NUTRITION and DIABETES GUIDE:

How Medical Nutrition Therapy Can Improve Diabetes Management

National Health Care for the Homeless Council

FEBRUARY 2019

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Purpose of Guide

This guide is published in direct response to the needs expressed by health care providers to the National Health Care for the Homeless Council concerning how health centers may provide quality care to people experiencing homelessness and diagnosed with diabetes. People who lack stable housing face numerous barriers that hamper diabetes management.

As HRSA-supported health centers focus on improving the screening and treatment of patients with diabetes, it is important to identify and disseminate promising practices in diabetes management for those experiencing homelessness. This guide highlights five registered dietitians serving in different health care settings sharing their personal experiences, challenges, strategies, and solutions. The information includes: case studies, various tips, references, resources and recipes that we feel may be beneficial.

Although this guide may be most applicable to the work of health care providers at organizations serving patients experiencing homelessness, this document is useful for health care providers serving populations diagnosed with prediabetes or diabetes. The content may be valuable to anyone interested in addressing food insecurity as a Social Determinant of Health and improving diabetes management through a nutrition-focused lens.

We hope this guide will provide a better understanding of how Medical Nutrition Therapy as an evidence-based strategy provided by a registered dietitian, may improve glycemic management and help meet the nutritional needs of patients who are unstably housed and diagnosed with diabetes.

Best of Health!

Darlene M. Jenkins, DrPH, RDN, CHES
National Health Care for the Homeless Council

Introduction

Diabetes occurs at approximately the same rate in people experiencing homelessness as in the general population. However, the diagnosis and management of diabetes in people experiencing homelessness remains challenging. Unstably housed individuals diagnosed with diabetes often have difficulties trying to manage the disease within the constraints of living in a shelter, transitional housing or on the streets. For many, the management of their disease often takes a backseat to more immediate concerns, such as safety, finding food, and shelter. For these individuals, the barriers to care are many, from medication storage to proper nutrition to financial burdens.

Diabetes occurs at approximately the same rate in homeless as the general populations. Diagnosis and management of diabetes for those with homeless histories remains challenging.

Well balanced, carbohydrate-controlled meals can be hard to find when receiving meals from shelters, food pantries, or soup kitchens; and it may be difficult to develop consistent meal times that coincide with insulin administration. Foods from fast food restaurants and those provided at shelters are often high in refined carbohydrates and undesirable fats (trans fat and saturated fats from nutrient poor sources) while also being low in fiber. Diets high in processed foods result in increased intake of salt and undesirable fats that can accelerate the development of cardiovascular disease (CVD). This is of particular concern as diabetes itself is a strong risk factor for CVD. These conditions are not favorable for those living with diabetes, who benefit from a well-balanced diet that is low in simple sugars (sodas and highly processed foods) and high in complex sugars (fruits, vegetables, and whole grains).

The direct correlation between diet and diabetes management is well established. It is important for people experiencing homeless with diabetes to receive medical nutrition therapy (MNT) provided by a registered dietitian to guide them in selecting foods to meet their individual nutritional needs. The nutritional counseling provided considers the availability of food, the individual's lifestyle, their living conditions, prescribed medications and other health goals such as lowering blood fat levels and controlling hypertension, in the development of a nutritional plan.

Medical Nutrition Therapy

Medical Nutrition Therapy (MNT) is the legal definition of nutritional counseling provided by a registered dietitian or nutrition professional and is an integral part of the overall management of diabetes. MNT includes a nutrition diagnosis as well as therapeutic and counseling services to help with the management of a chronic disease such as diabetes. MNT involves in-depth individualized nutrition assessments and uses the Nutrition Care Process to manage a chronic disease by addressing duration and frequency of care.

Registered Dietitians

Registered Dietitians/Registered Dietitian Nutritionists (RD/RDNs) provide medical nutritional therapy to patients and are food and nutrition experts who have met specific criteria to earn the RD/RDNs credential.

Many people mistakenly use the terms *"dietitian"* and *"nutritionist"* interchangeably. Although these two professions are related, they maintain distinctive qualities. The biggest difference between dietitians and nutritionists lies in the legal restrictions that each title carries. Only nutritionists that become registered with Commission on Dietetic Registration (CDR) may legally declare themselves as dietitians or more precisely, *Registered Dietitian Nutritionists* (RDNs).

Unlike dietitians, the nutritionist profession is much less protected under the law. In fact, nutritionists that do not use the titles of *"dietitian"* or *"Registered Dietitian"* are often free from government regulation. Some states may require nutritionists to obtain an occupational license from a Board of Nutrition, while other states allow individuals to practice as nutritionists without any previous education, training or work experience.

RDNs are effective nutrition counselors. They have both the scientific knowledge and the counseling skills necessary to provide helpful food and nutrition advice, and tailor nutrition recommendations to each individual's unique needs and circumstances. RDNs also help identify available resources to meet daily nutritional needs for patients.

Reimbursement Opportunities for Medical Nutrition Therapy

Although HRSA-supported health centers cannot bill Medicaid for nutrition services, Medicare Part B is willing to pay for MNT and Diabetes Self-Management Training (DSMT), two Medicare programs that pay for nutrition services.

MNT is not synonymous with DSMT. DSMT is an education and training program that helps patients manage their diabetes, while MNT consists of more individualized diagnosis, therapy, and counseling related to nutrition.

Beginning January 1, 2019, RDNs will have a new opportunity to increase their Medicare Part B payment, when the Centers for Medicare and Medicaid Services adds RDNs as eligible clinicians to the *Medicare Quality Payment Program*. As eligible clinicians, RDNs who are Medicare providers can begin reporting specific measures to CMS with the potential of increasing their payments in 2021.

Credentials of a Registered Dietitian Nutritionist

- Completed a minimum of a bachelor's degree at a US regionally accredited university or college and course work accredited or approved by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) of the Academy of Nutrition and Dietetics.
- Completed an ACEND accredited supervised practice program at a health-care facility, community agency, or a foodservice corporation or combined with undergraduate or graduate studies. Typically, a practice program will run six to 12 months in length.
- Passed a national examination administered by the Commission on Dietetic Registration (CDR).
- Completed continuing professional educational requirements to maintain registration.
- Some RDNs hold additional certifications in specialized areas of practice. These are awarded through CDR, the credentialing agency for the Academy, and/or other medical and nutrition practitioners.

Medical Nutrition Therapy (MNT) and Diabetes

Evidenced-based practices have shown MNT is one of the first treatments individuals should receive to improve conditions such as diabetes, heart disease and hypertension. In 1999, the Health Medicine Division (formerly known as the Institute of Medicine- IOM) of the National Academies of Sciences, Engineering and Medicine released a report about diabetes concluding that "evidence exists demonstrating that MNT can improve clinical outcomes while possibly decreasing the cost of managing diabetes to Medicare." The IOM recommended to Congress that "individualized MNT, provided by a registered dietitian with a physician referral, be a covered Medicare benefit as part of the multidisciplinary approach to diabetes care, which includes nutrition, exercise, blood glucose monitoring, and medications." (Institute of Medicine, 2000).

The *American Diabetes Association: Standards of Medical Care in Diabetes-2019* includes the following recommendations regarding Lifestyle Management:

- "…… all people with diabetes should participate in diabetes self-management education to facilitate the knowledge, skills, and ability necessary for diabetes self-care. Diabetes self-management support is additionally recommended to assist with implementing and sustaining skills and behaviors needed for ongoing self-management."
- "All individuals with diabetes should be offered a referral for individualized MNT, preferably provided by a registered dietitian (RD) who is knowledgeable and skilled in providing diabetes-specific MNT."

Although it is recommended that an individual with diabetes receive diabetes nutrition therapy provided by a registered dietitian at diagnosis or soon after diagnosis with ongoing follow-up, unfortunately, national data has shown that "about half of people diagnosed with diabetes report receiving some type of diabetes education and even fewer see an RDN" (Ali et. al., 2010). A study of 18,404 patients with diabetes, found only 9.1% of the patients had at least one nutrition visit within a 9-year period (Robbins et al., 2008).

RDNs - Important Members of the Interdisciplinary Health Care Team

For many individuals with diabetes, the most challenging part of the treatment plan is determining what to eat and following a meal plan. ***There is not a one-size-fits-all eating pattern for individuals with diabetes, and meal planning should be individualized***. As an essential and integral role in overall diabetes management, individualized or group MNT should be offered by an RDN or Certified Diabetes Educator knowledgeable and skilled in providing diabetes-specific MNT.

MNT Reductions in HgA1c with Type 2 Diabetes

0.25%-2.9%mg/dl

Values range varied by duration of diabetes and the level of HgA1c at time of implementation.

Results from the U.S. Prospective Diabetes Study, showed that MNT provided by an RDN is associated with Hemoglobin A1c (HbA1c) decreases of 1.0 to 1.9% for people with type 1 diabetes. For people with type 2 diabetes, Franz et. al., found that three to six months after MNT, HbA1c reduced by 0.25 to 2.9%. The range varied depending on the type and duration of diabetes and the HbA1c level at implementation. MNT was found the most effective at the first diagnosis of diabetes (Franz et.al., 1995). Research also demonstrated that individualized MNT is effective in decreasing HbA1c level in patients diagnosed with prediabetes over a 12-week period. Meeting regularly with an RDN helps manage weight, improve cholesterol levels, decrease the need for medicines, and reduce risk for other diseases (Lemon et. al., 2004).

RDNs use MNT Recommendations found in Table 5.1 of *the Lifestyle Management: Standards of Medical Care in Diabetes* (Diabetes Care, 2019) to provide treatment planning and self-management strategies in a collaborative manner with patients to develop individualized and personalized eating plans. This includes a discussion on a variety of nutrition approaches such as carbohydrate counting, simplified meal plans, healthy food choices, exchange lists, and behavior strategies to help manage a patient's diabetes and other co-morbidities.

Food Security and Diabetes

Food insecurity can be described as constrained or uncertain ability to acquire adequate foods through socially acceptable methods. Food insecurity, therefore, results in disrupted eating patterns and reduced food intake. There is a direct correlation between housing instability and food insecurity; and the association of type 2 diabetes and obesity with food insecurity has been well documented. Individuals experiencing homelessness with mental illness are especially prone to have low levels of food security. Therefore, all patients with a diagnosis of diabetes should be screened for ranges of food security and food insecurity to ensure patients have access to food options that promote health and promote good glycemic control.

Many health centers use the Hunger Vital Sign, a standardized two question screener, to assess for food security. The Feeding America toolkit is also very helpful with this process, additionally, it is important for patients to be assessed for the eligibility for food stamps known as the Supplement Nutrition Assistance Program (SNAP). Many people experiencing homelessness receiving SNAP benefits continuously experience having adequate food at the beginning of the month and not having enough food at the end of the month when funds run out. Researchers have noted that a recurring cycle of feast (overconsumption) or famine (under consumption) is associated with insulin resistance

and the progression of type 2 diabetes and obesity (Tsai & Rosenheck, 2013; Koh et. al., 2012).

If a patient is not receiving SNAP benefits, an application should be completed. The application does not have to be completed by an RDN and can be completed by anyone on staff at the health center. It is important that the entire health center team understands why assessing for food security as a Social Determinant of Health is important and when to make referrals to the RDN if a patient is found to be food insecure. Partnering with local food banks, developing an on-site food pantry, establishing a meal site or mobile pantry can assist health centers in fighting food insecurity. For additional information on the importance of screening for food security see Appendix A.

There are many significant diabetes-related initiatives being implemented in health centers and communities across the nation. The next section of this document highlights profiles of RDNs dedicated to helping unstably housed patients manage their diabetes at HRSA-funded health centers across the nation in both urban and rural settings.

PROFILE of Christina Watts, Foothills Health and Wellness Center, Clay City, Kentucky

Christina is a Registered Dietitian Nutritionist employed at Foothills Health and Wellness Center in Clay City, KY. She finished her Bachelor of Science in Dietetics at Northern Illinois University and her Master of Science in Community Nutrition at Eastern Kentucky University. She has worked with Foothills Health and Wellness Center for almost four years providing outpatient nutrition services to vulnerable populations.

Challenges Identified

- Patients with food insecurity
- Patients with limited resources living in rural areas
- Multi-generational, doubled -up families with limited budgets

Suggested Strategies and Solutions

For patients who are homeless or at risk of homelessness, we have care coordinators who assess for the Social Determinants of Health and help to identify other barriers to care. Once we understand the patient's needs, the care team, care coordinators and case managers identify both available resources in the community and the health center.

When assessing for food insecurity, patients are asked where they receive most of their food, and how many people currently reside in their household. One common issue that exists is grandparents raising grandchildren or changing household members due to families having to double up. Many times, there is not enough food to provide for everyone. It is also important to ask about what types of kitchen equipment they have access to for food preparation in order to recognize other barriers that would prevent food security.

The care coordinators and case managers on staff are a great resource for our team. Our clinic tries to find resources that exist in our counties to help patients with their needs. We provide transportation and work to help patients enroll in insurance, possibly make housing referrals from emergency housing to permanent housing, and we also can provide food boxes. Care coordinators also set goals with patients for their diabetes management, encourage foot care and provide logs for patients to complete and bring to follow-up appointments.

When I receive a referral to provide MNT to a patient who is newly diagnosed with diabetes, I first ask them if they have received a glucose meter to monitor their blood

sugar. It is very important to make sure every patient has the equipment necessary for diabetes management and knows how to use the glucose meter correctly. I also try to identify barriers that exist and how they will be able to access healthy food options. I have found MyPlate to be a great tool to help when I'm discussing balanced meals, especially if I have a limited time to provide nutritional education. I discuss with them what a balanced diet looks like and food choices that are more easily accessible. An example of a balanced meal using MyPlate is in Appendix B.

When dealing with patients with limited access to food, it is especially important to focus on how they can make the best choices regarding nutrient density, cost and ability to prepare or store their food. This is always addressed on an individualized basis, as barriers are broadly different with each patient. I also focus on portion control, and types of foods that may increase blood sugar to guide patients in making decisions based on what type of food options they have.

Tips for Using MyPlate

- Focus more on carbohydrates and portion control for the initial visit and provide a plastic MyPlate. Visually show patients what portion sizes look with food options they may have available to them.
- Focus on the types of foods that fit into each category (protein, fruit, vegetable, grains, dairy).
- Identify the different types of carbohydrates as the primary concern regarding diabetes.
- Demonstrate what one serving of carbohydrate looks like, and how it is generally 15 grams of carbohydrate. Explain how many servings the patient should aim for at each meal.
- When and if the patient returns for a follow-up appointment, review from the last visit and build upon the information provided. Include information regarding how the patient should balance an entire meal for the day.
- Discuss healthy fats and how to limit other foods that may be high in things such as sodium. Explain to the patient that people with diabetes should cut back on their sodium intake since they are more likely to have hypertension, a leading cause of heart disease.

Patient Case Study

Ms. X is a 53-year old female who has been diagnosed with diabetes over 15 years ago. She is currently doubled up- living with multiple family members in a small rural area and does not have transportation. Recently Ms. X had one toe amputated and was at risk for foot amputation due to a present ulcer not healing.

Ms. X was referred to dietitian services for MNT by the care coordinators due to uncontrolled diabetes. The patient had already been receiving services from the primary care provider, behavioral health therapist, transportation assistant and care coordinator. Upon our initial consultation for MNT, Ms. X blood sugars were ranging from 40-324 mg/dl.

A diet history revealed that Ms. X was eating inconsistently throughout the day, often skipping meals, and only eating a large dinner with simple carbohydrates. She also was not checking her blood sugar regularly.

The initial visit focused on identifying foods that affected blood sugar, discussing timing and portion of food choices to establish consistency. This was done using MyPlate guidelines, and planning around the patient's current lifestyle. In follow up appointments, portion control was reinforced, and incorporating a routine meal pattern was addressed. During these appointments, it was also revealed that the patient consumed multiple sodas per day along with other sugar sweetened beverages. This opened a discussion to the comparison between nutrient dense choices and the benefit of balancing food choices and limiting sugar sweetened beverages to help create consistent blood sugar levels. Throughout the process, the patient was encouraged to check her blood sugar daily, to identify patterns of poor blood sugar control, and set goals to establish better control. At one point, the patient reported her physician wanted her to check blood sugar every four hours. To help Ms. X adhere to the request from her physician, she was encouraged to set alarms or reminders to help her remember to check her blood sugar every four hours. Proper foot care and regularly checking feet for any changes or new concerns was also addressed.

In each follow-up meeting with Ms. X, it was important to address the benefits of controlled blood sugar. It was also beneficial to ask the patient open ended questions to learn more about circumstances and food choices rather than controlling the conversation. By asking open ended questions, more information was revealed as far as habits and food intake. For example, on one occasion the patient stated she did not want to give up potatoes, and preferred certain simple carbohydrate food options. At that point, it was important to develop strategies around the patient's choices such as timing and portion control of meals. Small goals were also set during sessions and strategies discussed to how each small goal could be obtained.

During the timeframe of following Ms. X in setting goals to manage her diabetes, she was simultaneously being followed by other services provided by the clinic to help meet her goals. By providing a holistic approach through an assigned care team, this patient was better able to manage her diabetes, gain skills for monitoring her glucose at home, and prevent further complications.

PROFILE of Kelsey Doll, Eskenazi Health Services, Indianapolis, Indiana

Kelsey is a Registered Dietitian Nutritionist employed at Eskenazi Health in Indianapolis, IN. Her previous experience with contract clinical/foodservice work within several State Hospitals throughout Indiana sparked an interest in working alongside those experiencing a mental illness. Her current position is within an outpatient primary care clinic (Pedigo Clinic) located in one of Indianapolis's day shelters. This particular clinic allows her to work with patients diagnosed with severe mental illness in an outpatient setting as well as patients who may be experiencing homelessness. Homelessness and mental illness are often co-occurring, and Pedigo clinic attempts to reduce barriers by delivering both mental health and primary care services in one clinic.

Challenges Identified

- Patients with mental health challenges
- Patients eating mostly at shelters, food pantries or convenience stores
- Patients with diabetes eating one meal a day

Suggested Strategies and Solutions

Pedigo health center is located inside a day shelter that allows us to work primarily with patients experiencing homelessness. In this way, we automatically tailor our care towards anyone who may be experiencing food insecurity. During nutrition consults, I typically ask patients if they utilize any support to obtain food (Supplemental Nutrition Assistance Program [SNAP, food stamps], food pantries, soup kitchens, etc.) and what types of cooking equipment (stove, oven, microwave), storage (refrigerator), and preparation is available to them (running water).

We screen all our patients for mental health needs during provider visits and patients often receive case management services on site. We provide both medical and mental health coordination at our clinic, which has been extremely helpful in finding various resources when needed. Our clinic provides bus passes to medical and mental health appointments on an as needed basis. We also have access to a clinic van that has helped transport patients at times (mostly for case management purposes). This van is used several times each week for outreach, where a small team (3-5) of social workers and medical providers will visit various homeless camps throughout the city to accomplish several tasks such as deliver snack packs, medication boxes, verify homeless

status, and in the colder weather deliver cold weather items such as blankets, jackets, and gloves. Outreach provides an opportunity to meet our patients where they are as well as introduce our services to those who may be new to the area. Along with this, I have coordinated with the day shelter to make a list of healthier items to include in snack packs that are distributed during outreach and engagement. We want to provide a variety of foods representing as many of the food groups as possible, while maintaining food safety and limiting the amount of trash produced. Here is the compiled list we currently use:

- Popcorn
- Peanut butter/almond butter packs
- Nuts
- Jerky
- Roasted chickpeas
- Dried fruit
- Dehydrated fruit
- Canned fruit in lite syrup
- Applesauce/vegetable squeeze packs
- Kind bars
- Protein bars
- Individual hummus packs
- Tuna/chicken salad kits w/ crackers
- Guacamole and salsa packs
- Chia pods (similar to pudding packs)
- Fruit puree pouches
- Rice cakes
- Oatmeal packs
- Animal crackers
- Rice milk/soy milk/shelf stable milk boxes

Pedigo clinic has also partnered with the local farmers market in the downtown area of Indianapolis. After the weekly farmers market concludes, vendors have the option to donate any unsold items to the clinic in lieu of repacking those items and taking them back home. There is one employee from the market who volunteers to deliver the produce to our clinic later that same day. We then sort the produce and offer it to our patients, usually with a recipe that is adapted to be used with limited resources. That same farmers market also participates in the "Fresh Buck" program that allows anyone utilizing food stamps to "double" their spending ability. Participants will inform the information booth how much food stamp money they would like to use throughout the market and after swiping their Electronic Benefit Transfer (EBT) card, will receive tokens to use in lieu of money at the vendors stations. The farmers market will double the number of tokens the participant receives, up to $20 dollars. Meaning, a participant can gain a maximum number of tokens equal to $40 dollars if $20 dollars is initially given at the information booth.

In addition to the farmers market programs, we have initiated a cooking class at our clinic to demonstrate how some of the produce items frequently offered at the markets may be prepared. This fall, we were able to host a 4-week nutrition class that included a cooking demonstration on a charcoal grill. Grills are often seen at many of the homeless encampments in our city, so it was important to provide recipes that would be pertinent to the availability of various cooking supplies. We chose recipes that are primarily plant based and diabetes friendly to increase the use of produce from the local farmers market and to reduce the risk of foodborne illness that can occur if patients attempt to store meat outside. Recipes that may be cooked on an outdoor grill are found in Appendix C.

Participants who attend at least half of the nutrition classes receive a gift card to the local grocery store to aid them in replicating the recipes on their own. We also have the capability to provide produce from Eskenazi's sky farm garden once a month. This seasonal produce is distributed during a sky farm market class that includes a brief cooking demonstration by the RDN to help aid participants in learning various ways to use the specific item of the month.

For patients who are newly diagnosed with diabetes, Pedigo health center provides an integrated model, so patients receive support from both mental and health care providers to assist them in managing their diabetes. When I meet with patients to provide MNT, I review self-monitoring strategies of blood glucose (if the provider prescribes this) to assist with self-management and look at the entire picture when helping patients make changes to their lifestyles. I always start with the MyPlate model because it is a simple way to address overall health. We will identify which food groups on the plate can impact blood glucose as well as portion sizes of those foods.

Most patients I work with only consume one meal-a-day, so I will also discuss how timing and spacing of meals can impact diabetes management. When I find a patient who

eats most of their meals at shelters or soup kitchens, I obtain an in-depth food recall (this requires a lot of questioning and prompting at times) and what a typical day looks like for the patient. I will normally work with them on identifying healthier options that may be available and focus on portion sizes of foods. We will review the plate model and discuss how to advocate for larger portions of vegetables, if able. Beverage choices are often discussed in depth with the patient, and I help them identify ways to increase water or sugar free beverages. For those folks who are receiving SNAP (food stamps), I provide information on healthier items to look for that could be consumed outside of the shelter.

Purchasing items with food stamps can be difficult because many of the local shelters do not allow outside food or beverages in their facilities, therefore we look at items they can consume in one sitting that are not only budget friendly, but also healthy (see list given during outreach). The inability to take outside food into the shelter restricts people with diabetes food intake even more, causing an additional challenge.

I also focus on beverage choices because most of our patients receive large amounts of milk, juice or coffee (with sugar and cream typically added) at the shelters or will purchase pop (soda) on their own.

Patients often express interest in one area they feel is manageable, and that is where I will focus specific information. Each session they return, I try to address another part of the puzzle and focus on small, gradual changes they can make in their dietary practices.

Tips for Assisting Patients with Diabetes Eating at Shelters

- If menus from the shelter are available online or a copy is available, review the menus with the patient, look and talk about the meal options and specific substitutions or other choices that can be made if the food options on the menu are not the best.
- Patients may also take a picture of the menus with their phone before they come for the appointment, this has proven to be a very easy way to identify foods that should be increased or decreased when they select their meals.
- Patients may be given a very simple form to keep a 3-day food diary. The patient should bring the food diary with them to the follow-up appointment. This method has varied success, and it strongly depends on where the patient is within the stages of change.
- Talk through what options are available to the patient at the shelter and what small changes they are able to make. For example, not getting juice at breakfast and getting fruit instead, or opting out of the dessert or sharing the dessert with someone else at dinner.
- Encourage the patient to ask for more or specific food items such as vegetables and less of other food items. Ask if they are able to provide feedback to the shelter staff about food items they would like to see on the menu.
- Try to connect with the different soup kitchen, shelter, and food pantry staff in the community to seek potential opportunities for nutrition intervention. This may also provide an opportunity to conduct a health fair, a nutrition education class, or facilitating a nutrition related question and answer forum during a meal.
- Foster a relationship with shelter staff. Conduct a nutrition session for shelter staff to make them aware of the challenges patients with diabetes experience when eating at the shelter.
- Assist the shelter in identifying other entities that may be able to donate healthier food options. Encourage shelter staff to ask donors for more appropriate foods.
- Ask the shelter if they are willing to partner with their local farmers market and other stores to get fresh fruits, vegetables, leaner meat and whole grain foods.
- Ask shelter staff to re-arrange the food options on the food line with salads, green or yellow vegetables first, protein offerings second, grains or carbohydrates third and desserts or bread last. Suggest they substitute fresh fruit for desserts if not daily, at least 3 – 4 times per week.

PROFILE of Kimaya Joshi, Veterans Health Administration of Greater Los Angeles, Los Angeles, California

Kimaya is a Registered Dietitian Nutritionist employed at the Veterans Health Administration of Greater Los Angeles. She first worked in Home Based Primary Care serving veterans in their various living conditions (houses, apartments, garages, assisted living facilities, board and cares, and many more). While homelessness was not a focus, suboptimal living conditions and food insecurity (financial and physical) were recurring concerns in this population. Since then she has transferred to an outpatient clinic and serves veterans on the homeless specific primary care team.

Challenges Identified

- Patients not understanding the importance of food and dietary patterns in diabetes management
- Patients with feelings of helplessness regarding dietary intake for diabetes management

Strategies and Solutions

Many patients I encounter tell me they will never be able to manage their diabetes because they have no control over what they eat when being served meals at shelters, food banks, food pantries, etc. Sometimes this message is unconsciously also pushed by other health care providers further discouraging the patient. During my appointments, I work to show them that ***food is not the enemy*** and diabetes can be managed anywhere, it just takes a little guided thought or planning. We analyze in detail the kinds of foods they encounter on a daily basis. This can include: bringing in the week's schedule of meals, researching nutrition information on restaurant websites, completing 3 - 7-day food diaries, calling facilities and asking what will be on the menu, looking at food pantry staples, analyzing recent food purchases from the convenience store. In most cases, we find there are methods to easily decrease the carbohydrate content and increase nutrient density of meals without feeling like they are forced to eliminate all the foods they love.

I also like to highlight actions they are already taking to manage their diabetes, no matter how small. Building a patient's self-efficacy has personally been a key factor for patients with successful outcomes. Often, they may not realize things they are already doing right. Even showing up for the nutrition appointment is a step in the right direction. Other factors might include: starting to look at nutrition labels, taking diabetes medications as prescribed, trying to develop meal timing consistency, following through with medical

appointments, completing paperwork for food stamps, trying a lower carbohydrate item at a restaurant, attending diabetes education classes, getting connected with diabetes support groups, testing blood glucose levels more often, and purchasing food from a new place with healthier options. When the client feels involved in their care, there is more commitment to follow through on actions discussed during our visit and for them to return when they encounter barriers to achieving their goals. I also encourage them to follow-up with me as frequently as they need until they feel confident with the information discussed.

Tips to Increase Patient Involvement in Dietary Management for Diabetes

- Provide positive reinforcement that diabetes can be managed in any setting
- Focus on foods they "can" eat vs. foods they "cannot" eat.
- Highlight steps they are already taking to better manage the condition as a whole.
- Encourage increased frequency of follow-ups with the RDN.
- Reduce conflicting information being provided by different members of the health care team, by identifying clear roles and lines of communication among health care team members when providing information to patients with diabetes.

Tips to Address Substance Use Disorders in Patients with Diabetes

The patient who is not ready or able to abstain from alcohol or substance drug use is at higher risk of hospitalization for diabetes complications.

- Stress the importance of eating. Assess the patient's diet and ability to eat consistent meals at consistent times, especially if the patient is taking medications which can cause hypoglycemia (insulin, oral antidiabetic medications).
- If the patient is drinking alcohol, assess the amount they are consuming. Teach the patient caloric content of alcohol and effect on glucose management. Review risk of hypoglycemia, signs and symptoms of hypoglycemia, and how to treat it.
- Encourage the patient to seek shelter on nights when weather is extreme, e.g., cold, hot, or wet.
- Consider using motivational interviewing and harm reduction techniques and risk reduction methods to guide the patient.
- Suggest more frequent clinic visits to encourage goal setting and closely monitor glycemic control.

PROFILE of Elizabeth Murphy, Heartland Alliance Health, Chicago, Illinois

Elizabeth is originally from Chicago, IL, and received her bachelor's degree in Nutrition and Dietetics with a minor in Urban Poverty Studies from Saint Louis University in St. Louis, MO. She spent two years as an AmeriCorps volunteer in Spokane, Washington with Catholic Charities Spokane. She completed her dietetic internship at Michigan Medicine before returning to sweet home Chicago to work as a community dietitian with Heartland Alliance Health. She provides individual and group nutrition services to patients at a federally qualified health center, supportive housing residential sites, refugee health program, and at Heartland's food pantries specifically for participants with HIV/AIDS.

Challenges Identified

- Patients with low health literacy
- Patients confused by diagnosis and instructions given by health care providers
- Patients receiving most of their meals at shelters

Strategies and Solutions

I have found, that when a patient is newly diagnosed with type 2 diabetes, they have a lot of fear and confusion around the diagnosis. Once, I had a nurse send me a note stating a patient was asked if he wanted to talk with the dietitian, and he said he "would think about it." The patient was afraid that I "would give him food options that he could not afford or store anywhere." Knowledge deficit related to food and nutrition and carbohydrate fear should both be addressed directly. One of my patients after receiving a diabetes diagnosis in the hospital ate salads for a week, subsequently ran out of food stamps, and was afraid to eat any food from the soup kitchen.

To address the fear of not knowing what foods patients are able to eat after being diagnosed with a chronic disease including diabetes, I started doing what I call "clinic outreach," standing out in the clinic waiting area passing out free samples of food to engage with our patient population while they are waiting for their appointment. I also partnered with other groups run by our case managers to provide food samples and nutrition education in a group setting.

I try to make sure patients understand that we will work together to achieve the best health outcomes possible in the context of their situation. There tends to be a lot of misunderstanding surrounding food choices and diabetes. For example, I had one patient tell me that he cannot have salt because of his prediabetes. He has been

diagnosed for two years and he has a diagnosis of elevated blood pressure, so the confusion is warranted. When someone who is unstably housed and is newly diagnosed with type 2 diabetes, my main focus is to figure out a way for them to get consistent meals throughout the day.

Depending on their housing situation, we will address different issues. For people staying in shelters, they generally can eat breakfast and dinner at the shelter but do not have a place to eat lunch. We discuss choices to make for breakfast and dinner; and suggest they can go to different soup kitchens for lunch, or I help them identify affordable options they can buy at the grocery store using food stamps for lunch.

I really think part of the solution to better diabetes management is working as a community. The interventions that I engage in are not unique to Chicago. I have experience working with soup kitchens and food pantries in other cities. Anywhere there is a food system, there is an opportunity for an intervention. Clinics should partner with food pantries and soup kitchens to improve the health of our community. Everyone deserves access to food, and not just any food, but good, healthy food that nourishes the body and promotes wellness.

Tips to Address Low Health Literacy

Health literacy is a broad concept including more than individual levels of intelligence, but rather a specific skillset that involves a variety of methods to communicate and interpret health information with unique demands, depending upon the person and their setting.

- Avoid one phrase with two interpretations
- Write out acronyms and other new terms
- Use the Teach-Back Method
- Ask open-ended questions
- See Appendix D for additional health literacy information

Patient Case Study

Mr. W is a 51-year old male, seen at one of Heartland Alliance Health's housing facilities. This is a supportive housing program for previously chronically homeless individuals. He lives in a single room occupancy unit. He was diagnosed with diabetes in 2010, and has hyperlipidemia, hypertension, Stage 3- Chronic Kidney Disease (CKD), major depression, and cocaine use. He shops and cooks for himself. He occasionally visits the food pantry that is close by. He does have SNAP (food stamps) benefits and shops at the discount grocery store or corner store. Mr. W walks outside approximately one mile about three days each week. He is on medications for diabetes, hyperlipidemia, and hypertension. Since Mr. W began receiving MNT in January 2018, he has had an approximate 5 percent weight loss. When interviewed, Mr. W had a few thoughts to share.

I asked Mr. W -Why is it important for you to be connected to a dietitian? This was his reply:

> "Maybe to control my sugar. Certain foods you can eat. Certain foods you can't. Like candy. I don't eat too much candy. When I do, I eat it all in one sitting. Like last night I sat down and ate some sour gummy bears. Had a whole big thing of them. I ate a couple of them. I kept chewing and said, okay I ain't gonna eat no more. But before you know it the whole thing was gone. Sometimes when I get a sweet tooth I'm gonna eat some sugar."
>
> "As far as diabetes, well I'm taking pills for mine. It ran through my family. My mother, she takes shots. She's doing insulin right now. Maybe 2-3 times throughout the day. I really don't know how she do it. I don't really like looking at it. Her mother, my grandmother, she was diabetic, my grandfather, my son, and my daughter they diabetic. Some things you just can't help. It's a weight issue for a diabetic too. Gotta try to keep your weight level down."

I then asked him - What are some ways that you try to monitor your diabetes?

> "I try to drink a lot of water. I drink a lot of water, stuff without sugars in it. Sometimes I can't help it I gotta drink my bodyarmor drink. That's my favorite drink. Everything in moderation. Last night I drank maybe one-fourth of the bottle."

It must be noted that when I first starting counseling Mr. W, he would drink 2-liters of pop in a day. Yes, two liters of pop! He said-

"In the beginning I would consume two or three – 2-liters out of a day. Sugar. Lord knows how much sugar is in one-2 liter." We then measured out how much sugar was in a 2 liter, to show him how much sugar he was consuming. It was a lot. "Yeah", he said, "you gotta make sure you keep your health up too with diabetes cause anything can happen."

I then ask Mr. W - What have you learned since starting to talk with me?

> "Eating a little bit more healthier. I don't consume the greasy foods like I used to. And you know like I said, I don't drink the pops like I used to. If I might buy two or

three 2-liters, that'll stretch me for a good while. I'll get a glass put some ice cubes in it and drink it that way. If it gets watered down so be it. I'm into the vegetable thing. I wasn't in the beginning. But I kinda dig it now, it's pretty cool. I like that arugula sandwich. It tastes good."

PROFILE of Laura Samnadda, Open Hand, Atlanta, Georgia

Laura is a Director of Nutrition at Open Hand in Atlanta. She received her Bachelor of Science in Dietetics and her Master of Science in Nutritional Sciences at Iowa State University. She has seen firsthand just how powerfully the fear of hunger can affect a person's well-being. Her efforts to provide access to healthy food and nutritional counseling have benefited countless patients. A dietitian and humanitarian at heart, Laura finds hope in the very people she serves.

Challenges Identified

- Patients with food insecurity
- Develop a workflow to identify patients who are food insecure

Strategies and Solutions

At our health center, we use the Hunger Vital Sign to assess for food insecurity. We setup our work flow our using this tool: Food Insecurity Screener. The workflow in our clinic is that the medical assistants (MAs) ask about food insecurity during a person's initial or 6-month follow up visit. If someone answers yes to both or either question they get a referral to the registered dietitian and is provided a listing of various food pantries and hot meal sites in their area. The MAs record this information in the medical chart (Centricity) and then at the end of the month data is pulled regarding who asked these questions, how often, and how many people answered that they were food insecure.

We are currently revising our workflow to assist patients who are homeless and newly diagnosed with diabetes. A provider makes a referral to our dietitian, Elizabeth. She schedules the appointment and then goes over basic Diabetes Medical Nutrition Therapy. During this time, she can help provide additional resources on how to shop and cook on a budget, schedule a grocery store tour, or provide guidance on the food pantry or hot meal sites available to the patient. For this reason, Elizabeth has been learning about the community where our health center is located. After she started working with us, she heard many patients give detailed accounts about their visits at food pantries and hot meal sites. Many highlighted places where they could obtain a healthier meal or where they give big portions and seconds. She quickly realized how important it was to understand the neighborhood and where her patients were visiting for their food

resources. Where they received their food would inform how she could help them. She wanted to complete a landscape survey of the area. When she presented this to me I thought it was such a good idea because our patients were receiving health and disease management recommendations from our clinic and we hoped the food resources in the area supported their health goals.

Elizabeth began contacting the food pantries and hot meal sites near our clinic and gave each of them a survey. She asked things about their views on food and nutrition and what they felt they served that was healthy. Additionally, she learned that almost all the food pantries and hot meal sites do not have access to a dietitian, so she offered her services at health fairs and during meal service times. The food pantry and hot meal sites were thrilled to have her visit and offer advice or recommendations. These visits have helped Elizabeth gather information to take back to the patients she sees in our clinic and make more informed recommendations. A copy of the survey used may be found in Appendix E.

Heartland also has a food pantry program that is Ryan White funded called *Vital Bridges* that serves people who are living with HIV/AIDS. Case managers and medical clinics across the city are making referrals to Vital Bridges so we included a Nutrition Risk form with our intake application. The form assesses for both food insecurity and health conditions and symptoms. This is filled out by the case managers, sent over to our intake coordinator, and then scored by our dietitians. Based on the score, someone is at a "high nutritional risk" meaning they are both food insecure and have health conditions that triggers a prioritized session with our dietitians.

Tips on How to Establish a Medically Tailored Food Pantry

• • •

The Vital Bridges food pantry program has always held the belief that food is medicine and in order to best help our HIV positive patients we integrated a team of dietitians into our network of food pantries. These dietitians are very knowledgeable about the food we serve and provide one-on-one medical nutrition therapy and group education/cooking demonstrations to our patients who struggle knowing where and when their next meal might come.

This year, with inspiration from the Food is Medicine Coalition (http://www.fimcoalition.org), we began medically tailoring the food that is served in our food pantries. The Food is Medicine Coalition is a network of national food and nutrition providers who define a medically tailored meal, as a meal that is recommended by a RDN based on a nutritional assessment and a referral from health care provider to address a medical diagnosis, symptoms, allergies, medication management and side effects to ensure the best possible nutrition-related health outcomes.

I love how the Food is Medicine presents this concept ***"By making medically tailored nutrition and food central to our healthcare system we will produce better health outcomes, lower the cost of care and improve patient satisfaction."***

Our team of dietitians analyze the food we serve, and they are based on MyPlate guidelines. We create client-choice grocery menus that are diabetes friendly, renal friendly and heart healthy. When a patient presents to the food pantry with the diagnosis of diabetes, they are assessed by the dietitian, receive diabetes education and guidance using the diabetes friendly grocery menu. The patients enjoy using our menus as a tool to help them pick out the foods at the pantry that are recommend for their illness. These menus offer an abundance of fresh fruits and vegetables, low-fat dairy, meat options, whole grains and beans to promote optimal nutrition and glycemic control.

Tips on Using a Harm Reduction Approach to Diabetes Management

Harm reduction offers a range of practical strategies approaches for managing alcohol use, substance use, and other high-risk behaviors. It incorporates a spectrum of strategies from safer use, to managed use/moderation, or abstinence. Consistent with the Health Care for the Homeless approach to care, harm reduction strategies are useful for health care providers of all disciplines to help effect behavioral change.

Because the focus is on improving the quality of life, any step that reduces harm to individuals, their loved ones, their community, and society as a whole is embraced and celebrated. The philosophy of harm reduction promotes and supports the right of people to be treated with dignity and respect; their right to exercise self-determination related to use; and their right to a collaborative approach in therapeutic relationships.

Dietitians take a harm reduction approach when providing MNT to patients diagnosed with diabetes. Diabetes can be challenging to manage for anyone, but especially for someone with an unstable living situation. Diabetes is easier for a patient to manage if changes are broken into small steps. The key is finding where the client is ready to make change. We ask, "What can you do now to manage your diabetes better?" Maybe the client is unaware of how eating better or physical activity may improve the way they feel, so we discuss how these changes could help them de-stress. People who have diabetes should regularly monitor their blood glucose level to manage their condition and prevent diabetes complications. "The recommendation is to test their blood sugar before and after every meal." For clients who cannot always afford monitors and needles, however, we suggest they test and record their levels daily—or every other day—upon awakening. This practical approach yields good results, and the blood glucose record helps the health care provider understand how well the patient's diabetes management plan is working.

To help clients pinpoint where they can make changes to help lose weight, I ask them to do a 24-hour food recall. If they typically drink a liter of soda, I ask if they are willing and able to move to 16-ounces, and from there, to a 12-ounce serving. I see the biggest improvement and progress towards patients' goals when they work toward achievable steps. People who are unstably housed have different struggles, if they have SNAP (food stamps), we show them how to eat healthier within their budget. Instead of buying a small bag of chips at the convenience store, we show them that with the same amount of money they could buy three apples. It is important to host cooking demonstrations and teach patients how to compare the nutritional value and cost of foods, so they can make healthy, budget friendly choices.

Summary

From Los Angeles, California to Chicago, Illinois to Indianapolis, Indiana to Clay City, Kentucky to Atlanta, Georgia, RDNs are playing an important role in the complex care of patients experiencing homelessness with diabetes. RDNS provide self-management education and support, (DSMES) and medical nutrition therapy (MNT) and offer innovative approaches to nutrition care.

Registered Dietitians use the principles of harm reduction, strength-based coaching techniques, motivational interviewing, shared-decision making, assessing stages of change and other strategies to encourage patients to make small positive behavioral changes. Since there is not one eating pattern that fits all individuals, RDNs provide each patient with individualized meal planning that takes into consideration the individual's living conditions, availability of healthy food, timing of meals, cooking arrangements, storage facilities, and community resources. RDNs connect patients with food resources available in their community (food stamps, farmers markets, discount grocery stores, food pantries, and soup kitchens), that provides patients the opportunity to make healthier food choices; and together they both celebrate the patient's nutrition lifestyle management successes.

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Appendices

A. The Importance of Screening for Food Security

B. MyPlate Example Meal for Patients with Diabetes

C. Recipes Appropriate for an Outdoor Grill

D. Addressing Health Literacy

E. Shelter Staff Food Questionnaire

F. Health Professionals Share Thoughts on the Importance of Coordinated Diabetes Care

G. Additional Nutrition Related Resources

H. Diabetes Related Resources

APPENDIX A: The Importance of Screening for Food Security

Why is it important to include food insecurity as part of a patient's visit?

One reason food insecurity should be addressed is because individuals who experience high levels of food insecurity have a higher prevalence of diabetes than those who identify as food secure (Seligman, Bindman, Vittinghoff, Kanaya, & Kushel, 2007). During an outpatient visit with a provider, questions about food insecurity are generally not part of the visit. Iezzoni, Barreto, Wint, Hong, and Donelan (2015) found that at select health centers in Boston, 40% of patients reported that their provider was unaware of social challenges they experienced such as lack of access to food. However, nutrition plays an important role in improving diabetes health outcomes and is often part of the care plan. If healthy foods are not accessible, the patient will have more difficulty following nutrition recommendations and have a higher risk of poor glucose control (Seligman, Jacobs, Lopez, Tschann, & Fernadez, 2012). Adding a food insecurity screening tool to the electronic medical record and providing a referral on places to find food are ways to address this lack of communication.

It is becoming more common for providers to attempt to address social determinants of health (SDOH) at an individual level in an outpatient clinic setting. Popay, Kowarzik, Mallinson, Mackian, and Barker (2007) interviewed patients who were part of a study to identify social needs in an outpatient clinic setting. They found that patients received more support for addressing social challenges when their provider asked about social history, provided a referral to a community-based support service that could help address the problem, and facilitated access to those services (Popay et al., 2007). Providing an opportunity for food insecurity screening during an outpatient clinic visit is one way to attempt to address SDOH, specifically as it relates to nutrition and diabetes.

HealthBegins SDOH screening asks about more than just food insecurity, but overall found that patients were willing to complete the screening tool and organizations felt more comfortable about using the tool if they had community organizations they could refer patients to for help with whatever the patient screened positive for (housing, food, etc.) (LaForge, et al., 2018). The HealthBegins screening starts with, "Everyone deserves the opportunity to have a safe, healthy place to live, work, eat, sleep, learn, and play. Problems or stress in these areas can affect health. We ask our patients about these issues because we may be able to help" (Manchanda & Gottlieb, 2015). By beginning the screening with this statement, it provides an opportunity for the patient to feel comfortable responding to the questions. To make the screening specific to food insecurity, the clinic could use the validated Hunger Vital Signs (HVS) screening (Rottapel & Sheward, 2016). The HVS questions could be asked while obtaining other vital signs from the patient. The statements are answered as 'never true,' 'sometimes true,' or 'often true.' The statements are, "Within the past 12 months we worried whether our food would run out before we got money to buy more." "Within the past 12 months the food we bought just didn't last and we didn't have money to get more." If someone answers 'sometimes true' or 'often true' to either or both of the statements, they are at risk of being food insecure (Rottapel & Sheward, 2016). Having hunger as a part of

health assessment can provide opportunity for interventions promoting food security and better health outcomes.

Instead of seeing it as strictly a diagnosis (diabetes) to prescription (eat more fruits and vegetables) model, the provider and clinic staff should incorporate other aspects of interpersonal communication to provide more effective patient-centered care. A recent joint report by the American Diabetes Association and the European Association for the Study of Diabetes emphasized shared decision making with patient-centered care (Davies, et al., 2018). A literature review by Mauksch, Dugdale, Dodson, and Epstein (2008) found that building rapport, setting visit expectations, and addressing social and emotional concerns patient can improve quality of care. By asking patients with diabetes about barriers to behavior change and making food insecurity a part of the conversation, patient care improve would improve by addressing social concerns the patient may have. If referral for services is needed and not provided, the provider's suggested healthy eating intervention will likely be more difficult for the patient to follow.

Awareness of the community food network is another part of the intervention. One way to look at food networks is through maps about the local food system, or community food mapping. Food sources, distance from housing location to food source, access to transportation, and general food environment all play a role in measuring and improving food security. In an outpatient setting where a food insecure person with diabetes is told to eat a healthy diet, knowledge of the food network the patient is embedded in is an important piece of conveying how to make those healthy changes. Knowledge of community food resources available to the patient could help solve the problem of effectively communicating what their options are for ways to change their diet. Some resources include community gardens, Supplemental Nutrition Assistance Program (SNAP) matching at farmer's markets, food deserts, grocery stores, food pantries and soup kitchens, and food swamps. Understanding this context is an important step to addressing food insecure patients. This will help bridge the communication gap between suggesting a healthy diet and actually providing recommendations on feasible options to do so.

If an individual identifies as food insecure from the HVS screening, a referral would be made for a food pantry that the patient lives near as well as a referral for assistance with applying for SNAP benefits if needed. This would provide an opportunity for the patient to increase their food access in their community and ultimately hopefully result in improved health outcomes related to diabetes care.

Additional Resources to Address Food Insecurity as a Social Determinant of Health:

https://foodcommunitybenefit.noharm.org/

http://www.hpoe.org/Reports-HPOE/2017/determinants-health-food-insecurity-role-of-hospitals.pdf

http://www.frac.org/wp-content/uploads/frac-aap-toolkit.pdf

http://www.nachc.org/research-and-data/prapare/

https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/measurement.aspx

Food Insecurity and Diabetes Management Resource:

https://www.cdc.gov/diabetes/ndep/pdfs/Food_Insecurity_Slides.pdf

APPENDIX B: MyPlate Example Meal for Patients with Diabetes

http://www.diabetes.org/food-and-fitness/food/planning-meals/create-your-plate/#seven

Appendix C: Recipes Appropriate for an Outdoor Grill

CHICKPEA BREAKFAST HASH WITH VEGGIES

PREP TIME: 5 MINUTES
COOK TIME: 15 MINUTES
TOTAL TIME: 20 MINUTES
MAKES: 2 SERVINGS
CALORIES: 379 KCAL
AUTHOR: FRESH OFF THE GRID

INGREDIENTS

1 tablespoon oil
1 summer squash or zucchini sliced into ½-inch half moons
1 small red onion sliced into ¼-inch half moons
3 mini sweet peppers cut into ¼-inch slices, or 1 bell pepper
1 (15 oz) can chickpeas drained
½ teaspoon cumin
¼ teaspoon coriander
1/8 teaspoon cinnamon
½ teaspoon salt
2 eggs

EQUIPMENT NEEDED

10" Cast iron skillet
Sharp knife
Cutting board
Spatula
Measuring spoons
Plates and utensils

INSTRUCTIONS

1. Heat the oil in the skillet over your campfire or camp stove on medium-high heat until hot and shimmering. Add the onions, peppers, and squash. Sauté until beginning to soften about 5 minutes. Add the drained chickpeas and spices and cook until the veggies and chick peas are cooked through and browned in spots, about 10 minutes.

2. Move the veggies and chickpeas to the sides of the skillet to create a well in the middle of the pan. Add a little oil if the bottom of the pan is looking dry. Crack two eggs into the well and cook to your liking.

3. Pull the skillet off the heat and serve.

CAMPFIRE TACOS WITH SWEET POTATO, BLACK BEANS AND POBLANO PEPPERS

PREP TIME: 5 MINUTES
COOK TIME: 20 MINUTES
TOTAL TIME: 25 MINUTES
MAKES: 6 TACOS
CALORIES: 195
AUTHOR: FRESH OFF THE GRID

INGREDIENTS
SWEET POTATOES AND PEPPERS
1 tablespoon oil
1 medium sweet potato and cut into ½-inch cubes
1 poblano pepper seeded and chopped into ½-inch pieces
1 tablespoon cumin
Salt to taste
BLACK BEANS
1 tablespoon oil
½ small red onion diced
2 cloves garlic minced
1 (15oz) can black beans
2 limes juices
1 teaspoon chili powder

TO ASSEMBLE
6 corn tortillas
½ red onion, avocado, cilantro, hots sauce

INSTRUCTIONS
1. Heat 1 tablespoon oil in a skillet over medium high heat. Add the sweet potatoes and cook, stirring occasionally, 10 minutes. Add the peppers, cumin and a pinch of salt and continue to cook an additional 10 minutes, or until the potatoes and peppers are cooked through and tender.

2. In the meantime, prepare the black beans. Heat 1 tablespoon oil in a small pot. Add the onion and sauté 3-4 minutes, until it begins to clear. Add the garlic and sauté until you may smell it, about 1 minute. Add the beans, lime juice, chili powder, and a pinch of salt. Reduce heat to low and simmer about 15 minutes until the beans are heated through and the potatoes and peppers are done.

3. To assemble, heat the tortillas on the stove burner or over your campfire. Spoon a scoop of beans into the tortilla, add a scoop of the potatoes and peppers, and top with whatever fixings you would like!

ONE POT PASTA

PREP TIME: 5 MINUTES
COOK TIME: 15 MINUTES
TOTAL TIME: 20 MINUTES
MAKES: 4 SERVINGS
CALORIES: 350 KCAL
AUTHOR: FRESH OFF THE GRID

INGREDIENTS

1 bunch of kale, taken off the stems and chopped
2 cloves garlic sliced
½ teaspoon salt
Pinch of red pepper flakes optional
1 tablespoon olive oil
FOR THE PASTA
1 (23 oz) jar tomato sauce and 2 cups water
10 oz package of pasta
¼ cup cheese – we used parmesan (omit to make this recipe vegan)

EQUIPMENT NEEDED

Camp stove
10.5" skillet
Cutting board
Sharp knife
Spoon or spatula
Measuring cups and spoons
Plates and utensils for serving

INSTRUCTIONS

1. Cook the kale: Heat 1 tablespoon olive oil, and the red pepper flakes over in a high-sided skillet. Once the oil is hot, add the kale, garlic and salt and sauté until the kale is tender. Remove the kale from the skillet and set aside.

2. Cook the pasta: Add the tomato sauce and water to the skillet and bring to a simmer. Add the pasta and cook for the time recommended on the package, or until the pasta is al dente, stirring frequently to ensure the pasta cooks evenly. Stir the cooked kale into the sauce to warm and take the skillet off the heat.

3. Assemble and serve: Sprinkle cheese over the top, if using and serve.

AFRICAN SWEET POTATO AND PEANUT STEW

PREP TIME: 5 MINUTES
COOK TIME: 30 MINUTES
TOTAL TIME: 35 MINUTES
MAKES: 4 SERVINGS
CALORIES: 334 KCAL
AUTHOR: FRESH OFF THE GRID

INGREDIENTS

1 tablespoon oil
1 small onion diced (to yield 1 1/2 cups)
2 cloves garlic minced (about 1 tablespoon)
1 medium sweet potato chopped into ¼ -inch cubes (to yield 2 cups)
2 cups broth
14 oz can diced tomatoes
¼ cup peanut butter
1 teaspoons chili powder
½ teaspoon salt
15 oz can chickpeas drained
2 cups Tuscan kale taken from the stems and chopped

INSTRUCTIONS

1. Heat the oil in a Dutch oven over medium heat. Add the onion and sauté about 5 minutes, until translucent and just starting to brown in spots. Add the garlic and sauté until fragrant, about 1 minute.

2. Add the sweet potato, broth, tomatoes & their juices, peanut butter, chili powder, and salt. Stir well to ensure the peanut butter is thoroughly mixed in and there's no clumps remaining. Simmer, uncovered, for about 15-20 minutes, or until the sweet potatoes are tender.

3. Once the sweet potatoes are tender, add the chickpeas and the kale to the Dutch oven. Stir to combine and heat until the chickpeas have warmed through and the kale has wilted.

APPENDIX D: Addressing Health Literacy

People experiencing homelessness, like many vulnerable populations, are at high risk for limited health literacy. Health literacy is the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions.

Limited health literacy and cognitive impairment are more prevalent among people who have a lower socioeconomic status, including those experiencing homelessness. Poor health literacy and cognitive impairments are contributing factors to poor self-management.

More recently, there has been greater emphasis on the perspective that health literacy represents not only the skills needed by an individual to process health-related information, but also the demands of the health system in terms of the delivery of information or instructions

The Rapid Estimate of Adult Literacy in Medicine – Short Form (REALM-SF) is a 7-item word recognition test to provide health care providers with a valid quick assessment of patient health literacy. The REALM-SF has been validated and field tested in diverse research settings and has excellent agreement with the 66-item REALM instrument in terms of grade-level assignments.

Additional Health Literacy in Diabetes Resources:

Strategies to Address Low Health Literacy and Numeracy in Diabetes

Health Literacy in Diabetes Care: Explanation, Evidence and Equipment

APPENDIX E: Shelter Staff Food Questionnaire

1. Where does the overall funding for your shelter come from? How much of that funding is allocated for food?

Funding sources:

% of overall funding allocated for food:

0-25%

25-50%

50-75%

75-100%

2. Please describe the main suppliers of food for your shelter. What percent of each contributes to the food supply of your shelter (total should add up to 100)?

Purchases Government Donations Community Donations

Corporate Donations Other

3. Does your shelter have a monthly food budget and if so, how much? How much per person?

$0-200

$200-400

$400-600

$600-800

$800-1000

Per person:

4. In the last year, how many people did your shelter on average serve per month?

<100 people

101-500 people

1001-1500 people

More than 1500 people

5. How many meals does your shelter serve per day? How many days per week is your food served? Which meal(s) do you serve?

Number of Meals:

0

1

2

3

>3

Types of Meals:

Breakfast

Lunch

Dinner

Snacks

Other

6. Please respond to what extent you agree with the following statement:

On average, over the last 6 months, my shelter has been able to request and receive enough of the following items to serve all clients that visit my shelter through the month.

a. **Fresh fruits and vegetables**

1	2	3	4
Strongly disagree	Moderately Disagree	Moderately agree	Strongly agree

b. **Lean protein (e.g. chicken, turkey, beans)**

1	2	3	4
Strongly disagree	Moderately Disagree	Moderately agree	Strongly agree

c. **Low-fat dairy (1% or skim milk, low-fat yogurt)**

1	2	3	4
Strongly disagree	Moderately Disagree	Moderately agree	Strongly agree

d. **Whole grains**

1 2 3 4

Strongly disagree Moderately Disagree Moderately agree Strongly agree

e. **Low-sugar beverages**

1 2 3 4

Strongly disagree Moderately Disagree Moderately agree Strongly agree

7. How satisfied are you with the following on a scale from 1-4?

Ability to purchase healthy food within your budget

1 2 3 4

Strongly disagree Moderately Disagree Moderately agree Strongly agree

Ability to access donated healthy donated food from food banks

1 2 3 4

Strongly disagree Moderately Disagree Moderately agree Strongly agree

Ability to access donated healthy food from community food drives

1 2 3 4

Strongly disagree Moderately Disagree Moderately agree Strongly agree

8. What do you see as the biggest barriers to *accessing* healthy foods sufficiently?

9. Do you find that certain categories or types of food are more easily accessed than others?

10. Are there any nutrition standards that must be met for the food supply?

Yes No

If yes, please expand in more depth.

11. Does your shelter have any policies that require workers to seek out donations of healthy food or purchase healthy food? If so, please describe.

Formal Policy Informal Policy No Policy

12. Does your shelter have a way in which the nutritional value of the food serve is considered or evaluated?

Yes No

If yes, please explain in more depth.

13. Does your shelter have a nutritionist or nutrition consultant?

Yes No

If yes, please explain in more depth.

14. Are guests allowed to bring food into the shelter upon arrival?

Yes No

If yes, please explain in more depth.

15. What is your method of distributing food? Is it restaurant style or cafeteria style?

16. What are the most popular foods among the guests?

17. How have the guests responded to healthy foods (e.g. whole grains, fresh fruits and vegetables, lean protein, low-fat dairy, low-sugar beverages)?

18. Are there healthy foods that have been more popular with the guests than others?

19. Is food education provided in any form to your guests? e.g. Are guests educated about the healthy food options?

Yes No

If yes, please expand in more depth.

20. Is food education provided in any form to the chefs or kitchen volunteers?

Yes No

If yes, please expand in more depth.

21. Is there a formal mechanism for feedback about the food at the shelter?

Yes No

If yes, please expand in more depth.

22. What feedback have guests given you about the food choices at the shelter? How much of a priority does type of food seem to be to the guests?

23. Is there any attention paid to how healthy food is displayed?

Yes No

If yes, please expand in more depth.

24. Is any type of food left out between meals?

Yes No

If yes, please expand in more depth.

25. Do your volunteers/employees eat the food served to the guests?

Yes No

26. How have changes in budget such as budget cuts affected the food budget? Please be specific if possible.

27. What do you see as the biggest barriers to *serving* healthy foods?

28. What services would allow you to provide more nutritious foods to individuals who visit your shelter?

29. Do you have a weekly menu that we would be able to see a copy of?

30. Please provide the following demographic information:

a. What is your age? _____

b. How long has this shelter been in existence? _____

c. What is your role in the shelter? _____

d. How long have you been working in this shelter? _____

e. What is your motivation for doing this work?

APPENDIX F: Health Professionals Share Thoughts on the Importance of Coordinated Diabetes Care

Interview with nurses Erin Bolema (E) and Femmily Robison (F), Heartland Alliance Health, Chicago, Illinois

Why is it important to connect patients with diabetes to health care providers, or nursing, or dietitian in the clinic?

F: Because diabetes is a complex disease and folks with diabetes need a lot of support around what and why their medications, how to administer their insulin, and side effects of the medications. It is stressful to have diabetes and having support is good for them.

E: That is what drives humongous insurance costs up for hospital visits. So, if they're not monitored or helped with monitoring. Plus, with homelessness there is all that comorbidity with mental illness and that fear/ mistrust of healthcare providers. And having that clinic where they actually feel like they're a part of and they trust us is a huge thing.

F: The long-term impact of diabetes with folks especially people experiencing homelessness are incredibly detrimental. Loss of vision, impaired wound healing. If folks are not linked with people who are educated about the disease and how to take care of it then their long-term health outcomes are going to suffer. Those outcomes are so preventable.

How have you seen people's health outcomes improve once they've been connected to the clinic?

E: Better glucose control, medication adherence, decreasing daily medication regimen because they have changed their diet, lost some weight, increased their exercise.

F: Better wound care management, A1c decreasing.

E: Better understanding of "Oh! These new diabetic shoes are great!" Better understanding of disease progression. More engagement with the clinic and they trust us and see they are getting better. It's more of a community than a clinic. A lot of people I realized do not know how bad junk food is for you which has been kind of amazing. I had a conversation with this guy yesterday just about blood pressure. I was like, "Ramen noodles have a lot of sodium in them. That is salt." He was like, "Really?!"

Why is nutrition important?

F: Because it directly impacts diabetes. It is the most important aspect of diabetes care in my opinion. And it does not get covered enough by nursing or providers.

E: The providers do not get enough education at all about it.

F: And neither do nurses.

E: It is mostly common sense.

F: And that is not enough, it is just not enough. That is not evidence-based. A dietitian can provide evidence-based education which is supposed to be at the cornerstone of what we do. If someone can change the way they eat and their nutrition maybe they can be on less medication.

Interview with Sheena Ward, Supervisor of Benefits and Entitlements Program, Heartland Alliance Health. Chicago, Illinois

It is important for all patients to connect with public benefits because it allows them access to care that can improve their quality of life. Those with a diabetes diagnosis are especially in need of public benefits because the care they receive can save their lives. Benefits also give them access to support services such as the support of a dietitian along with primary care to create a comprehensive care plan thus furthering the improvement of their health and quality of life.

The Benefits Team assisted a patient with obtaining Medicaid and he was able to connect to primary services to help him treat him uncontrolled diabetes. His blood sugar was either too high or too low for the monitor to read daily. He was eventually able to learn how to take his blood sugar, keep a log to bring to his appointment, and eat properly to manage his symptoms. He was also able to get housed at one of our residential facilities.

Why is it important to get people connected with benefits as part of the clinic?

It is important to have a benefits specialist at a clinic especially an FQHC because it allows patients who may be part of an underserved or underrepresented community to have access to one-on-one assistance applying for public benefits programs. This gives patients an opportunity to learn how to advocate for themselves, stay abreast of constant changes, and get health insurance education. Often there is a distrust of government systems and individuals from underserved communities may experience mistreatment albeit intentional or unintentional that can cause stress with navigating public benefits programs; having an advocate at a clinic ensures complete access to benefits.

APPENDIX G: Additional Nutrition Related Resources

American Diabetes Association "Where Do I Begin?"

Association of Clinicians for the Underserved Patient Education Materials on Diabetes

Centers for Disease Control and Prevention National Diabetes Program "Do it for them! But for you too."

Cooking Matters – Share Our Strength partners with nonprofits, community groups, and public organization across the country to provide Cooking Matters programming to low-income families.

Farmers Markets Directory - Some states have programs that double the amount of SNAP dollars at participating markets. There are also Women, Infant and Children (WIC) and senior Farmers Market Nutrition Program (FMNP) to promote purchasing of fresh fruits and vegetables.

Farmers Markets and SNAP

Feeding America – A national network of food pantries to refer patients.

Hunger and Health – Food and poverty brief and additional resources.

National Institutes of Health (NIH) Community Health Worker Health Disparities Initiative Multicultural Resources

NIH National Institute on Aging Go4Life physical activity ideas especially helpful for participants living in single room occupancy (SRO) or health centers who want to start a physical activity program for patients with diabetes.

NIH "What's On Your Plate?"

USDA Dig In! Posters

Blueprint for Complex Care:

https://www.nationalcomplex.care/wp-content/uploads/2018/12/Blueprint-for-Complex-Care_FINAL_120318.pdf

Food Gatherers, Healthy Pantry Conversion Project:

https://www.foodgatherers.org/?module=Page&sID=partner-program-info---healthy-pantry-conversion-project

Nutrition Initiatives Guide:

https://www.hungercenter.org/wp-content/uploads/2011/07/Campus-Kitchens-Nutrition-Initiative-Guide-Bylander.pdf

Safe Healthy Food Pantries Project:

https://www.dropbox.com/s/jean0z6o8i2negu/Safe_Healthy_Food_Pantries.pdf?dl=0

https://fyi.uwex.edu/safehealthypantries/action-plan/

https://static1.squarespace.com/static/5626862ce4b0b39e06352d65/t/56ccbb8586db43562e8ccad4/1456257926668/Freshplace_Manual.pdf

http://hungerandhealth.feedingamerica.org/wp-content/uploads/legacy/mp/files/tool_and_resources/files/f2e-background-detail.v1.pdf

Soup Kitchens as Opportunities for Intervention:

https://www.dropbox.com/s/4j3x6a4c7pmkyl6/soup%20kitchens%20as%20opportunities%20for%20intervention.pdf?dl=0

National Association of Community Health Centers Resources:

http://www.nachc.org/health-center-issues/emerging-issues-resources/food-insecurity/

http://www.nachc.org/wp-content/uploads/2017/10/NACHC_FIToolkit_WEB_v1.pdf

http://www.nachc.org/wp-content/uploads/2017/10/getting-started.pdf

National Health Care for the Homeless Council Resource:

http://www.nhchc.org/wp-content/uploads/2011/12/Healing-Hands-Fall-2011.pdf

APPENDIX H: Diabetes Related Resources:

ADA Screening Tool:

http://www.diabetes.org/are-you-at-risk/diabetes-risk-test/

Diabetes Self-Management Resources:

Diabetes Self-Management Questionnaire (DSMQ)

Study and Tool: https://hqlo.biomedcentral.com/articles/10.1186/1477-7525-11-138

AADE7 Self-Care Behaviors: https://www.diabeteseducator.org/living-with-diabetes/aade7-self-care-behaviors

DEEP Program - Overview: http://www.whcawical.org/files/2016/07/LSQIN_B2_DEEP_flier.pdf

Stanford Model: https://www.selfmanagementresource.com/programs/small-group/diabetes-self-management

CCD Managing Diabetes Self-Management Education Programs: https://www.cdc.gov/learnmorefeelbetter/programs/diabetes.htm

Stout Street Health Center Diabetes and Pre-Diabetes Self-Management Curriculum:

https://www.dropbox.com/s/fliwrcutde3934i/Compiled%20DSME%20Curriculum%2005.11.18.docx?dl=0

The Use of Language in Diabetes Care and Education:

http://care.diabetesjournals.org/content/40/12/1790

PEARLS Program:

Evidence Based Depression Program: http://www.pearlsprogram.org

Information Regarding Diabetic Supplies:

Patients may get a free meter by submitting info on the Accuchek website. They will receive a card/voucher in the mail that they can use at the pharmacy. (Limit one per patient every two 2 years).

340B pharmacy on diabetes supplies for uninsured sliding scale patients.

- True Matrix glucometer is free 1 a year, with a prescription for strips and lancets
- 50 strips are $10-15
- 100 lancets are $12

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