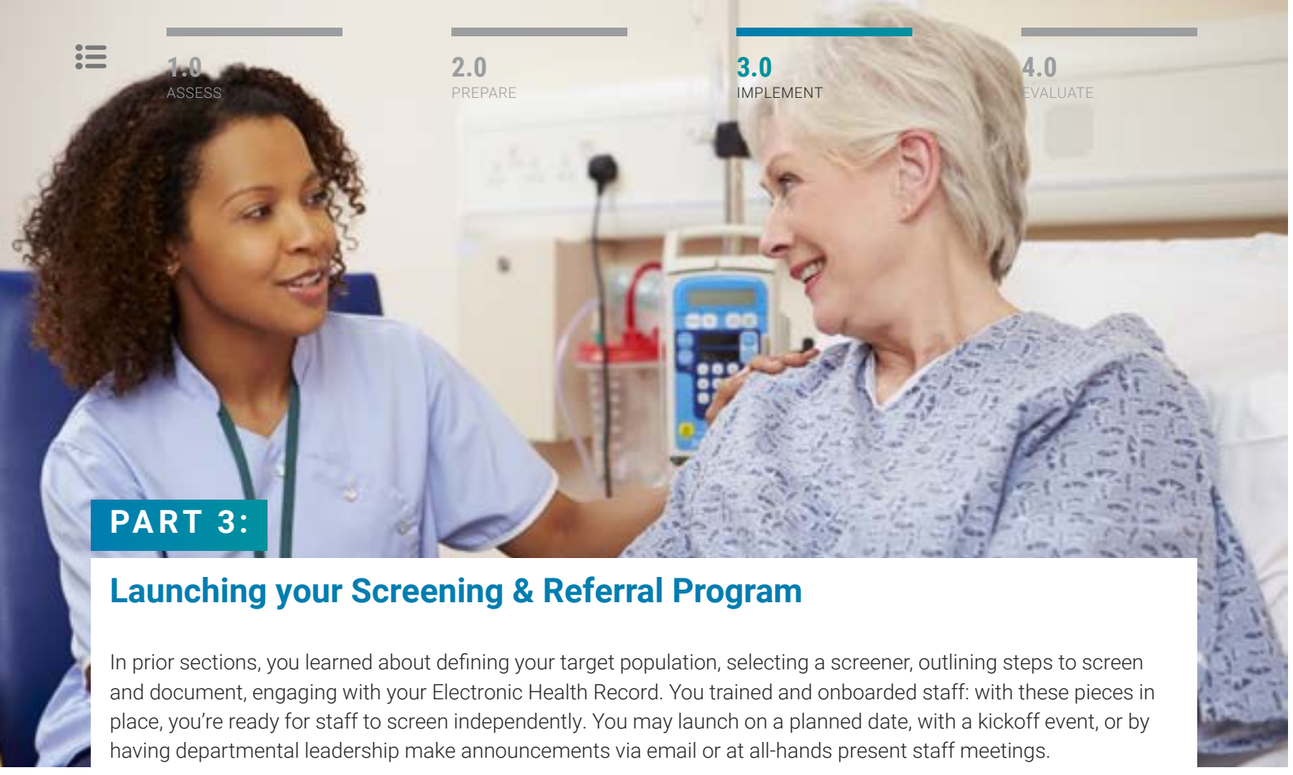
After a period of pilot testing and refining it is time to **launch your food insecurity screening and referral program,** although planned and unplanned adaptations will continue as your screening and referral program progresses.

Implementation Strategy Checklist

Your work to define your population **(section 1)**, engage your stakeholders **(section 1)**, plan workflows **(section 2)**, and develop community partnerships **(section 2)** comes together here.

Implementation Stage

Task	Who is Responsible	Initial Plan	Modification
Screen all patients in target demographic			
Review & document screener results			
Determine if the patient wants assistance or help			
Offer additional resources as needed			
Make referral to community partner			
Arrange and deliver services in the community			
Follow up, track outcomes, and “close the loop”			
Data collection			



PART 3:

Launching your Screening & Referral Program

In prior sections, you learned about defining your target population, selecting a screener, outlining steps to screen and document, engaging with your Electronic Health Record. You trained and onboarded staff: with these pieces in place, you're ready for staff to screen independently. You may launch on a planned date, with a kickoff event, or by having departmental leadership make announcements via email or at all-hands present staff meetings.

Change is Natural

During pilot testing, you most likely made adaptations and changed practices. Stay open to making changes as needed based on staff and patient feedback. You can use tools like PDSA cycles and adaptation logs to help you keep track of modifications.

Common modifications after launch might include:

- Revising the introduction to the screener to make it clearer
- Updating documentation to streamline processes
- Administration method (read aloud vs. filled out by patient)
- Alteration of where and when during the visit the screening is done
- Modifying the wording of questions

As you adapt your processes, be sure to track improvements---are your changes resulting in more screening, referrals, or more staff buy-in?

Practical Tip

There are many resources that can help you refine and strengthen your implementation approach. Look for evidence-based ***implementation strategies*** from Convene Teams, Provide Interactive Assistance, or ***CFIR.***

Practical Considerations for Screening Older Adults

- Communication barriers: Be mindful of hearing, auditory processing, and speech challenges that older patients may face. If available, a patient proxy (e.g. a family member or caregiver) may be able to help by answering on behalf of the patient or facilitating communication. Clarify with all parties involved—social workers, nurses, and community partners—the role of patient proxies in consenting to referrals and setting up services. Make sure that hospital social workers are permitted to send referrals with permission from family members of caregivers and the community partner is able to arrange services at the request of a family member or caregiver, rather than the patient themselves.
- Social stigma, attitude towards social services, and other reasons for declines: Food insecurity is complex and can be a sensitive issue. Not every older adult who is food insecure will want to admit it, and some who screen positive for food insecurity will not be open to receiving services. Having some introductory language that normalizes both the screening process and the problem of food insecurity can help reduce stigma and increase patient willingness to report a problem and receive services. Personal attitudes towards receiving services may impact their choice to not be linked to services—a phenomenon described in the literature.[33,34] Patients may feel pride that makes them reluctant to accept assistance or feel concerned maintaining their privacy and independence. Remember, receiving community-based services is a personal choice. Offer patients other resources, including handouts so that they can contact providers independently if they choose.
- Language barriers: During the planning phase, you learned about the demographics of your patient population. Find out what interpreting services are available in your setting, and if versions of your screener can be made available in other languages. If you have a significant population of a speakers of a certain language, make sure that screening tools are available in that language and that community partners are able to serve this community. If your health care setting sees smaller numbers of speakers of other languages, develop a list of interpreters of those languages who you can call on. Your health care setting may contract with interpreters or offer tele-interpretation.
- Considerations for acute care settings: Many of the older adults who come into your urgent care or Emergency Department are experiencing discomfort, such as pain from a fall, nausea, or a concerning symptom like chest pain. Patients may not be receptive to screening because they're already feeling stressed, sick, or overwhelmed. However, clinical staff should be well-trained to engage compassionately with patients and pick up cues about patient distress. If they are not, look for resources to increase training in this area. Also, build in flexibility as to when the screening takes place during a patient encounter. Doing so is appropriate given the complexities of caring for acutely ill patients: clinical staff should screen once they feel the patient is likely to be receptive.

Ongoing Engagement and Reinforcement: Sharing Patient Stories, Super Screeners, and Incentives

Never underestimate the value of communicating the mission of your food insecurity program to clinical staff who are involved in screening, as well as administrative stakeholders. Highlighting program successes can help to build staff engagement while reinforcing the value of screening and referring for food insecurity. Seek out stories of patients whose lives have been positively impacted by being linked to community-based services. Elicit stories and experiences from staff about patient responses to screening: whether or not they need services, many patients are grateful that senior social needs are being prioritized! In the planning phase, you may have learned about how staff share news and information; use these communication channels—whether email listservs, staff meetings, pre-shift huddles, or flyers in public areas—to share the stories and successes of your food insecurity program.

Other opportunities to promote engagement among implementing staff include offering small incentives when screening milestones are met, such as gift cards to a local coffee shop, ordering crowd-pleasing treats for clinical staff, or raffling off prizes, or highlighting individual staff members for their efforts, like sending out a congratulatory email on department listserv for a clinical staff member who screened 50 patients or who helped an individual with significant needs.

Referrals to Community Partners

Your community partner/partners may need support and guidance early in the implementation phase, particularly if they haven't had a partnership with a health care organization before, or if, as a result of successful screening, they are managing a larger volume of referrals than usual.

Volume of Referrals:

Check in on the volume of referrals: How many referrals are they receiving weekly? Is it more or less than expected? If higher, make sure the volume can still be managed. Will the community partner be able to respond to each referral? To conduct any follow up procedures? New processes may be easier and take less time once they become more familiar. Continue checking in about volume as needed.

Patient Information:

Are referrals arriving via pre-established pathways (e.g. a secure fax or email)? If not, examine the referral processes used by both the health care setting and community partner. For example, has community partner contact information been widely disseminated? Are the steps to send referrals widely understood? Because private patient information is being sent, it is crucial to work out any issues with the sending and receiving of referrals.

Patient Contact:

Do referrals contain the relevant information to contact and arrange services for patients? Are staff of the community partner able to contact patients in a timely way? If community partners are unable to contact patients, consider changing referral protocol, for example, asking patients for an alternate contact or verifying phone numbers, rather than relying on a number entered into to the EHR which may be incorrect or out of date. Find out if any additional information should be provided in the referral such as county of residence or living arrangement (e.g. community-dwelling vs. facility-dwelling)

Services:

Are patients amenable to receiving services? Are services immediately available for patients or is there a waitlist? Do available services match patient needs or are there other needs beyond nutrition to address? How long does it take to begin delivering services, when desired? Because of time required to contact patient after a referral, steps required to enroll or complete an intake process, and other logistics, it might take more than a week for a patient to begin receiving services. It is good practice to record an estimated start date for when services can begin. The protocol for your screening and referral program in the event of significant delay (e.g. more than 10 days) will depend on the resources of your program. If funds are available, they could be used to provide services until community partners can provide services sustainably. Alternative stop-gap services, like boxed frozen meals, are another option if services are not immediately available in the patient's community. Establishing a plan for what to do if services are not available should be a part of your discussions with community partner in the planning phase. The scope of your program will also inform how you respond to additional unmet social needs. Determine in the planning stage how community partners should respond if a patient requires additional services like home health, housing assistance, or legal advice.

Funding:

Are there reimbursement processes available to cover the cost of services provided by community-based organizations, such as Meals on Wheels, senior transportation, or congregate meals? If so, are these reimbursements being received by the partner organization consistently and in a timely manner? If there are issues, review invoice and reimbursement processes to identify bottlenecks.

PART 4:

Close the Loop and Follow Up

In section 2, you outlined your plans for patient follow-up. Depending on the scope of your screening and referral program, you may focus on simply "closing the loop," meaning that you determine if a referral resulted in services. This determination can be based on reports from community partners about the outcome of referrals. However, if time and resources allow, you may decide to do a more in depth follow up and assess the effect of services and other patient-reported outcomes and how well they met patient needs. The depth of your follow-up process depends on the resources and capacity of your organization and those of community partners you work with.

Seeking a Standardized Approach to Follow-Up

Those who work in human service can attest that providing services to older adults is not an entirely linear process. Nevertheless, it is helpful to develop standardized follow-up metrics and establish a clear follow-up workflow that establishes:

- Who is responsible for follow up with the patient
- What data are collected
- When follow-up occurs
- What you do with the data you collect

Eliciting Patient Feedback

Some metrics that you decide to gather to provide insight into the effect and impact of your screening include:

- Satisfaction with services—for example, "on a scale of 1-5, how satisfied are you with services?"
- Helpfulness with service—for example, "on a scale of 1-5, how helpful have services been for you?"
- Quality of life and general health—these measures can characterize your patient population; if possible, getting measures of these characteristics at two time points can help you understand the impact and make the case for your program
- Patient impression of change since receiving services: this can be a powerful indicator that services are influencing patient wellbeing
- Additional unmet social needs: such as transportation, homemaker services, legal support, or other needs that can be met by community partner

Health Care Utilization

As you look to the future, keep in mind how you can make the case for food insecurity screening and referral to different audiences. For insurers and other payors, health care utilization is a metric of interest. When following up with patients, you can document changes that happen as a result of social service interventions such as those you deploy with your program.

- Patient reported health care utilization: patients can be queried about return visits to the ER, Urgent Care, or hospital stays
- Administrative data from your health care setting's EHR can give an approximation of utilization before and after services were initiated

OUR FOLLOW-UP EXPERIENCE

At UNC, the AAA contacted patients after their ED discharge, assessed their needs, and facilitated a warm hand-off to community-based services in the patient's county. Following this, we included two points of follow-up: (1) the regional AAA checked in with the service agency and patients, and (2) the research group called patients at 3 months.

The AAA was responsible for initial follow up that included: 1) checking in with agencies to determine if services were available. If not, the AAA was able to offer funding to support up to 3 months of services for patients. 2) Once funding was agreed upon, the AAA followed-up with agencies again to determine if the patient was reached and if services were initiated. 3) After services were initiated, the AAA contacted patients to assess their satisfaction with services and ascertain if they had additional social needs.

Our study team followed-up at 3 months to assess the impact of services; we gathered both qualitative and quantitative data on quality of life, health, experience with community services, health care utilization, social support, and experiences with services.

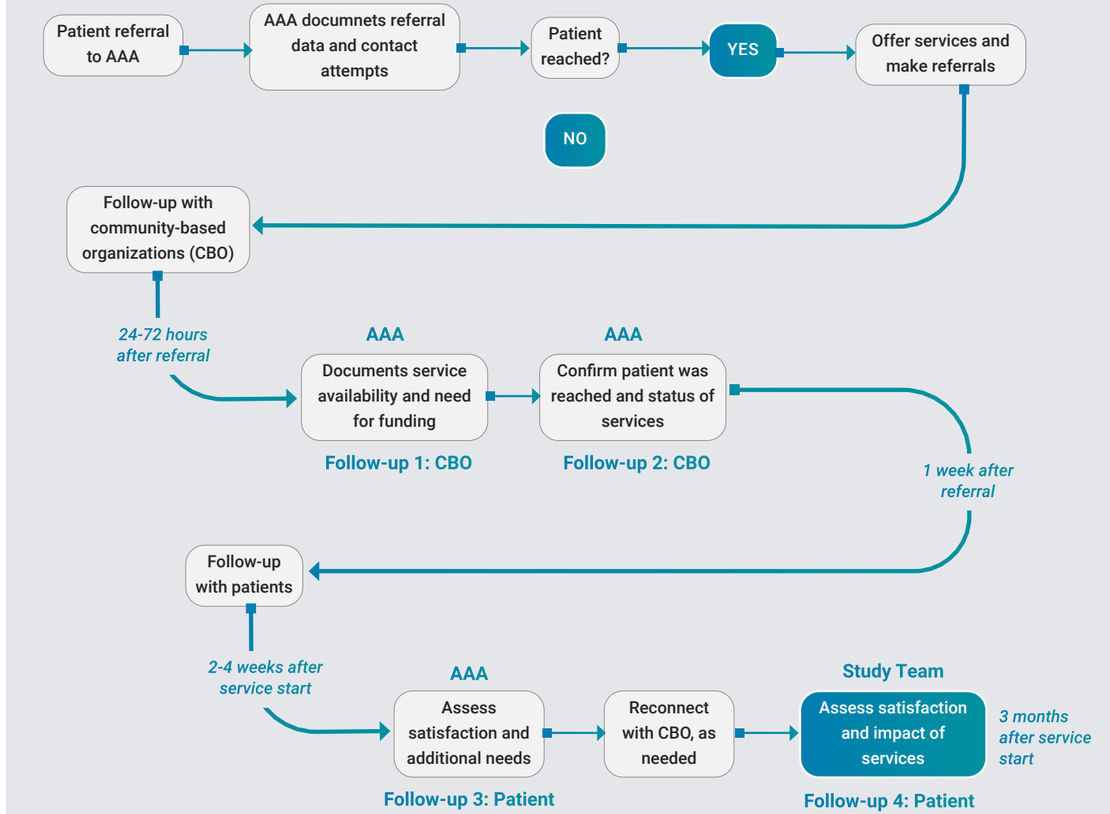
Both the study team and AAA shared a collaborative workspace in a database called REDCap to store data on referrals, patient contact, and follow-up. REDCap, which is usually used for research purposes, has advanced data security features and is HIPAA compliant. This system allowed us to track progress on the community side. If a shared database isn't an option, make a plan to receive and share updates on progress at a regular interval.

The follow-up process used at UNC was chosen because we were trying to learn as much as possible about a new implementation effort within the context of a funded study. Sites that are implementing a food insecurity screening program do not need to replicate this follow-up process. Less intensive follow-up methods for implementing sites might include:

1. Giving patients a contact within the AAA of the healthcare system to report concerns and provide feedback
2. Contacting AAA at regular intervals to confirm that referrals were received, determine if the patient was contacted and if services were provided.
3. A single follow-up with the patient to assess patient-reported outcomes
4. Additional follow-up methods as described in our work flow

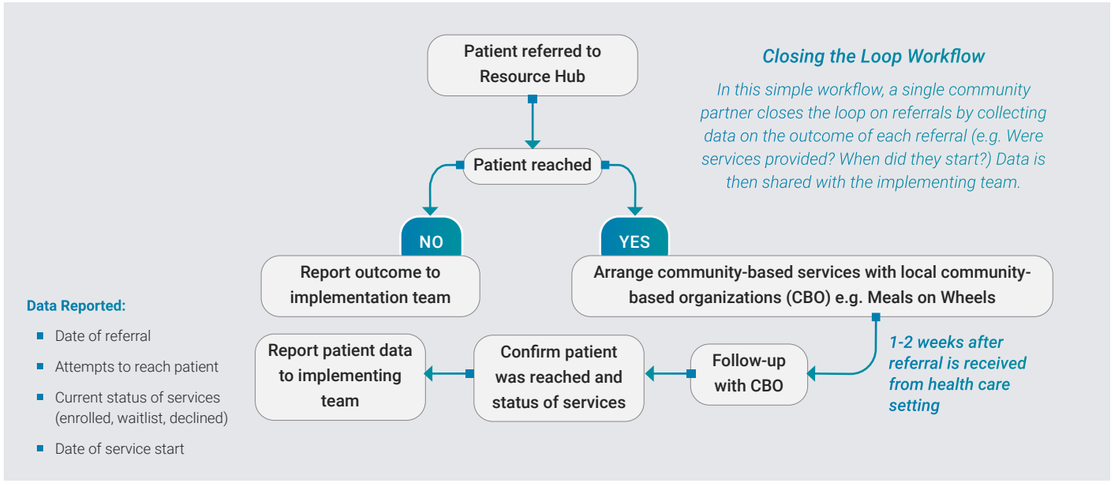
UNC BRIDGE Follow Up Workflow

In this workflow, the community partner (the AAA) determined the outcome of each subsequent referral and both the AAA and the UNC Study Team contacted patients to assess satisfaction with services and effect of services on quality of life.



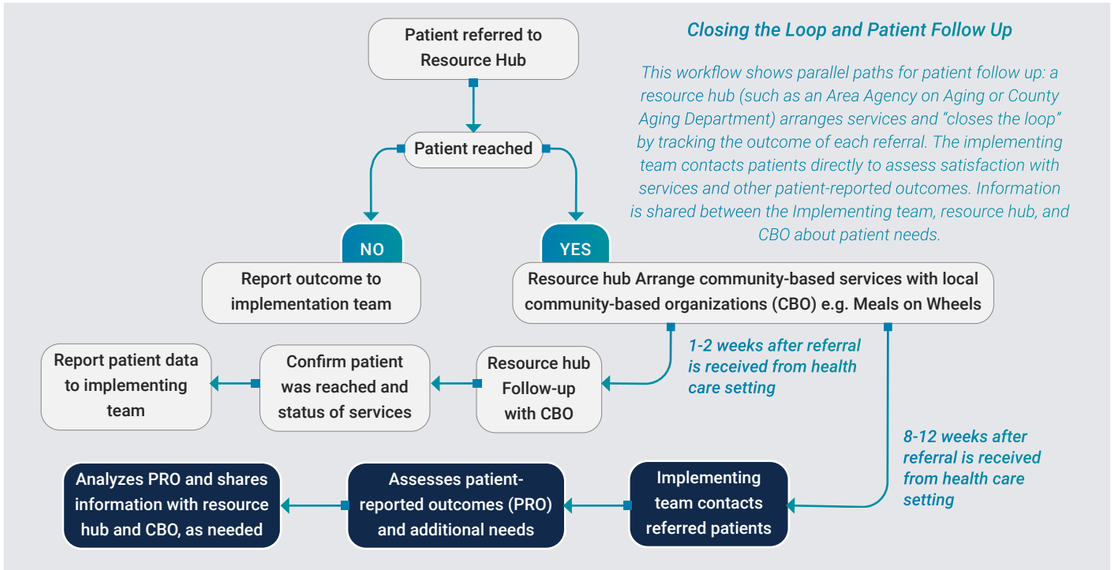
A Simple Closing the Loop Workflow

In this workflow, the community partner documents the outcome of each referral and reports to the implementing team.



A Simple Workflow for Closing the Loop and Patient Workflow

In this workflow, the community partner is responsible for determining if services were provided and the implementing team conducts a single follow-up assessment.



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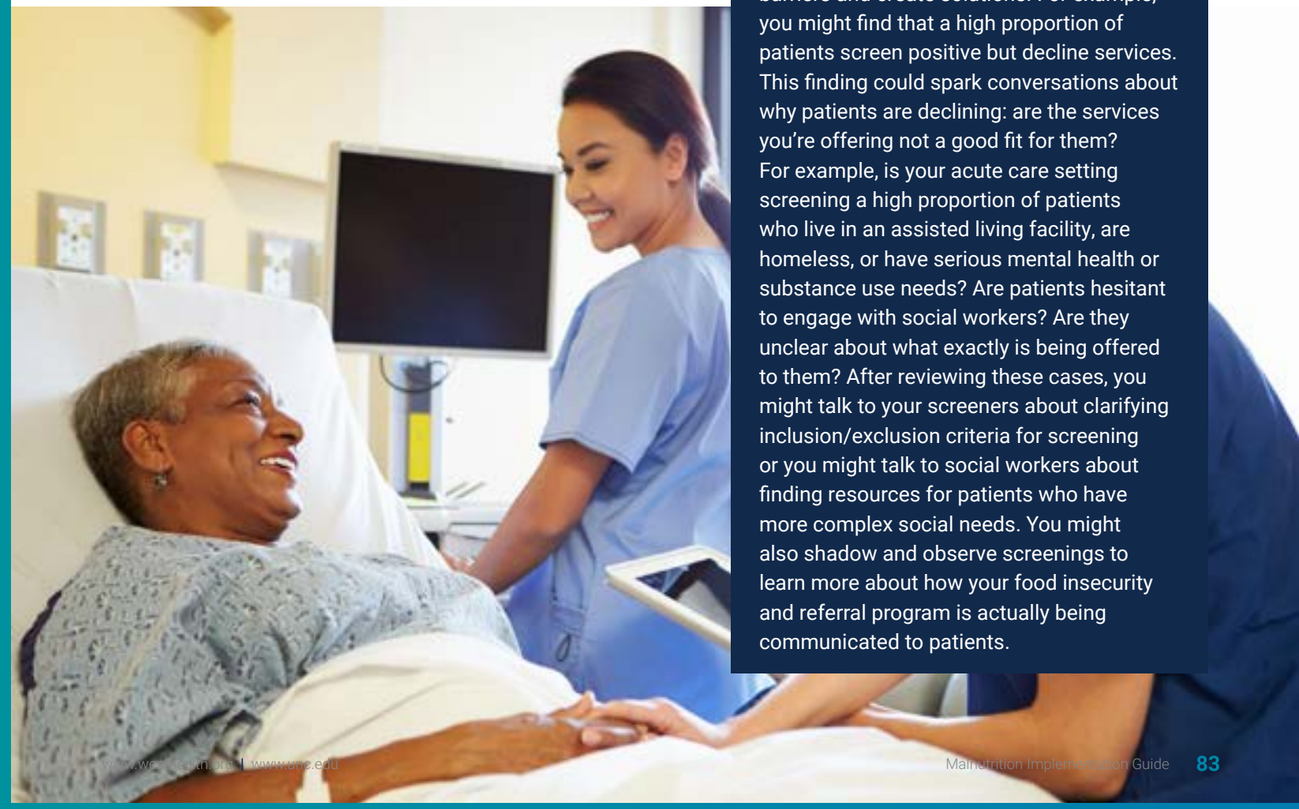
Section 4: Evaluate

WELCOME TO SECTION 4:

EVALUATE

Evaluation strategies can be included in your program planning from the start. From the outset, consider what information you'll need to have to determine whether your food insecurity screening and referral program is having a positive impact on seniors in your health care setting.

Teams undertake evaluation to gain information about the performance of a program in achieving its stated objectives. Program evaluation will help you figure out key questions as they look at their progress: is their program working? If so why? If not, why not? [35] An objective is a clear, action-oriented statement of purpose, outlining the realistic steps your organization will take to meet its goals (such as reducing senior food insecurity). A good objective is a SMART one: Specific, Achievable, Measurable, Relevant, and appropriate to your Time-Frame. [36]



Practical Tip

While you might be eagerly hoping for an overwhelmingly positive evaluation, stay open to negative results. Finding weaknesses in your program presents an opportunity to improve, using data to identify barriers and create solutions. For example, you might find that a high proportion of patients screen positive but decline services. This finding could spark conversations about why patients are declining: are the services you're offering not a good fit for them? For example, is your acute care setting screening a high proportion of patients who live in an assisted living facility, are homeless, or have serious mental health or substance use needs? Are patients hesitant to engage with social workers? Are they unclear about what exactly is being offered to them? After reviewing these cases, you might talk to your screeners about clarifying inclusion/exclusion criteria for screening or you might talk to social workers about finding resources for patients who have more complex social needs. You might also shadow and observe screenings to learn more about how your food insecurity and referral program is actually being communicated to patients.

Evaluation helps you tell the story of your work, allowing you to make the case to stakeholders, learn from initial implementation, and scale and spread. In this section, we will walk through the following sections:

01	02	03	04
What to Evaluate	How to Evaluate	Planning for Sustainability	Getting Ready to Scale & Spread

Planning your Evaluation

Evaluation can be a highly complex process; some evaluation processes require additional resources or analysis, for example, tracking healthcare utilization will likely require the acquisition and analysis of significant amounts of data. Others evaluation processes, like tracking screening rates or getting staff feedback, require comparatively fewer resources The chart below suggests some evaluation priorities that you can choose from based on the age and size of your program, and the capacity you have for evaluation.

Evaluation Goals and Priorities

	Beginner: could be included in an implementation evaluation	Intermediate: could be included in a larger evaluation of a more established program	Advanced: could be included in a full-scale impact evaluation
Track screening rates	×	×	×
Identify barriers and facilitators to implementation	×	×	×
Characterize patients who screen positive	×	×	×
Track connections with community partner, CBOs, and service delivery	×	×	×
Track types of services delivered	×	×	×
Collect patient-reported outcomes		×	×
Gather healthcare utilization data		×	×
Estimate cost effectiveness			×
Assess staff satisfaction with screening processes	×	×	×
Assess quality of communication between health care setting and community partners		×	×
Develop a plan to sustain the program	×	×	
Determine plan to scale up the program to other EDs and urgent cares within your healthcare system	×	×	

Why Evaluate?

- ✓ To monitor progress toward your goals
- ✓ To determine whether current activities are contributing towards your desired outcomes
- ✓ To monitor program effects on different groups, especially among populations with disproportionately high risk factors and adverse health outcomes
- ✓ To make the case for future funding, support, and spread of your program
- ✓ To ensure that effective practices are maintained and resources are not wasted on activities or steps that don't work

PART 1:

WHAT TO EVALUATE?

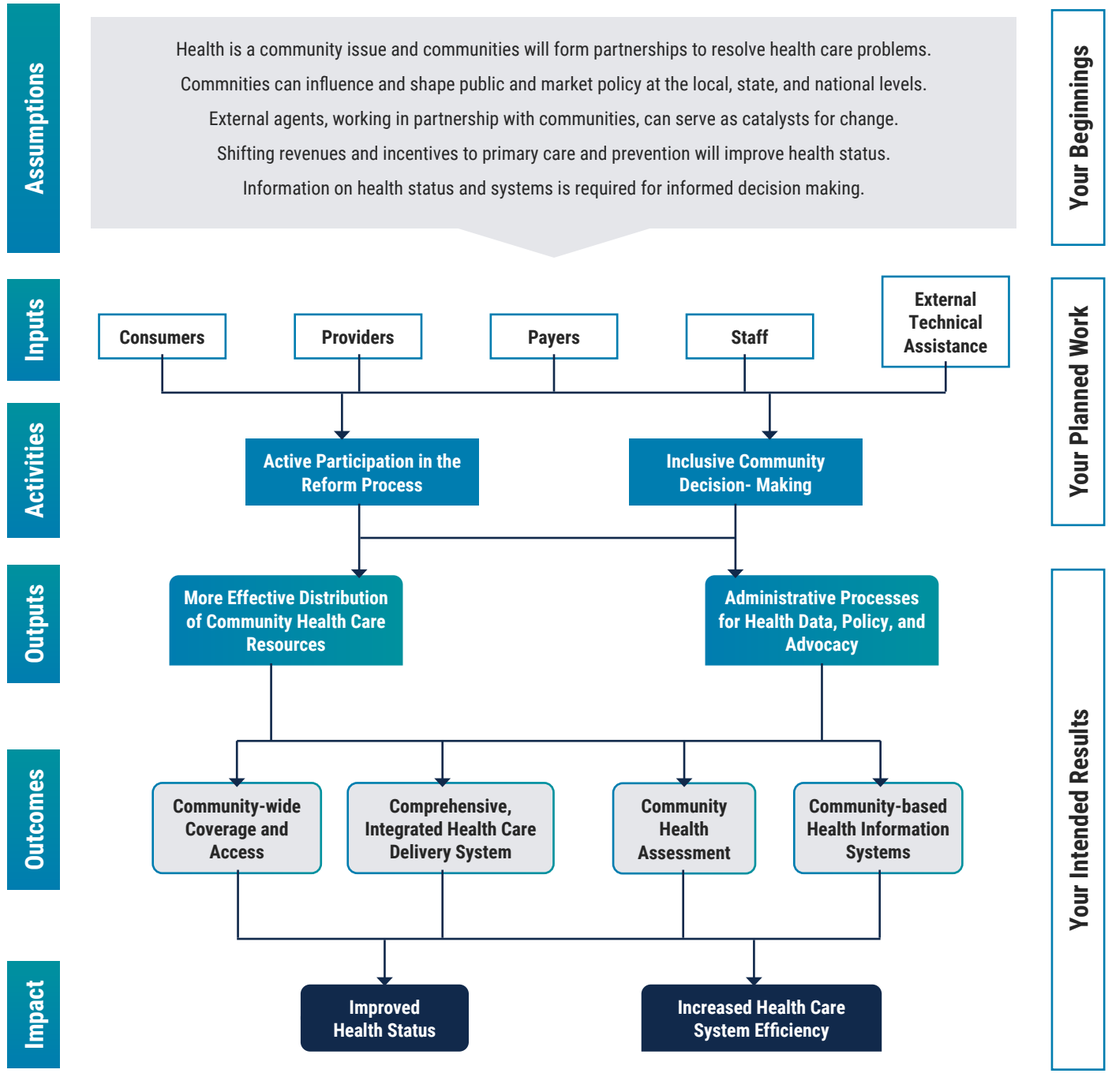
Three essential questions help guide a strong evaluation

1. Is the program working?
2. What is the impact of the program on seniors?
3. What is the value of the program to your health care system?

Evaluation can tell into success. A good way to identify objectives and outcomes (and to embed evaluation into your program plans) is to develop a *logic model.* A logic model (see example, below) is a visual representation of the activities of your program and the expected outcomes and impact of those activities, which is supported by the underlying assumptions, resources, and inputs of your program. [38]

OUR EXPERIENCE:

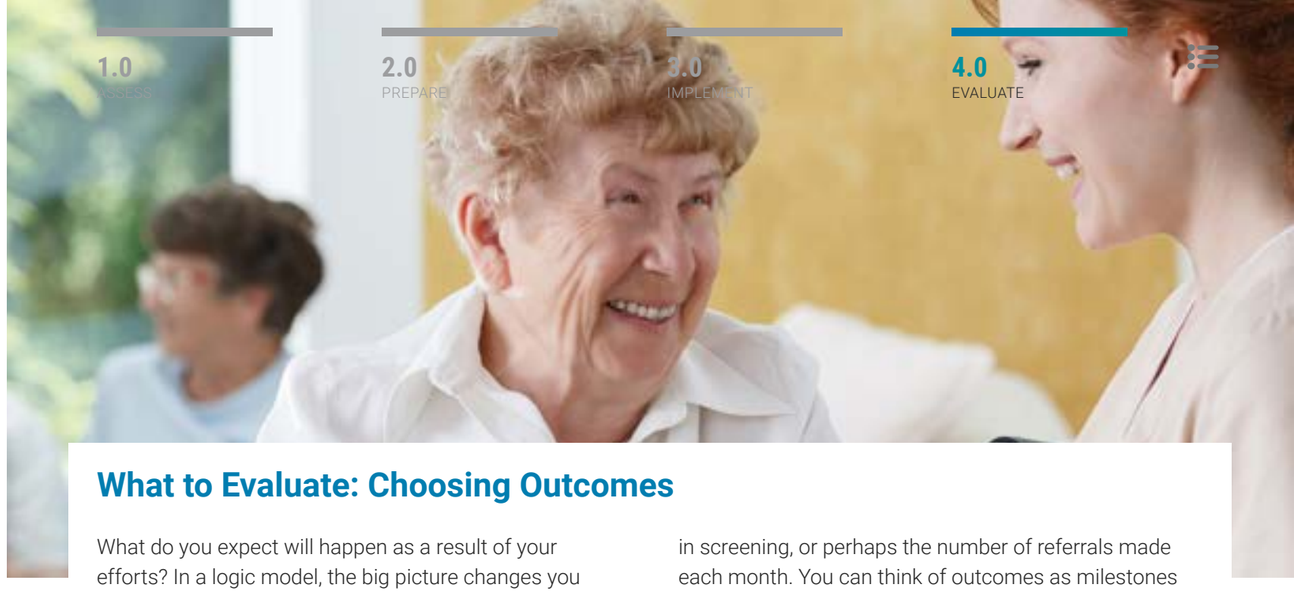
Below is a logic model we developed for the BRIDGE program at UNC. When our planning team, which consisted of a program coordinator, a physician researcher, and health services researchers, first began the process, we already had a general sense that the long-term impact of this work would be reducing food insecurity among older adults. We then outlined the steps needed to achieve that long-term impact. We began with inputs, considering all the resources we'd need to implement our planned activities. Establishing our required inputs helped us plan preliminary work, like selecting screening tools and developing staff buy-in. We next defined the specific activities that would be part of our food insecurity screening and referral process. Because UNC BRIDGE was a pilot study, our logic model activities included activities related to both screening and process evaluation. From there, we considered outputs: what should happen in the short term in our Emergency Department as a result of our activities? For UNC BRIDGE, we expected our outputs would include specific measurable changes like new documentation of food insecurity, referrals to our community partner. Outcomes and impacts can seem quite similar. Thinking about the timeline of our project helped clarify the difference for our team at UNC. If we effectively implemented a strong food insecurity screening and referral program, within a year we could expect outcomes that reflect a greater awareness of food insecurity among our ED staff, more patients being identified as food insecure, and quality of life improvements specific to the patients who are referred for services. For impacts, we looked further down the road at the big-picture changes we hope to see in our health care setting and community, like reduced incidence of food insecurity among older adults overall.



Inputs	Activities	Outputs	Outcomes	Impact
Tools ✓ Validated screening tool **People** ✓ Research staff ✓ Nursing and Social Work staff ✓ West Health Institute collaborators ✓ Area Agency on Aging staff ✓ Patients 60 and older entering the Emergency Department (ED) **Tech** ✓ REDCap Research Database ✓ Epic Access **Other** ✓ Funding ($200/ patient) for Area Agency on Aging; $300 per patient as needed for community partners	**ED Screening** ✓ Eligible patients are screened in ED ✓ Positive screened patients linked community services **Process Evaluation** ✓ Follow-up longitudinal interviews, regular reflections with ED staff and leadership ✓ Pull Epic reports on eligible patients and screening	**ED Screening** ✓ Screening documented in Epic and results reported ✓ Eligible patients linked with AAA and enrolled in appropriate community based services **Process evaluation** ✓ Screening is sustainably implemented into ED staff workflow ✓ Screening is consistently completed in ED	**ED Screening** ✓ Increased ability to identify food insecurity among older adults in ED **Linking to services** ✓ Increase in number of patients referred to AAA ✓ Increase in number of patients enrolled in community-based services ✓ Improvement in patient-reported quality of life **Process Evaluation** ✓ Screening process adopted by all stakeholders within UNC ED ✓ Screening older patients integrated as part of regular care	✓ Decrease in prevalence of food insecurity among patients 60+ presenting in ED ✓ Increase in quality of life for older adults (access to transportation, food, social support) ✓ Decrease in medical expenditures for enrolled patients ✓ Strong integration of health care and social services

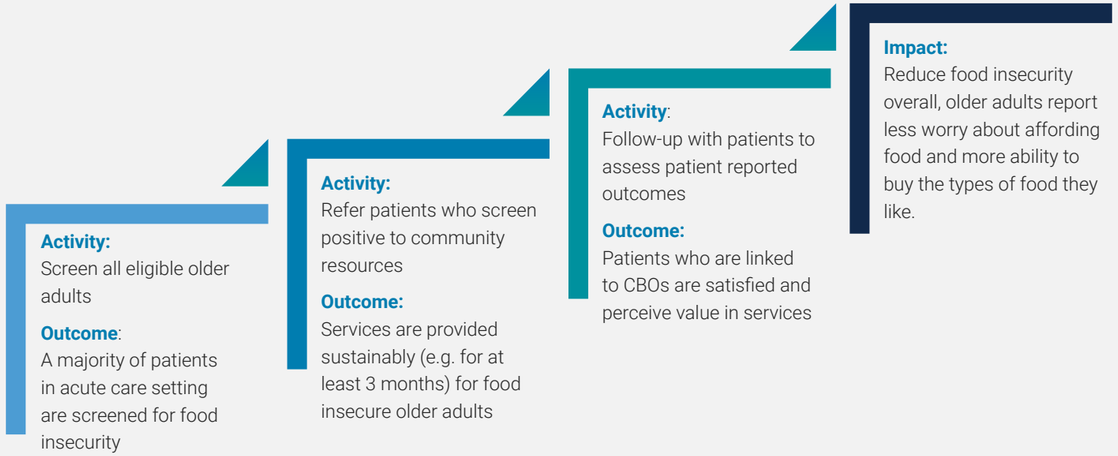
Underlying Contextual Factors: *patient health status, knowledge, beliefs, and preferences; staff priorities, values, and beliefs, staff turnover.*

1.0 ASSESS
2.0 PREPARE
3.0 IMPLEMENT
4.0 EVALUATE



What to Evaluate: Choosing Outcomes

What do you expect will happen as a result of your efforts? In a logic model, the big picture changes you hope to cause are known as "impacts." In other words, what is it you are trying to accomplish? Answers might include such things as improving health for seniors, reducing repeat ED visits, decreasing levels of food insecurity and hunger among older adults. To achieve big goals, however, you need to first meet short and medium-term outcomes. Short and medium term outcomes could include things like having a majority of clinical staff participate in screening or a majority of all eligible patients being screened for food insecurity. This type of outcome can be assessed with process measures, which are indicator of your program's functioning. Process measures could be indicators such as the proportion of eligible patients who are actually screened, or the number or proportion of staff engaged in screening, or perhaps the number of referrals made each month. You can think of outcomes as milestones that will get you to your biggest goal. Then you will select the measures and indicators that will help you know that you're making progress.[37] For example, to get to the long-term outcome of reducing food insecurity among older adults, you'll need to first increase program reach, by having robust screening rates. Eligible adults will need to be connected to services, which will be reflected in the number, type, and outcome of referrals; patient-reported outcomes like satisfaction with services or perceived fit will give you insight into how well services are working for patient. Measuring each of these short and medium-term outcomes will help you understand how well you are progressing towards the bigger goal of reducing food insecurity overall.



Selecting Outcomes:
What Matters to Stakeholders

One way to begin developing outcomes is to consider your stakeholders: patients, clinical staff, community partners, and healthcare system administrators and leaders. What outcomes are meaningful for them? The health system may prioritize measures like repeat ED visits since these can result in readmission penalties. However, community partners might value metrics related to patient satisfaction with services. Other outcomes, such quality of life and reduced food insecurity, may be motivating to all groups involved.

A worksheet in the *toolkit* is provided to help you engage stakeholders and develop a set of evaluation questions that matter to all stakeholders involved.

PART 2:
HOW TO EVALUATE

A strong evaluation will consist of both qualitative and quantitative data, both of which help you understand if your program is working and how it can be improved. Be mindful that achieving long-term impacts (like reducing overall food insecurity among seniors) can take years and that your initial implementation evaluation should focus primarily on short and medium-term outcomes. [35]

Your initial evaluation of an initial implementation you may focus on questions like: "what percentage of eligible patients were screened?" "what percentage of positive-screened patients were successfully linked to community-based resources" and "of those patients linked to resources, what proportion reported satisfaction with and benefit from services?"

Factors to Keep in Mind

As you settle on a set of evaluation questions, consider some of the key factors that will inform how you evaluate:

Budget

—What costs are associated with evaluation? There may be personnel costs, data acquisition fees, or costs related to research, such as transcription or data analysis. Balance costs and feasibility with the need for thoroughness in evaluation.

Logistics

—How will you collect the data you need? How can you modify data collection processes to use your existing resources? For example, while a focus group discussion among clinical staff about appropriateness and acceptability of your food insecurity screening program may be an optimal data collection methodology, can you gather similar data with an electronic survey, or a few interviews with key informants? Consider your timeline as well: what data must be reported to stakeholders and when?

Age of program

—As described above, evaluation of a newly implemented program will likely focus on short-term and medium-term outcomes that describe processes and intermediate effects. A lengthier evaluation that seeks to answers questions about health status and health care utilization among patients receiving services or overall cost savings may be better suited for a more mature program (e.g., one that's been active for more than a year). As your program grows, there are many resources, including those listed in the table above, available to help guide you through a cost effectiveness assessment or an analysis of health care utilization.

Biases

—It bears repeating: don't be afraid of negative findings! Remain open to negative feedback and encourage transparency in the data collection process. In an implementation evaluation, finding out what's not working is as important as highlighting successes.[35]

Process Measures & Outcomes

Two key sources of data are described in the table. Administrative data refers to data that is tracked either by your health care system (e.g. electronic medical record data) or by members of your project team (e.g. records of referrals). Follow-up data is information obtained from seniors served by your program, collected either by community partners or a member of your implementing team.

Process Measures			
Outcome	**Key Question/ Rationale**	**Data Type**	**Example Approach, Resources, and Tools**
Screening Rate	What proportion of eligible patients are screened?	Administrative data	Review data at a regular interval (e.g. monthly)
Staff Who Screen	What proportion of staff are taking part in screening?	Administrative data	Review data at a regular interval (e.g. monthly)
Referrals	What proportion of positive screens are referred to community partners?	Administrative and follow-up data	Establish a regular check-in with community partner to review referrals
Services Received	Of referred patients, for what proportion are services initiated?	Follow-up data (community partners and patients)	Establish a regular check-in with community partners, or develop a reporting process for community partner
Patients Rreceiving Services at 3 Months	What proportion of patients are receiving services 3 months after ED visit?	Follow-up data (community partners and patients)	Establish a regular check-in with community partners, or develop a reporting process for community partner

Outcomes			
Outcome & Definition	**Key Questions/ Rationale**	**Data Source**	**Example Tools, Resources, and Approach**
Acceptability	What is perceived agreeableness and receptivity to the program?	Surveys or interviews with stakeholders	*Acceptability of Intervention Measure*
Fidelity	Is the program being implemented and used as intended? If altered, is the program now being implemented consistently within your setting/ healthcare system? Are the clinical staff able to use a common language regarding the program and solve problems for one another about the program. Are community-based services organizations comfortable with the range of patients who are being referred to them?	Observations, interviews, checklists, and administrative data	Develop a *fidelity assessment*
Food Insecurity	How frequently is food insecurity being identified?	Administrative data	Use screening data collected from your electronic medical record or paper forms
Change in Food Insecurity	How has patient-reported food insecurity changed after screening?	Follow-up data (interviews, surveys) with patients	Use food insecurity screeners (see toolkit section 2) and open-ended questions to describe experience of food insecurity
Reach	What proportion of patient population is being reached? Is reach similar across patient demographics?	Administrative data	Use screening data from electronic health record or the *Reach Calculator Tool*
Cost-Effectiveness	What is the return on investment (ROI)?	Administrative data	Use a tool to calculate ROI *Commonwealth Fund ROI Calculator* *WHO Guide to Calculating Cost Effectiveness*

Patient Reported Health Outcomes	What impact is it having on patient's self-reported health and wellbeing?	Follow-up data (surveys, interviews) with patients	*Patient Reported Outcome Measures* including global health, positive affect, depression, and anxiety
Clinical Staff Experience	What is the experience of staff with the program and is it changing how they deliver care?	Surveys or interviews	Assess clinician *experience and perspective*
Healthcare Utilization	How is food insecurity and service delivery associated with high cost utilization (e.g. hospitalization, ED visits)	Administrative data	Use administrative data to assess ED visits, hospital days, and outpatient visits

There is no need to start from scratch when it comes to evaluating a program. You might notice that efforts described in Parts 1, 2, and 3 can be folded into a program evaluation. For example, your follow-up plans (which you developed in section 2) might provide you with the data you need to track referrals, patient-reported outcomes, and patient-reported health care utilization. The relationships you built with clinical staff as you engaged, trained, and conducted PDSA cycles will make it easier to quickly gather data on **acceptability and appropriateness of the intervention.** Once your program gets started, you will likely be monitoring certain indicators on an ongoing basis—things like screening rates or referrals made. Tracking these indicators along the way allows you to make adjustments and provide updates to stakeholders and to conduct a more thorough evaluation after your program has run for a period of time.

DATA SOURCES

You need to think about how you will collect the data and where it will be stored and accessed for analyses. In Figure below, there are multiple data sources referenced as a starting point.

Generally, you can obtain data from two broad categories:

Survey and interview data:

To capture perspectives and understand how the program and implementation is going, you will want to use surveys and/or interviews with patients and clinical team members.

- Semi-structured interviews are especially helpful to identify barriers and facilitators, **especially early on and after your fidelity** assessments (see below) to better understand what is and is not working.
- A helpful **online tool** can help you develop semi-structured interview guides using different domains and constructs from the **Consolidated Framework for Implementation Research (CFIR).**

Administrative data:

While useful, the type of data and access will vary based on how you implement the program, availability, and your resources.

- Examples include the EHR, a care coordination platform, an integrated Social Service Resources Locator, or even a spreadsheet used to track screening rates.

Making the Case:

I Don't forget the power of a personal story! Having patient stories or testimonials available can help personalize the program and show impact in a different way.

ASSESS FIDELITY

Fidelity refers to the degree to which your screening and referral program is delivered as intended or planned (i.e., if your workflows and protocols are being followed). It is important to track fidelity because it informs you how and why your program has or has not worked, and how you can improve outcomes. You should track fidelity frequently, and ensure that when you develop your *fidelity assessment* that items are actionable. More specifically, make sure you link fidelity to the program's outcomes and impact.

- The ideal scenario is to be in **HIGH FIDELITY** with **GOOD OUTCOMES.** If you have high fidelity but poor outcomes, it means your program is being implemented as intended but the impact is poor/unclear. You may need to modify the program and ensure the outcomes you selected are appropriate or potentially discard the program altogether.
- While other scenarios are more challenging, before you consider starting completely over, make sure you first attempt to re-train implementors or modify the process by which the program is implemented, as poor outcomes may not be a reflection of the program itself.

	LOW FIDELITY	HIGH FIDELITY
GOOD OUTCOMES	Re-examine the program and modify implementation or training	**IDEAL STATE** Monitor and maintain
POOR OUTCOMES	Start over with training and ensure appropriate outcomes were selected	Modify or discard program, ensure outcomes match implementation activities

Linking your screening data to patients' healthcare utilization data will help you make the case and show the importance of addressing older patients' social needs. One option is to compare the patient's healthcare use or management of a chronic disease before and after screening or prior to making a referral.

Practical Tip

To estimate costs, use available ICD-10 codes related to social needs and estimate cost based on reimbursement data.

Though not all screening and referral programs will have the time or resources to collect patient-reported outcomes, they are important because they help you understand the full impact of the screening and referral program on patients' overall well-being and health. Opportunities to collect patient-reported outcomes include: during screening, following a clinic visit, or during post-visit follow-up.

- A well-known resource for identifying measures related to patient's self-reported health and wellbeing is the Patient-Reported Outcomes Measurement Information System ***(PROMIS)***. It includes a range of validated patient-reported outcomes to select from that are validated and can be integrated into many EHRs.

A small QI pilot was conducted with a subset of older patients to screen for loneliness and social isolation and found that 30% of patients screened positive. Dr. Jones, who led the pilot, wants to help these patients by implementing a larger screening and referral program but is unsure about funding opportunities.

Fidelity

Key question:
Is the program being used as intended?

Data Source:
Observations, checklists and administrative data

Example tools or resources:
Develop a fidelity assessment

OUR EXPERIENCE:

The text below describes a case study of assessing fidelity in the UNC BRIDGE Project

At UNC, fidelity was an important outcome. Fidelity refers to the degree to which an intervention is being carried out as intended. For us, that meant that NA were screening eligible patients (adults 60 and older, excluding patients with serious psychiatric complaints and prisoners) and using Hunger Vital Sign, the validated screening tool we selected in our planning phase. We expected that if NA were implementing the screening as intended, that would help ensure that eligible patients were screened in a similar manner across the ED and could be connected with community resources as needed. One source of data to assess fidelity was administrative data from the EHR, which showed us which patients screened positive and for whom referrals were being made.

There was another invaluable data source right in front of us: the nursing assistants who conducted screenings. Observations gave us context as to how closely staff were adhering to the intervention as designed, while also providing rich qualitative detail about staff comfort level, patient receptivity, and integration into workflow.

Although we encouraged nursing assistants to use the 2-item Hunger Vital Sign as written, we recognized that individuals would likely put their own "spin" on the screening, in terms of how they introduced the screen and interacted with patients. Part of our goal in conducting observations was to understand how well individual patients comprehended and responded to the screening.

We observed BRIDGE screening processes starting about 9 months after the initial launch. We designed a checklist/set of questions to guide each observation:

Observing a Screening

Instructions: *Ask staff members for permission to observe them while they screen a patient. Be sure to time the length of the interaction.*

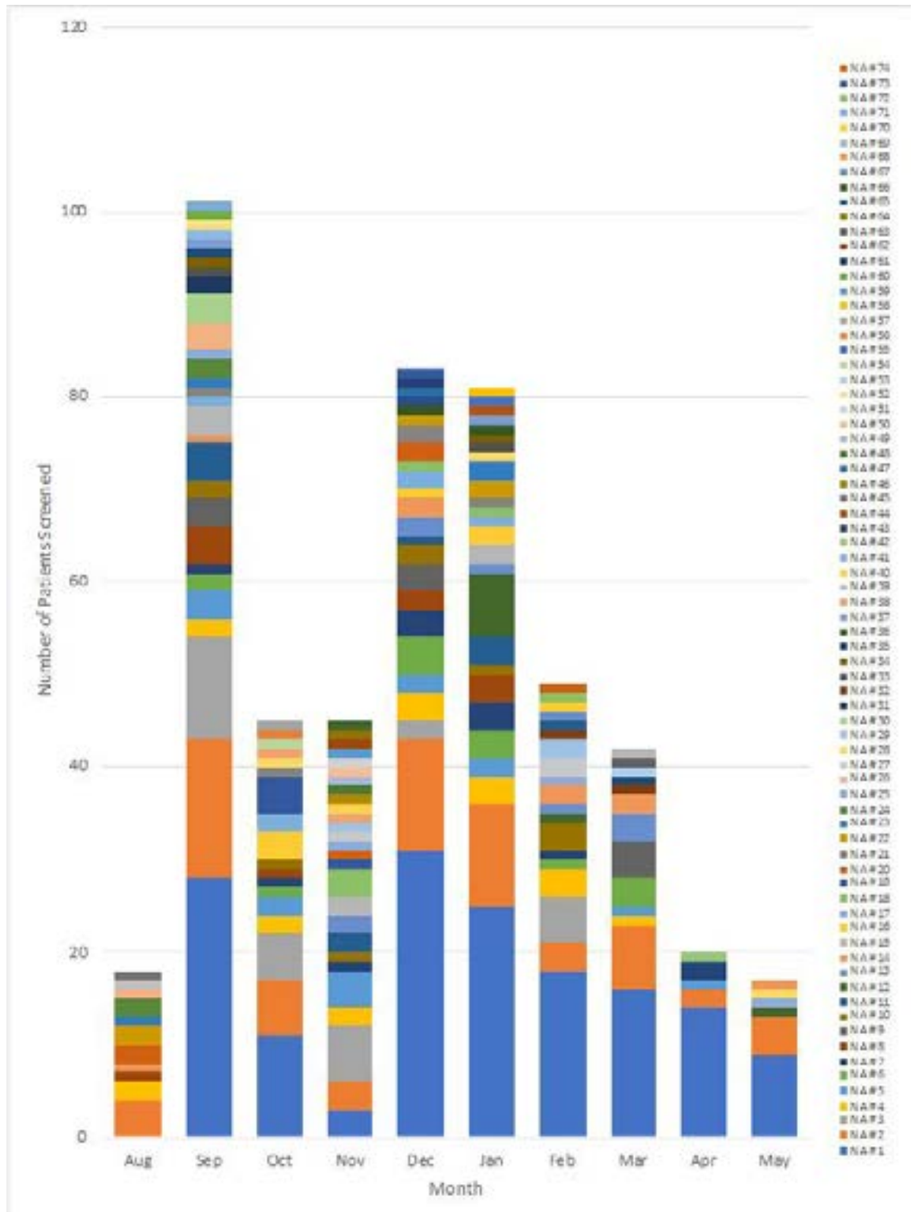
1. How does the screener frame the questions? Does he or she introduce themselves?
2. How does the screener ask the food insecurity screening questions? Try to note as close to verbatim as possible. To what extent does the screener deviate from the published wording of the tool?
3. What do you notice about how the patient responds to the screening questions? Consider both verbal and non-verbal responses.
4. Characterize the patient's situation: do they have family in the room? Are they in a private room or a hallway bed? Are there significant communication barriers? If so, please describe.
5. In general, how comfortable does the screener appear to be when introducing and delivering the screening?
6. What else does the screener do while in the room with the patient (e.g. measure vital signs, share information, other tasks)?

Knowing that screeners likely behaved differently when they were being observed, we compared these findings with administrative data and one-on-one interviews to fully evaluate intervention fidelity.

Administrative data:

Data pulled from the EHR showed the extent to which standard processes were followed. From administrative data pulls and targeted chart review, we were able to glean information about:

- **Who Screens:** Nursing Assistants were designated as screeners at the start of the program planning process. The early data reports confirmed that in almost all cases, nursing assistants were the staff administering and documenting screenings.
- We also learned a lot about which nursing assistants were screening the most, who had started recently, and who had stopped screening. This allowed us to follow-up as needed with staff to offer thanks, encouragement, or additional training.



With administrative data we were able to identify who screened, when, and how often. This figure shows number of screens performed by individual nursing assistants each month. You'll notice that our nursing assistant Champions (NA #1 and NA #2) were onboarded in September and were consistent screeners throughout the study period. You'll also see that we re-started training efforts in December and January after numbers dwindled following an active September.

- **Coordination with Care Management:** to ensure that there was adequate coordination with care management, we went back to the data and looked for cases where a patient screened positive, but there was no documentation that the patient was seen by a care manager. In these cases, we dug a little deeper into charts to figure out what happened. Some of the reasons for a positive screen but no care management consult included:
  - ✓ Care managers were not paged correctly: for example, a page didn't include information needed to locate a positively screened patient (e.g. name, or bed number), or the wrong pager number was used.
  - ✓ Care managers were not available
  - ✓ Care managers did respond to the patient, but did not document encounters in a way that showed up in the administrative data pull
- **Patient Receptivity:** Two pieces of data helped us estimate patient receptivity: (1) If the response to screening questions was coded as "refused," and (2) if the care manager documented that a patient declined a referral. We found these cases using administrative data and followed-up to understand the reasons for declines. The reasons included: some patients did not qualify for nutrition services; some were better served by other, more intensive resources; some people simply preferred not to be connected to community programs.

We also used periodic reflections to assess several outcomes, including fidelity. Periodic reflections are a pragmatic implementation technique that involves re-assessing a series of domains over time, in order to chart changes in attitudes, practices, and beliefs over the course of implementation.[39] Put more simply, period reflections are structured check-ins with key implementors and stakeholders. Checking at several time points allows you to see where improvements are needed and where progress is happening. We typically completed a periodic assessment before or after observing screening with nursing assistants; these reflections were often informal, taking less than 10 minutes. Among other topics, our periodic reflection guide asked questions to assess fidelity and monitor unplanned adaptations:

1. Have there been changes to the screening process during the past month? If yes, can you describe those changes?

a. What's been the impact of those changes?

"I feel like after Josh's [Nurse Manager in the department] email [about BRIDGE] people started screening more." Reports that lately has had more positive screens. "Makes me care about it more because I see how it's affecting some people!"

In summer and early fall, had just negative screens. She wonders if it is the time of year.

2. Are you hearing concerns or suggestions from other staff about food insecurity screening? If yes, what are they?

One nursing assistant shared that "you have to go all over creation in Epic to enter info and it is unclear if data entered is saved" and shared that there is confusion among NA about entering and saving data. As a note, this periodic reflection occurred shortly after an Epic system upgrade that changed the documentation process.

3. Are there other projects, issues, or changes going on in the ED that you think impact your team's ability to screen patients for food insecurity?

a. If yes, please describe.

"Psychiatric patients boarding" really stretches NA capacity to screen. These patients require 1:1 care, which means many nursing assistants are pulled away from typical work which includes screening.

Together, these three data sources: observations, administrative data, and periodic reflections gave us a clearer picture regarding intervention fidelity and helped us understand where and how to intervene when fidelity was not maintained.

Make the Case:

The Value of Stories

Evaluation is an opportunity to uncover powerful stories of patients who have benefited from your food insecurity screening and referral program. These stories may come to light when talking to staff members—perhaps they have a vivid memory of a patient who was in need of help—or when conducting follow-up with patients. Keep an eye out for good stories throughout the implementation process; members of the implementing team can pursue story leads and gather more detail. Compelling personal narratives, patient quotes, and even photos or videos can be a valuable product of your evaluation. Use these stories to make the case for your program's impact.

UNC'S EXPERIENCE:

Making the Case

During a 3-month patient follow-up, which was part of our evaluation plan, our study team spoke with Mr. F., a 60-year old patient who had started receiving Meals on Wheels after being screened for food insecurity during an ED visit. Mr. F spoke with gratitude about the difference Meals on Wheels had made in his life and shared how complicated accessing food was for him before he was connected to Meals on Wheels. With his vision failing, he could no longer drive to the supermarket or food pantry and the sidewalks in his neighborhood were cracked and uneven—which made him nervous about falling on his way to the corner store. Knowing Meals on Wheels would take care of five meals during the week took a big weight off his shoulders, and the kindness of volunteers lifted his spirits.

Mr. F's story illustrated how a simple screening could link a patient with life-changing services. Thanks to a nursing assistant taking the time to screen, Mr. F. was able to enjoy nutritious meals and avoid activities—like driving or walking to the store—that put him at risk for serious harm. This story was shared with both clinical staff (especially nursing assistants) through their departmental listserv as well as other stakeholders including ED leadership and community partners, to illustrate the benefit of BRIDGE and encourage ongoing engagement with the screening and referral process.

OTHER OUTCOMES

Patient-Reported Outcomes (PRO)

If you decide to include patient-reported outcomes (PROs) in your evaluation, consider gathering a mix of qualitative and quantitative data. *PROMIS* is a validated library of patient-centered health measures, related to quality of life, heath, and functioning. PROMIS measures include tools like a *4-item assessment of social isolation, a 4-item measure of instrumental support*; and a 2-item measure of *global physical health*. For an implementation evaluation, it is also helpful to gather outcomes related to patient satisfaction and experience with specific services, for example, how satisfied are patients with services and why? Are they still getting services and if not, why? How have services impacted their life?

1.0 ASSESS
2.0 PREPARE
3.0 IMPLEMENT
4.0 EVALUATE

Reassessing Food Insecurity

If the rate of food insecurity among seniors who are connected to services is an outcome an indicator for your evaluation or follow up, consider measuring with a tool that covers multiple dimensions of food insecurity, such as the USDA screener. If time and resources allow, it may be helpful to reassess food insecurity several times after services are initiated to best assess change in severity of food insecurity over time. If you would like to seek more detail about experiences with food insecurity or elicit patient stories, you could probe patients for more information, a qualitative research technique that simply asks patients to elaborate on answers. Asking a question or to follow-up on a validated screenings may provide you with valuable nuance and personal details. Consider probes such as: "can you tell me what made you choose that answer?" or "what is that experience like for you?" or "what do you do when you feel worried about running out of food?"

PART 3:

PLANNING FOR SUSTAINABILITY

Economic considerations may be the biggest factor in determining your program's ability to be(come) sustainable. As discussed earlier, this type of programs may incur costs associated with arranging and delivering services to ensure that patients receive services in a timely fashion. Covering those costs in the long-term requires having a plan for sustainability that includes a funder with a vested interest in supporting the activities of your screening and referral program. In this guide, you have hopefully learned how to make the case for a food insecurity screening program both with data from the literature as well as findings from your own food insecurity screening and referral program. If successful, the tools, workflows, and processes you develop for your food insecurity screening and referral programs could serve as a model for future efforts to use acute care settings to bridge the gap between healthcare and social services for older adults.

There is growing recognition of the role that social determinants of health play in patient health outcomes and health spending. As you wrap up implementation and begin to evaluate initial results, you may consider convening conversations with stakeholders who recognize the importance of addressing social determinants of health and can support program sustainability. The growth of alternative payment models represents an opportunity to expand social determinants of health interventions, as payors and funders seek creative solutions to improve health and reduce spending for their beneficiaries. Let's revisit some of the potential funding stakeholders you were introduced to in Part 2:

Medicare Advantage:

The passage of the 2018 CHRONIC Act gave Medicare plans new flexibility to incorporate special supplemental benefits for the chronically ill (SSBCI), meaning that they may now pay for benefits like home-delivered meals. Medicare Advantage plans typically select the benefits that will be available annually to their beneficiaries, choosing from a menu of options like smoking cessation or health club memberships.

Initial analyses show that few plans have adopted SSBCI in their plans; as of 2020, only **4.6%** of all Medicare Advantage plans had incorporated new benefits that address social needs. Of those that had, pest control and meal delivery were the most common.[1] Data on your acute care setting's food insecurity screening and referral program can help make the case for plans to include home-delivered meals and other nutrition services as benefits for their members.

Accountable Care Organizations:

Nearly 1 in 10 Americans is covered by an Accountable Care Organization (ACO) [2] and those ACOs with robust care management programs showed reductions in ED visits and hospitalizations among beneficiaries.[3] Because ACOs are responsible for both cost of care and health outcomes, and because social determinants of health have a strong impact on health outcomes, many ACOs are exploring or already made investments to addressing social determinants of health. This engagement is manifest in a variety of ways, often influenced in part by state-based regulations and requirements. Some states require ACOs to have social determinants of health interventions. Other states are now including social determinants of health screening as a quality metric for ACOs. Some states now require the development of partnerships with community-based service providers as part of Requests for Proposals for new ACOs. Another approach is to build a social determinants of health metric into payment plans for ACOs – so that ACOs that care for patients with limitations in social determinants of health receive more funding – which reduces the likelihood that ACOs will attempt to avoid caring for these patients. This approach is also notable because it requires an assessment of social determinants of health; the data is generated to inform compensation to ACOs but the data can also be used to identify patient needs. Technological innovation has the potential to drive expansion of social determinants of health interventions in health care by automating case identification, automating and standardizing referral processes, and automating patient-reported outcomes needed to assess the impact of interventions on key health-related outcomes such as quality of life. Recognizing that there are a range of approaches to supporting social determinants of health interventions within ACOs and understanding the priorities and commitments of ACOs present in your healthcare market may create opportunities to greatly accelerate the implementation of a food insecurity screening program.[4,5,6]

Medicaid Managed Care:

Medicaid Managed Care Organizations (MCOs) are growing more common, with 41 states having enacted MCO models to improve outcomes and address social determinants of health. Care coordination and services, including food assistance, may be a part of your state's Medicaid program. Half of all states have a Medicaid program that includes social needs screening, referral, or partnership with community-based programs for service delivery.[7] An example of an MCO conducting a successful intervention to address social determinants of health and reduce health care costs is provided by the partnership in Philadelphia between Health Partners Plan and Metropolitan Area Neighborhood Nutrition Alliance. Together they provided food to food insecure members with chronic illnesses such as diabetes, resulting in a 28% decrease in hospitalizations.[8]

Although there are many stakeholders within a food insecurity screening and referral program, perhaps the most important for ensuring the sustainability of the program are the payers: ACOs, MCOs, and MA plans. Establishing relationships with these plans can help identify funds to support food programs that are over prescribed yet underfunded and can help make screening and referral a priority. However, it is important to recognize that the plans prioritize their patients – not all patients. Although the ED is a good place for identifying food insecure patients with high medical costs who are likely to benefit from receiving services, the ED population is usually diverse in regard to their health insurance coverage. For this reason, a single health insurer might not see the ED as an appropriate place for screening and referral. Partnering with the insurers whose patients account for a large proportion of food insecure patients in your ED and/or partnering with multiple insurers may be a way to address this issue.[9]

Be ready to share data that will be demonstrate value to each of these stakeholders including:

- Insurance coverage type of patients who receive services as a result of your screening and referral program
- Type of services received, length of service delivery, and cost to provide those services
- Patient-reported outcomes including quality of life and self-reported health status
- Any data on health care utilization, including patient-reported health care utilization such as return visits to the emergency room or hospitalizations

PART 4:

GETTING READY TO SCALE AND SPREAD

At the start of this process, you were asked to consider how value is defined in your acute care setting. At the broadest level, value in health care can be thought of as health outcomes achieved per dollar spent, a perspective that encourages a focus on the delivery of sustainable, preventative care.[10] If the results of your evaluation indicate that your food insecurity screening and referral program is adding value to the care of older adults (through either improving health and quality of life and/or reducing total costs), then you may think about how to scale and spread your program. Scaling a program means making "efforts to increase the impact of innovations" that have shown success in pilot testing.[11]

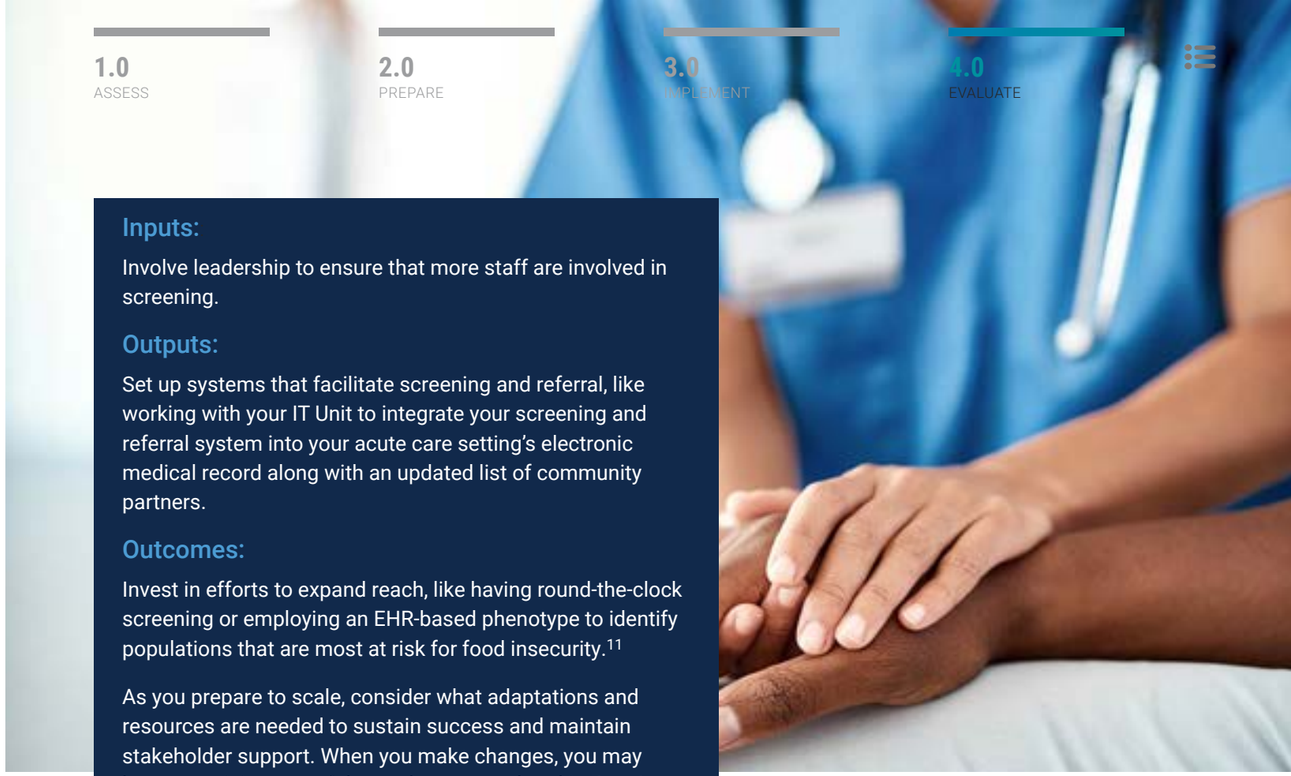
Programs are ready to scale when you can clearly see that:

01	02	03
There is evidence of success: Your definition of success depends in part on how your health care system defines value, the outcomes you prioritize, and the findings from your evaluation. Evidence for success will likely include: ■ Your screening efforts results in regularly identifying patients who are food insecure and connecting those patients to resources ■ Your community partners are able to link patients to services that meet their needs ■ Available data suggest that patients receiving services have improve health and/or reduce total healthcare costs	There is a model for a screening and referral program that can be shared with others in your organization or among peer organizations. As you review findings from your evaluation, consider how you might refine your processes moving forward to embed it further in your acute care setting. Next, think about how you would launch your screening and referral program at another site. Are further iterations possible? If so, what are the key inputs, roles, and activities needed to establish a similar program at other sites?	Senior leaders and decision makers support the intervention. Engagement with stakeholders is a component of each of the four phases described in this guide (Assess, Plan, Implement, and Evaluate). Maintaining open channels of communication with leaders and stakeholders—sharing successes, eliciting concerns, and providing updates on progress—will help you maintain buy-in. As you consider scaling and spreading your screening and referral program, take time to understand the perspective and concerns of senior leaders and make sure that you have their backing.

What programmatic changes will help your program increase its impact?

You can begin by considering all the components that make up your program: inputs, outputs, and outcomes.

1.0 ASSESS
2.0 PREPARE
3.0 IMPLEMENT
4.0 EVALUATE



Inputs:

Involve leadership to ensure that more staff are involved in screening.

Outputs:

Set up systems that facilitate screening and referral, like working with your IT Unit to integrate your screening and referral system into your acute care setting's electronic medical record along with an updated list of community partners.

Outcomes:

Invest in efforts to expand reach, like having round-the-clock screening or employing an EHR-based phenotype to identify populations that are most at risk for food insecurity.[11]

As you prepare to scale, consider what adaptations and resources are needed to sustain success and maintain stakeholder support. When you make changes, you may have to revisit some of the work you completed in Part 1: Assess, in which you considered stakeholder needs and developed workflows.

Spread:

Expand your intervention beyond your initial acute setting. It can be thought of as efforts to promote broader adoption across organizations or institutions, for example, implementing a food insecurity screening and referral program at other acute care settings in your health care system or broader community.

Here you will need to think about dissemination, marketing and key components of your screening and referral program that you can share (e.g., the screener, workflows, strategies for partnering with community organizations, the follow-up process, how you make and close the loop on referrals).[12] The process of spreading an intervention will require collaboration with your acute care setting's legal and marketing departments to understand what can be shared with external organizations and how do so. Most organizations have legal stipulations about what data and intellectual property can be shared and branding guidelines for printed or online materials that are shared.

Although screening processes may be similar or identical across acute care settings, the referral responses will need to take in to account local CBO availability. Having an expert, like a clinician, social worker, or administrator, with local knowledge who can advocate for your program and support implementation will likely be essential. In some cases, referral processes may benefit from integration with independent companies that provided pooled information on referrals such as NowPow.

As you spread, you may once again revisit questions from Parts 1, 2, and 3 to identify community partners, adapt workflows to different settings, and onboard new clinical teams. Fortunately, as you begin to spread your intervention, you'll be able to make the case by sharing compelling findings from your own efforts and building on knowledge gained through your own implementation processes.

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