Chapter 17
More Than Hunger: Nutrition and Food Issues

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Introduction

Food, like shelter, is a basic human need. It is also a major determinant of health [1]. Individuals who consume unhealthy diets, such as those that contain high levels of sodium, highly processed foods, and sugar-sweetened beverages along with low intake of fruits and vegetables, have increased risk for cardiometabolic morbidity and mortality [2], a leading cause of death in the United States [3]. Diet-related illnesses such as diabetes and hypertension affect those who are homeless similar to those with stable housing [4]. However, unlike many with stable housing, individuals who are homeless may have an added challenge of accessing healthy food to support disease prevention and management. In fact, more than half may go an entire day without eating [5].

Homeless populations face a multitude of challenges including access to safe, nutritious, and adequate food [6–10]. Many individuals who are without stable shelter consume diets that are high in saturated fat and low in fruit and vegetable intake [11]. They also have numerous micronutrient deficiencies [11]. Malnutrition from

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the lack of access to healthy foods, coupled with other comorbidities (such as alcoholism, substance abuse, and mental health conditions) and poor environmental conditions, contributes to the health inequities found among those who are homeless [11, 12].

Individuals who struggle to access food also have increased use of emergency rooms and hospitalizations [5, 13]. Clinicians and other members of the healthcare team who provide services to this highly vulnerable population need to be aware of potential limitations to food access. They also need to consider these limitations when developing their treatment and management plans in effort to reduce the morbidity and mortality affecting this highly vulnerable group.

This chapter focuses on nutrition and food issues that need to be considered when caring for individuals who have unstable housing. The objectives for this chapter begin with a review of food insecurity as a social determinant of health. It will also describe nutrition screening and nutrition assessment. It will detail the Nutrition Care Process. This chapter will share current social safety net programs to help those who need food assistance and will discuss the interdisciplinary approach needed to address this complex problem of food hardships among those who lack stable housing. Finally, this chapter weaves a case study throughout to better connect didactic knowledge with a clinical example.

Case Study: Introduction

David is a 44-year-old single African-American male who is obese and has type 2 diabetes, hypertension, and early stage chronic kidney disease and hypertension.

David lives in Detroit, Michigan, and is homeless. After losing his janitorial job 3 months ago, he was unable to pay the rent for his apartment. He now lives in his car.

Review of Social Determinants of Health

Food insecurity is a social determinant of health along with homelessness. Research has shown that 40 percent of factors contributing to health are social or economic, compared to 20 percent that are related to medical care [14]. The link between food insecurity and health issues is strong and needs to be part of any population health strategy. Wang et al. [15] confirms the relationship between food insecurity and the poor management of hypertension, diabetes, HIV disease, and depression, which demonstrates that this is a problem. Understanding the behavioral, social, and environmental significance of social determinants of health is a major contributor to keeping people healthy. The factors influencing health are also factors associated with food insecurity, making the connection between healthcare issues and food insecurity strong. A review of socioeconomic factors is needed with clients, because all have effects on overall health: inability to afford food, physical environmental

factors including lack of access to a grocery store, clinical care factors like the high cost of healthcare resulting in difficult trade-offs, or the lack of access to care. The average percentage of food-insecure households in the United States as of 2018 was 11.7%. Overall there has been little change, only a decrease of 0.5% to the national number from 2008 when it was 12.2% [16]. The cycle of food insecurity and chronic disease management is most prominent in low-income populations. As a person becomes sicker, the likelihood of missing work, increased healthcare costs, and the financial burden leading to difficult trade-offs fuels the continuation of the food insecurity cycle [14]. In the absence of good nutrition, chronic diseases can worsen, often leading to increased usage of the healthcare system [14]. Wang et al. [15] supports the idea that food insecurity alone will result in poor outcomes. Additionally, Gurvey et al. [17] found a relationship between the availability of appropriate nutrition, medical nutrition therapy, and its direct role on healthcare costs. The provision of health education, specifically on healthy eating, can impact the relationship between food insecurity and poor nutritional practices [18]. When left unsolved, the cycle of food insecurity and chronic disease will continue, resulting in a significant public health issue.

Case Study: Social Determinants of Health

David had basic health insurance with his janitorial job. He had a primary care provider who he saw every 3 months for his diabetes and hypertension management. His co-pays were high, but he understood its importance and paid $60 per visit. Sometimes he would have to choose between getting his prescriptions and getting groceries. He tried to stretch his medications by taking them every other day. He could not afford his blood sugar test strips so he only checked his blood sugar if he felt bad. He also would buy food like rice and beans to keep him full even though he knew they would bump up his blood sugar. David managed to take care of his basic and health needs, but just barely.

One Saturday morning, he slipped on a patch of ice while getting the mail. David could not get up because of pain. His neighbor called an ambulance. David incurred multiple co-pays from the ambulance ride, CT scan (to rule out head injury), MRI for his knee, and cast for a fractured arm. Even when he returned to work, he was not able to perform at the previous level. Eventually, he was terminated. David had little in savings. Without his job, he could not afford rent and was evicted. He also lost his health insurance. David could not get steady work. It's now summer and living in his car is taking a toll on David. He focuses his days getting food and staying safe on the streets. David's last full meal was a day ago. This morning he ate a doughnut he found in the trash behind a bakery.

Defining Food Insecurity

The terms *food security* and *food insecurity* are often used interchangeably. Both refer to access to healthy food. Per the US Department of Agriculture (USDA), food security means access to enough food for an active, healthy life at all times [19]. At a minimum, individuals who are food secure have ready access to nutritionally adequate and safe foods. They also acquire these foods in socially acceptable ways (i.e., without resorting to emergency food supplies, scavenging, stealing, or other coping strategies) [19]. Conversely, food insecurity is an economic and social condition of limited or uncertain access to adequate food [20].

The most accepted measure for food security is the 18-item Household Food Security Survey Module (HFSSM), or its various shorter forms [21]. This tool is used in several national population health surveillance surveys such as the Current Population Survey and the National Health and Nutrition Examination Survey. The 18-item HFSSM measures food security at the household, adult, and child food security. A slightly shorter 10-item HFSSM omits the eight child-focused questions and is used to measure adult food security [22]. The 6-item HFSSM [23] is the short form of the 18-item survey module. The 6-item HFSSM takes less time to administer and has demonstrated reliability and validity [24]. However, the 6-item HFSSM is less precise and somewhat less reliable compared to 18-item HFSSM [24]. It also does not measure the most severe levels of food insecurity that can be associated with hunger. All versions of this survey are readily available through the USDA's web page: https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/survey-tools/ [25].

Each survey includes details on how to administer and score the instrument. The numerical score is a sum of the affirmative responses to the questions in the instrument. Each instrument has a unique range of scores dependent on the number of questions asked. However, in all three versions of the HFSSM, higher scores indicate increasing food insecurity.

Using the tabulated scores, survey respondents can be categorized into four levels of food security [26]: high, marginal, low, and very low food security [27]. As the name indicates, those with high food security report no problems or limitations accessing food. Those with marginal food security may experience concerns or anxiety regarding food shortage or sufficiency but have had to make little or no changes to their diets or food intake. In contrast, individuals with low food security (previously labeled "food insecurity without hunger") [27] report reduced quality, variety, or desirability of the foods they consume. The most extreme level of food insecurity is very low food security (previously labeled "food insecurity with hunger"] [27]. Those with very low food security have disrupted eating patterns and reduced food intake. They have cut the size of their meal or skipped meals, ate less than they felt they should, were hungry but did not eat, lost weight, and/or did not eat the whole day [28].

Every year, the USDA Economic Research Service shares a report for the prevalence of food insecurity across the nation. However, this report does not include individuals who are homeless [29]. The number of studies reporting on prevalence of food insecurity in the homeless population is limited. However, several small

studies suggest that between 40% and 60% of those who are homeless have high prevalence of food insecurity [30, 31].

Please note that that all versions of the HFSSM (18-, 10-, or 6-item) ask respondents if they had "enough" food and were able to afford "balanced" meals. Both "enough" and "balanced" are subjectively defined by the respondent. How much food is "enough," and what constitutes a "balanced" meal may have different meanings depending on a person's knowledge of nutritional needs. Individuals living with chronic food insecurity may have developed a different meaning for both "enough" food and "balanced" meal [9].

In busy clinics where time is critical, an 18-item or even 6-item food security survey may not be practical. However, screening for food insecurity as part of a holistic approach to care is important. The American Hospital Association and Feeding America recommend using the validated 2-item Hunger Vital Sign™ to quickly screen for food insecurity [14, 32]. The two questions in the Hunger Vital Sign™ are: "Within the past 12 months we worried whether our food would run out before we got money to buy more" and "Within the past 12 months the food we bought just didn't last and we didn't have money to get more." To further help healthcare providers, Feeding America has designed a useful toolkit that outlines a process to screen and address food insecurity in almost any clinic setting [32].

The Veterans Health Administration (VHA), the largest healthcare organization in the United States, demonstrated leadership by implementing screening for food insecurity among Veterans seen in their primary care clinics beginning in October 2017 [33]. The VHA uses a 1-item screener question: "In the past three months, did you ever run out of food and you were not able access to more food or have the money to buy more food?" This screener is located with other clinical reminders in the VHA's electronic health record, so it is automatically prompted for completion during routine clinical encounters. Clinic staff are to ask this question during intake after they ask the housing stability screener. Positive responses prompt a social work, dietitian, nursing, or provider consultation. Hopefully as awareness of the relationship between social determinants (such as food insecurity) and health expands, more healthcare institutions and systems will adopt screening for and addressing food insecurity.

Quantifying Food Insecurity

Food insecurity is a social determinant of health [34]. Individuals struggling with food insecurity often cope with the limited finances by consuming low-cost, filling foods [35, 36]. However, these foods are also often high in calories and lack essential nutrients [37]. Individuals experiencing food insecurity also may have higher levels of stress due to economic instability. The low-quality diet coupled with increased stress places individuals living in food insecurity at greater risk for poor health outcomes such as obesity, diabetes, cardiovascular disease, and depression. For these reasons, food insecurity contributes to health inequality.

Those who are struggling to avoid hunger have little, if any, choice over the foods that are available for them to consume [10]. Individuals who are homeless may engage in harmful strategies to access food. For example, they may consume food foraged through dumpsters or trash cans. This food is not safe for consumption and could place the individual at risk for foodborne illness and infections. If panhandling or loitering outside stores and restaurants, this can place the individual at odds with ordinances or law enforcement. Even safer sources of food (such as food pantries, community kitchens, or family/friends) may not offer foods that meet the nutritional needs of the individual.

For example, community kitchens (a.k.a. "soup kitchens") may or may not offer meals that fit the recommended dietary requirements for individuals who have diabetes, cardiovascular disease, celiac disease, or other illnesses with dietary restrictions. Therefore, it may be challenging for individuals who are homeless (or even those who have homes but limited income) to consume foods that adhere to their diet, thus worsening their health condition.

Case Study: Vital Intake

David arrives to the emergency department complaining of dizziness. His vital signs indicate heart rate of 85 beats per minute, 9 respirations per minute, blood pressure of 155/92, capillary blood sugar 58 mg/dL, pain score 0 out of 10, and body mass index 38 kg/m^2. The emergency department (ED) also recently adopted the Hunger Vital Sign™ [38] *as part of its patient intake. On review of the chart, you notice that he has responded yes to both questions on this screener. Immediately you enter a consultation to social work to help him get access to food. You also see that this is David's fourth ED visit in 8 months. Each time he has come, it was for issues that could have been addressed in primary care. He was admitted once for additional workup but has otherwise been discharged the same day.*

As you get set to interview David, he asks you if he can get something to eat, like a sandwich or anything. He tells you that his last meal was last night and that he has been hungry since he woke up. He has not taken his diabetes medication, or any medication, because he was worried about not having any food to go with it. David tells you that normally he can get food from the community kitchen near the park where he keeps his car. They make some of the best mashed potatoes he has ever eaten. He knows that eating the potatoes will spike his blood sugar level, but he said that the other option is to be hungry.

At this point, you also consult the dietitian as you know that David is in a precarious situation. Not only is he homeless, he also lacks sufficient access to food that meets his dietary requirements. Knowing that he has diabetes with early stage kidney disease, he already has a complicated diet to which he must adhere. However, acknowledging that he may not always be able to control what foods he has access to means that David is at high risk for additional complications. You also wonder if David has had trouble accessing food in the past and if so to what extent could that have contributed to his diabetes-related complications with kidney disease.

Prevention and Nutrition Screening

The first step in treatment of a condition is prevention of the condition. This is true for homelessness as well as associated nutrition concerns such as hunger, food insecurity, nutrient deficiencies related to poor nutritional intake, and malnutrition. Homelessness and food insecurity are ultimately preventable conditions at the individual and community level. Preventive efforts of the healthcare team are vital to provide their clients a voice and advocacy in the context of their own communities, professional organizations, and institutions or hospitals. These efforts include raising awareness and opening conversations about homelessness and food insecurity through:

- Poster presentations at professional organization or institutional meetings/conferences
- Case studies presentations with other healthcare teams or hospital leadership
- Hosting journal clubs
- Publishing research
- Collecting data and participating in quality improvement projects
- Advocacy at local, state, or federal legislative levels
- Serving as field subject matter experts for local, state, or federal representatives
- Serving as a voice of healthcare professionals who work with the homeless and/or food insecure

Additionally, healthcare providers and teams have meaningful opportunities to intervene at the individual level, at times in a family's or individual's life when they are at risk of becoming homeless or losing basic needs such as food or shelter. This is done by performing their particular discipline's role with a whole-person approach, that is, ensuring a Social Needs Assessment in developing their treatment plan. Healthcare providers must understand a client's housing and food access situation to appropriately prescribe treatment:

- Where do they currently sleep?
- Do they have access to toilets, soap, and potable running water? How convenient is this access?
- Where are they getting their meals?
- Do they have access to heat sources to prepare meals (i.e., hot plate, stove, microwave)?
- Do they have refrigeration and/or safe food storage capacity?

For example, if a client does not have food or shelter, it is unlikely any treatment plan prescribed can be followed before those needs are being addressed. If healthcare teams know their clients' social factors, not only can they more effectively help clients with their actual needs during a visit, but their treatment efforts will not be in vain. Clients' social factors and risk change over time, so it is important to seize any opportunity when a client is transitioning or recently has transitioned into homelessness or food insecurity.

A powerful tool in both prevention and treatment is screening, because identifying the problem is necessary to begin clinical treatment. Nutrition screening is different than prevention, but it should be used in preventive efforts for the population to identify and offer the food-insecure treatment/intervention. Routine nutrition screening also monitors changing risk and transitions in a client's life over time. A client may screen negative at one visit but lose a job, relapse in substance use disorder, or be kicked out of the house by an angry partner by the next visit. Nutrition screening is used to identify clients with a nutrition-related condition but can be used to identify those at risk of food insecurity; thus it has a role in prevention too.

Nutrition screening is used to identify a wide range of nutrition-related concerns:

- Food insecurity
- Malnutrition
- Overweight/obesity
- Food intolerances or intake problems (nausea, vomiting, diarrhea, dysphagia, mastication)
- Disordered eating behaviors (binging, purging, other restrictive or excessive intake patterns)
- Others

Some nutrition screening is required by the Joint Commission [39] (CTS.02.01.11):

1. The organization screens all individuals served to identify those for whom a nutritional assessment is indicated. At a minimum, the screening includes questions about the following:
    - Food allergies
    - Weight loss or gain of ten pounds or more in the last 3 months
    - Decrease in food intake and/or appetite
    - Dental problems
    - Eating habits or behaviors that may be indicators of an eating disorder, such as bingeing or inducing vomiting
2. Individuals for whom a nutritional assessment is indicated are either assessed and treated by the organization or referred for assessment or treatment.
3. For organizations that assess nutritional status, the assessment identifies those individuals who may be at moderate or high nutritional risk" [39].

Some nutrition screenings are unvalidated but rather developed locally by hospitals or programs as a means to gather data and/or food preferences and generate internal referrals to Registered Dietitian Nutritionist (RDN), Dietetics Technician Registered, diet technicians, or other team members. These include body mass index (BMI) screens for over- or underweight, food intolerance or intake problems, or other local screening. However, there are validated nutrition screenings for malnutrition and food insecurity. Validated nutrition screening should be used instead of locally developed screening to identify nutrition risk (Table 17.1).

Table 17.1 Nutrition screening tools [14, 21, 31, 40–43]

Tool	Purpose	Assessor	Additional information/links
Mini Nutritional Assessment – Short Form (MNA-SF®)	Malnutrition and malnutrition risk for clients >/= 65 years	Any healthcare worker	https://www.mna-elderly.com/forms/mna_guide_english_sf.pdf
Malnutrition Screening Tool (MST)	Malnutrition risk for adults in the residential/inpatient/outpatient hospital setting	Any healthcare worker	http://static.abbottnutrition.com/cms-prod/malnutrition.com/img/Alliance_Malnutrition_Screening_Tool_2014_v1.pdf
Subjective Global Assessment	Protein-calorie malnutrition	Trained personnel	Basic intake and weight questions with a physical exam that focuses on areas of subcutaneous fat, muscle wasting, edema, and ascites
Malnutrition Universal Screening Tool (MUST)	Nutrition risk for adult clients	Any healthcare worker	https://www.bapen.org.uk/screening-and-must/must/introducing-must
Household Food Security Survey Module (HFSSM)	Has 18-, 10-, and 6-item versions for population screening of household, adult, and child food security	Any healthcare worker	https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/survey-tools/
Hunger Vital Sign™	2-question validated screen	Any healthcare worker	"Within the past 12 months we worried whether our food would run out before we got money to buy more" and "Within the past 12 months the food we bought just didn't last and we didn't have money to get more."
VHA Food Security Clinical Reminder	1-question screener used in the Veterans Health Administration electronic health record	Any healthcare worker	"In the past 3 months, did you ever run out of food and you were not able access to more food or have the money to buy more food?"

As listed above, nutrition screenings look like a question, or very brief series of questions, that can be administered by anyone on the healthcare team. Nutrition screening is not designed to be completed by a Registered Dietitian Nutritionist (RDN), but rather should be part of an institution's clinical flow and practices. For example, nutrition screening may be completed with every inpatient admission intake. It can easily be added to other screenings during this process, such as Nursing Admission Screening or Behavioral Health Admission process. Nutrition screening should be part of an institution's outpatient care too, because nutrition is a key tenet of overall health and a basic need for survival. Therefore, addressing it through screening at every new visit or admission does not seem excessive. An institution can add nutrition screening questions to admission or clinic documentation [44].

Screening for food insecurity is a sensitive endeavor. The topic has significant negative stigma associated with it. The stigma may impact many induvial and families in need, to seek resources or ask questions about resources that are available. Healthcare providers represent knowledge, resources, and in most cases trusted confidants to their patients. This relationship makes them perfectly suited to screen for social determinants of health like food insecurity and to provide education on resources and medical therapies that may be impacted by a positive screen [14]. The healthcare team, including the nurse, social worker, dietitian, and provider, each provide an important vantage point to educate and assist the food-insecure patient. The nurse is usually the clinician who will conduct the screening. When a positive screen occurs, the nurse is perfectly positioned to provide education regarding the impact that the client's current medications have to their disease and how certain medicines and food affect well-being. Of particular concern are patients with diabetes who are on medication to manage their blood glucose. Diabetes in this population is more difficult to manage. If a food-insecure patient skips a meal but takes their medication, their risk of experiencing a hypoglycemic event is high. Seligman et al. [45] observed a statistically significant relationship between patients with food insecurity and poor diabetes management, which led to chronic emergency department visits for hypoglycemic events. Additionally, the evidence highlights the work of O'Toole et al. [46], who found the effects of food insecurity were higher than expected for hypoglycemic episodes in patients with diabetes, indicating the strong relationship seen with this specific disease. Connecting the client to the social worker as soon as the positive screen is obtained allows for the provision of resources more expeditiously. Ideally, the plan is to facilitate the client at the time of a positive screen, so that he or she leaves with useable information and a plan to obtain food that day.

When the client meets with the dietitian, the exchange of information should focus on the following topics:

- What type of access do you have to prepare food?
- Do you have a microwave, a hot plate, a full kitchen, etc.?
- If the patient is in receipt of Supplemental Nutrition Assistance Program (SNAP) benefits, then a discussion on how to stretch SNAP benefits.
- How to increase healthy choices, especially if using a food pantry to supplement the food supply.

The healthcare team provider is responsible for assessing the impact that food insecurity may have on the different diseases the patient has. To start, a review of the medication list is important to assess the need for food to be present when the medication is taken, or the impact the medication will have if unpredictable ingestion of food is occurring. The healthcare team collectively needs to educate and support the food-insecure patient to reduce the risk of any drug-nutrient interactions or significant side effects.

Nutrition Care Process

Screening leads to treatment of a condition, and nutrition screening must be connected to follow up action to be meaningful. For example, if a patient responds affirmatively to a malnutrition screening question, this should trigger a nutrition consult or referral to a Registered Dietitian Nutritionist for a full nutrition assessment. In the case of food insecurity screening, this consult or referral may be to a social worker, RDN, or the patient's designated nurse, case manager, or care manager.

When a patient is referred to a Registered Dietitian Nutritionist for a nutrition assessment, this begins the Nutrition Care Process. The Nutrition Care Process (NCP) is a standardized way that all RDNs provide evidence-based care and documentation [47]. It is problem(s)-focused and provides consistency in nutrition interventions for identified nutrition problems. It consists of five distinct components collectively referred to as "ADIME": Assessment, Nutrition Diagnosis, Intervention, Monitoring, and Evaluation [47].

"Assessment" is most synonymous with the familiar "SOAP" notes' documentation (Subjective, Objective, Assessment, Plan) used by providers and other healthcare professions. In ADIME, Assessment includes roughly the "SOA" data. It is when the RDN gathers data from:

- Interviewing the client, caregiver, and other healthcare team members
- Nutrition-Focused Physical Exam
- Medical chart/history
- Laboratory results
- Anthropometrics such as weight trends
- Medications
- Many other pertinent pieces of information that tell the client's story

A nutrition assessment begins with a handshake. This builds rapport, especially important when interviewing homeless populations, because it shows respect for persons and extends human kindness to those who may be physically rejected or avoided by others in their daily lives. The handshake also begins the Nutrition-Focused Physical Exam (NFPE) [48]. The NFPE is performed by a RDN or provider who has been trained in NFPE. It includes both inspection (visual) and palpation (physical) examination of the client. Upon handshake, the RDN can begin

to assess handgrip and any muscle wasting of the interosseous muscle between the thumb and index finger. The NFPE proceeds with permission of the patient to review head-to-toe areas that are affected by nutritional intake: muscle, fat stores, hair, nails, skin, mucous membranes, gums, and lips. The RDN (or specially trained clinician) inspects and/or palpates:

- Hollowing of the temporal area of the head for muscle wasting
- Visual inspection of orbital fat pads under the eyes for subcutaneous fat loss (may be masked by edema/fluid retention)
- Visual inspection of anterior lower ribs for fat stores (lower ribs should not be visually evident)
- Subcutaneous fat: arms at a 90-degree angle and lightly pinching biceps and triceps
- Edema/hydration status: dimpling the skin with two fingers above the ankle, edema at the sacrum, ascites in the abdomen, pinching the skin on back of the hand, and mucous membranes
- Bilateral muscle wasting (presents in the upper body first): shoulders (acromion processes), trapezius muscles (scapula), deltoids, triceps, biceps, thigh, above the knee, calf, clavicle, and interosseous muscle
- Trained inspection for micronutrient deficiencies: nails, hair, skin, and gums

Findings in a NFPE can be validated by another clinician and laboratory values to confirm the extent of the nutritional deficiency and inform the clinician on any micronutrient repletion needs. Note that micronutrient (vitamins and minerals) repletion is specific to the nutrient deficiency and will need further evaluation to determine repletion regimen. It is not appropriate to treat micronutrient deficiencies with a multivitamin/multi-mineral supplement.

Assessment often includes a 24-hour recall with the client, which entails a multiple pass method of interviewing [49]. The client is asked to "walk through a typical day" with the RDN, relaying all food and fluid intake. The multiple passes in a 24-hour recall allow the RDN to walk through a typical day with the client in five steps to catch details not included in the previous passes (e.g., "I had a sandwich for lunch" on Pass 1 turns into the following by Pass 3: "I had a ham sandwich with 4 slices of honey baked ham, two slices each of lettuce and tomato, 1 tablespoon regular mayonnaise on 2 regular pieces of white bread with a 'big grab' bag of barbeque potato chips and a 24 ounce diet soda, but 3-4 times a week I go to the fast food restaurant at the corner of Miller and 5th and get the 'Number 5' special with a 12 ounce vanilla shake.") The multiple pass 24-hour recall is a preferred method to gather intake data. If done with sensitivity and understanding, it builds more rapport and can initiate trust in the client-RDN relationship. The 24-hour recall can also elucidate stark nutrition findings, such as food access problems (financial or geographical), transportation challenges, work and family influences, food attitudes, social isolation or interactions, exploring disordered eating behaviors, and even suicidal ideations not previously disclosed. The lifestyle around food is poignant; RDNs learn so much from clients through the assessment component of the NCP, and this allows them to more precisely move to the next component of NCP to identify the nutrition diagnosis.

Nutrition Diagnosis

Registered Dietitian Nutritionists use codified electronic Nutrition Care Process Terminology (eNCPT) in documenting the Nutrition Care Process [50]. Use of the standardized eNCPT also allows for standardization in identifying and defining nutrition diagnoses. Nutrition diagnoses are different from ICD-10 medical diagnoses, and RDNs assign them to clients based on standardized etiologies and signs/symptoms. Providers should enter ICD-10 code Z59.4 "lack of adequate food and safe drinking water" as the ICD-10 medical diagnosis, because proper documentation and coding of the medical encounter is important. Nutrition diagnoses are identified by the RDN and are written in documentation in the form of "PES" statements (Problem/Diagnosis, Etiology, Signs/Symptoms). For example, a provider may see the following 1–3 PES's in a RDN's progress note [50]:

- Limited access to food (nutrition diagnosis) related to lack of financial resources (etiology) as evidenced by client's report of skipping two to three meals 3 or more days a week (signs/symptoms)
- Intake of unsafe food (nutrition diagnosis) related to lack of proper food storage (etiology) as evidenced by client complaints of nausea and diarrhea and reports of eating foods, including meats and eggs, out of trash cans (signs/symptoms)
- Poor nutrition quality of life (nutrition diagnosis) related to food insecurity (etiology) as related to lack of social and familial support (signs/symptoms)

The eNCPT [50] offers RDNs a complete list of the multiple domains and terminology related to all steps of the NCP for all types of clients and patients. The PES statement tells the provider that the RDN is going to intervene his/her expertise to improve or resolve the nutrition problem/diagnosis(es) by primarily addressing the etiology. This intervention may be provided directly by the RDN, or the RDN may use care coordination/referral to social work or case manager, if more appropriate. The ultimate goal in the NCP is to resolve the nutrition diagnosis.

Nutrition Interventions

The "I" in ADIME is the Intervention [47]. Nutrition Interventions are organized into the following domains to address the etiology and ultimately resolve the nutrition diagnosis:

- Food/nutrient delivery to provide customized approach to nutrition, including basic dietary or intake recommendations, tube feeding, or parenteral nutrition
- Nutrition education to provide didactic information
- Nutrition counseling to support goal setting and behavior change
- Nutrition coordination of care to refer to other team members or resources
- Population-based nutrition action to address needs of a population

These interventions are provided by the RDN or coordinated by him/her in referring to another healthcare team member or community resource.

Nutrition Monitoring/Evaluation

In ADIME, the "ME" Monitoring/Evaluation part of the Nutrition Care Process can be thought of as the follow-up plan. It also establishes the outcomes related to the nutrition diagnosis. When should the client be seen again? What data will be needed at that time to determine progress or resolution of the nutrition diagnosis? The follow-up interval should be determined by the nutrition diagnosis. For example, if the PES statement records "Limited access to food related to lack of financial resources as evidenced by client's report of skipping 2–3 meals 3 or more days a week," the follow-up interval would be something sufficient to show progress in this diagnosis such as the time required to connect with the local food pantry or enroll in emergency food assistance. The goal of Monitoring/Evaluation is to follow up with the client to determine if outcomes are being achieved to resolve the nutrition diagnosis(es). It is also an opportunity to reassess with new data and the Nutrition Care Process cycle to identify emerging nutrition diagnoses. The ultimate goal of the Nutrition Care Process is that nutrition diagnoses are resolved.

Case Study: Dietitian Consultation

The dietitian meets with David. She shakes his hand warmly and states her role in his care, asking if he has any particular concerns today. He says not really but knows he has diabetes and hasn't been eating well lately, which has given him low blood sugar. The dietitian asks if David can walk through a typical day for her (for a 24-hour recall) and if she could perform a Nutrition-Focused Physical Exam to "make sure he's in good shape." She learns that David feels safest sleeping in his car which he keeps parked at the park. The park also has restrooms. Normally he eats one meal a day at the community kitchen, but he can only go there four times per week. The community kitchen serves one meat with a side of vegetables (green beans, corn, or potatoes), a small salad with dressing, and a desert. He tries to skip desert, but if he is still hungry, he will eat it. If he can afford it, he will get a $5 supreme pizza or other burger and fries fast-food meal on the days he cannot go to the community kitchen. He also tries to keep some snacks in his car in case he feels like his sugar is getting low. He has no means of making his own food and no access to refrigeration. David used up his savings (which was not much) long ago. With tears in his eyes, he describes digging through trash and begging for food. His two greatest fears are that he will lose his car or have to always beg for food. His health concerns are secondary to these two daily fears.

The dietitian enters the following Nutrition Assessment Note as part of the medical record:

(A)ssesment
44-year-old African-American male; type 2 diabetes, hypertension, renal insufficiency referred from ED 2/2 s/s hypoglycemia. Lives in car × 8 months

Intake 1 noon meal/day at community kitchen

- 4 oz. beef
- 1 cup mashed potatoes
- Tossed salad with ranch
- 1/8 pumpkin pie
- 72 oz. water/day
- Other intake: trash cans (donuts) or begging

NFPE obese (8% weight loss × 6 months), mild bilateral muscle wasting (biceps, triceps, clavicle), 1+ LE edema

Nutrition (D)iagnosis Limited access to food related to lack of financial resources as evidenced by client's report of skipping two to three meals 3 or more days a week

(I)nterventions
Nutrition Coordination of Care: Referred patient to ABC Food Pantry and provided list of available foods at no cost. Completed Supplemental Nutrition Assistance Program (SNAP) online application with patient, including Emergency SNAP Benefits Request. Referred patient to facility Homeless Case Manager for follow-up housing needs (appointment tomorrow morning).

Nutrition Education: Discussed role of SNAP Emergency and regular benefits and strategies to follow consistent carbohydrate intake using foods available at ABC Food Pantry and provided sample SNAP shopping list to maximize benefits. Reviewed food safety principles and dangerous foods to consume out of temperature and time.

(M)onitoring/(E)valuation: Follow-up with Homeless Case Manager tomorrow 9:30 AM. Follow-up dietitian × 2 weeks or per request. Phone number provided.

Discharge Planning

Ideally a hospital or healthcare system has resources such as social workers, dietitians, and case managers to address the multitude of complex needs to address complex issues such as homelessness and food insecurity. However, there are some basic social needs that should be addressed if a client cannot meet with a social worker at the time of their visit.

Recommendations:

1. Assessing client literacy level to help determine the best way to deliver discharge plans.
2. Assessing social support assets: family or friends who may be able to assist. They may need help contacting the family or friends or need someone who is willing to ask for them.

3. Asking about where the individual usually sleeps (in a shelter or on the streets). Then help them locate community kitchens, food pantries, or places of safe refuge near these areas.

Individuals who are homeless are not only struggling to meet basic needs like food; they often have co-existing health conditions that add to their daily struggles and complex management. For example, they may have substance abuse, alcoholism, mental health issues, and chronic diseases. O'Toole and other researchers found that connecting homeless individuals with primary care that offers wraparound services helps reduce unnecessary emergency department visits and better meets their health needs [5, 13, 51, 52]. Connecting individuals who are homeless with primary care services designed to help meet their physical, mental, and social support needs may be the most critical element of their discharge planning.

Case Study: Social Work and Case Management

Unfortunately, the social worker will not be able to see David today. He is overloaded with cases. However, the Homeless Case Manager will step in and see how she may assist tomorrow morning. Her goal is to reduce David's re-visits.

David, unlike many who are homeless, does not smoke or have substance abuse disorder or mental health condition. He understands his illnesses are severe and he tries to do what his doctors tell him he needs to do. However, as he explains to the case manager, he must make choices on what he can afford: medications, healthy food, or gas. Housing is a far-off goal for now. When he feels desperate or scared, he knows that the emergency department (ED) will take care of him.

David has a sister and a son who live in the area. His sister is also struggling to make ends meet and cannot offer David much financial support. His sister's live-in boyfriend does not want David to live with them even temporarily. David's son is 20 years old and is trying to "get his life going." David has not told his son about his living situation yet.

David had never applied for social assistance like the Supplemental Nutrition Assistance Program (SNAP) because he was "sure he would not qualify." He has tried to look for work, but when most employers see his appearance and lack of hygiene, he is quickly denied the position. He finds some odd jobs here and there, but it is never stable.

David does not see a primary care physician because he has no insurance. He gets about 2 weeks' worth of medications from the ED and stretches them out. He has never told anyone in the ED about his living situation because "no one has ever asked."

Resources and Social Interventions

Currently, most approaches to managing social determinants of health, like food insecurity, have focused on population-level approaches and policy-level work. There is great opportunity to impact change at the healthcare system level [53]. This work starts with the screening for food insecurity at a variety of levels of care. The opportunities for screening can occur in traditional outpatient clinic settings, as part of an acute care hospitalization or when receiving urgent care through an emergency department. Approximately 30% of patients with frequent hospital admission are food insecure [54]. Once screening data are available to a healthcare system, the information can be used to impact medical risk and treatment decisions while informing interventions that can increase the outcomes of vulnerable patient populations [53]. As more healthcare and non-healthcare agencies collect information on social determinants of health, the potential to integrate these data sets creates an opportunity to impact the current medical home model in favor of a healthy neighborhood. The idea of whole healthcare, or care that improves the patients' total health and well-being, is an alternative to the traditional disease-driven practice of the traditional healthcare system [55]. Personalized, proactive, patient-driven healthcare are the core principles of this approach. As the model is developed, the implementation of the proactive principle includes the provider and the patient utilizing strategies that are considered less traditional medical therapies and more likely considered generally healthy living principles. These strategies include mind-body approaches and nutritional strategies. The intent is to explore these concepts prior to traditional strategies like surgery or chemotherapy [55]. The framework being utilized for this approach is called Complementary and Alternative Medicine (CAM); this framework aligns with the core concept that the patient is at the center of his/her healthcare and encourages and empowers him/her to make choices to support individual well-being. The idea of a "circle of health" has been used to outline the basic tenants of this framework. The primary categories include working your body, surroundings, personal development, food and drink, recharge, family, friends and coworkers, spirit and soul, and power of mind. The connection of food to well-being is clear and strong. This approach is reminiscent of Hippocrates, who said "Let food be thy medicine, and let medicine be thy food."

The capturing of data both from the screening tool and through medical coding can provide invaluable data. The team must be aware of the importance of connecting the patient with resources at the time they are identified as food insecure. This may be the only chance to educate the patient on their options and the impact food insecurity has on their disease management. The social worker and RDN are best poised to develop a local list of resources available for the team to provide to a patient. The resource list should include the national resources like SNAP and Women, Infants, and Children (WIC) Program, as well as local resources, for example, soup kitchens, food banks, faith-based organizations, and any volunteer or non-profit organizations that support food security.

Interdisciplinary Teamwork and Summary

The healthcare team has a number of opportunities to assess the patient for their current food security status. In addition to the outpatient screen, acute care admissions can provide excellent access to evaluate social factors for the patient. The healthcare team together provides the best opportunity to impact the coordinated care described as whole health at the time of the discharge plan. The discharge plan must include the food security status, which is ideally identified during initial screening. This allows the nurse, the dietitian, the social worker, and the physician to collectively develop the plan of care with this information in mind. The personalized education will include the same components as they do in the outpatient setting; however, the inpatient admission allows for multiple visits by the healthcare team members, increasing the opportunity for greater compliance to the healthcare plan by the patient upon discharge. A complete assessment of the patient's food sources is critical. An accurate account includes determining if food is coming from soup kitchens, food banks, or dumpsters. The dietitian needs to have informed conversations focusing on food safety. For example, the patient needs to understand the risk of eating any type of meat that is found in a dumpster. Foodborne illnesses are a real threat, and the danger needs to be highlighted in a sensitive and thoughtful manner.

Case Study: Discharge Planning

As your shift comes close to its end, you want to make sure that David is set for discharge. You see that he has spoken with the dietitian who has offered some suggestions on how to make food choices given his tough circumstances. You also see that case management has tried to address some of his needs by providing him with a list of resources. David has seen this list before, but he does not know what to do with it.

You referred David to the new homeless clinic outreach program. He can receive primary care services, some hygiene material, dry foods, and a bagged meal at his visit tomorrow morning. He will also be able to connect with social work and a housing authority representative at his first visit. You make David's follow-up appointment at the new clinic and provide him with a bus pass so that he can get there. You know that realistically the ED can only provide David with a limited amount of care and resources. The wrap-around services at the clinic are what David really needs to help him meet his basic and health needs. You emphasize this in your discharge instructions, and David verbalizes that he will go to the clinic.

He thanks you and leaves through the sliding door, opposite to the revolving door through which he came.

References

1. World Health Organization | The determinants of health [Internet]. [cited 2019 Dec 6]. Available from: https://www.who.int/hia/evidence/doh/en/index3.html.
2. Micha R, Peñalvo JL, Cudhea F, Imamura F, Rehm CD, Mozaffarian D. Association between dietary factors and mortality from heart disease, stroke, and type 2 diabetes in the United States. JAMA J Am Med Assoc. 2017;317(9):912–24.
3. Heron M. National vital statistics reports. June 24, 2019;68(6). Deaths: leading causes for 2017 [Internet]. 2019 [cited 2019 Dec 8]. Available from: https://www.cdc.gov/nchs/products/index.htm.
4. Bernstein RS, Meurer LN, Plumb EJ, Jackson JL. Diabetes and hypertension prevalence in homeless adults in the United States: a systematic review and meta-analysis. Am J Public Health. 2015;105:e46–60.
5. Baggett TP, Singer DE, Rao SR, O'Connell JJ, Bharel M, Rigotti NA. Food insufficiency and health services utilization in a national sample of homeless adults. J Gen Intern Med. 2011;26(6):627–34.
6. Weber J, Lee RC, Martsolf D. Understanding the health of veterans who are homeless: a review of the literature. Public Health Nurs [Internet]. 2017;34(5):505–11. Available from: http://doi.wiley.com/10.1111/phn.12338. [cited 2019 Dec 3].
7. Lee BA, Greif MJ. Homelessness and hunger. J Health Soc Behav. 2008;49(1):3–19. https://doi.org/10.1177/002214650804900102.
8. Weinreb L, Goldberg R, Bassuk E, Perloff J, Hosmer D, Sagor L, et al. Determinants of health and service use patterns in homeless and low-income housed children. Pediatrics [Internet]. 1998;102(3):554–62. Available from: http://www.ncbi.nlm.nih.gov/pubmed/8361791 [cited 2019 Jan 21].
9. Herault N, Ribar DC. Food insecurity and homelessness in the Journeys Home survey. J Hous Econ. 2017;37:52–66.
10. Sprake EF, Russell JM, Barker ME. Food choice and nutrient intake amongst homeless people. J Hum Nutr Diet. 2014;27(3):242–50.
11. Seale JV, Fallaize R, Lovegrove JA. Nutrition and the homeless: the underestimated challenge. Nutr Res Rev. 2016;29:143–51.
12. Patterson ML, Markey MA, Somers JM. Multiple paths to just ends: using narrative interviews and timelines to explore health equity and homelessness. Int J Qual Methods [Internet]. 2012;11(2):132–51. Available from: http://journals.sagepub.com/doi/10.1177/160940691201100202 [cited 2019 Dec 6].
13. Rodriguez RM, Fortman J, Chee C, Ng V, Poon D. Health policy and clinical practice / brief research report: food, shelter and safety needs motivating homeless persons' visits to an Urban Emergency Department. YMEM [Internet]. 2009;53:598–602.e1. Available from: http://www.annemergmed.com [cited 2019 Nov 30].
14. Trust HR and E. Social determinants of health series: food insecurity and the role of hospitals [Internet]. 2017 [cited 2019 Nov 23]. Available from: https://www.aha.org//ahahret-guides/2017-06-21-social-determinants-health-series-food-insecurity-and-role-hospitals.
15. Wang E, McGinnis K, Goulet J, Bryant K, Gibert C, Leaf D, et al. Food insecurity and health: data from the veterans aging cohort study [Internet]. Public Health Rep. 2015;130:261–8. Available from: https://journals.sagepub.com/doi/pdf/10.1177/003335491513000313. [cited 2019 Jan 10].
16. Food insecurity data show the need for more robust anti-hunger efforts, not ill-considered policies that increase hunger - Food Research & Action Center [Internet]. [cited 2019 Dec 13]. Available from: https://frac.org/news/new-food-insecurity-data-show-the-need-for-more-robust-anti-hunger-efforts-not-ill-considered-policies-that-increase-hunger.
17. Gurvey J, Rand K, Daugherty S, Dinger C, Schmeling J, Laverty N. Examining health care costs among MANNA clients and a comparison group. J Prim Care Community Health. 2013;4(4):311–7.

18. Becerra MB, Mshigeni SK, Becerra BJ. The overlooked burden of food insecurity among Asian Americans: results from the California health interview survey. Int J Environ Res Public Health. 2018;15(8):1684.
19. United States Department of Agriculture's Economic Research Service. Food Security in the U.S.: measurement [Internet]. 2019 [cited 2019 Dec 6]. Available from: https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/measurement.aspx#security.
20. Anderson SA, editor. Core indicators of nutritional state for difficult-to-sample populations. J Nutr [Internet]. 1990;120(suppl_11):1555–600. Available from: https://academic.oup.com/jn/article/120/suppl_11/1555/4738657 [cited 2019 Dec 6].
21. United States Department of Agriculture's Economic Research Service. U.S. Household Food Security Survey Module: three stage design, with screeners [Internet]. 2012 [cited 2019 Dec 6]. Available from: https://www.ers.usda.gov/media/8271/hh2012.pdf.
22. United States Department of Agriculture's Economic Research Service. U.S. Adult Food Security Survey Module: three-stage design with screeners [Internet]. 2012 [cited 2019 Dec 6]. Available from: https://www.ers.usda.gov/media/8279/ad2012.pdf.
23. United States Department of Agriculture's Economic Research Service. U.S. Household Food Security Survey Module: six-item short form [Internet]. 2012 [cited 2019 Jan 7]. Available from: https://www.ers.usda.gov/media/8282/short2012.pdf.
24. Blumberg SJ, Bialostosky K, Hamilton WL, Briefel RR. The effectiveness of a short form of the Household Food Security Scale. Am J Public Health [Internet]. 1999;89(8):1231–4. Available from: http://www.ncbi.nlm.nih.gov/pubmed/10432912 [cited 2019 Jan 7].
25. USDA Economic Research Survey Tools. https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/survey-tools/. [Cited Dec 6 2019].
26. Bickel G, Nord M, Price C, Hamilton W, Cook J. Measuring food security in the united states guide to measuring household food security revised 2000 [Internet]. [cited 2019 Jan 21]. Available from: http://www.fns.usda.gov/oane.
27. United States Department of Agriculture's Economic Research Service. Definitions of food security [Internet]. 2018 [cited 2019 May 15]. Available from: https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/definitions-of-food-security.aspx.
28. Coleman-Jensen A, Rabbitt MP, Gregory CA, Singh A. Household food security in the United States in 2017 [Internet]. 2018 [cited 2018 Dec 30]. Available from: www.ers.usda.gov.
29. Coleman-Jensen A, Rabbitt MP, Gregory CA, Singh A. Household food security in the United States in 2018 [Internet]. 2019 [cited 2019 Sep 28]. Available from: www.ers.usda.gov.
30. Bowen EA, Lahey J, Rhoades H, Henwood BF. Food insecurity among formerly homeless individuals living in permanent supportive housing. Am J Public Health. 2019;109:614–7.
31. Holland AC, Kennedy MC, Hwang SW. The assessment of food security in homeless individuals: a comparison of the Food Security Survey Module and the Household Food Insecurity Access Scale. Public Health Nutr. 2011;14:2254–9.
32. America food insecurity and health: a tool kit for physicians and health care organizations [Internet]. [cited 2019 Nov 26]. Available from: https://hungerandhealth.feedingamerica.org/wp-content/uploads/2017/11/Food-Insecurity-Toolkit.pdf.
33. Dewey C. Why so many veterans go hungry — and VA's new plan to fix it. Washington Post [Internet]. 2017. Available from: https://www.washingtonpost.com/news/wonk/wp/2017/10/09/why-so-many-veterans-go-hungry-and-the-vas-new-plan-to-fix-it/?utm_term=.167000845791.
34. Gundersen C, Ziliak JP. Food insecurity and health outcomes. Health Aff [Internet]. 2015;34(11):1830–9. Available from: http://www.ncbi.nlm.nih.gov/pubmed/26526240. [cited 2019 Apr 14].
35. Kamdar N, Rozmus CL, Grimes DE, Meininger JC. Ethnic/racial comparisons in strategies parents use to cope with food insecurity: a systematic review of published research. J Immigr Minor Health. 2019;21(1):175–88. https://doi.org/10.1007/s10903-018-0720-y.
36. Drewnowski A, Eichelsdoerfer P. Can low-income americans afford a healthy diet? Nutr Today [Internet]. 2010;44(6):246–9. Available from: http://www.ncbi.nlm.nih.gov/pubmed/20368762. [cited 2019 Feb 9].

37. Drewnowski A, Specter S. Poverty and obesity: the role of energy density and energy costs. Am J Clin Nutr [Internet]. 2004;79(1):6–16. Available from: https://academic.oup.com/ajcn/article/79/1/6/4690070. [cited 2019 Feb 9].
38. [Internet]. [cited 2019 Dec 8]. Available from: https://www.childrenshealthwatch.org/wp-content/uploads/FINAL-Hunger-Vital-Sign-4-pager.pdf.
39. The Joint Commission. 2019 Hospital accreditation standards; 2019.
40. White JV, Guenter P, Jensen G, Malone A, Schofield M. Consensus statement: academy of nutrition and dietetics and American society for parenteral and enteral nutrition: characteristics recommended for the identification and documentation of adult malnutrition (undernutrition). J Parenter Enteral Nutr. 2012;36(3):275–83.
41. Guigoz Y. The mini nutritional assessment (MNA®) review of the literature - what does it tell us? J Nutr Health Aging. 2006;10:466–85.
42. Nestle Nutrition Institute. Mini nutritional assessment [Internet]. 2009 [cited 2019 Dec 13]. Available from: https://www.mna-elderly.com/forms/mini/mna_mini_english.pdf.
43. Barbosa-Silva MCG, Barros AJD. Indications and limitations of the use of subjective global assessment in clinical practice: an update. Curr Opin Clin Nutr Metab Care. 2006;9:263–9.
44. Department of Veterans Affairs' Veterans Health Administration. VHA Directive 1438 Clinical nutrition management and therapy [Internet]. 2019. Available from: https://www.va.gov/vha-publications/ViewPublication.asp?pub_ID=8512.
45. Seligman HK, Davis TC, Schillinger D, Wolf MS. Food insecurity is associated with hypoglycemia and poor diabetes self-management in a low-income sample with diabetes. J Health Care Poor Underserved. 2010;21(4):1227–33.
46. O'Toole TP, Roberts CB, Johnson EE. Screening for food insecurity in six veterans administration clinics for the homeless, June–December 2015. Prev Chronic Dis [Internet]. 2017 [cited 2019 Mar 15];14:E04. Available from: http://www.ncbi.nlm.nih.gov/pubmed/28084988.
47. Academy of nutrition and dietetics. The Nutrition Care Process [Internet]. 2019 [cited 2019 Dec 16]. Available from: https://www.ncpro.org/nutrition-care-process?404%3Bhttp%3A%2F%2Fwww.ncpro.org%3A80%2Fnutrition-care-process=404%3Bhttp%3A%2F%2Fwww.ncpro.org%3A80%2Fnutrition-care-process&set_ga_opt_in_cookie=1&set_ga_opt_in=Save+Settings.
48. Mordarski B, Wolff J. Nutrition focused physical exam pocket guide. p. 49.
49. United States Department of Agriculture's Agricultural Research Service. USDA automated multiple-pass method [Internet]. [cited 2019 Dec 13]. Available from: https://www.ars.usda.gov/northeast-area/beltsville-md-bhnrc/beltsville-human-nutrition-research-center/food-surveys-research-group/docs/ampm-usda-automated-multiple-pass-method/.
50. Academy of Nutrition and Dietetics. Nutrition terminology reference manual (eNCPT): dietetics language for nutrition care. [Internet]. [cited 2019 Dec 13]. Available from: http://www.ncpro.org.
51. O'Toole TP, Johnson EE, Borgia ML, Rose J. Tailoring outreach efforts to increase primary care use among homeless veterans: results of a randomized controlled trial. J Gen Intern Med. 2015;30(7):886–98.
52. Interventions to improve access to primary care for people who are homeless: a systematic review. Ont Health Technol Assess Ser. 2016;16(9):1–50.
53. Gottlieb L, Sandel M, Adler NE. Collecting and applying data on social determinants of health in health care settings. JAMA Intern Med. 2013;173(11):1017–20.
54. Phipps EJ, Singletary SB, Cooblall CA, Hares HD, Braitman LE. Food insecurity in patients with high hospital utilization. Popul Health Manag. 2016;19(6):414–20.
55. Krejci LP, Carter K, Gaudet T. Whole health: the vision and implementation of personalized, proactive, patient-driven health care for veterans. Med Care. 2014;52:S5–8.