

Healthcare Provider Needs Assessment Report

October 2024

Prepared by:

Catherine S. Rudolph, MS, RD, LDN

Graduate Research Assistant, Iowa State University

Eva C. Wood

Graduate Research Assistant, Iowa State University

Sarah L. Francis, PhD, MHS, RDN

Professor, Iowa State University

Nutrition and Aging Resource Center Team:

Iowa Department of Health and Human Services: Alexandra Bauman RD, LDN (Director), Ashley Danielson, RDN, LDN (Nutrition Coordination Director), Bambi Press RD, LD (Healthy Aging Director), Elizabeth Fridley, RDN, LDN (Health Promotion Director), Erin Longnecker RDN, LD (Nutrition and Aging Content Director), Caroline McKinney (Nutrition Innovation Director), Marissa Vance, MAC (Communications Manager), Denita De Raad, CAFS (Administrative Assistant)

Iowa State University Team: Sarah L. Francis PhD, MHS, RD (ISU Director), Catherine S. Rudolph, MS, RD, LDN (Graduate Research Assistant), Savannah Schultz MS, RD (Graduate Research Assistant), Shelley Woodall, RD (Program Assistant), Eva C. Wood (Graduate Research Assistant)

This resource was supported in part by a cooperative agreement No 90PPNU0002 from the Administration on Aging (AoA), Administration for Community Living (ACL), U.S. Department of Health and Human Services (DHHS). Grantees carrying out projects under government sponsorship are encouraged to express freely their findings and conclusions. Therefore, points of view or opinions do not necessarily represent official AoA, ACL, or DHHS policy.

Table of Contents

List of Figures.....	3
List of Tables	4
Executive Summary	5
Introduction	7
Methods.....	9
Findings.....	12
Respondent Demographic Characteristics and Aging Perspectives.....	12
Healthcare Respondent Service Characteristics	15
Community-based Food Program Awareness and Referral.....	19
Training Needs and Preferences.....	22
Health-Related Social Needs Screening Practices.....	28
Perceived Social and Nutritional Concerns of Patients	34
Conclusions	37
Recommendations.....	37
References	39
Extended Text.....	41
Figure 1. Survey Category Descriptions and Number of Questions	41
Figure 3. Healthcare Coverage of Patients 60 Years or Older (<i>n</i> =16)	41
Figure 4. Awareness of Community-based Food and Nutrition Programs (<i>n</i> =160).....	41
Figure 5. Frequency of Community Program Referrals (<i>n</i> =74)	42
Figure 6. Barriers to Making Community-Based Food and Nutrition Program Referrals (<i>n</i> =160).....	42
Figure 7. Interest in Training on Aging and Health Topics (<i>n</i> =160)	43
Figure 8. Healthcare Providers' Typical Food and Nutrition Information Sources (<i>n</i> =160)	43
Figure 9. Professional Conferences Providers Typically Attend (<i>n</i> =160).....	44
Figure 10. Health-Related Social Needs Providers Screen Their Patients For (<i>n</i> =160)	44
Figure 11. Food/Nutrition Insecurity Screening Barriers (<i>n</i> =96)	45
Figure 12. Nutritional Risk Screening Tools Used by Healthcare Providers (<i>n</i> =52).....	45
Figure 13. Barriers to Referring Patients to Registered Dietitians (<i>n</i> =111).....	46
Appendix- Draft NRCNA Logic Model to Facilitate Healthcare-SNP Partnerships	47

List of Figures

Figure 1. <i>Survey Category Descriptions and Number of Questions</i>	10
Figure 2. <i>Average Aging Expectations Scores Among Healthcare Providers</i>	14
Figure 3. <i>Healthcare Coverage of Patients 60 Years or Older (n=160)</i>	18
Figure 4. <i>Awareness of Community-based Food and Nutrition Programs (n=160)</i>	19
Figure 5. <i>Frequency of Community Program Referrals (n=74)</i>	20
Figure 6. <i>Barriers to Making Community-Based Food and Nutrition Program Referrals (n=160)</i>	22
Figure 7. <i>Interest in Training on Aging and Health Topics (n=160)</i>	23
Figure 8. <i>Healthcare Providers' Typical Food and Nutrition Information Sources (n=160)</i>	25
Figure 9. <i>Professional Conferences Providers Typically Attend (n=160)</i>	26
Figure 10. <i>Health-Related Social Needs Attributes Healthcare Providers Screen Their Patients For (n=160)</i>	29
Figure 11. <i>Food/Nutrition Insecurity Screening Barriers (n=96)</i>	31
Figure 12. <i>Barriers to Nutritional Risk Screening (n=108)</i>	33
Figure 13. <i>Barriers to Referring Patients to Registered Dietitians (n=111)</i>	34

List of Tables

Table 1. <i>Sociodemographic Characteristics of Survey Respondents (n=160)</i>	12
Table 2. <i>Healthcare Practice Role and Characteristics of Survey Respondents (n=160)</i>	15
Table 3. <i>Community Referral Methods Employed by Providers' Healthcare Practice (n=133)</i>	20
Table 4. <i>Health-Related Social Needs of Training Interest (n=141)</i>	23
Table 5. <i>Preferred Training Settings and Formats (n=160)</i>	24
Table 6. <i>Preferred NRCNA Resources and Materials (n=160)</i>	27
Table 7. <i>Food Insecurity Screening Characteristics (n=64)</i>	30
Table 8. <i>Nutritional Risk Screening Tools Used By Healthcare Providers (n=52)</i>	32
Table 9. <i>Healthcare Provider Perceptions of Most Frequent Nutrition and HRSN Concerns Among Older Adult Patients (n=160)</i>	35

Executive Summary

Successful partnerships between healthcare providers and community-based services play a promising role in supporting the complex challenges facing a rapidly growing aging population. Older Americans Act (OAA) Senior Nutrition Program (SNP) staff have expressed “connecting with healthcare providers” as a top organizational goal. However, more resources are needed to facilitate collaboration between the two sectors.

In response to the growing interest in this topic among OAA SNP, the Nutrition and Aging Resource Center conducted a nationwide survey among healthcare providers working with older adults. A 54-item Qualtrics™ survey was disseminated through Qualtrics™ market research panels among a national sample. Survey topics included awareness of, barriers to, and interest in partnerships with community-based food and nutrition programs; training needs and preferences; practices around addressing nutritional risk and health-related social needs (HRSN) among older patients; and aging stereotypes. The final sample included data from 160 healthcare providers. The data were analyzed for descriptive statistics using SPSS. More in-depth analyses will be shared in future reports, publications, and/or presentations.

Summary of Key Findings

Healthcare Providers’ Engagement with Community Food and Nutrition Programs

- **Awareness:** moderate awareness of common food and nutrition programs for older adults; notably, one out of three had low/very low awareness of the congregate meal program
- **Referral:** reported referring older patients to community-based food and nutrition programs; most common were the Supplemental Nutrition Assistance Program, nutrition education, and OAA home-delivered meal programs
- **Referral barriers:** staffing shortage, lack of access to community-based food and nutrition programs in area, lack of familiarity with programs/services
- **Interest:** more than one-half express “high/very high” interest in learning more about community-based food and nutrition programs for older adults

Healthcare Provider Perspectives on Older Adult Patient Needs and Nutrition

- **Key nutrition concerns:** dietary management of chronic disease, low physical activity, physical limitations impacting eating
- **Key HRSN concerns:** economic or financial instability, housing instability/safety concerns, isolation, and poor mental health status
- **Nutrition attitudes:** nutrition viewed as important/very important within the healthcare of their patients 60 years and older

Aging Perspectives of Healthcare Providers

- **Overall Aging Expectations:** the average total Expectations Regarding Aging score indicates greater expectations of decline with age and opportunity for improvements in aging stereotypes among healthcare providers
- **Sub-Total Aging Expectations:** expectations were lowest regarding physical health decline with age, followed by cognitive health and mental health

Training Needs and Preferences of Healthcare Providers

- **Knowledge:** average level of knowledge or skills on the topics of HRSN, the nutritional needs of older adults, and geriatrics
- **Interest:** around one-half expressed high/very interest in learning more about HRSN, the nutritional needs of older adults, and geriatrics
- **Top HRSN topics of interest:** healthcare access, mental health, food/nutrition insecurity
- **Preferred Training Settings:** in-person conferences, in-person peer-to-peer sessions, online course series
- **Preferred Quick Information:** email, colleagues, handouts

Healthcare Providers' HRSN Screening Practices

- **HRSN most screened for:** healthcare access, mental health status
- **HRSN least screened for:** isolation, transportation, loneliness
- **Top food/nutrition insecurity screening barriers:** concern for patient comfort/promoting stigma, inadequate technology, doesn't seem necessary
- **Key barriers to screening for nutritional risk:** unaware of referral processes or appropriate screening tools, doesn't seem necessary
- **Most utilized referral methods:** paper handouts, verbal information

Summary of Key Recommendations

- Spread awareness about congregate meals among healthcare providers.
- Offer education/information to healthcare providers through preferred formats.
- Support and enhance referral methods to SNPs and other services.
- Mitigate barriers to referring patients to SNPs and other services.
- Promote HRSN and nutritional risk screening among older adult patients.

Introduction

Adults 60 years or older comprise 1 in 4 U.S. citizens and are the fastest-growing age group (ACL, 2024; U.S. Census Bureau, 2022). While it is important to not overgeneralize the rich diversity of experiences among older adults, many are facing complex challenges impacting their health and wellbeing. It is estimated that nearly 12% of older adults are food insecure (United Health Foundation, 2023) and a majority consume a dietary pattern classified as poor quality (Zhao & Andreyeva, 2022). Further, most older adults experience at least one chronic condition, and out-of-pocket health care expenditures have risen 47% since 2012 (ACL, 2024). Another confounding factor is that more than 1 out of 4 older adults are socially isolated (NASEM, 2020). Thus, community-based social care services play an important role in mitigating such challenges, particularly among older adults in the greatest social and economic need.

The Older Americans Act (OAA) was enacted in 1965 to meet the social services needs of older adults. The OAA establishes a nationwide “Aging Network” that includes the Administration on Aging, State Units on Aging, Tribal Organizations, Area Agencies on Aging, and local service providers that collectively support programs and services for older adults. Title III-C of the OAA authorizes federal to state grants for senior nutrition programs (SNPs) such as congregate and home-delivered meals (Colello & Napili, 2022). The purpose of the Title III-C programs are to 1) reduce hunger, food insecurity, and malnutrition, 2) promote socialization, and 3) promote the health and well-being of older individuals (ACL, 2021).

The National Resource Center on Nutrition and Aging (NRCNA), also known as the Nutrition and Aging Resource Center, operates as a collaborative partnership between the Iowa Department of Health and Human Services and Iowa State University under a 5-year cooperative agreement (2021-2026) with the Administration for Community Living (ACL). The primary mission of the NRCNA is to provide resources and technical assistance to OAA Title III-C SNPs across the country.

The current and future success of OAA Title III-C programs relies on systems-level partnerships. One growing area of interest is expanding integrative partnerships between healthcare and social care services (NASEM, 2019; Schultz & Francis, 2022). The National Academies of Sciences, Engineering, and Medicine recognizes the importance of these partnerships and has prepared a list of evidence-based recommendations to promote the integration of social care into health care through activities such as awareness, adjustment, assistance, alignment, and advocacy (NASEM, 2019). While more research is needed to measure client outcomes from these partnerships, there is evidence to suggest

they result in improved mortality, reductions in unnecessary health care utilization, and decreased spending among older adults (Curry et al., 2022).

Among SNPs, a 2022 needs assessment conducted by the NRCNA identified “connecting with healthcare providers” as a top organizational goal (Schultz & Francis, 2022). Potential benefits to SNPs connecting with healthcare organizations include maximizing reach and overall impact, increasing referrals, and accessing funding sources. At least a few studies have outlined enablers and barriers to partnerships between healthcare and the Aging Network (Brewster et al., 2022; Chaudhuri et al., 2023; Curry et al., 2022; Kunkel et al., 2022). However, more work is needed to grow and strengthen collaboration opportunities between the two sectors.

To address this goal and better understand how the NRCNA can help facilitate connections between SNPs and the healthcare sector, the NRCNA conducted a nationwide needs assessment survey among healthcare providers serving older adult populations. The survey aimed to assess healthcare providers’:

- Awareness of, barriers to working with, and interest in partnerships with SNPs and other community-based food and nutrition programs
- Training needs and preferences
- Current practices, barriers, and training needs related to addressing health-related social needs and nutritional risk factors among older adults
- Aging stereotypes

Methods

A 54-item survey was developed and imported into Qualtrics™ to capture key characteristics of interest among healthcare providers (Figure 1). The survey prompts respondents to answer between 43 to 51 questions, based on their selections. Prior to distribution, the survey went through several rounds of review by NRCNA and ACL employees for content and face validity checks.

Aging stereotypes were assessed using the 12-item Expectations Regarding Aging (ERA). The ERA is a valid and reliable tool to gauge perceptions of how physical health, mental health, and cognitive function change as people age (Sarkisian et al., 2002; Sarkisian et al., 2005). Each score is based on a scale of 0–100. Higher scores represent greater expectations to achieve and maintain high physical and mental function with aging. Lower scores indicate that people expect a decline in function with increasing age (Sarkisian et al., 2005).

Figure 1.

Survey Category Descriptions and Number of Questions

Respondent Information (7)	•Sociodemographic characteristics such as sex, age, education, race, and ethnicity; initial eligibility questions
Aging Perspectives (1)	•12-item Expectations Regarding Aging- assess aging stereotypes
Healthcare Practice Role and Setting (10)	•General characteristics of healthcare setting such as role, practice area, experience, location
Community-Based Food and Nutrition Program Awareness and Referral (11)	•Awareness and referral to community-based food and nutrition programs, partnership interests, NRCNA awareness/utilization
Training Needs and Preferences (10)	•Prior educational training/expertise, relevant topics of interest, preferred training and marketing formats
HRSN and Nutritional Risk Screening (10)	•Screening practices related to HRSN and nutritional risk including tools and barriers
Needs of Older Adult Patients (5)	•Perspectives on the HRSN and nutritional needs of their older patients

[Figure 1 extended text](#)

Qualtrics™ staff oversaw recruitment and data collection through their market research panels, which includes pools of respondents who have agreed to be contacted to participate in surveys. The target sample for the survey included healthcare providers across the United States serving adults aged 60 years or older. The goal sample size was 150 healthcare providers and was determined based on available funding.

Quotas based on sex and race/ethnicity were employed with the goal of recruiting a relatively diverse, representative sample:

- American Indian or Alaska Native: 1%
- Black: 15%
- Hispanic/Spanish/Latino: 15%
- Native Hawaiian or Pacific Islander: 1%
- White or Miscellaneous Identities: 68%
- Females: 70%
- Males: 30%

These numbers were determined based on estimates of previously collected data which found the U.S. healthcare workforce to be 60.5% white, 18.2% Hispanic, 12.1% Black, 6.3% Asian, 0.6% American Indian or Alaska Native, and 0.2% Native Hawaiian or Pacific Islander (Salsberg et al., 2021). Sex quotas were based on population estimates of 74.7% females, 25.3% males (U.S. Census Bureau, 2021).

Recruitment occurred October 11, 2023 through November 2, 2023. Survey responses were reviewed for quality standards throughout data collection. Quality criteria included speed of completion, completion rate, “straight lining” or providing the same answers repeatedly in a matrix question, and eligibility based on survey responses (i.e., occupation is not healthcare).

The final dataset included a total of 160 respondents. Descriptive analyses were conducted using SPSS v.29 statistical software.

Findings

Respondent Demographic Characteristics and Aging Perspectives

A total of 160 healthcare providers completed the survey. Respondents identified as primarily female (68.1%), white (66.3%), non-Hispanic (85%), and between 18–39 years old (58.1%) (Table 1). Nearly half of the healthcare provider respondents have a bachelor's degree or advanced or post-graduate degree (49.4%) (Table 1).

Males (30%), people of color (30.6%), Hispanic (15%), and individuals 40 years or older (40.1%) made up a smaller percentage of respondents. Race and sex findings were as predicted, based on established survey quotas.

Respondents represent a national audience across 34 states. The states with the most respondents are from Florida (11.9%), Texas (8.9%), California (6.9%), and Georgia (6.9%). The highest percentage of respondents provide care to older patients in ACL Region IV, while few providers practice in Regions I, VII, VIII, and X (Table 1).

Further demographic characteristics can be found in Table 1.

Table 1.

Sociodemographic Characteristics of Survey Respondents (n=160)

Characteristics	Number	Percentage (%)
Sex		
Female	109	68.1
Male	48	30.0
Prefer not to answer	3	1.8
Age (years)		
18 to 39	93	58.1
40 to 59	50	31.3
60+	14	8.8
Prefer not to answer	3	1.9
Educational Attainment		
Less than high school	3	1.9
High school	35	21.9
Some college	42	26.3
Bachelor's degree	50	31.3
Some post-graduate or advanced degree	29	18.1
Prefer not to answer	1	0.6

Characteristics	Number	Percentage (%)
Race^a		
American Indian or Alaskan Native	5	3.1
Asian	16	10.0
Black or African American	25	15.6
White	106	66.3
Middle Eastern and/or North African	3	1.9
Native Hawaiian / Pacific Islander	-	-
Not listed ^b	6	3.8
Do not wish to answer	6	3.8
Spanish, Hispanic, or Latino/a/x		
No	132	82.5
Yes	24	15.0
Do not wish to answer	4	2.5
Primary Service Location by ACL Region		
Region I (CT, MA, ME, NH, RI, VT)	2	1.3
Region II (NY, NJ, PR, VI)	16	10.0
Region III (DC, DE, MD, PA, VA, WV)	23	14.4
Region IV (AL, FL, GA, KY, MS, NC, SC, TN)	53	33.1
Region V (IL, IN, MI, MN, OH, WI)	22	13.8
Region VI (AR, LA, OK, NM, TX)	22	13.8
Region VII (IA, KS, MO, NE)	1	0.6
Region VIII (CO, MT, UT, WY, ND, SD)	2	1.3
Region IX (CA, NV, AZ, HI, GU, CNMI, AS)	16	10.0
Region X (AK, ID, OR, WA)	3	1.9

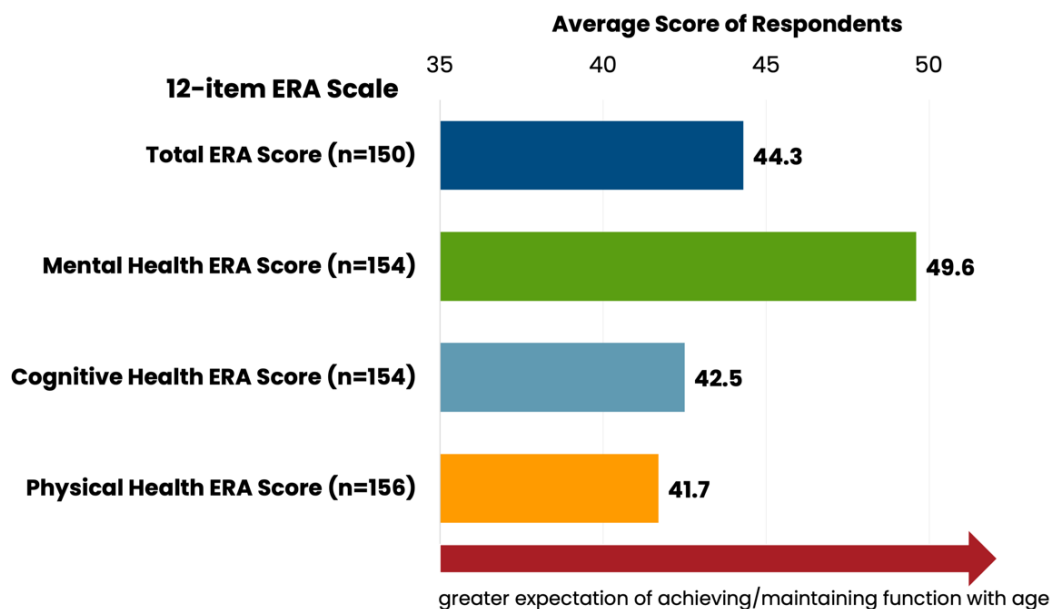
^a Respondents were able to select more than one

^bFree Response: Hispanic, Mix, Nicaraguan, Puerto Rican, Portuguese

The mean total ERA score among survey respondents was 44.3 out of 100, suggesting ample room to improve aging stereotypes among healthcare providers working with older adults (Figure 2). Expectations among healthcare providers regarding mental health function with age were highest (mean 49.6 out of 100), while expectations regarding physical health were lowest (mean 41.7 out of 100) (Figure 2). These findings are similar to what other studies assessing the mean total ERA (~35–68 out of 100) among healthcare providers have reported (Davis et al., 2011, Palsgaard et al., 2022, Sari et al., 2024). Additionally, these studies have also found similar trends of higher expectations regarding mental health, and lower expectations regarding physical health.

Figure 2.

Average Aging Expectations Scores Among Healthcare Providers



Healthcare Respondent Service Characteristics

Table 2 describes the health care service attributes of the respondents. Many respondents (59.4%) have worked in healthcare between 1 to 10 years. The respondents work within a variety of job titles and focus areas with 46.4% identifying as nurses, represented as certified nursing assistants (CNAs), registered nurses (RNs), nurse practitioners (NPs), certificated nurse educators (CNEs), advanced practice nurses (APNs), or registered practical nurses (RPNs) (46.4%) (Table 2).

The leading four primary focus areas/specialties included primary care (22.5%), family medicine/general practice (18.8%), diabetes (16.3%), and eating disorders (12.5%). One-third of the respondents work in home care. Finally, 44.4% of respondents reported serving primarily suburban areas. Further healthcare practice characteristics can be found in Table 2.

Table 2.

Healthcare Practice Role and Characteristics of Survey Respondents (n=160)

Characteristics	Number	Percentage (%)
Years of Healthcare Experience		
≤ 5 years	60	37.5
6 to 10 years	44	27.5
11 to 15 years	24	15.0
≥ 16 years	32	20.0
Job Title		
Nurse (CNA, RN, NP, CNE, APN, RPN) ^a	74	46.3
Social Worker	15	9.4
Other	14	8.8
Administrator	13	8.1
Nutrition (DTR, Dietary Aide) ^b	11	6.9
Health Coach or Personal Trainer ^c	9	5.6
Physical Therapy (PT, PTA) ^d	7	4.4
Physician ^e	6	3.8
Research	4	2.5
Speech Language Pathologist (SLP)	3	1.9
Pharmacist	2	1.3
Medical Director	1	0.6
Psychogeriatric Resource Consultant (PRC)	1	0.6

Characteristics	Number	Percentage (%)
Primary Focus Area/Specialty^f		
Primary Care	36	22.5%
Family Medicine/General Practice	30	18.8%
Diabetes	26	16.3%
Eating Disorders	20	12.5%
Emergency Medicine	18	11.3%
Physical Medicine and Rehab	18	11.3%
Nutrition Support	17	10.6%
Allergy	16	10.0%
Geriatric	14	8.8%
Cardiology	13	8.1%
Critical Care	13	8.1%
Dermatologist	12	7.5%
Weight Management	12	7.5%
Bariatrics	11	6.9
Anesthesiology	10	6.3
Internal Medicine	10	6.3
Pediatrics	10	6.3
Psychiatry	10	6.3
Other	10	6.3
Gastroenterology	8	5.0
Neurology	8	5.0
Occupational Medicine	7	4.4
Palliative Care	7	4.4
Sports Medicine	7	4.4
Surgery	7	4.4
Orthopedics	6	3.8
Oncology	5	3.1
Nephrology	4	2.5
Pulmonology	4	2.5
Transplant	4	2.5
Hematology	3	1.9

Characteristics	Number	Percentage (%)
Healthcare Practice Setting^f		
Home Care	48	30.0
Community Health Center	35	21.9
Emergency Department/Urgent Care Center	31	19.4
Hospital Inpatient Services	31	19.4
Hospital-Affiliated Outpatient Clinic	19	11.9
Long-term Care	19	11.9
Mental Health	16	10.0
Educational Setting (Student)	14	8.8
Retirement Community/Assisted Living	12	7.5
Team-Based/Collaborative Practice	12	7.5
Federally Qualified Health Center	11	6.9
Public Health Department Clinic	11	6.9
Educational Setting (Faculty/Research)	9	5.6
Solo-Care Practice	9	5.6
Non-Hospital Employer Outpatient Service	7	4.4
Specialty Clinic	7	4.4
Other	6	3.8
School-based Clinic	5	3.1
Veterans Affairs Hospital or Clinic	5	3.1
Service Location (Rural/Suburban/Urban)		
Rural	43	26.9
Suburban	71	44.4
Urban	46	28.8

^a31 Certified Nursing Assistants, 19 Registered Nurses, 10 Nurse Practitioners, 8 Clinical Nurse Educators, 4 Advanced Practice Nurses, 2 Registered Practice Nurses

^b1 Dietetic Technician, Registered, 10 Dietary Aides

^c7 Health Coaches, 2 Personal Trainers

^d5 Physical Therapists, 2 Physical Therapist Assistants

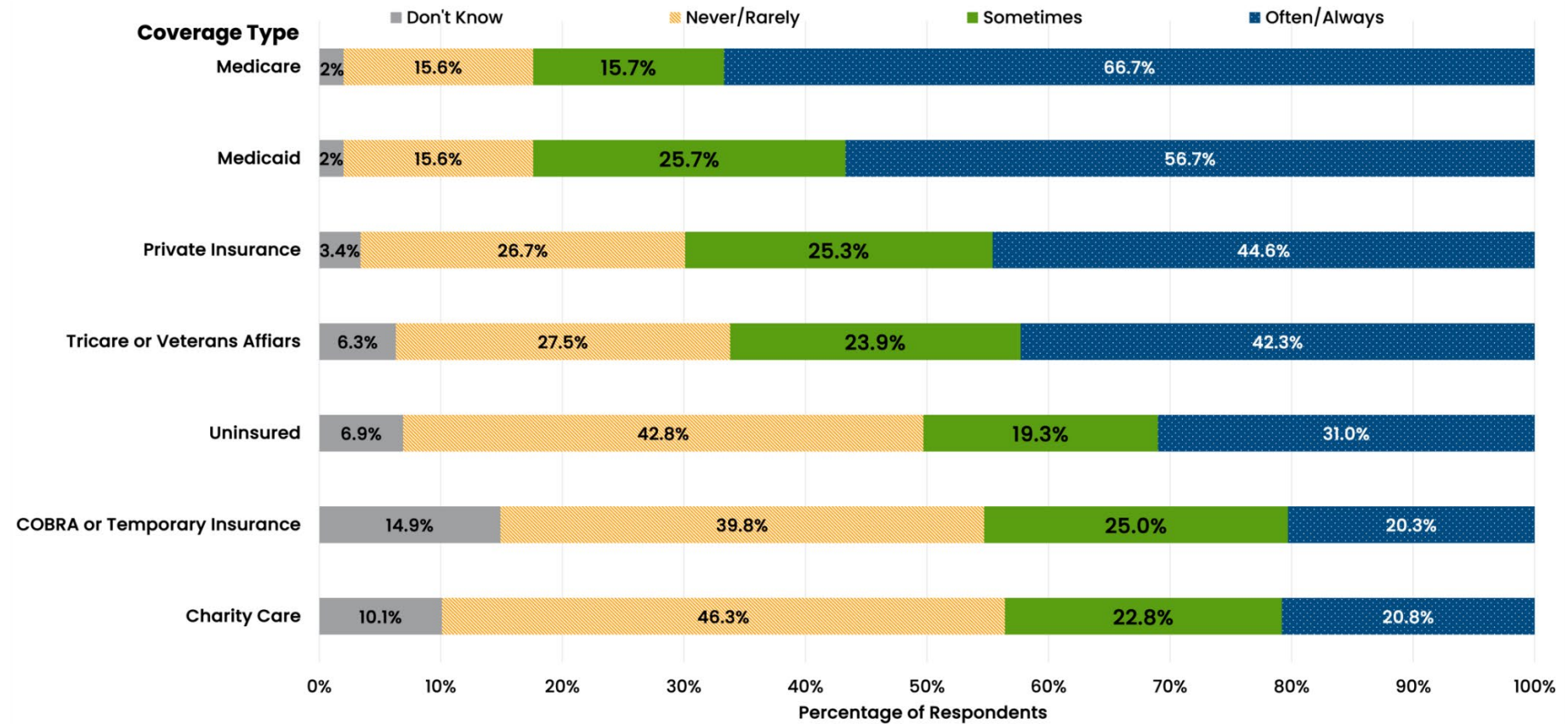
^e4 Specialty Physicians (e.g., cardiology, endocrinology, etc.), 2 Physicians (MD/DO/ND)

^f Respondents were able to select more than one

When asked about the healthcare coverage of their patients 60 years or older, many respondents shared that they often or always see patients with Medicare (66.7%) and Medicaid coverage (56.7%) (Figure 3). Many rarely or never see patients with coverage through charity care (46.3%), COBRA or temporary insurance (39.8%), or who are uninsured (42.8%) (Figure 3).

Figure 3.

Healthcare Coverage of Patients 60 Years or Older (n=160)



[Figure 3 extended text](#)

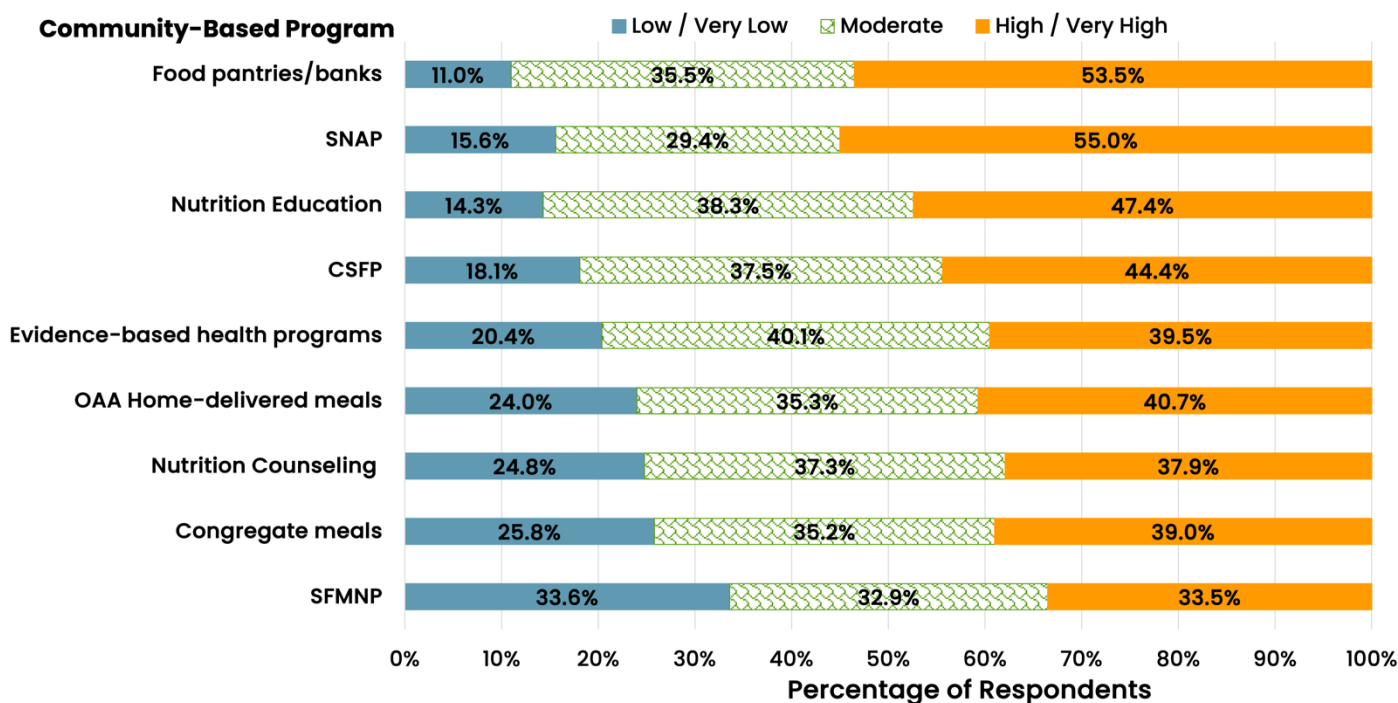
Community-based Food Program Awareness and Referral

Most of the healthcare providers in this survey were at least moderately aware of common community-based food and nutrition programs available to older adults, such as the Supplemental Nutrition Assistance Program (SNAP), Commodity Supplemental Food Program (CSFP), Senior Farmers Market Nutrition Program (SFMNP), and Older Americans Act (OAA) Senior Nutrition Programs (SNPs) (Figure 4).

Between 33.5 to 55% had high or very high awareness of the programs listed. Awareness was highest for food pantries/banks, and the Supplemental Nutrition Assistance Program (SNAP), and lowest for the Senior Farmers' Market Nutrition Program (Figure 4). Notably, 33.6% of the providers had low/very low awareness of the congregate meal program, indicating opportunity for increased education among health care providers.

Figure 4.

Awareness of Community-based Food and Nutrition Programs (n=160)



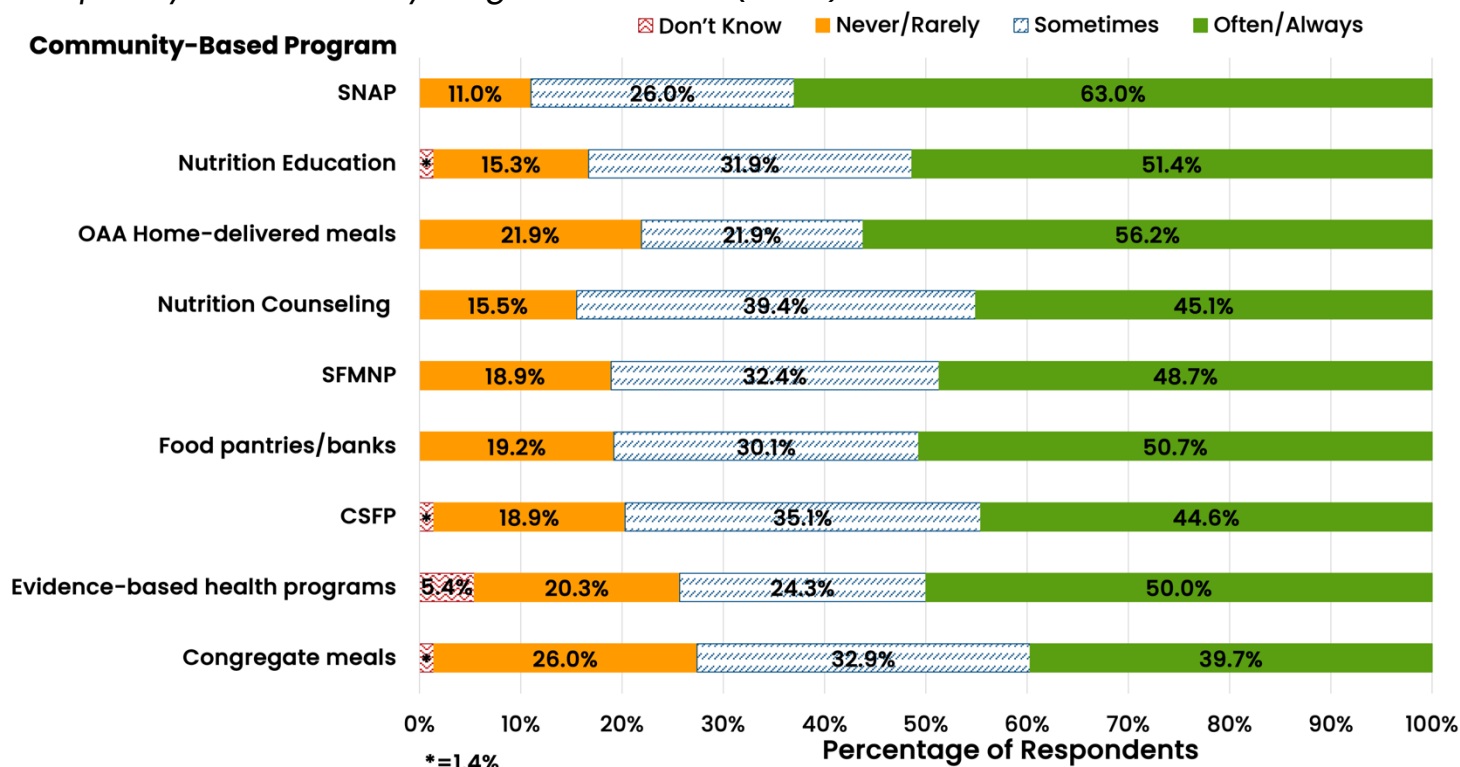
[Figure 4 extended text](#)

Most healthcare providers indicated that they refer their older adult patients or clients to community-based food and nutrition services (83.2%). Nearly one-half (46.3%) are actively involved in the referral process or decisions on what services they are referred to, while over one-third refer their clients or patients to another service coordinator who manages the referral (36.9%).

Among the providers who are actively involved in the referral process ($n=74$), the most referred programs are SNAP, nutrition education, and OAA home-delivered meals (Figure 5). The least referred program was the congregate meal program, likely connected to the low awareness of this service among the providers, as demonstrated in Figure 4.

Figure 5.

Frequency of Community Program Referrals ($n=74$)



[Figure 5 extended text](#)

The most utilized referral methods were passive methods such as paper handouts with information on the program/service (51.9%) and verbal information on the program/service (50.4%) (Table 3).

Table 3.

Community Referral Methods Employed by Providers' Healthcare Practice ($n=133$)

Referral Method ^a	Number	Percentage (%)
Verbal information on the program/service	69	51.9
Paper handout with information on the program/service	67	50.4
Through the electronic medical record	57	42.9
Send patient/client's information to the program/service for follow-up	56	42.1
Through a community-based resource platform	51	38.3
Not sure	3	2.3

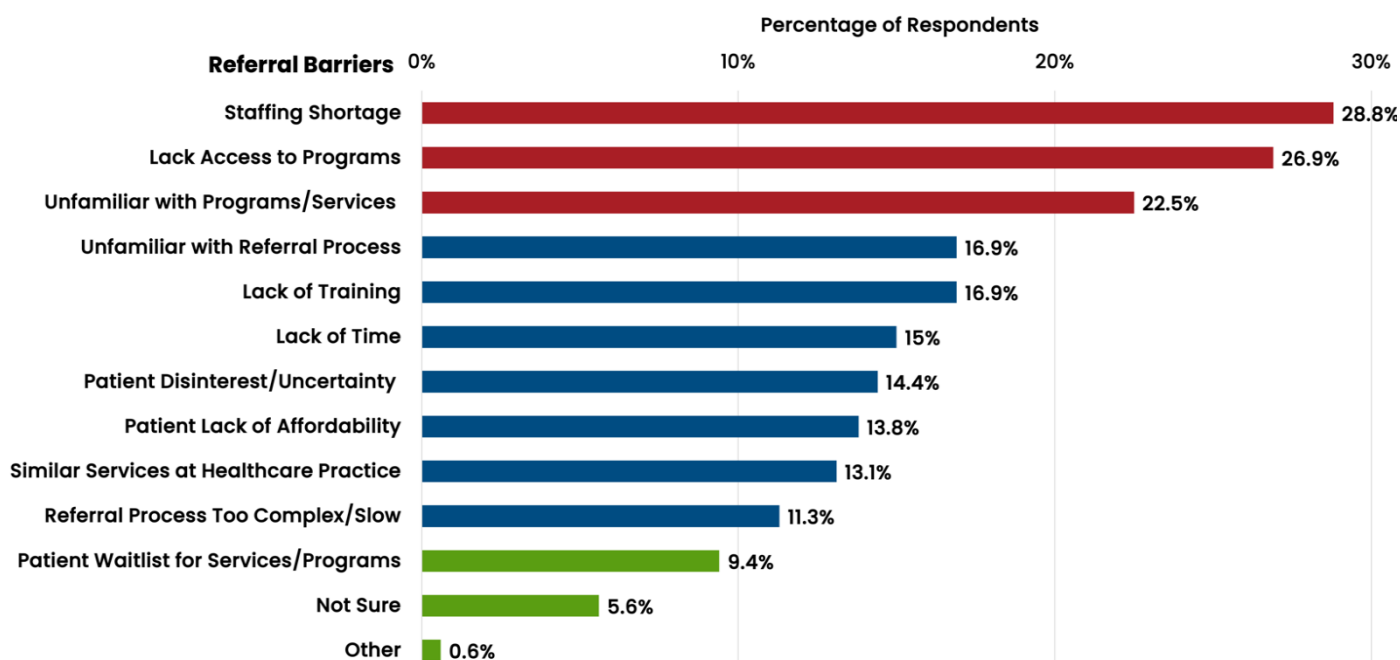
^a Respondents were able to select more than one

The frequency at which patients asked their health care providers about community-based food and nutrition services was evenly distributed between the options—“often/always” (35%), “sometimes” (31%), and “never/rarely” (30%). Three-quarters (77%) of the respondents have an established protocol at their healthcare practice for patient referrals to community food support.

To gain a better understanding of the respondents’ referral practices, the providers were prompted to select the barriers they face when referring their patients to community-based food and nutrition programs. The most common barriers included staffing shortages (28.8%), lack of access to community-based food and nutrition programs within their area (26.9%), and lack of familiarity with programs/services (22.5%) (Figure 6).

Figure 6.

Barriers to Making Community-Based Food and Nutrition Program Referrals (n=160)



[Figure 6 extended text](#)

The respondents indicated interest in learning more about community-based food and nutrition services—56% “very high/high,” 36% “moderate,” 8% “very low/low.”

A majority of the healthcare providers marked that they were aware of the National Resource Center on Nutrition and Aging (NRCNA) (68%), 23% were not aware, and 9% were not sure. Respondents with awareness of the NRCNA ($n=109$) were further asked if they have ever utilized the center’s resources; 83% shared that they have, 15% that they have not, and 3% were not sure.

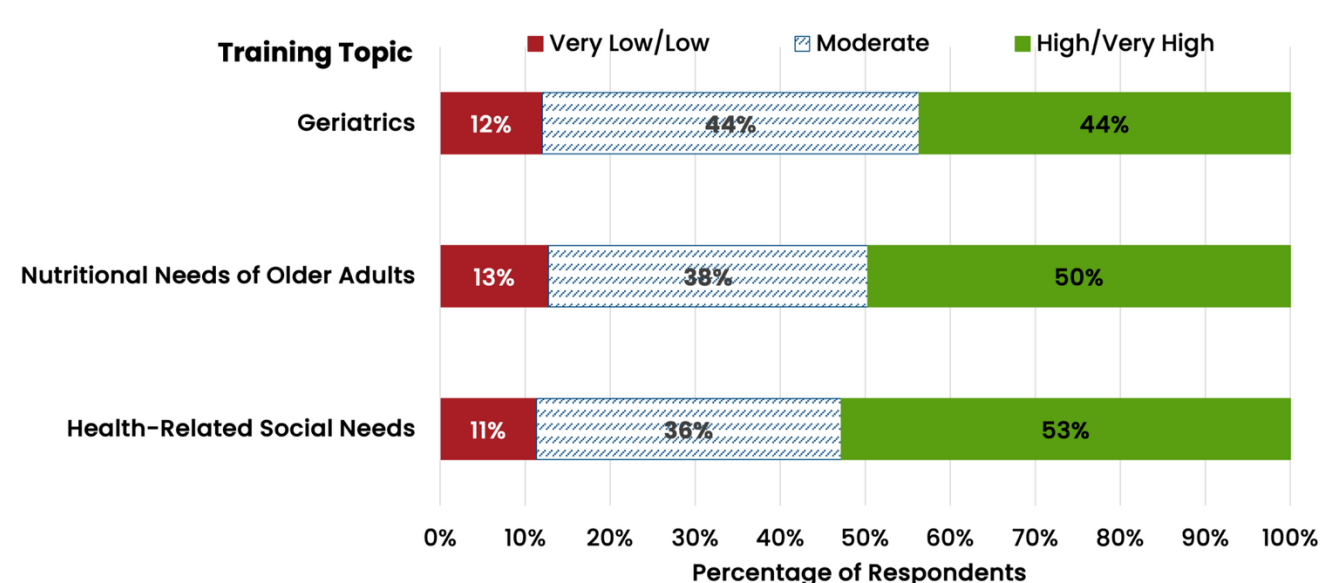
Training Needs and Preferences

Around two-thirds of the healthcare providers indicated that they have received a specialization, certification, or training in Geriatrics, or the care of older adults (66%). Around one-quarter stated they did not (26%) and a small percentage were not sure (8%). Most respondents reported having either an average level of knowledge (“some knowledge or skills”) (39–41%) or advanced knowledge (“good amount of knowledge or skills”) (45–50%) on the topics of health-related social needs, the nutritional needs of older adults, and geriatrics.

Interest levels in geriatrics, nutritional needs of older adults, and health-related social needs were similar. Geriatrics interest was evenly split between moderate and high/very. One-half of the survey respondents expressed “high or very high interest” in receiving training around nutritional needs of older adults and HRSN (Figure 7). The HRSN topics of highest interest included healthcare access (38.3%), mental health (37.6%), food/nutrition insecurity (35.5%), housing (31.2%), and loneliness (31.2%) (Table 4).

Figure 7.

Interest in Training on Aging and Health Topics (n=160)



[Figure 7 extended text](#)

Table 4.

Health-Related Social Needs of Training Interest (n=141)

HRSN Topic ^a	Number	Percentage (%)
Healthcare Access Needs/Support	54	38.3
Mental Health Needs/Support	53	37.6
Food/Nutrition Insecurity Needs/Support	50	35.5
Housing Needs/Support	44	31.2
Loneliness Needs/Support	44	31.2
Social and Emotional Needs/Support	37	26.2
Nutritional Risk/Malnutrition Needs/Support	37	26.2
Employment Needs/Support	37	26.2
Economic Needs/Support	35	24.8
Isolation Needs/Support	35	24.8
Utility Needs/Support	34	24.1
Personal Safety Needs/Support	32	22.7
Transportation Needs/Support	29	20.6

^a Respondents were able to select more than one

When it comes to training, many survey respondents preferred in-person or live formats such as face-to-face conferences (41.9%), in-person peer-to-peer sessions (40.6%), and live online course series (33.8%) (Table 5). When seeking quick information to conduct their job, the providers most preferred emails (peer-to-peer listservs) (49.4%), talking with colleagues (41.3%), or handouts (2-4 pages) (39.4%) (Table 5).

Table 5.

Preferred Training Settings and Formats (n=160)

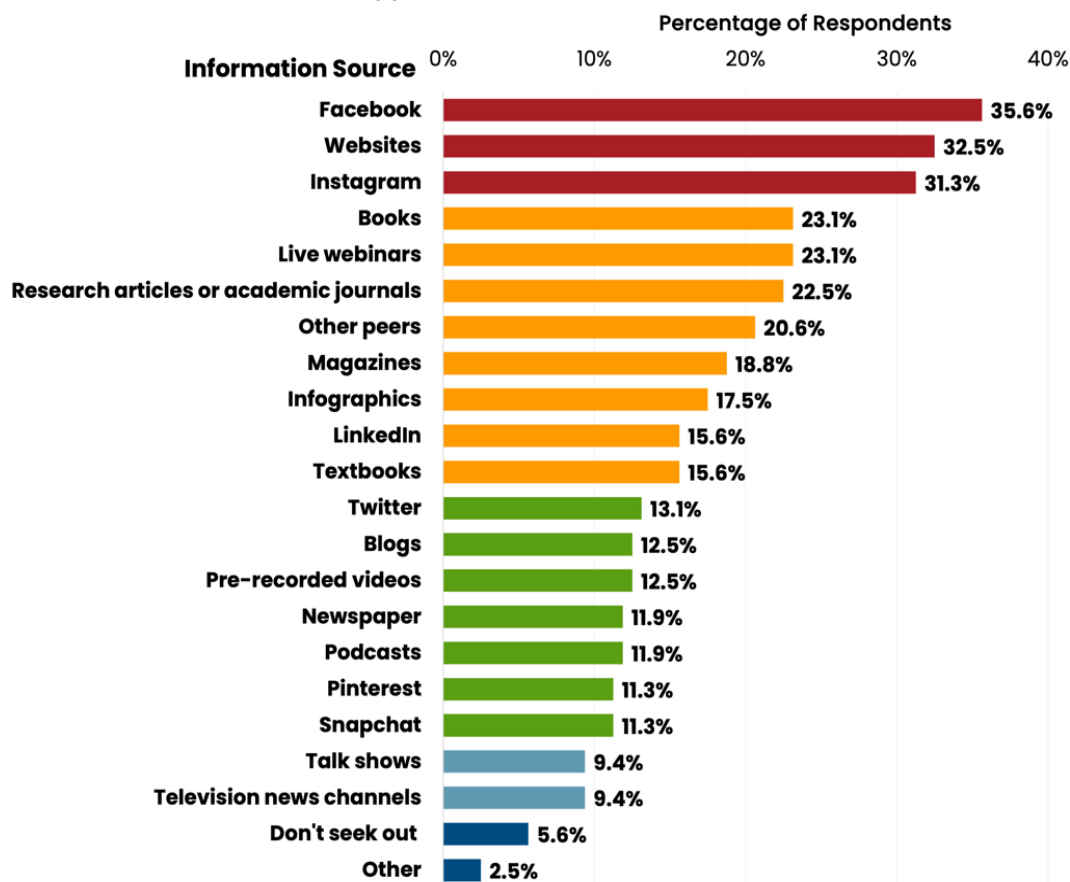
Formats	Number	Percentage (%)
Preferred Training Settings^a		
Face-to-face conferences	67	41.9
In-person peer-to-peer session	65	40.6
Live online course series	54	33.8
Pre-recorded online course series	42	26.3
Virtual conferences	40	25.0
Live webinar	38	23.8
Peer-reviewed journal article	36	22.5
Report	20	12.5
Pre-recorded webinar	19	11.9
Virtual peer-to-peer session	16	10.0
Other	2	1.3
Preferred Formats for Quick Information^a		
Email (peer-to-peer listserv)	79	49.4
Colleagues	66	41.3
Handouts	63	39.4
Frequently Asked Question (FAQ) Page	36	22.5
Social media posts	32	20.0
Newsletter	31	19.4
Infographics	30	18.8
Website page	30	18.8
One-page overview	27	16.9
User guides (>5 pages)	26	16.3
Podcast	24	15.0
Quickinars (<10 min. videos)	24	15.0
Peer-reviewed journal article	24	15.0
Toolkits	20	12.5
Blog post	17	10.6
Other	2	1.3

^a Respondents were able to select more than one

When accessing information about food or nutrition-related topics, the most prevalent sources indicated by the providers were Facebook (35.6%), websites (32.5%), and Instagram (31.3%) (Figure 8).

Figure 8.

Healthcare Providers' Typical Food and Nutrition Information Sources (n=160)

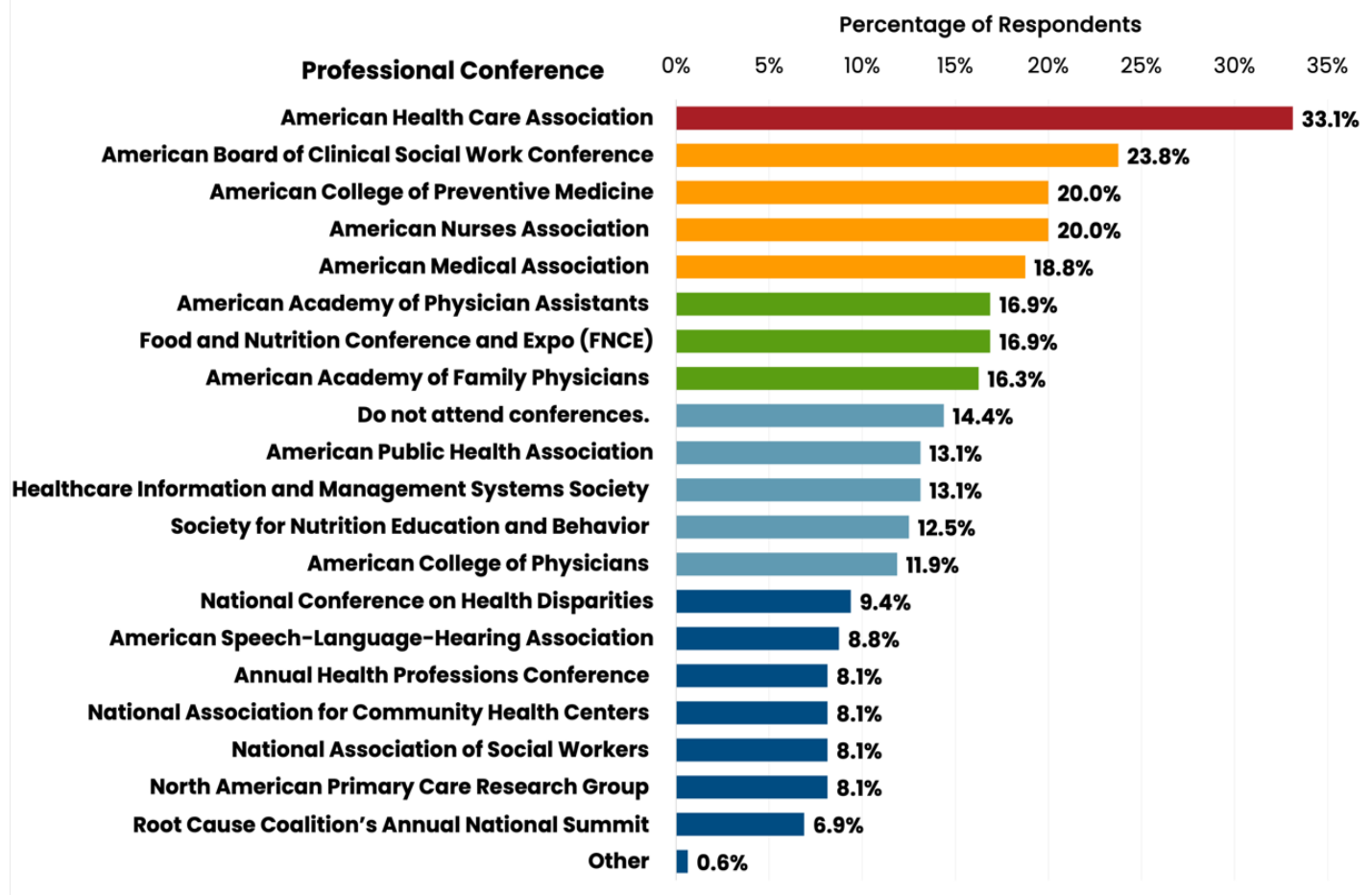


[Figure 8 extended text](#)

When attending professional conferences, 33.1% reported typically attending the American Health Care Association conference, which is targeted toward individuals working in long-term care (Figure 9). Other conferences the providers typically attend include the American Board of Clinical Social Work (23.8%), American College of Preventive Medicine (20%), and the American Nurses Association (20%). This is logical given that many respondents work in nursing or social work, and have a primary focus within primary care or family medicine (Table 2). Of note, nearly 15% do not attend conferences (Figure 9).

Figure 9.

Professional Conferences Providers Typically Attend (n=160)



[Figure 9 extended text](#)

The preferred ways of getting connected with the NRCNA if they wanted to, were through Facebook (39.4%), email newsletters (36.3%), or the website page (34.4%) (Table 6). If the NRCNA developed printable materials for use with coworkers and/or patients, the healthcare providers indicated that they would prefer informational handouts (38.8%), example surveys (33.1%), nutrition education newsletters (29.4%), or pamphlets/brochures (29.4%) (Table 6).

Table 6.*Preferred NRCNA Resources and Materials (n=160)*

Resources and Materials	Number	Percentage (%)
Preferred Method to Connect with the NRCNA^a		
Facebook	63	39.4
Email newsletter	58	36.3
Website page	55	34.4
Instagram	47	29.4
YouTube	40	25.0
Peer to peer listserv	37	23.1
National conferences	32	20.0
Snapchat	30	18.8
LinkedIn	28	17.5
X (formerly Twitter)	24	15.0
Pinterest	20	12.5
Preferred Types of Materials from the NRCNA^a		
Informational handouts	62	38.8
Example surveys	53	33.1
Nutrition education newsletters	47	29.4
Pamphlets or brochures	47	29.4
Customizable products	45	28.1
FAQs	44	27.5
Newsletter	42	26.3
Marketing toolkits	32	20.0
Tip sheets	32	20.0
Infographics	27	16.9
Social media toolkits	27	16.9
One-page overview of topic	24	15.0
Posters	21	13.1
Quality assurance toolkit	16	10.0
Other	3	1.9

^a Respondents were able to select more than one

Health-Related Social Needs Screening Practices

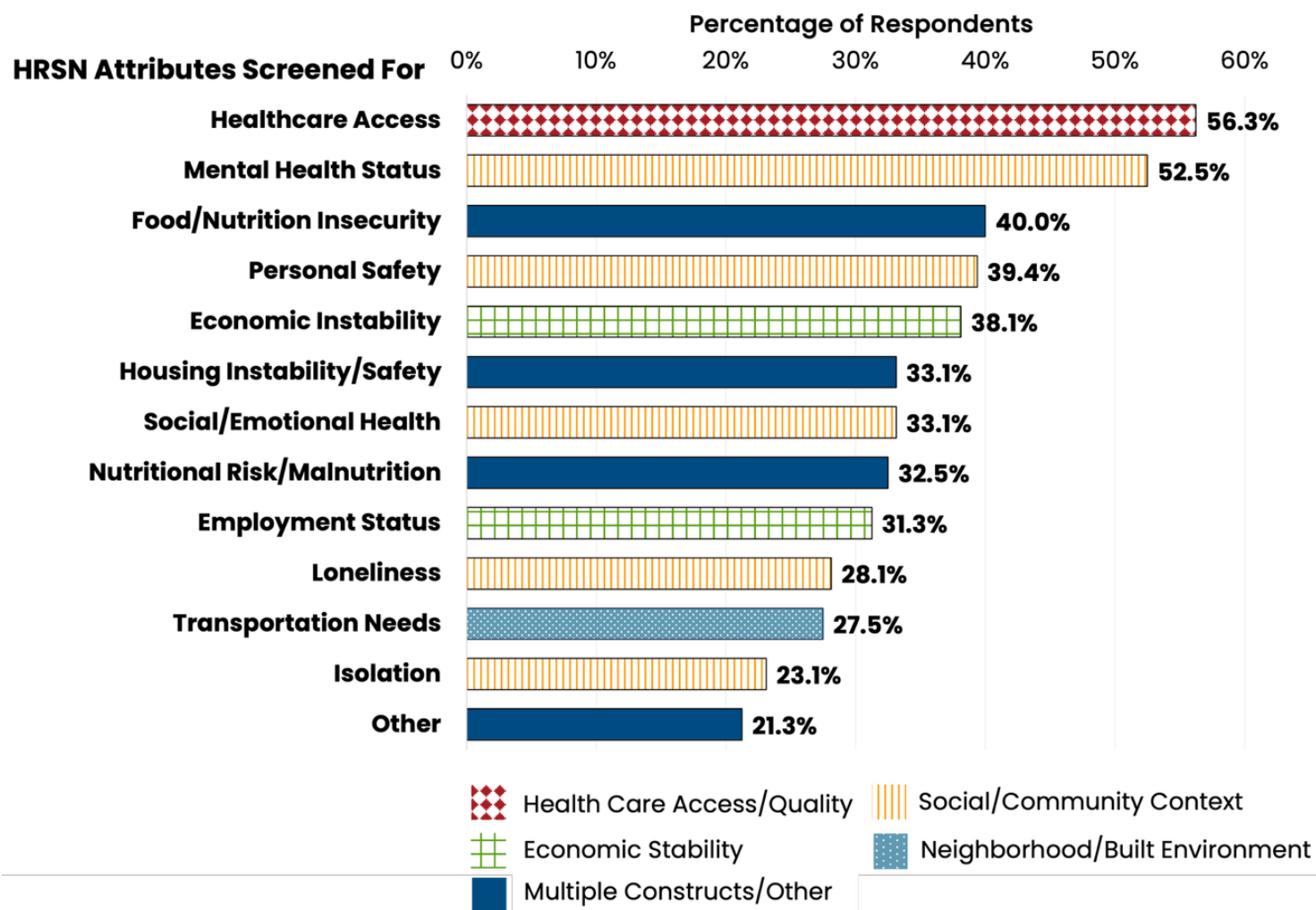
Awareness of the social and nutritional concerns of patients is a critical step in connecting healthcare providers and social care services, such as senior nutrition programs (NASEM, 2019). Ideally, all patients should be universally screened for risk factors that impact their health and wellbeing. This would aid in healthcare providers better understanding the experiences of their patients and increase the likelihood of referring them to social care services that would support healthy aging.

HRSN depict the conditions in which people are born, grow, work, live, and age. The Centers for Disease Control and Prevention (CDC) conceptualizes HRSN into five key areas—1) health care access and quality, 2) education access and quality, 3) social and community context, 4) economic stability, and 5) neighborhood and built environment (CDC, 2024). Factors across these key areas, aside from education access and quality, are represented in Figure 10.

When asked what HRSN factors respondents screen for when assessing patients, over one-half responded with healthcare access (56.3%) and mental health status (52.5%) (Figure 10). Additionally, over one third of respondents reported that they screen their patients for food/nutrition insecurity (40.0%), personal safety (39.4%), and economic/financial instability (38.1%). HRSN that are screened for the least among survey respondents are loneliness (28.1%), transportation needs (27.5%), and isolation (23.1%) (Figure 10).

Figure 10.

Health-Related Social Needs Attributes Healthcare Providers Screen Their Patients For (n=160)



[Figure 10 extended text](#)

When screening for food insecurity (overall food access/availability), healthcare providers reported most often using the USDA 6 (43.8%), USDA 10 (39.1%), and USDA 18 (34.4%) screening tools (Table 7). The other two tools healthcare providers indicated using are the 2-item Hunger Vital Sign (28.1%) and simply asking their patients (25.0%). One person responded “other” but did not write-in what they use instead.

When determining who to screen for food insecurity, healthcare providers most often screen all patients (56.3%) (Table 7). If a provider did not choose to screen all patients, they were most likely to screen older adults (32.8%) or individuals with financial need (31.3%) (Table 7). Furthermore, most providers indicated that they screen their patients at every visit (42.2%) or at visits, but no more than once per month (37.5%) (Table 7).

Table 7.

Food Insecurity Screening Characteristics (n=64)

Characteristics	Number	Percentage (%)
Food Insecurity Screening Tools Used^a		
USDA 6	28	43.8
USDA 10	25	39.1
USDA 18	22	34.4
2-item Hunger Vital Sign	18	28.1
I/we ask about food insecurity, but do not utilize a screening tool	16	25.0
Not sure	11	17.2
Other	1	1.6
Patients Screened For Food Insecurity^a		
All	36	56.3
Older Adults	21	32.8
Individuals with Financial Need	20	31.3
Individuals on Medicare	17	26.6
Individuals with Comorbidities	10	15.6
Pediatrics	7	10.9
Not sure	3	4.7
Frequency Patients are Screened for Food Insecurity		
Every visit; does not matter when the patient was last screened.	27	42.2
At visits, but no more than once per month.	24	37.5
At visits, but no more than once every 2-3 months.	14	21.9
At visits, but no more than once every 4-6 months.	9	14.1
At visits, but no more than once a year.	7	10.9
Not sure	1	1.6

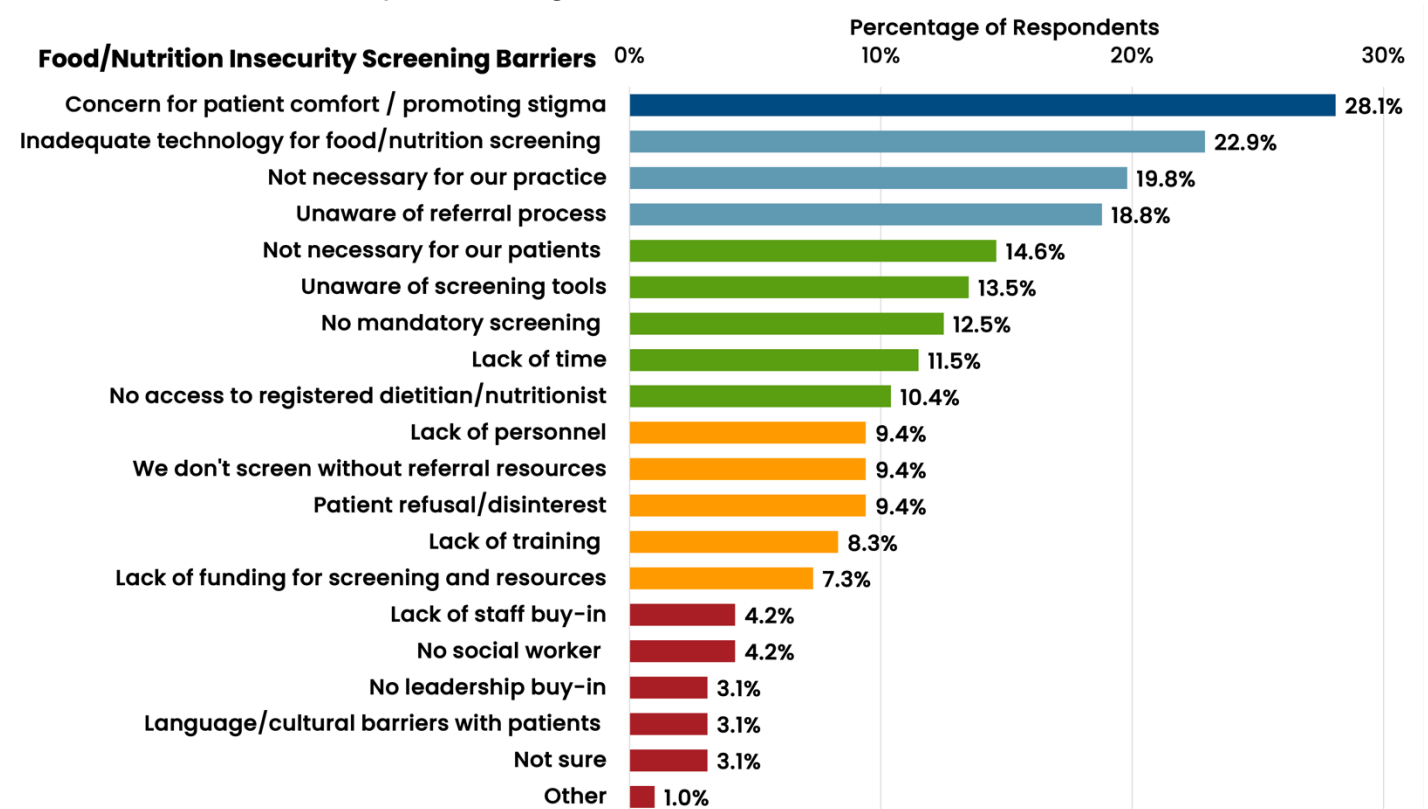
^a Respondents were able to select more than one

There are many potential barriers that can keep healthcare providers from screening their patients for food/nutrition insecurity. Nutritional insecurity often more specifically assesses access to/availability of nutritious, culturally appropriate foods as opposed to overall food sources. Among the survey respondents who stated that they do NOT screen for food/nutrition insecurity, the top barrier was “concern for patient comfort/promoting stigma” (28.1%) (Figure 11).

Other reported barriers included “inadequate technology system in place to support screening for food/nutrition insecurity” (22.9%), “not necessary for our practice given our patient population” (19.8%), and “lack of awareness of appropriate referral processes to support patients at risk of food/nutrition insecurity” (18.8%). Barriers least likely to be reported were “lack of leadership buy-in” (3.1%) and “language/cultural barriers with patients” (3.1%) (Figure 11).

Figure 11.

Food/Nutrition Insecurity Screening Barriers (n=96)



[Figure 11 extended text](#)

Nutritional risk screening tools assess the likelihood that a patient is not receiving adequate calories or protein to support their health. When assessing nutritional risk, the majority of healthcare providers in this survey reported using the 24-item Dietary Screening Tool (DST) to assess nutritional risk (61.5%) (Bailey et al., 2009; Table 8). As the DST is 24 questions and more commonly used in community settings, it is suspected that

the healthcare providers may have been referring to a different dietary screening tool they use at their clinic and not the one created by Bailey and others (Bailey et al., 2009).

Other leading nutritional risk screening tools used by the healthcare providers were DETERMINE Your Nutritional Health (38.5%), Malnutrition Screening Tool (MST) (34.6%), Malnutrition Universal Screening Tool (MUST) (30.8%), and the Nutritional Risk Screening (NRS) (30.8%). The providers were least likely to ask the patients about their nutritional risk without a formalized screening tool (13.5%) (Table 8).

Table 8.

Nutritional Risk Screening Tools Used By Healthcare Providers (n=52)

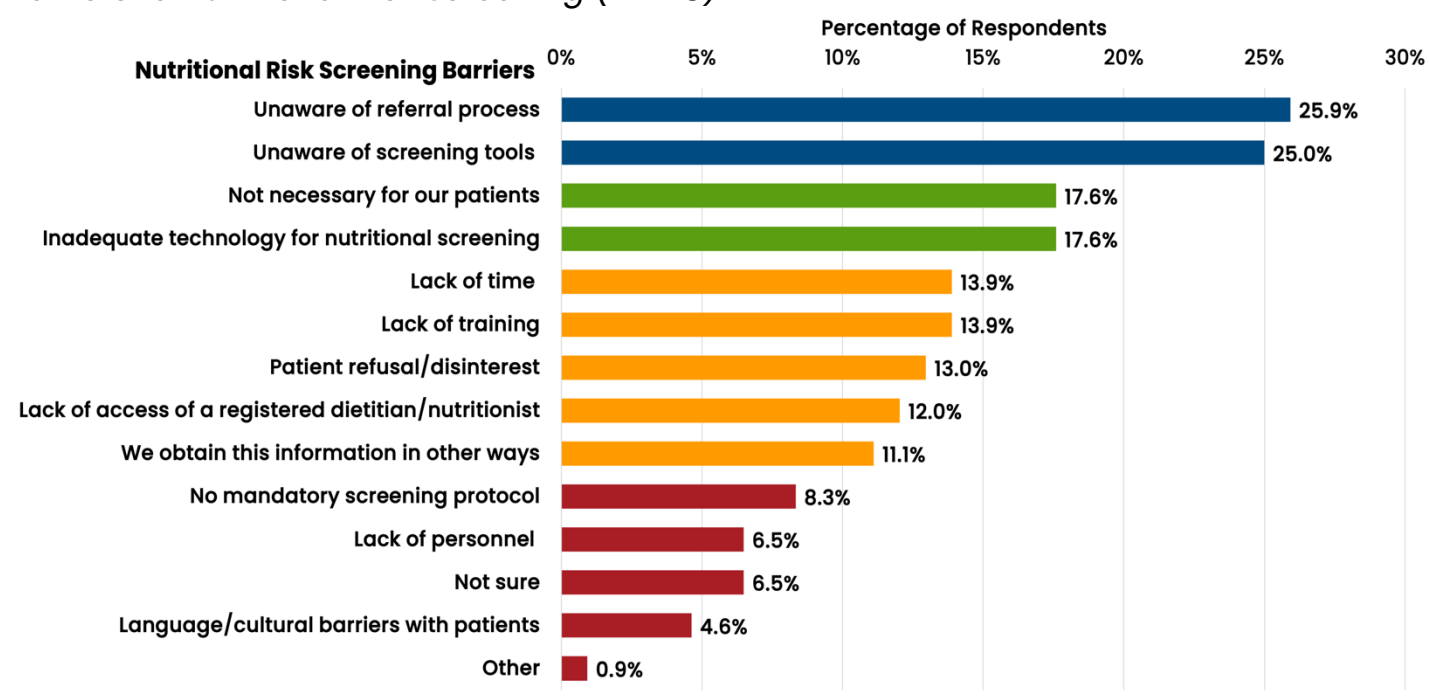
Nutritional Risk Screening Tool^a	Number	Percentage
Dietary Screening Tool (DST)	32	61.5%
DETERMINE Your Nutritional Health checklist (DETERMINE)	20	38.5%
Malnutrition Screening Tool (MST)	18	34.6%
Malnutrition Universal Screening Tool (MUST)	16	30.8%
Nutritional Risk Screening (NRS)	16	30.8%
Mini Nutritional Assessment–Short Form (MNA–SF)	15	28.8%
Subjective Global Assessment (SGA)	12	23.1%
Mini Nutritional Assessment (MNA)	11	21.2%
Patient Generated Subjective Global Assessment (PG–SGA)	10	19.2%
I/we ask about nutritional risk, but do not utilize a screening tool.	7	13.5%
Not sure	3	5.8%

^a Respondents were able to select more than one

The providers who do NOT screen for nutritional risk (n=108) were also asked about barriers that prevent them from doing so. The highest barriers were lack of awareness of appropriate referral processes to support patients at nutritional risk (25.9%) or appropriate screening tools to utilize (25%) (Figure 12). Other top reported barriers were “doesn’t seem necessary given the needs of our patient population” (17.6%) and having “inadequate technology system(s) in place to support screening for nutritional risk/malnutrition” (17.6%). Like the food/nutrition insecurity screening barriers, providers were least likely to report barriers related to the language/culture of their patients (4.6%).

Figure 12.

Barriers to Nutritional Risk Screening (n=108)



[Figure 12 extended text](#)

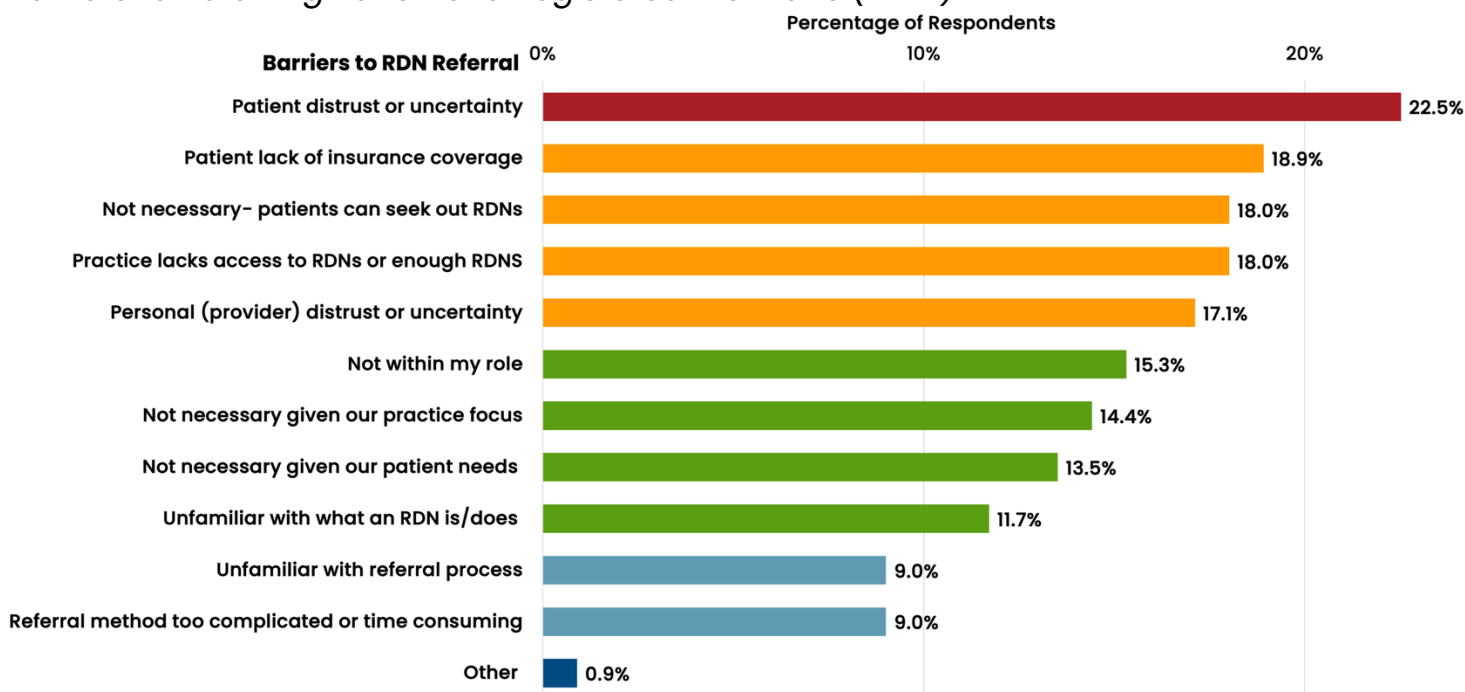
To offer additional context to the providers' practices around addressing their patients' nutrition-related concerns, they were asked about their access to and utilization of a registered dietitian nutritionist (RDN). A majority of respondents shared that they have access to an RDN, whether as a direct member of their care team (53.8%) or through external referral (15.6%). A smaller percentage indicated not having access to an RDN because one is not available (14.4%) or because they choose not to seek out access (11.9%).

Among the providers with access to an RDN ($n=111$), 28.8% estimated that they make referrals to an RDN 1–5 times per week, and 28.8% make referrals around 6–15 times per week. Around 25% make referrals 16 or more times per week and only 8.1% make referrals less than once per week. A small percentage stated, "not applicable" due to referrals being triggered automatically (5.4%), they "never" make referrals (2.7%), and "not sure" (0.9%).

The providers with access to an RDN were further asked if they experienced any barriers that have prevented referring patients to an RDN. The most common barriers were patient distrust or uncertainty about nutrition counseling provided by the available RDNs (22.5%), patients lacking insurance coverage for services provided by RDNs (18.9%), feeling as though patients can seek out RDNs on their own if they want to (18%), and a lack of access to RDNs or enough RDNs at their practice setting (18%) (Figure 13).

Figure 13.

Barriers to Referring Patients to Registered Dietitians (n=111)



[Figure 13 extended text](#)

Perceived Social and Nutritional Concerns of Patients

Survey respondents were asked to select the top 2–3 nutrition and HRSN concerns they most frequently encounter among their older adult patients. For consistency, they were provided a list of common items to choose from and were not allowed to select more than three.

Around one third of the healthcare providers perceived that the top nutrition concerns of their patients included “dietary management of chronic disease,” “low physical activity,” and “physical limitations impacting eating” (Table 9).

Over one-third of healthcare providers perceived that the most frequent HRSN concern they encountered among their older patients was “economic or financial instability” (38.1%). Other frequent concerns were “housing instability/safety concerns” (30.0%), “isolation” (30.0%), and “poor mental health status” (26.3%) (Table 9).

Table 9.

Healthcare Provider Perceptions of Most Frequent Nutrition and HRSN Concerns Among Older Adult Patients (n=160)

Concerns	Number	Percentage (%)
Nutrition Concerns^a		
Chronic disease management	57	35.6
Low physical activity	51	31.9
Physical limitations impacting eating	47	29.4
Obesity/overweight	39	24.4
Hunger/food insecurity	38	23.8
Vitamin/mineral deficiencies	38	23.8
Malnutrition	36	22.5
Nutritional risk	30	18.8
Underweight	24	15.0
Not sure	6	3.8
HRSN Concerns^a		
Economic or financial instability	61	38.1
Housing instability/safety concerns	48	30.0
Isolation	48	30.0
Poor mental health status	42	26.3
Barriers within built environment	39	24.4
Limited food access/availability	39	24.4
Lack of/inconsistent social support	31	19.4
Loneliness	31	19.4
Personal safety concerns	31	19.4
Lack of/inconsistent employment	28	17.5
No or limited healthcare access	27	16.9
Transportation needs	23	14.4
Utility needs	15	9.4
Not sure	12	7.5

^a Respondents were able to select no more than three

According to the healthcare provider respondents, there is a wide variation in how often their patients ask about nutrition-related issues. Over one-third of respondents reported that their patients ask about nutrition “often” or “always” (39%), around one-third (31%) “sometimes” ask, and around one-third (29%) “never/rarely” ask.

The providers were also asked about their comfort level in answering nutrition questions from their patients. A majority felt “comfortable” or “somewhat comfortable” (62%) while 26% felt “neutral” about their comfort level, and 12% felt “somewhat uncomfortable” or “uncomfortable.”

Many respondents viewed nutrition with “very high” or “high” (71%) importance. Almost a quarter had a “moderate” view of its importance (22%), while few felt that nutrition had “low” or “very low” importance (6%) within the healthcare of their older adult patients.

Conclusions

This healthcare provider needs assessment collected a variety of information intended to support the creation and expansion of partnerships between healthcare providers and senior nutrition programs (SNPs). The findings highlight opportunities for improvements in the overall awareness of SNPs, particularly congregate meal programs, as well as screening and referral practices that can help facilitate connections between older adults and SNPs. Data on training needs and preferences offer strategies for the NRCNA and SNPs to connect with healthcare providers.

The NRCNA will utilize this data to draft a long-term plan to develop services and resources that assist SNPs and healthcare providers in working together to improve the health and well-being of older adults. A preliminary logic model for this can be found in the Appendix. In the short-term, the findings will be incorporated into NRCNA resources for SNPs, such as the 2025 summer webinar series.

Further, data from this report will be disseminated and made available through a variety of channels including reports, presentations, and manuscripts.

Recommendations

Based on the report findings, the aging network may consider the following strategies to establish and strengthen partnerships between healthcare providers and SNPs:

- **Spread Awareness About Congregate Meals.** One of three respondents indicated low/very low awareness of the congregate meal program. Additionally, more than one-half expressed high/very high interest in learning more about community-based food and nutrition programs for older adults. The aging network can aim to address these findings by providing informational sessions or materials about the congregate meal program, and other services, to healthcare providers.
- **Offer Education/Information Through Preferred Formats:** To inform healthcare providers about SNPs and other topics, the aging network should consider utilizing preferred formats such as in-person conferences and sessions, live online courses, emails, and brief handouts (2-4 pages). The aging network can also offer training on topics of interest among healthcare providers such as HRSN, the nutritional needs of older adults, food/nutrition insecurity, and geriatrics.
- **Support and Enhance Referral Methods:** Respondents reported most often utilizing paper handouts and verbal information to refer patients to community-based food and nutrition services. SNPs can help facilitate referrals by providing handouts and verbal information about their services to healthcare providers. Upon readiness, healthcare providers and SNPs can work toward integrating more active referral methods to connect patients to community services. Examples include having a

patient navigator or SNP staff member call patients to follow-up on accessing the service.

- **Mitigate Referral Barriers:** The most common barriers to referring to community-based services in this assessment were staffing shortages, lack of access to community-based food and nutrition programs, and lack of familiarity with services. The aging network can work with healthcare providers to identify opportunities to assist with staffing shortages, such as offering staff or volunteers to facilitate screening and referral processes. SNPs can also aim to improve access to programs by expanding service areas, where possible.
- **Promote HRSN and Nutritional Risk Screening:** Universal screening of patients' HRSN and nutritional concerns is critical to being able to connect them with SNPs or other community-based services. A majority (over 60%) of the healthcare providers in this assessment indicated that they **do not** screen their patients for food/nutrition insecurity, social/emotional health, nutritional risk/malnutrition, loneliness, and other important HRSN factors. The aging network can assist in educating, encouraging, and/or offering to help healthcare teams with screening.

References

- Administration for Community Living (ACL). (2024). [2023 Profile of Older Americans](#).
- Administration for Community Living (ACL). (2021). [Older Americans Act Title III Programs: 2018 Highlights and Accomplishments](#). Washington, D.C. Office of Performance and Evaluation.
- Bailey, R. L., Miller, P. E., Mitchell, D. C., Hartman, T. J., Lawrence, F. R., Sempos, C. T., & Smiciklas-Wright, H. (2009). Dietary screening tool identifies nutritional risk in older adults. [The American Journal of Clinical Nutrition](#), 90(1), 177–183.
- Brewster, A. L., Wilson, T. L., Kunkel, S. R., Curry, L. A., & Rubeo, C. (2022). [Factors Associated With Contracting Between Area Agencies on Aging and Health Care Entities](#). *Journal of Applied Gerontology*, 41(8), 1878–1886.
- Centers for Disease Control and Prevention. (2024). [Health-related social needs](#).
- Chaudhuri, N., Alvi, L. H., & Williams, A. (2024). [Long-term support referrals to enhance food security and well-being in older adults: Texas physicians and nurses on what works](#). *Journal of Public Health*, 32(3), 421–433.
- Colello, K.J. & Napili, A. (2022). [Older Americans Act: Overview and Funding](#). Congressional Research Service, R43414.
- Curry, L., Cherlin, E., Ayedun, A., Rubeo, C., Straker, J., Wilson, T. L., & Brewster, A. (2022). [How Do Area Agencies on Aging Build Partnerships With Health Care Organizations?](#) *The Gerontologist*, 62(10), 1409–1419.
- Davis, M. M., Bond, L. A., Howard, A., & Sarkisian, C. A. (2011). [Primary care clinician expectations regarding aging](#). *The Gerontologist*, 51(6), 856–866.
- French, J. (2017). The Case for Social Marketing. In J. French, C. Blair-Stevens, D. McVey, & R. Merritt (Eds). *Social Marketing and Public Health: Theory and Practice*. New York: Oxford University Press.
- Kunkel, S. R., Lackmeyer, A. E., Graham, R. J., & Straker, J. K. (2022). *Advancing Partnerships: Contracting Between Community-Based Organizations And Health Care Entities*. Scripps Gerontology Center, Miami University.
- Lefebvre, R. C., & Rochlin, L. (1997). Social Marketing. In K. Glanz, F. M. Lewis & B. K. Rimer (Eds.). *Health Behavior and Health Education* (pp. 384–402). San Francisco, CA: Jossey-Bass Publishers.
- National Academies of Sciences, Engineering, and Medicine (NASEM). (2020). [Social Isolation and Loneliness in Older Adults: Opportunities for the Health Care System](#). Washington, DC: The National Academies Press.
- National Academies of Sciences, Engineering, and Medicine (NASEM). 2019. [Integrating Social Care into the Delivery of Health Care: Moving Upstream to Improve the Nation's Health](#). Washington, DC: The National Academies Press.

- Palsgaard, P., Maino Vieytes, C. A., Peterson, N., Francis, S. L., Monroe-Lord, L., Sahyoun, N. R., Ventura-Marra, M., Weidauer, L., Xu, F., & Arthur, A. E. (2022). [Healthcare Professionals' Views and Perspectives towards Aging](#). *International Journal of Environmental Research and Public Health*, 19(23), 15870.
- Salsberg, E., Richwine, C., Westergaard, S., Portela Martinez, M., Oyeyemi, T., Vichare, A., & Chen, C. P. (2021). [Estimation and Comparison of Current and Future Racial/Ethnic Representation in the US Health Care Workforce](#). *JAMA Network Open*, 4(3), e213789.
- Sari, D. W., Ulfiana, E., Anggraini, N. V., Kristianingrum, N. D., Aurizki, G. E., & Noguchi-Watanabe, M. (2024). The Expectations Regarding Aging and Ageism Perspective between Nurses and Caregivers in Long-term Care Facilities. *Nurse Media Journal of Nursing*, 14(1), 85–95.
- Sarkisian, C. A., Hays, R. D., Berry, S., & Mangione, C. M. (2002). [Development, reliability, and validity of the expectations regarding aging \(ERA-38\) survey](#). *The Gerontologist*, 42(4), 534–542.
- Sarkisian, C. A., Steers, W. N., Hays, R. D., & Mangione, C. M. (2005). [Development of the 12-item Expectations Regarding Aging Survey](#). *The Gerontologist*, 45(2), 240– 248.
- Schultz, S. & Francis, S.L. (2022). [2022 Needs Assessment Report](#). Nutrition and Aging Resource Center.
- Storey, J. D., Saffitz, G. B., & Rimon, J. G. (2008). Social marketing. In K. Glanz, B. K. Rimer, K. Viswanath (Eds.). *Health Behavior and Health Education* (4th ed., pp. 436– 464). San Francisco, CA: Jossey Bass Publishers.
- United Health Foundation. (2023). [America's Health Rankings Senior Report: State Summaries](#).
- United States Census Bureau. (2022). [ACS Demographic and Housing Estimates](#).
- United States Census Bureau. (2021). [ACS Occupation By Sex For The Civilian Employed Population 16 Years And Over](#).
- Zhao, H., & Andreyeva, T. (2022). [Diet Quality and Health in Older Americans](#). *Nutrients*, 14(6), Article 6.

Extended Text

Figure 1. Survey Category Descriptions and Number of Questions

Respondent Information (7) – Sociodemographic characteristics such as sex, age, education, race, and ethnicity; initial eligibility questions

Aging Perspectives (1) – 12-item Expectations Regarding Aging – assess aging stereotypes

Healthcare Practice Role and Setting (10) – General characteristics of healthcare setting such as role, practice area, experience, location

Community-Based Food and Nutrition Program Awareness and Referral (11) – Awareness and referral to community-based food and nutrition programs, partnership interests, NRCNA awareness/utilization

Training Needs and Preferences (10) – Prior educational training/expertise, relevant topics of interest, preferred training and marketing formats

Health-Related Social Needs (HRSN) and Nutritional Risk Screening (10) – Screening practices related to HRSN and nutritional risk including tools and barriers

Needs of Older Adult Patients (5) – Perspectives on the HRSN and nutritional needs of their older patients

Figure 3. Healthcare Coverage of Patients 60 Years or Older ($n=16$)

Insurance Coverage Type	Don't Know	Never/Rarely	Sometimes	Often/Always
Medicare	2%	15.6%	15.7%	66.7%
Medicaid	2%	15.6%	25.7%	56.7%
Private Insurance	3.40%	26.7%	25.3%	44.6%
Tricare or Veterans Affairs	6.30%	27.5%	23.9%	42.3%
Uninsured	6.90%	42.8%	19.3%	31.0%
COBRA or Temporary Insurance	14.90%	39.8%	25.0%	20.3%
Charity Care	10.10%	46.3%	22.8%	20.8%

Figure 4. Awareness of Community-based Food and Nutrition Programs ($n=160$)

Community-Based Food Program	Low / Very Low	Moderate	High / Very High
Food pantries/banks	11.0%	35.5%	53.5%
Supplemental Nutrition Assistance Program	15.6%	29.4%	55.0%

Community-Based Food Program	Low / Very Low	Moderate	High / Very High
Nutrition Education	14.3%	38.3%	47.4%
Commodity Supplemental Food Program	18.1%	37.5%	44.4%
Evidence-based health programs	20.4%	40.1%	39.5%
Older Americans Act Home-delivered meals	24.0%	35.3%	40.7%
Nutrition Counseling	24.8%	37.3%	37.9%
Congregate meals	25.8%	35.2%	39.0%
Senior Farmers Market Nutrition Program	33.6%	32.9%	33.5%

Figure 5. Frequency of Community Program Referrals (n=74)

Community-Based Food Program	Don't Know	Never/Rarely	Sometimes	Often/Always
Supplemental Nutrition Assistance Program	–	11.0%	26.0%	63.0%
Nutrition Education	1.4%	15.3%	31.9%	51.4%
Older Americans Act Home-delivered meals	–	21.9%	21.9%	56.2%
Nutrition Counseling	–	15.5%	39.4%	45.1%
Senior Farmers Market Nutrition Program	–	18.9%	32.4%	48.7%
Food pantries/banks	–	19.2%	30.1%	50.7%
Commodity Supplemental Food Program	1.4%	18.9%	35.1%	44.6%
Evidence-based health programs	5.4%	20.3%	24.3%	50.0%
Congregate meals	1.4%	26.0%	32.9%	39.7%

Figure 6. Barriers to Making Community-Based Food and Nutrition Program Referrals (n=160)

Referral Barriers	Percentage of Respondents
Staffing Shortage	28.8%
Lack Access to Programs	26.9%
Unfamiliar with Programs/Services	22.5%
Unfamiliar with Referral Process	16.9%
Lack of Training	16.9%
Lack of Time	15.0%
Patient Disinterest/Uncertainty	14.4%
Patient Lack of Affordability	13.8%
Similar Services at Healthcare Practice	13.1%

Referral Barriers	Percentage of Respondents
Referral Process Too Complex/Slow	11.3%
Patient Waitlist for Services/Programs	9.4%
Not Sure	5.6%
Other	0.6%

Figure 7. Interest in Training on Aging and Health Topics (*n*=160)

Training Topics	Very Low/Low	Moderate	High/Very High
Geriatrics	12%	44%	44%
Nutritional Needs Of Older Adults	13%	38%	50%
Health-Related Social Needs	11%	36%	53%

Figure 8. Healthcare Providers' Typical Food and Nutrition Information Sources (*n*=160)

Nutrition Information Source	Number of Respondents	Percentage of Respondents
Facebook	57	35.6%
Websites	52	32.5%
Instagram	50	31.3%
Books	37	23.1%
Live webinars	37	23.1%
Research articles or academic journals	36	22.5%
Other peers	33	20.6%
Magazines	30	18.8%
Infographics	28	17.5%
LinkedIn	25	15.6%
Textbooks	25	15.6%
Twitter	21	13.1%
Blogs	20	12.5%
Pre-recorded videos	20	12.5%
Newspaper	19	11.9%
Podcasts	19	11.9%
Pinterest	18	11.3%
Snapchat	18	11.3%
Talk shows	15	9.4%
Television news channels	15	9.4%
Don't seek out	9	5.6%
Other	4	2.5%

Figure 9. Professional Conferences Providers Typically Attend (*n*=160)

Professional Conferences	Number of Respondents	Percentage of Respondents
American Health Care Association	53	33.1%
American Board of Clinical Social Work Conference	38	23.8%
American College of Preventive Medicine	32	20.0%
American Nurses Association	32	20.0%
American Medical Association	30	18.8%
American Academy of Physician Assistants	27	16.9%
Food and Nutrition Conference and Expo (FNCE)	27	16.9%
American Academy of Family Physicians	26	16.3%
Do not attend conferences.	23	14.4%
American Public Health Association	21	13.1%
Healthcare Information and Management Systems Society	21	13.1%
Society for Nutrition Education and Behavior	20	12.5%
American College of Physicians	19	11.9%
National Conference on Health Disparities	15	9.4%
American Speech-Language-Hearing Association	14	8.8%
Annual Health Professions Conference	13	8.1%
National Association for Community Health Centers	13	8.1%
National Association of Social Workers	13	8.1%
North American Primary Care Research Group	13	8.1%
Root Cause Coalition's Annual National Summit	11	6.9%
Other	1	0.6%

Figure 10. Health-Related Social Needs Providers Screen Their Patients For (*n*=160)

Health-related Social Needs	Number of Respondents	Percentage of Respondents
Healthcare Access	90	56.3%
Mental Health Status	84	52.5%
Food/Nutrition Insecurity	64	40.0%
Personal Safety	63	39.4%
Economic Instability	61	38.1%
Housing Instability/Safety	53	33.1%
Social/Emotional Health	53	33.1%

Health-related Social Needs	Number of Respondents	Percentage of Respondents
Nutritional Risk/Malnutrition	52	32.5%
Employment Status	50	31.3%
Loneliness	45	28.1%
Transportation Needs	44	27.5%
Isolation	37	23.1%
Other	34	21.3%

Figure 11. Food/Nutrition Insecurity Screening Barriers (n=96)

Food/Nutrition Insecurity Screening Barriers	Percentage of Respondents
Concern for patient comfort / promoting stigma	28.10%
Inadequate technology for food/nutrition screening	22.90%
Not necessary for our practice	19.80%
Unaware of referral process	18.80%
Not necessary for our patients	14.60%
Unaware of screening tools	13.50%
No mandatory screening	12.50%
Lack of time	11.50%
No access to registered dietitian/nutritionist	10.40%
Lack of personnel	9.40%
We don't screen without referral resources	9.40%
Patient refusal/disinterest	9.40%
Lack of training	8.30%
Lack of funding for screening and resources	7.30%
Lack of staff buy-in	4.20%
No social worker	4.20%
No leadership buy-in	3.10%
Language/cultural barriers with patients	3.10%
Not sure	3.10%
Other	1%

Figure 12. Nutritional Risk Screening Tools Used by Healthcare Providers (n=52)

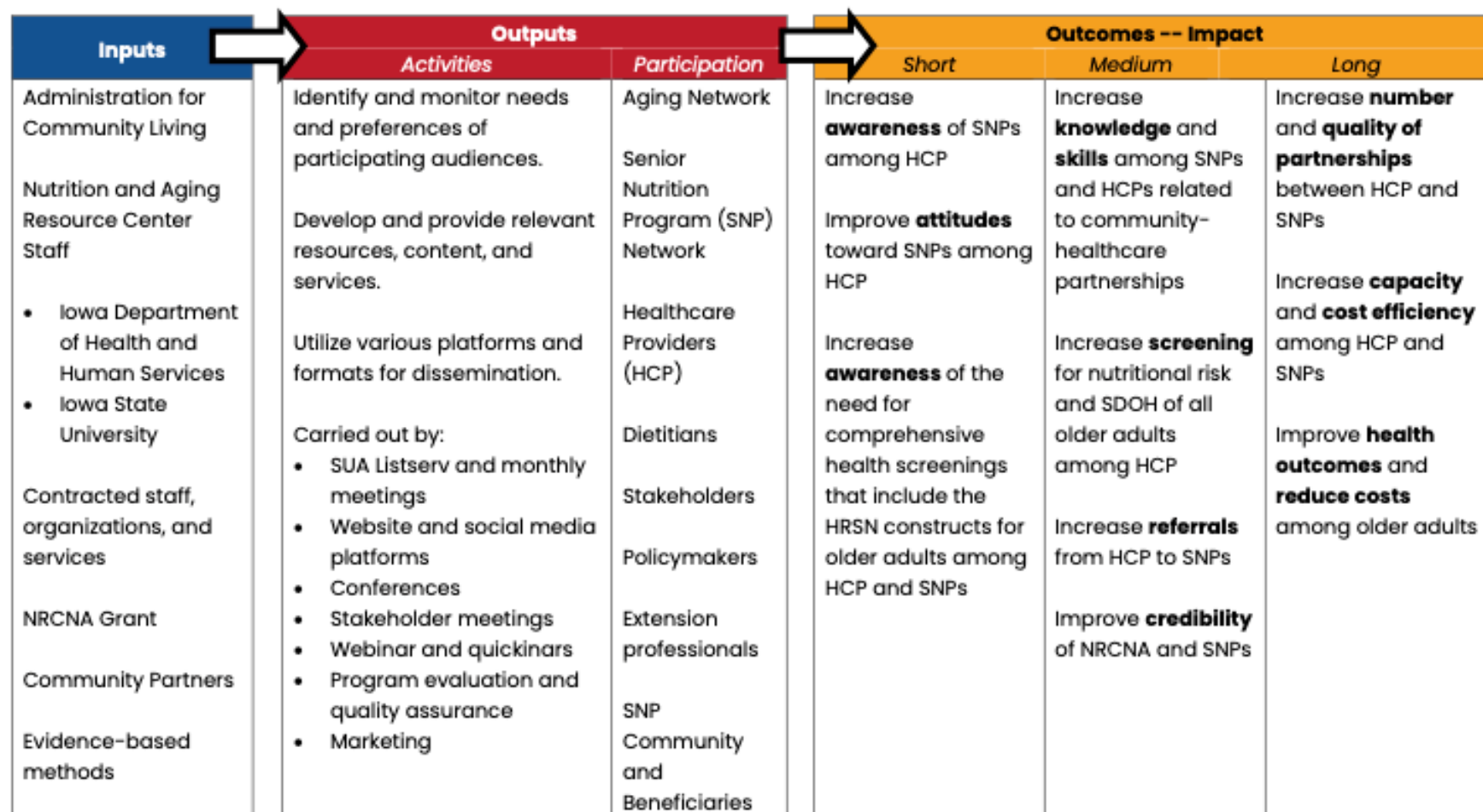
Nutrition Risk Screening	Percentage of Respondents
Unaware of referral process	25.9%
Unaware of screening tools	25.0%
Not necessary for our patients	17.6%

Nutrition Risk Screening	Percentage of Respondents
Inadequate technology for nutritional screening	17.6%
Lack of time	13.9%
Lack of training	13.9%
Patient refusal/disinterest	13.0%
Lack of access of a registered dietitian/nutritionist	12.0%
We obtain this information in other ways	11.1%
No mandatory screening protocol	8.3%
Lack of personnel	6.5%
Not sure	6.5%
Language/cultural barriers with patients	4.6%
Other	1.0%

Figure 13. Barriers to Referring Patients to Registered Dietitians (*n*=111)

Barriers to Referring Patients	Number of Respondents	Percentage of Respondents
Patient distrust or uncertainty	25	22.5%
Patient lack of insurance coverage	21	18.9%
Not necessary- patients can seek out RDNs	20	18.0%
Practice lacks access to RDNs or enough RDNs	20	18.0%
Personal (provider) distrust or uncertainty	19	17.1%
Not within my role	17	15.3%
Not necessary given our practice focus	16	14.4%
Not necessary given our patient needs	15	13.5%
Unfamiliar with what an RDN is/does	13	11.7%
Unfamiliar with referral process	10	9.0%
Referral method too complicated or time consuming	10	9.0%
Other	1	0.9%

Appendix- Draft NRCNA Logic Model to Facilitate Healthcare-SNP Partnerships



Assumptions

The SNP Network and HCPs can benefit from NRCNA services to facilitate partnerships through its role as a national leader in SNPs. Utilizing evidence-based methods to guide the development of resources and services leads to higher quality, relevant products. The NRCNA will have continued support in these efforts upon the conclusion of the 2021-2026 grant period.

External Factors

- Aging Network and healthcare sector's capacity, technology competence, knowledge, and interest
- SNP and HCP organizational structure and services
- Older adult population
- Older Americans Act and healthcare policy
- Available inputs

Extended text: for the Draft NRCNA Logic Model to Facilitate Healthcare-SNP Partnerships

Inputs: Administration for Community Living; Nutrition and Aging Resource Center Staff (Iowa Department of Health and Human Services, Iowa State University); Contracted staff, organizations, and services; NRCNA Grant; Community Partners; Evidence-based methods

Outputs: Activities; Identify and monitor needs and preferences of participating audiences. Develop and provide relevant resources, content, and services. Utilize various platforms and formats for dissemination. Carried out by: SUA Listserv and monthly meetings, Website and social media platforms, Conferences, Stakeholder meetings, Webinar and quickinars, Program evaluation and quality assurance, Marketing. Participation: Aging Network, Senior Nutrition Program (SNP) Network, Healthcare Providers (HCP), Dietitians, Stakeholders, Policymakers, Extension professionals, SNP Community and Beneficiaries

Outcomes – Impact:

Short: Increase awareness of SNPs among HCP. Improve attitudes toward SNPs among HCP. Increase awareness of the need for comprehensive health screenings that include the HRSN constructs for older adults among HCP and SNPs.

Medium: Increase knowledge and skills among SNPs and HCPs related to community-healthcare partnerships. Increase screening for nutritional risk and HRSN of all older adults among HCP. Increase referrals from HCP to SNPs. Improve credibility of NRCNA and SNPs.

Long: Increase number and quality of partnerships between HCP and SNPs. Increase capacity and cost efficiency among HCP and SNPs. Improve health outcomes and reduce costs among older adults.

Assumptions: The SNP Network and HCPs can benefit from NRCNA services to facilitate partnerships through its role as a national leader in SNPs. Utilizing evidence-based methods to guide the development of resources and services leads to higher quality, relevant products. The NRCNA will have continued support in these efforts upon the conclusion of the 2021-2026 grant period.

External Factors: Aging Network and healthcare sector's capacity, technology competence, knowledge, and interest; SNP and HCP organizational structure and services; Older adult population; Older Americans Act and healthcare policy; Available inputs