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# A Qualitative Study of Factors Influencing Food Choices and Food Sources Among Adults Aged 50 Years and Older During the Coronavirus Disease 2019 Pandemic

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## ABSTRACT

**Background** The coronavirus disease 2019 pandemic affected food availability and accessibility for many older adults, especially those experiencing food insecurity. Food citizenship is a theoretical framework that encourages the use of alternate over industrial food sources and can characterize where foods are acquired and how food choices are made.

**Objective** The purpose of this study is to explore how lowans aged 50 years and older made choices about what foods to acquire and where to acquire foods during the coronavirus disease 2019 pandemic using food citizenship as a theoretical framework.

**Design** We used in-depth interviews with lowans aged 50 years and older (N = 60).

**Participants** We recruited respondents through Area Agencies on Aging, food banks, and food pantries. Individuals who contacted the research team, were aged 50 years and older, and spoke English were eligible. Half of the sample screened as food insecure.

**Statistical analysis** We conducted a thematic analysis to identify recurring themes.

**Results** Food costs, personal preferences, and the healthfulness of food were cited as the most influential factors. Respondents said that the pandemic had not changed how they make choices, but increased prices had made costs more salient. Respondents primarily got their food from industrial food retailers, government programs, or food pantries. More than half of the respondents also acquired food from an alternate food source, such as a farmers' market. Reasons for not using alternate food sources included cost and transportation barriers.

**Conclusions** It is essential to ensure that older adults have access to affordable, healthy foods, especially during crises such as the coronavirus disease 2019 pandemic. Alternate food sources provided supplementary, healthy food for many respondents, but there are opportunities to expand the use of these food sources. Incentivizing the use of alternate food sources through government programs and connecting the emergency food system to local producers could increase the consumption of healthy food.

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**O**LDER ADULTS WHO EXPERIENCE FOOD INSECURITY generally consume a poor diet<sup>1-5</sup> and are at increased risk for malnutrition.<sup>4,6</sup> Older adults who experience food insecurity also have an increased chronic disease burden compared with those who are food secure.<sup>7</sup> Barriers such as poor access to<sup>8,9</sup> and high costs of<sup>10,11</sup> healthy and sustainably grown food make it difficult to consume a health-promoting diet. Because of this, government programs and emergency food services offer support to individuals experiencing food insecurity,<sup>12-14</sup> but these services may not be available to all who need them and are underutilized by older adults.<sup>15-17</sup>

Food citizenship is a food movement and theoretical framework that has been used to address poor diet and food

insecurity by enabling access to healthy, sustainably produced foods.<sup>18-21</sup> Whereas the food citizenship framework has been more fully described elsewhere,<sup>21</sup> rights and responsibilities are key concepts within food citizenship that should be considered here. Food citizenship is based on the fundamental and inalienable right to access healthy, nutritious foods produced in a just and sustainable way.<sup>21</sup> Based on this right, all members of the food system have responsibilities around food production, distribution, procurement, preparation, and consumption behaviors.<sup>21</sup> For food producers, distributors, and retailers, there is a responsibility to provide whole and truthful information about their foods and to increase equitable access to healthy, nutritious foods.<sup>21</sup> For individual consumers, food citizenship states that they

have a responsibility to consider how their food-related behaviors and choices influence themselves and others.<sup>21</sup> By enabling all to practice the right to food and satisfying these responsibilities, we can improve our food system as well as individual dietary intake, health, and well-being.

It is important to reflect on why older adults choose the foods they do. Older adults have been shown to make food choices based on personal beliefs and preference as well as outside factors such as costs,<sup>22</sup> and these choices differ based on socioeconomic status<sup>23</sup> or food security status.<sup>24</sup> Furthermore, changing physiological and social circumstances associated with aging influence food choices.<sup>25</sup> Although food choices among older adults have been studied,<sup>22-25</sup> they have not been examined using food citizenship, which emphasizes a wide range of responsibilities associated with food choices that often were not considered in previous studies.

One manner in which older adults could engage with their responsibilities around food is utilizing the alternate food system. Alternate food systems often focus on local production and consumption and include food sources outside the industrial food systems such as farmers' markets, gardens, or community-supported agriculture. This is in contrast to industrial food systems, which are those that are characterized by large-scale operations, often featuring vertical integration and concentration of power, and where the focus is efficiency and increasing profit.<sup>26,27</sup> In addition, the emergency food system exists as a safety net to provide food to those in need at no cost, and consists of meal sites, food pantries, food banks, and food rescue programs.<sup>14</sup> These systems are not independent; that is, a producer may sell food directly to consumers as part of the alternate food system but also have products in a grocery store as part of the industrial food system. Furthermore, emergency food systems rely on donations from large, multinational corporations but also receive food from local producers. However, by characterizing different food sources based on their focus and practices (eg, small-scale, local productions vs multinational, vertically integrated production), researchers can broadly understand from what type of institutions or organizations individuals are acquiring their foods. It is important to examine why older adults do or do not use certain food sources and understand what barriers may exist for individuals with food security, such as food costs or transportation.<sup>28,29</sup> This is especially true given the increased rates of food insecurity during the coronavirus disease 2019 (COVID-19) pandemic.<sup>30-32</sup>

During the COVID-19 pandemic, many barriers to consuming healthy food items have been exacerbated, but little is known about how these barriers influenced food choices or where older adults acquired food. When there are disruptions to the food supply chain or changes in factors that influence food choices, such as price, individuals may respond by seeking to acquire food from new or different sources. This study aimed to answer two general research questions about adults who were approaching older age and older adults. First, we were interested in understanding what factors influenced food choices during the COVID-19 pandemic among adults aged 50 years and older and how these factors align with food citizenship. Second, we were interested in how the COVID-19 pandemic influenced where adults aged 50 years and older get their food and how their food sources align with food citizenship.

## RESEARCH SNAPSHOT

**Research Question:** How has the coronavirus disease 2019 pandemic influenced the food choices and food sources of adults aged 50 years and older?

**Key Findings:** Food prices, personal preferences, and a food's healthfulness were the primary factors driving choices. Although respondents said the pandemic had not changed the factors motivating their choices, they mentioned that food prices had become particularly relevant. Similarly, food sources did not change, and respondents used retailers in the industrial food system, government programs, or food pantries as their primary food source. Many respondents supplemented their diets with foods from the alternate food system, mainly farmers' markets.

## METHODS

This study was part of a larger project conducted in collaboration with the Iowa Department of Public Health's Supplemental Nutrition Program Education (SNAP-Ed) program and the Iowa Food Bank Association. The goal of the larger project was to increase produce consumption among older Iowans with food insecurity through food bank services.

### Study Population, Recruitment, and Sample Size

The population was English-speaking adults aged 50 years and older who were living in Iowa. Iowa's overall demographic profile can be found elsewhere.<sup>33</sup> We initially chose our population as individuals aged 50 years and older to capture the perspectives of those in near-retirement age as well as older adults, who we define based on the age-eligibility guidelines for Older American Act Nutrition Programs (ie, those older than age 60 years). Although we originally intended to use quota sampling to facilitate comparisons based on age, gender, and rural status, due to limitations introduced by the COVID-19 pandemic, we used a convenience sample. We chose to do this to collect timely data from as many individuals as possible during the data collection period so our results could potentially inform actions aimed to lessen food hardship among Iowans aged 50 years and older. Recruitment occurred between June and November 2020. During our first round of recruitment, we distributed a flyer through the congregate or home-delivered meal programs at four Area Agencies on Aging (AAAs) in Iowa. These four agencies cover 61 of Iowa's 99 counties. Some individuals who did not participate in the AAA meal programs contacted us after hearing about the study through word of mouth. For the second round of recruitment, the flyer was distributed by three food banks to their partner agencies and mobile pantry programs. The flyer included details about the study and asked interested parties to contact the research team either by telephone or e-mail. This study was approved by the institutional review board at the University of Iowa.

Because this was a preliminary, qualitative study, the number of participants was guided by the aims of the study and the responses of the participants, specifically, the collection of new, meaningful information throughout the data collection. After conducting 46 interviews in our first round of recruitment, we had reached saturation.<sup>34,35</sup>

However, we did not have many respondents from the 50- to 59-year old age group, from historically marginalized populations, from the northeastern and western regions of the state, and from those living in more rural areas. From the second round of recruitment, we conducted an additional 14 interviews for a total of 60 interviews. We had participants from 15 counties of which six are considered metropolitan and nine of which are considered nonmetropolitan according to 2013 Rural-Urban Continuum Codes.<sup>36</sup> Each of the state's four congressional districts (which correspond to the Northeast, Northwest, Southeast, and Southwest of the state) were represented in the sample. Although the second round of recruited participants added diversity to our sample, there were no major differences in the responses between the rounds.

### Data Collection Tools

We used in-depth interviews to gather the thoughts, experiences, and perspectives of adults aged 50 years and older. We developed an interview guide to explore where respondents were obtaining their food, why they were obtaining food from those places, and how they chose which foods to get (see [Figure 1](#), available at [www.jandonline.org](http://www.jandonline.org)). Following 10 pilot interviews, the interview guide was updated by reordering the sequence of the questions, eliminating original stems and replacing them with probes, and rewording questions to be more specific. An example of rewording a question was asking about how choices were made for selecting specific types of food vs generally (eg, "Last time you got fruit, how did you choose which fruits you were going to get?" vs "How do you make choices about what food you get?"). The interview guide asks about two general time periods, before the COVID-19 pandemic began and since the pandemic started because we were interested in exploring changes in these topics influenced by the pandemic.

We also collected demographic information (age, gender, Hispanic ethnicity, race, educational attainment, and monthly income), their living situation (the type of housing, whether they rent or own, and if they lived alone), and the use of food assistance programs and services (eg, SNAP, Older Americans Act nutrition programs, and food pantries/banks). We used a two-item food insecurity screening questionnaire<sup>37</sup> that has been validated in the general US population and for older adults<sup>38</sup> to identify individuals who had experienced food insecurity during the past year.

### Data Collection and Management

The data collection team consisted of three interviewers (authors P.J.B., H.T., and S.K.) trained in conducting interviews with older adults. After a potential study participant contacted us to schedule an interview, we verified they were older than age 50 years, obtained verbal consent, and either carried out the interview or scheduled it for a later date. The first 10 interviews served as a pilot and were completed by the first author. Because the changes to the interview guide were minor, the 10 interviews used as a pilot were included in the analysis. Following the pilot interviews, the remaining interviews were split between the three research team members. All interviews were completed over the telephone and were audiorecorded. Participants were compensated

with a \$25 gift card following the interview. A typical interview lasted approximately 30 minutes, but some lasted longer than an hour. The interviews occurred between June and November 2020. The audio files were transcribed by a third-party transcription service. In the limited cases where participants did not want to be audiorecorded ( $n = 3$ ) or the audio files were corrupted ( $n = 1$ ), detailed notes were used instead of an interview transcript. We uploaded the de-identified and cleaned transcripts to the Dedoose software program.<sup>39</sup>

### Analytic Approach

We used a thematic analysis approach to code each transcript.<sup>40</sup> We developed a codebook using a deductive approach based on the aim of this study, the research questions, and the initial reading of the transcripts. After developing a draft codebook, each member of the research team coded three interviews independently. We then combined the coded interviews and met to discuss code applications and to refine the draft codebook. We finalized the codebook by reaching a consensus on code definitions and rules for code applications. Each member of the research team then independently coded a selection of the remaining transcripts. We reviewed the coded transcripts, met to discuss the code applications, and reached a final consensus. Following the initial coding, the first author categorized the factors that influence food choices as factors outside individual control (eg, food prices or food availability), factors related to responsibilities for themselves (eg, personal health or taste preferences), and factors related to responsibilities to others (eg, supporting farmers or environmental sustainability). We then compared responses between respondents who were food secure and food insecure to identify group differences. We had originally intended to compare emergent themes between adults in each age group to explore differences in experiences by age category (50 to 59 vs 60 to 69 vs  $\geq 70$  years) in addition to comparisons between respondents reporting food security and food insecurity, but this was not possible given the number of participants in the age 50 to 59 years category. We also did not observe differences in emergent themes between respondents in the age 60 to 69 years and age 70 years and older groups. Therefore, we do not discuss differences in emergent themes between age categories.

## RESULTS

### Demographic Characteristics

Respondents' demographic characteristics are shown in the [Table](#). The sample was mostly older, women, and White. We did not have any respondents who identified as Hispanic or Latino. The vast majority of the respondents were not employed and had completed a high school education or equivalent. Most of the respondents earned  $< \$1,500$  per month, lived alone, rented their residence, and lived in an apartment. Half of the sample screened as experiencing food insecurity in the past year. Half the respondents were participating in SNAP at the time of the interview and about two-thirds of the respondents described using a food pantry or food bank during the pandemic.

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**Table.** Demographic characteristics of respondents (N = 60) in an interview study about food-related behaviors and factors contributing to food choices among lowans aged 50 years and older conducted between June and November 2020

Characteristic	n	%
<b>Age (y)</b>		
50-59	6	10.0
60-69	24	40.0
70+	30	50.0
<b>Race</b>		
White	53	88.3
Black	5	10.0
Other or multiple responses	2	3.3
<b>Gender</b>		
Male	11	18.3
Female	48	80.0
Non-binary	1	1.7
<b>Employment</b>		
Employed	6	10
Not employed	54	90.0
<b>Education</b>		
Less than high school	4	6.7
High school or equivalent	15	25.0
More than high school	41	68.3
<b>Monthly income</b>		
Less than \$1,500	39	65.0
\$1500 to \$4,000	16	26.7
More than \$4,000	4	6.7
Refused	1	1.6
<b>Residence</b>		
Apartment	41	68.3
House	17	28.4
Other	2	3.3
<b>Rent or own</b>		
Rent	46	76.7
Own	14	23.3
<b>Living alone</b>		
Yes	50	83.3
No	10	16.7
<b>Food security status</b>		
Food secure	30	50.0
Food insecure	30	50.0

(continued)

**Table.** Demographic characteristics of respondents (N = 60) in an interview study about food-related behaviors and factors contributing to food choices among lowans aged 50 years and older conducted between June and November 2020 (continued)

Characteristic	n	%
<b>Enrolled in Supplemental Nutrition Assistance Program</b>		
Yes	30	50.0
No	30	50.0
<b>Use food pantry or bank</b>		
Yes	39	65.0
No	22	35.0

### Food Choices during the COVID-19 Pandemic

Overall themes and quotes regarding food choices during the COVID-19 pandemic are shown in [Figure 2](#) and discussed in more detail below. The majority of respondents cited food costs, personal preferences, and health concerns or the food's healthfulness as the major factors driving food decisions. The respondents frequently discussed balancing these factors; respondents often said they considered their preferences, health, and outside factors such as price together when selecting foods. The pandemic did not seem to introduce new influences on the respondents' dietary choices, except when they were able to acquire more expensive food items that they would normally not purchase due to pandemic-related efforts to address unmet food needs. Some respondents highlighted factors such as price and healthfulness of foods that have become more relevant. For example, due to increased health risks due to the pandemic, some respondents described trying to eat healthier to strengthen their immune system. Food insecure respondents described prices as the major factor driving their food choices more often and more intensely compared with those who did not experience food insecurity. Respondents with food security were more likely to cite personal preferences. There were no other evident differences in responses based on food security status.

Respondents most often discussed that food prices ultimately determined their food choices, regardless of the source of food or other factors they may consider ([Figure 2](#); Theme: Food costs). The respondents noted that this was true prior to the pandemic, but that increased food prices during the pandemic had changed what foods they chose or the quantity of foods they purchased ([Figure 2](#); Theme: Food costs). Respondents often noted that foods from alternate food sources were more expensive than at industrial retailers, but respondents also considered these foods to be healthier ([Figure 2](#); Themes: Food costs and Support for local food). Because price was often the major factor driving food choices and a barrier to selecting certain foods, there is an unmet responsibility under food citizenship in ensuring individual's

food choices are not constrained by systemic factors. Other outside factors influencing food choices were not necessarily framed in reference to outside responsibilities that one would consider as a food citizen even when they were emphasized as important by the respondents. One example of this is seasonality. Although some respondents mentioned picking produce according to the season, it was due to price and food quality and not a responsibility toward environmental sustainability (Figure 2; Theme: Food costs, Subtheme: Seasonality), which would be an important concern under food citizenship. In addition, many of the respondents discussed choosing foods for their shelf life or to prevent food waste, but this was out of economic concerns (Figure 2; Theme: Food costs, Subtheme: Shelf-life).

Many respondents reported that their food choices were influenced by the foods they like to consume and how those foods would influence their health (Figure 2; Themes: Healthfulness and Personal Preferences). Because autonomy of choice is a key concept in food citizenship, it is important for individuals to have access to the foods they would like to consume. Despite this, many respondents experienced cost barriers to purchasing foods they would prefer to eat, such as with foods that were perceived to be healthier (Figure 2; Theme: Food costs). Respondents who discussed the health benefits of certain foods influencing their choices cited both chronic conditions (eg, low sodium for hypertension) and to support an overall healthy lifestyle (Figure 2; Theme: Healthfulness). Food citizenship emphasizes a responsibility to one's own health, therefore considering individual health in food choices is consistent with food citizenship.

A few respondents mentioned the availability of food items as a challenge (Figure 2; Theme: Availability and Accessibility), but most of the respondents did not describe foods being out of stock or unavailable. In fact, a number of respondents described increased accessibility since the pandemic started, due to increased SNAP benefits, participation in other government programs, or receiving food from a food pantry or food bank (Figure 2; Theme: Availability and Accessibility). Despite the increased accessibility of foods and the ability to choose a wider variety of foods, respondents focused on maximizing their individual benefit, whether that was around price, taste, or health, rather than considering how their food choices influence others or larger systems.

None of the respondents cited outside factors (eg, for environmental sustainability, supporting local producers, other economic benefits to the community) as their primary reason for purchasing food items, but a few respondents did specifically mention these as influencing their food choices. Some respondent mentioned supporting their local food economy (Figure 2; Theme: Support for local food), which is integral to food citizenship. They also discussed how the decision to acquire food from alternate food sources and support local producers was influenced both by increased costs compared to industrial food retailers and responsibilities for protecting individual health through healthier dietary intake (Figure 2; Theme: Support for local food).

### Food Sources during the COVID-19 Pandemic

Overall themes and quotes regarding food sources during the COVID-19 pandemic are shown in Figure 3 and discussed in

more detail below. All respondents used an industrial food retailer (ie, grocery store, supermarket, or dollar store), government program (in this case, the Commodities Supplemental Food Program or Older Americans Act Nutrition Services), or a food pantry/bank as their primary source of food (Figure 3; Theme: Main food sources). These were often the places that the respondent had acquired food from before the pandemic, but in some cases, respondents moved from one grocery or super store to another for various reasons such as price, offering delivery services, or out of concerns for safety related to COVID-19 (Figure 3; Themes: Main food sources and COVID-19-related barriers to accessing food sources). A few respondents indicated that retailers in the industrial food system were not enforcing safety precautions such as social distancing and mask wearing while others were implementing these precautions (Figure 3; Theme: COVID-19-related barriers to accessing food sources).

More than half of respondents also acquired food from an alternate food source, but this often was not out of a desire to support the local food economy, but instead due to personal preferences (Figure 3; Theme: Alternate food sources) and having financial support (Figure 3; Theme: Alternate food sources, Subtheme: Financial support). The majority of respondents using alternate food sources discussed using farmers' markets, while a few said that they had their own gardens. The respondents who shopped at farmers' markets cited the foods' taste and health profile as reasons for shopping there (Figure 3; Theme: Alternate food sources). In addition, many who attended the farmers' markets received Senior Farmers' Nutrition Program (SFMNP) vouchers from their AAA, which reduced price barriers to accessing these food sources (Figure 3; Theme: Alternate food sources, Subtheme: Financial support). Some stated that they would spend their own money at farmers' markets, whereas others would only use the SFMNP vouchers. Some respondents also started growing their own food in response to the pandemic, whether that was due to worries over food shortages or increasing food prices (Figure 3; Theme: Alternate food sources).

The use of alternate food sources did not differ between respondents who did and did not experience food insecurity, but rather depended on the availability and accessibility of these food sources, financial support to purchase foods from local vendors, and personal preference. Even though there did not appear to be a major factor influencing the use of alternate food sources, the prices of foods were cited by some respondents who were experiencing food insecurity as a reason to not shop at alternate food sources (Figure 3; Theme: Alternate food sources, Subtheme: Accessibility of alternate food sources). In addition, some respondents reported transportation barriers preventing them from using farmers markets (Figure 2; Theme: Alternate food sources, Subtheme: Accessibility of alternate food sources). Similar to retailers in the industrial food system, a few respondents indicated that farmers' markets were not enforcing safety precautions while others were (Figure 3; Theme: COVID-19-related barriers to accessing food sources). These barriers indicate that there are unfulfilled responsibilities around ensuring alternate food sources are accessible for all. Some respondents who use food pantries discussed how these emergency food providers connected them with locally produced foods (Figure 3; Theme: Alternate food sources,

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Subtheme: Accessibility of alternate food sources), increasing access to food from the alternate food system.

When examining where the respondents got their food and why through the lens of food citizenship, it is clear these respondents were not actively participating as food citizens, but often due to structural barriers such as physical and financial access. The majority of the respondents who used alternate food sources stated that they only used them because they had financial support to do so. There were a few examples of individuals being connected to local food sources through new programs as a result of the pandemic, which indicates that local producers and emergency food providers were acting on their responsibility to provide access to healthy, nutritious food to all. It was also clear that some retailers, both in the industrial and alternate food systems, were not acting responsibly in regard to the safety of their customers and precautions around the spread of COVID-19. Overall, it does not appear that the respondents moved toward acquiring food from alternate food sources in response to the pandemic. Despite this, farmers' markets, gardens, and locally produced foods received through the emergency food system were an important source of healthy foods during this time.

## DISCUSSION

This study explored the factors leading to food choices and food sources among lowans aged 50 years and older during the COVID-19 pandemic using food citizenship as a theoretical framework. These results show that factors such as personal preference, health, and price were consistent determinants of food choices before and during the pandemic and that food acquisition behaviors did not change substantially. Although the pandemic did not cause the issues the respondents described, it exacerbated already existing vulnerabilities regarding food access and security and highlighted various structural and societal barriers to consuming healthy and preferable foods. In addition, the responses to this crisis, such as strengthening SNAP and expanding access to emergency food resources, provide insight on potential paths forward to improve food security and access. It will be critical for practitioners in nutrition, dietetics, public health, and public policy to learn from these times to build a foundation where all people and communities have access to healthy, preferable food.

Food choices among respondents were primarily based on material and personal factors, which is consistent with previous literature,<sup>10,11,24,25</sup> but largely did not consider wider social responsibilities, such as to consume ethically produced and distributed food. Food citizenship is defined by a right to access healthy nutritious foods and a responsibility to promote justice and equity through individual and collective actions.<sup>21</sup> These results show that the actions prescribed under this movement may not be feasible for adults aged 50 years and older given unmet societal responsibilities creating barriers to accessing healthy, nutritious foods produced in a just manner.

Whereas respondents' sources of food remained fairly consistent during the COVID-19 pandemic, some respondents described increased barriers to accessing healthy food due to increase food prices, whereas others said responses to the pandemic, like increasing SNAP benefits, improved their

access. It is clear from these results that lowans aged 50 years and older, especially those who were experiencing food insecurity, were not actively acting as food citizens when making their food choices. Food prices and personal preference were most often described as what motivated food choices, which agrees with previous qualitative research identifying similar factors, such as taste, monetary, and health considerations.<sup>24</sup> The respondents' material situation and personal needs may have been more pressing than loftier motivations described under food citizenship because no respondents cited responsibilities to others or the greater good as their primary reason for choosing food. Despite this, some respondents noted these responsibilities as an additional consideration, indicating that certain responsibilities described under food citizenship may be more salient in this population in the case that current factors such as price that overwhelmingly influenced food choices were addressed. Conceivably, these more immediate needs will have to be met to enable older adults to consider wider, societal obligations they have when choosing their foods, especially in the context of a global pandemic. Dietitians, other food and nutrition practitioners, and health care professionals working in clinical and community settings should aim to address these immediate needs by connecting patients experiencing food insecurity with resources such as SNAP and emergency food providers, including aiding in navigating the administrative hurdles to accessing these services.

Food prices are a major influence on food choices and a barrier to healthy eating for food insecure individuals,<sup>10,11</sup> and the respondents indicated that rising food prices were a concern. Although COVID-19 may not have been the sole reason for changes in food prices, the respondents here perceived it as the reason for changes in food prices and often discussed how higher food prices had influenced their food choices during this time, particularly for meat and produce. Respondents also described panic buying resulting in less availability of low-cost items, forcing them to choose more expensive options. The respondents described this effect being blunted or eliminated in cases where the increase in SNAP benefits countered the increase in cost. It was clear from the respondents that the increase in SNAP benefits were viewed as immensely beneficial and that previous benefits levels were inadequate to support a healthy diet. This study provides initial evidence suggesting that some of the policies enacted in response to the pandemic were effective in improving food security and dietary intake. There is limited information on the influence of the pandemic and accompanying food assistance and economic supports on diet quality of older adults. These results indicate that at least for some, dietary intake may have improved due to policy and nongovernmental responses to the pandemic, and future research is needed to quantify the influence of these policy interventions on food security and dietary intake.

Respondents' use of multiple food sources agrees with the previous literature showing that households rely on a number of sources for food, including grocery stores, supermarkets, convenience stores, and restaurants,<sup>41,42</sup> and that spending at alternate food sources is much lower than at other sources.<sup>43</sup> Alternate food sources provided access to fresh produce, which was perceived by the respondents as healthier and of higher quality compared with foods from industrial food retailers. These perceptions are supported by

Themes and subthemes	Example quote(s)
<b>Food costs</b>	<ul style="list-style-type: none"> <li>• “The healthy meals, they’re prepared for you. I think of the cost when I pick them up. If they’re on sale, I’ll pick them up. But if they’re not I’m not going to pick them up.” (age 67 years, White, female, food secure).</li> <li>• “I used to buy more meat, and I’m buying less now. Because if I want to keep my weekly shopping between \$30 and \$40, I can’t afford salmon and different things that are really healthy. But I wait until the canned salmon goes on sale for \$2 and then I buy that...I go by on what’s on sale, probably like most people do.” (age 73 years, White, Female, food secure)</li> <li>• “I bought ground beef and I was shocked...for the times and what’s going on, it might be reasonable, I don’t know, but I’m aware it’s more expensive than I’ve paid before.” (age 83 years, White, female, food secure)</li> <li>• “I would like the farmers’ market, but they can be pricy too, which I understand because they’re taking their time out to grow these items. You have to get back what you put into it and maybe a little more.” (age 54 years, Black, male, food insecure)</li> </ul>
Seasonality	<ul style="list-style-type: none"> <li>• “If it’s in season and it’s a lower price, then I’ll get it, but if it’s out of season, I watch the prices. If it’s too expensive, I just say ‘Okay, forget it, I’m not going to get that until the prices go back down.’” (age 70 years, White, female, food insecure)</li> </ul>
Shelf-life	<ul style="list-style-type: none"> <li>• “It showed you how long they last in the refrigerator. Now that’s very important to your budget because if you buy something that’s going to rot in 2 days, you done wasted your money.” (age 71 years, Native American and Black, female, food secure)</li> </ul>
<b>Healthfulness</b>	<ul style="list-style-type: none"> <li>• “Just the health aspect of the food. If it’s low in saturated fat, and there are things that are good for our microbiome, we’ll prefer to eat those types of foods.” (age 66 years, White, male, food secure).</li> <li>• “Whole-wheat bread, 100% whole-wheat bread. The pastas are all wheat, because the white bread, and the noodles and everything, the pastas and everything, it turns to sugar too fast in my system because I am diabetic. I have to watch everything I eat.” (age 70 years, White, female, food insecure)</li> </ul>
<b>Personal preferences</b>	<ul style="list-style-type: none"> <li>• “By preference, what I like and what I don’t like. I don’t like cabbage. I like sauerkraut and I love coleslaw, but I don’t like cooked cabbage.” (age 75 years, White, female, food secure)</li> <li>• “I go usually with those pasta, bread, and cereal. I go with what I like, nutrients, because I have started trying to do a lower-sugar diet. And so, I’m checking that. And then, price.” (age 76 years, White, female, food secure)</li> <li>• “I go by what I like because if you buy a cheaper brand and you don’t like it, by the time you get done doctoring it up, you might as well just bought the other can because now you’re going to use other things at home to make it better and that’s going to cost you more.” (age 63 years, White, female, food insecure)</li> </ul>
<b>Availability and accessibility</b>	<ul style="list-style-type: none"> <li>• “I can’t tell you the last time I bought fruit...I do have some fruit, but that was only because we just started having them as part of the food boxes that the government supplied.” (age 59 years, White, female, food insecure).</li> <li>• I was going to get a loaf of bread, and they’re all out of the bread. The shelves are just really low. So then, I had to go to [Grocery store 2] and get the more expensive stuff.” (age 67 years, White, female, food secure)</li> </ul>
<i>(continued on next page)</i>	

**Figure 2.** Themes related to food choices emerging from an interview study about food-related behaviors and factors contributing to food choices among Iowans aged 50 years and older conducted between June and November 2020.



Themes and subthemes	Example quote(s)
	<ul style="list-style-type: none"> <li>• Interviewer: "Can you tell me a little bit... what foods you're seeing going up in price?" Respondent: "Like chicken, vegetable, just about everything has gone up." Interviewer: "Okay. And has that impacted what you're buying?" Respondent: "No, not really, because I have food stamps right now. And we got quite a bit this last couple of months." (age 64 years, White, female, food insecure)</li> <li>• "There was disappointment for a while because I was only getting \$16 a month. And then, now that the pandemic has taken place, they've increased it to close to \$200 a month. So, that's been extremely helpful because my only income is Social Security... Just taking the pressure off, and then giving me money for other expenses that I have." (age 72 years, White, male, food secure)</li> <li>• "I don't know what the money is like for the food stamp program, but really \$78 a month is not enough for me....I'm relying a lot on the kindness of strangers...There really isn't enough money for a person." (age 65 years, Black, Non-binary, food insecure)</li> </ul>
<b>Support for local food</b>	<ul style="list-style-type: none"> <li>• "They're a hometown company. I've used their products all my life and I just stay with them to support a hometown business." (age 76 years, White, female, food insecure)</li> <li>• "You pay a little more, but you get a better product, I think. You get less other junk that they use to get it on the shelf in the store...Support your local farmer." (age 71 years, White, female, food secure)</li> <li>• "Ones that are grown locals. If they're Iowa tomatoes or different local Iowa foods, I would consider them the healthiest...if I could get eggs from a farmer here in the [town] area, that's what I would do...the factory ones or the ones you can get in the grocery store...They're my last choice." (age 73 years, White, female, food secure)</li> </ul>

**Figure 2.** (continued) Themes related to food choices emerging from an interview study about food-related behaviors and factors contributing to food choices among Iowans aged 50 years and older conducted between June and November 2020.

previous research on consumer perceptions of food from farmers' markets.<sup>44-46</sup> They also offered the opportunity to obtain foods in season, which were noted as an important factor in food choices by respondents in this study. In previous studies, receiving food from alternate food sources was beneficial to older adults' fruit and vegetable consumption<sup>47</sup> and diet quality,<sup>48</sup> and because acquiring foods from alternate food sources also has broader societal benefits,<sup>49</sup> facilitating the use of alternate food sources is a vital strategy to improve our food system. Nutrition and dietetics practitioners can facilitate the transition toward consuming more foods from the alternate food system by linking clinical or community services to alternate food systems. For example, in SNAP-Ed nutrition education and produce prescription programs or by connecting patients to resources that increase accessibility to these foods, such as emergency food providers who work with local producers and the SFMNP.

In a few cases, respondents were connected to local food sources through initiatives in the emergency food system. Previous interventions addressing food insecurity using food citizenship have aimed to distribute locally produced foods to low-income individuals through government food programs<sup>19</sup> and nonprofits.<sup>20</sup> Respondents in this study also described benefits from efforts that increased access to locally produced foods, including through food pantries and government programs. Nutrition and dietetics practitioners and health care providers should work with providers in the emergency food system to connect them to local food

resource and promote these foods to their clients. Integrating food recovery and redistribution efforts with emergency food systems and incentivizing the purchase of locally produced foods through government programs can provide local produce to individuals who may not be able to afford to shop in the alternate food system,<sup>50</sup> aligns with the goals of food citizenship,<sup>21</sup> and has the potential to improve dietary intake and health for vulnerable households who rely on food pantries to acquire food.

A number of respondents said they were trying to eat healthier food in response to the pandemic, often citing the benefits food has on one's immune response. The healthfulness of food has been identified as an influential factor motivating food choices in older adults.<sup>25</sup> Furthermore, some respondents discussed being able to eat healthier foods because of increased benefits, participation in government programs, or access to emergency food systems, which were available in response to the pandemic. These results suggest that if foods produced in more just and environmentally sustainable ways were affordable and accessible at comparable levels to food from the industrial food system, it is likely that these respondents would prefer, purchase, and consume them. Nutrition and dietetics practitioners can increase healthy food consumption among adults aged 50 years and older and benefit society by leveraging their desire to eat healthy foods while connecting them to the resources required to access, prepare, and consume foods produced in just and environmentally sustainable ways.

Themes and subthemes	Example quote(s)
<b>Main food sources</b>	<ul style="list-style-type: none"> <li>• “I go to [Grocery store 1] and I go to [Grocery store 2] about once a week. Shopping less because of social distancing, but I still cook at home. Pretty much I get my food the same place as I always have before the COVID<sup>a</sup>.” (age 73 years, White, female, food secure)</li> <li>• “I used to shop at [Super store 1] or [Grocery store 3], but now I have it delivered to me from [Grocery store 2]. And the food is more expensive from [Grocery store 2].” (age 74 years, White, female, food insecure)</li> <li>• Well, we have two food pantries here in [Town]. One at the church, at [Name 1], and then there’s one, it’s called [Name 2]. I go to both of those. If it wasn’t for the pantries, I would starve to death. I feel very, very blessed to have the food pantries..., [ Name 2], I go once a month. Then, the church, I go twice a month.” (age 70 years, White, female, food insecure)</li> </ul>
<b>Coronavirus disease 2019-related barriers to accessing food sources</b>	<ul style="list-style-type: none"> <li>• “I go to farmers’ market. I’ve been two or three times since this started, however, I didn’t purchase one thing...I have participated in, in the past before COVID-19...I believe in supporting the local farmers and I love fresh produce...Even though it was outside, they were not maintaining distance and I was not happy with that. I didn’t want to wait in line with somebody breathing down my neck.” (age 71 years, White, female, food secure)</li> <li>• Respondent: “Yes, I stopped going to [Super store 1]. And [Grocery store 1], I’ve only been there three times I think since the COVID started. And that’s my favorite store. All these, I used to go there. I don’t go there anymore. [Super store 1], I definitely don’t go there.” Interviewer: “And can you tell me why?” Respondent: “COVID fears...Here in town we’ve got not too many cases, and so it’s a lot safer here than it is in [city], which is very high COVID cases. I just don’t want to be around those people.” (age 77 years, White, female, food secure)</li> </ul>
Alternate food sources	<ul style="list-style-type: none"> <li>• “I especially enjoy fresh vegetables from the farmers’ market. That’s just wonderful. And that, if anything is nutritious for you that’s got to be. And then on top of that, it’s got the good flavor to go with it...I wish that was available all year long.” (age 67 years, White, male, food secure)</li> <li>• “Tomatoes are \$2.99 a pound. That’s prohibitive for me, so I did plant some tomato plants out in my yard.” (age 73 years, White, female, food secure)</li> </ul>
Financial support	<ul style="list-style-type: none"> <li>• “I will when the farmer’s market starts here because there’s an agency that gives seniors \$30 in vouchers, so I can get \$30 worth of farmers’ market food. But spending my own money on that? No I do not.” (age 65 years, Black, non-binary, food insecure)</li> <li>• “The farmers’ market just opened up last weekend, and I did go to the farmers’ market last weekend...without those coupons, I probably wouldn’t go to the market because it is more expensive than at the store.” (age 67 years, White, female, food secure)</li> </ul>
<i>(continued on next page)</i>	

**Figure 3.** Themes related to food sources and use of alternate food sources emerging from an interview study about food-related behaviors and factors contributing to food choices among lowans aged 50 years and older conducted between June and November 2020. <sup>a</sup>COVID = coronavirus disease 2019.

Themes and subthemes	Example quote(s)
Accessibility of alternate food sources	<ul style="list-style-type: none"> <li>• “I would like the farmers’ market, but they can be pricy too, which I understand because they’re taking their time out to grow these items. You have to get back what you put into it and maybe a little more.” (age 54 years, Black, male, food insecure)</li> <li>• “I haven’t done farmers’ market this year. It’s hard too, when you’re this far out, your choice of food comes from where you can get, how you can get there...I don’t have a van or a car that I can put the electric wheelchair in, So, basically, my food comes from where I’m at.” (age 64 years, White, female, food insecure)</li> <li>• “At the food pantry, the food is from local farmers who donate it. It really, to me...the apples might not look perfect like the ones in the store, but it’s the food right from the farmers. I think that’s great.” (age 73 years, White, female, food secure)</li> </ul>

**Figure 3.** (continued) Themes related to food sources and use of alternate food sources emerging from an interview study about food-related behaviors and factors contributing to food choices among lowans aged 50 years and older conducted between June and November 2020. <sup>a</sup>COVID = coronavirus disease 2019.

For those who did not use alternate food sources, the barriers to use were also reflected in the previous literature and included factors discussed by the respondents, such as cost and transportation barriers.<sup>31,32</sup> Despite these barriers, we believe there are multiple opportunities to improve older adults’ diet through facilitating connections to the alternate food system. This could be done by brining foods from the alternative food system into nutrition education programs, leveraging perceived healthfulness of foods from the alternative food system to reduce intake of ultraprocessed foods, connecting participants to financial support (such as the SMFNP), for acquiring foods from the alternate food system, and connecting the alternate food and emergency food systems. It should also be noted that this study was conducted when alternate food sources were widely available (ie, summer and fall), and the seasonality of these food sources is also likely to be a barrier to using alternate food sources at other times of the year. Additional barriers were introduced by the pandemic, specifically in the case where providers and customers were not following safety precautions (eg, wearing masks and social distancing). Efforts should be made to ensure that older adults are able to safely shop in any outlet because it is a societal responsibility to ensure that all individuals are able to safely access the food retailers of their choice.

### Limitations

The recruitment strategy for this study introduces a few limitations. First, because of limitations associated with conducting research during a pandemic with a vulnerable population, we chose to use a convenience sample for this study, which resulted in a sample that was mostly women, and we did not have any respondents who identified as Hispanic. We also recruited the majority of the sample through AAAs. This is likely why we saw such a large proportion of the sample receiving vouchers for the SFMNP because AAAs distribute the SFMNP vouchers in Iowa. A smaller group of our sample was recruited through the food banking system, which increased the geographic, racial, and

age diversity of our sample. Because of where we recruited participants, we largely interviewed individuals who were already connected to either an AAA or a food bank, and therefore we do not include the perspective of individuals who are not connected to either a government or nonprofit support system. In other words, this sample likely did not include the most marginalized individuals of any demographic group included in the sample, which should be considered when interpreting these results. Because we had reached saturation, indicating that increasing the sample size would not add new, meaningful data and our results would not change, it is important to consider how the limitations of the recruitment strategy affect who was included in this study. These limitations could be addressed in future research by recruiting outside of food assistance programs and services, using more purposeful selection criteria, and using quota sampling; for example, requiring a certain proportion of the sample is not receiving emergency food or participating in government food assistance. In addition, we were not able to examine differences in emergent themes between respondents in the 50 to 59 ages groups vs other age categories, which are likely given then different circumstances of those in this age group compared with those older than age 60 years. Further research is needed on how changes in food choices and sources differed by age category. Finally, the recruitment strategy relied on participants reaching out to schedule an interview, which would introduce self-selection bias because those who are willing to reach out likely differ from those who are not in some ways. For example, our sample was heavily women, which may be due to self-selection of female-identifying individuals into the sample vs male-identifying individuals.

### CONCLUSIONS

This study used in-depth interviews with lowans aged 50 years and older to explore factors influencing food choices and food sources during the COVID-19 pandemic. The factors that determined food choices among respondents were

mostly outside of individual control (food prices) and/or related to responsibilities toward one's self (eg, personal preferences or for health reasons) rather than for responsibilities to the greater good. Acquiring foods from alternate food sources has individual dietary benefits and collective benefits, such as promoting environmental sustainability. Dietitians and food and nutrition practitioners should work to connect eligible clients aged 50 years and older to resources that provide material resources (eg, SNAP) and increase accessibility to alternate food sources (eg, SFMNP and emergency food providers) while providing the knowledge and skills needed to prepare and consume those foods to promote the consumption of these foods. By promoting and incentivizing the use of alternate food sources and consumption of locally produced foods, there is the opportunity to meet the nutrition needs of older adults and improve population health while working toward a more sustainable and just food system.

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## STATEMENT OF POTENTIAL CONFLICT OF INTEREST

No potential conflict of interest was reported by the authors.

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## Older Adult Interview Guide

### Intro

As I mentioned [*before/last time we spoke*], during this interview I will be asking about food – what you eat, where you get your food, what types of food you get, and what you think about healthy food. I will also be asking about how the COVID-19 pandemic has affected you. The information you provide is important and will help the state of Iowa and Iowa food banks better understand issues related to food and older Iowans.

I will be recording this interview, so we have an accurate record of what you say. However, your name and personal information will remain confidential. Also, feel free to let me know if you would like to skip any questions, take a break from the interview, or end this interview at any time.

*If the participant wants to take a break but continue the interview in this interview session, pause the recorder until the participant is ready to continue the interview.*

*If the participant wants to take a break and continue the interview at another time, make a note on the interview guide where you stopped the interview, say that you would like to provide them with a few resources and collect some information from them, and then go to the wrap up section.*

Any questions before we start?

I will now turn on the recorder.

### Background

First, let's start off with some questions we ask everyone about their current situation.

What county do you live in? (*Note: We will match each interview with the number of cases of COVID-19 in the county to assess the impact on food related practices*)

Can you tell me about your current living situation?

*Probe:* Can you describe your place of residence? Is it a single-family home, duplex, apartment, condo or something else?

*Probe:* Is this where you normally live or have you changed your living situation due to the COVID 19 pandemic?

*Probe:* Do you rent or own your place of residence?

*Probe:* Do you live with anyone else?

*[If yes]* Are they 60 years of age or older?

*[If yes]* Do you have any children under the age of 18 living with you?

**Figure 1.** Older adult interview guide.

**Places**

Since the COVID-19 pandemic started and social distancing recommendations were released, where has your food been coming from?

*Probe:* 1) Grocery stores or box stores, 2) restaurants or fast food chains, 3) convenience or drug stores, 4) farmers markets, 5) friends or family, 6) community or church, 7) Picking up from congregate meal sites, 8) home delivered meals from AAA (*Probe for if they were receiving HDM before*), 9) personal or community gardens, 10) food pantry/food bank including food that was picked up, gotten in a drive through pantry, or delivered.

*Probe:* Are you going to the store yourself or are you having someone else go for you or having it delivered?

*Probe if going to stores:* Are you shopping during “senior hours” or times when stores have set aside for older adults to shop?

*Probe:* How often have you been going out to *Place* or having someone else bring your food from *Place*?

*If response they haven't gotten food from food pantry/bank:* Why haven't you gotten food from a food pantry or food bank? *Probe for details, e.g. not one close, hours of operation, transportation, etc.*

*Probe:* Have you ever gotten food from a food pantry or food bank?

Are you getting food anywhere new or have you stopped getting food from anywhere?

Are there other places you'd like to get food from but can't?

*Probe:* Tell me about those places.

*Probe:* Why? Transportation, cost, safety, etc.

If you have purchased any food in the last 2 weeks has the food been affordable or reasonably priced?

Have you noticed any change in food prices now compared to before the COVID-19 pandemic and social distancing recommendations were released? Has this changed what foods you get?

Has the selection of foods you are able to get changed since the COVID-19 pandemic began and social distancing recommendations were released?

If you have gotten any foods in the last 2 weeks, were there foods you have not been able to get? Was this because the store was out of stock or for some other reason?

**Preparation**

Sometimes as people age, it may be more difficult to prepare certain foods for themselves. Do you choose certain foods because they are easier to prepare? *Probe for what foods.*

Since the COVID-19 pandemic started and social distancing recommendations were released, have you been able to get foods that are easy to prepare?

**Food Choices**

Next, I'm going to ask you about how you choose which foods to get.

Last time you got fruit, how did you choose which fruits you were going to get?

*Probe:* Shelf-life? Cost? Taste? Easy to prepare? Health? Fresh vs processed? Local?

**Figure 1.** (continued) Older adult interview guide.

Last time you got vegetables, how did you choose which vegetables you were going to get?  
*Probe:* Shelf-life? Cost? Taste? Easy to prepare? Health? Fresh vs processed? Local?

Last time you got meat, how did you choose which meats you were going to get?  
*Probe:* Shelf-life? Cost? Taste? Easy to prepare? Health? Fresh vs processed? Local?

Last time you got breads or cereals or pasta, how did you choose which breads or cereals you were going to get?  
*Probe:* Shelf-life? Cost? Taste? Easy to prepare? Health? Fresh vs processed? Local?

Last time you got dairy products, how did you choose which products you were going to get?  
*Probe:* Shelf-life? Cost? Taste? Easy to prepare? Health? Fresh vs processed? Local?

How are the choices you make about what foods you get different now compared to before the COVID-19 pandemic and social distancing recommendations were released?

### **Healthy foods**

Next, I'd like to ask you about healthy foods. There are many different ways people define what healthy foods are.

What are some foods you consider to be healthy?

In your opinion, what makes them healthy?

How important is it for you to have healthy foods in your meals? Why?

Thinking back to before the pandemic and then now, has the amount of healthy food you eat changed? Do you eat more or less healthy food now compared to before? Why do you say that?

We are particularly interested in fruits and vegetables, so I'd like to ask about those more specifically now.

Do you think you eat enough fruit? *May need to clarify this includes fresh, canned, or frozen fruits.*

Do you eat more or less fruit now compared to before the COVID-19 pandemic? Why do you say that?

We know many people eat white potatoes for their vegetables (*baked, mashed, French fries, hashbrowns*).

How often do you eat white potatoes for your vegetables?

Do you eat more or less white potatoes now compared to before the COVID-19 pandemic? Why do you say that?

Do you think you eat enough vegetables besides those white potatoes?

Do you eat more or less vegetables (not counting potatoes) now compared to before the COVID-19 pandemic? Why do you say that?

### **SNAP Participation**

Do you participate in Iowa Food Assistance? You may also know this as Food Stamps, EBT or SNAP.

*If yes:* Can you tell me about your experience with that program? Does Food Assistance allow you to buy the foods you [*and your family*] need?

**Figure 1.** (continued) Older adult interview guide.



*If no:* Why not? Have you ever applied for Food Assistance?

### **Food Insecurity**

The next two questions are standard screening questions for food insecurity. I will read each statement and ask if that was often true, sometimes true, or never true for your household

Within the past 12 months we worried whether our food would run out before we got money to buy more. Was that often true, sometimes true, or never true for your household?

Within the past 12 months the food we bought just didn't last and we didn't have money to get more. Was that often true, sometimes true, or never true for your household?

### **Demographics**

For the last set of questions, I am going to ask you some standard demographic questions we ask everybody.

What is your age?

What is your gender?

Are you of Hispanic or Latino origin or descent?

What race do you consider yourself to be? White, Black or African American, American Indian, Alaska Native, Asian, Native Hawaiian, Pacific Islander, or something else?

Are you currently employed?

*Probe:* Full or part-time?

What is the highest grade or level of school that you have completed?

Finally, what is your household's monthly income from all sources?

**[If refused or don't know]** Would you be able to tell me if your household's monthly income is less than \$1,500, between \$1,500 and \$4,000, or greater than \$4,000?

### **Wrap up**

Those are all the questions I have today.

Is there anything else you'd like to share that we have not discussed?

Thank you so much. **TURN OFF RECORDER**

We'd like to thank you for participating by sending you a \$25 Wal-Mart gift card.

Next, I will just need your mailing address so we can send that gift card to you. *Record address in incentive tracking spreadsheet. Confirm address*

*After confirmed:* We will send that out in the next few days so look for it in the mail within the next two weeks.

Do you have a pen and paper nearby?

**Figure 1.** (continued) Older adult interview guide.

If you have any questions or concerns, or if you have not received your gift card within a reasonable amount of time, feel free to call me at: 1-302-547-3176.

During these times, we think that people may need extra support, including help getting food, mental health resources, or other support. I would like to give you a few phone numbers of places you can contact for that, do you have a pen and paper to write these down?

*If not enrolled in SNAP:* If you would like more information about receiving Food Assistance benefits, you can call the Iowa Food Bank Association Food Assistance Hotline at 855-944-3663 between 8 am and 4:30 pm Monday through Friday. They can give you more information on your eligibility and how to apply for benefits. *If concerns about benefits expressed in interview* Food Assistance (SNAP) is a federal entitlement program that expands to the amount of people that need it, so anyone who qualifies for the program will receive benefits. You will not be taking away a benefit from anyone else.

The 211-assistance line can assist you with a wide variety of problems, including where to find a source of supplemental food closets to you, mental and physical health resources, and other services such as transportation, homemaking services, or home health care. Just call 211 and you will be connected to the Iowa assistance line.

You can also contact your local food bank if you need supplemental food. They can connect you to a food pantry in or close to your community and any programs they have. The phone number is

Food bank	Phone number
Northeast Iowa Foodbank	319-235-0507
Riverbend Foodbank	563-345-6490
HACAP	319-393-7811
Foodbank of Iowa	515-867-2880
Food bank of Siouxland	712-255-9741
Food bank for the Heartland	402-331-1213

If you have questions about food preparation, food preservation, food safety, nutrition, or other household concerns like cleaning or doing laundry, you can call ISU extensions and Outreach's AnswerLine at 1-800-262-3804 between 9 am-noon or 1pm-4pm Monday through Friday

If you need support around stress management or mental health, finances, or legal help you can call ISU extensions and Outreach's ConcernLine at 1-800-447-1985. They are available 24/7.

If you have concerns about elder abuse and would like to speak with someone who can provide assistance, you can call the elder abuse hotline at (800) 362-2178

I know you are receiving support from your local Area Agency on Aging, but they can provide you with additional support with getting services and connecting with resources in your community. You can always contact your AAA through Lifelong Links at 1-800-532-3213.

*If scheduling another interview session:* When would you like me to contact you to complete the interview? *Record time and date for interview.*

Thank you so much—have a great day and stay safe!

**Figure 1.** (continued) Older adult interview guide.