

Addressing Food Insecurity in Patients with Chronic Diseases

Collaborators







2



More resources available at: https://dchealth.dc.gov/dcrx



Important Information

The video will progress at its own pace.



Do not attempt to speed up the video.

The video can be paused and resumed later.



Course Overview

- Provides information and tools to Address Food Insecurity in Patients with Chronic Diseases
 - Instructor presentations
 - Panel discussion
 - Knowledge checks
- Requires that you receive a passing score on the knowledge checks and complete the evaluation to receive completion credit
- Will be approximately 1.5 hours in length for viewing and completion of the evaluation
- Approved for 1.5 hours of CME



Instructors

• Kofi Essel, MD, MPH, FAAP

Assistant Professor of Pediatrics Children's National and The George Washington University School of Medicine and Health Sciences Washington, DC

• Carrie Stoltzfus, MPH

Executive Director Food & Friends Washington, DC

• Kristy McCarron, MPH

Vice President, Community Health and Wellness YMCA of Greater Washington Washington, DC



Moderator & Course Advisor

Moderator

• Wen-kuni Ceant, MPH Innovation Horizons

Course Advisor

• Timothy S. Harlan, MD, FACP, CCMS Culinary Medicine Specialist Board



Conflict of Interest

• The instructors have no conflicts of interest to declare.

Anti-discrimination Policy

• The **instructors and advisor** have agreed to our antidiscrimination policy that prohibits the inclusion of discriminatory language, graphics, or references on the basis of race, gender identity, age, color, national origin, physical or mental disability, or religion.





Introduction

Community Care Programs on Nutrition

- The United States has put together a series of programs surrounding nutrition that act as a safety net which are often funded by the United States government
- The agency that confronts these issues head on is the Food and Nutrition Service, subsidiary of the United States Department of Agriculture



Programs

- National School Lunch Program
- The Women, Infants and Children Program
- Summer Food Service Program for Children
- School Breakfast Program
- Food Stamp Program
- Special Milk Program



Access to reliable and healthy food products

- In Washington, DC the city's most disadvantaged region (Ward 8) has the least amount of grocery stores and farmers markets.
- In addition, stores in lower income neighborhoods stock fewer healthy varieties of food and feature fresh produce of much lower quality.
- Low-income geographic regions = worst health outcomes.
- What is a food desert?



Source: DC Hunger Solutions



Average	Average
Household	Household
Income for	Income for
Ward 8	other wards

\$44,665

\$115,016

Southeast DC

The region in DC with the highest rate of food inequality

1/3

Of the residents in the DC area are food insecure

Source: DC Health Matters; Capital Area Food Bank

13

A Local DC Lens

Some local organizations addressing food insecurity:

- Capital Area Food Bank
- DC Greens
- Food & Friends
- YMCA of Metropolitan Area



Learning Objectives

- Describe food insecurity and broad strategies to effectively identify and address it through novel partnerships and collaborations
- Identify how healthcare providers can incorporate prescription food programs in their patient care practices
- Describe evidence-based chronic disease management programming focused on nutrition and wellness, and their integration with primary care

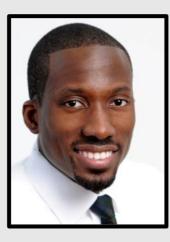




Food Insecurity: Background & Management

Addressing Food Insecurity in Patients with Chronic Diseases

Kofi Essel, MD, MPH, FAAP Assistant Professor of Pediatrics Children's National Hospital The George Washington University School of Medicine & Health Sciences Washington, DC



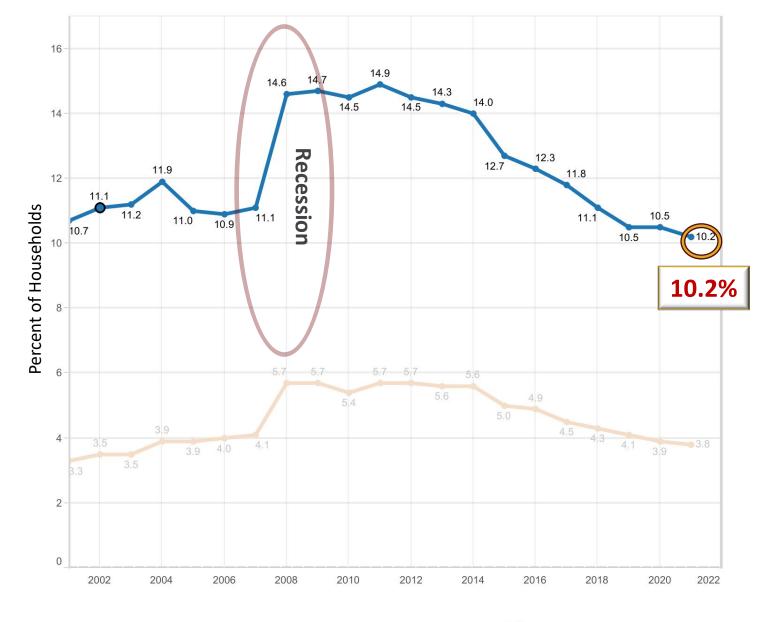
Food Insecurity Definitions





Source: Adapted from the USDA Economic Research Service

2021 US Food Security Prevalence



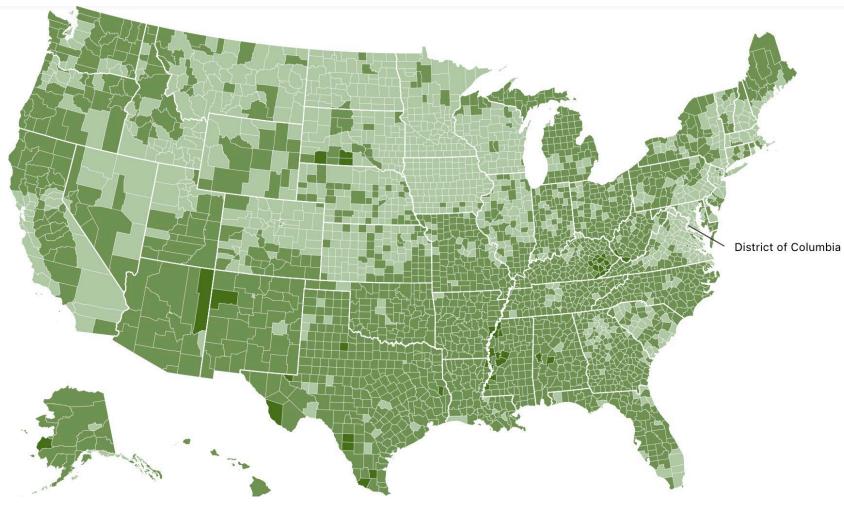
Food insecurity
Very low food security

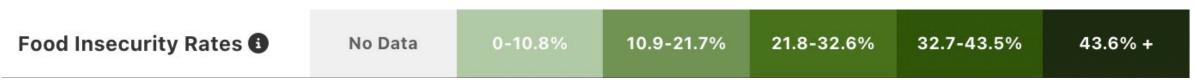


Source: Calculated by USDA, Economic Research Service, using Current Population Survey Food Security Supplement Data

Copyright 2022 DC Health | Government of the District of Columbia

Food Insecurity Rates





Source: Feeding America, Map the Gap, 2020

2022 Capital Area Food Bank (CAFB) Hunger Report

- Interviews conducted: February 4, 2022 March 2, 2022
- 3,769 Adults (>18yo)
- DC Metropolitan Area

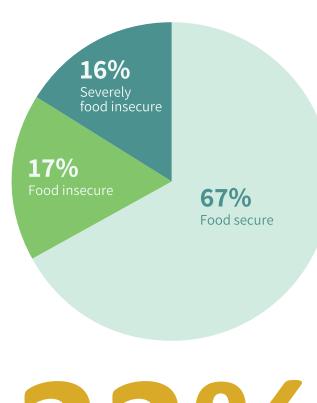




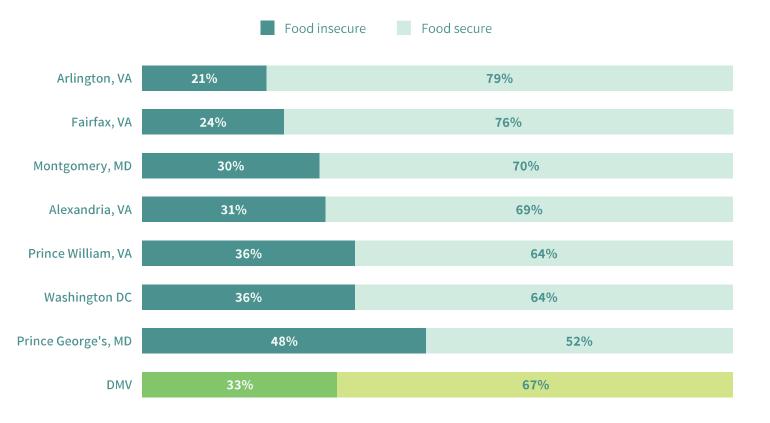
Source: Capital Area Food Bank Survey conducted February 4-March 2, 2022 with 3,769 adults age 18 and older in the D.C. Metro Area

CAFB Hunger Report

Prevalence of food insecurity in DMV in 2021



Prevalence of food insecurity in DMV in 2021



Question: USDA six-item screener for food insecurity

Source: Capital Area Food Bank Survey conducted February 4-March 2, 2022 with 3,769 adults age 18 and older in the D.C. Metro Area

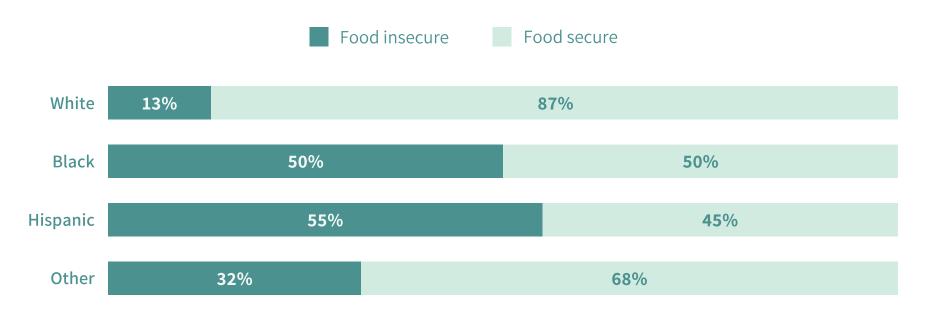
GOVERNMENT OF THE DISTRICT OF COLUMBIA

D

6

CAFB Hunger Report

Prevalence of food insecurity in DMV by race



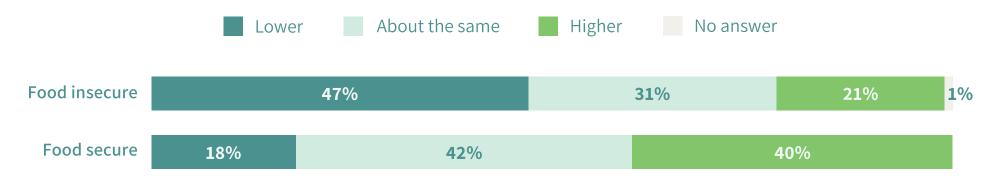
Question: USDA six-item screener for food insecurity



Source: Capital Area Food Bank Survey conducted February 4-March 2, 2022 with 3,769 adults age 18 and older in the D.C. Metro Area

CAFB Hunger Report

Change in household income since March 2020



Question: Is your current household income higher, lower, or about the same as it was on March 1, 2020?



Source: Capital Area Food Bank Survey conducted February 4-March 2, 2022 with 3,769 adults age 18 and older in the D.C. Metro Area

Lived Experiences of Families Experiencing Food Insecurity





Source: Nord, Journal of Hunger & Environmental Nutrition, 2013; Alaimo, Topics in Clinical Nutrition, 2005; Essel et al., SpringerBriefs, 2018

Chronic Diseases, Health Conditions, and Health Behaviors Associated with Food Insecurity in ADULTS

Arthritis	Diabetes	Less Physical Activity
Asthma	Functional Limitations	Mental Distress
Cancer	Hepatitis	Obesity
Chronic Kidney Disease	Higher Levels of C-reactive Protein	Poor Dietary Intake
COPD	Hyperlipidemia	Poor or Fair Health Status
Cigarette Smoking	Dyslipidemia	Pregnancy Complications
Coronary Heart Disease	Hypertension	Stroke
Depression (+Maternal Depression)	Insufficient Sleep or Poor Sleep Outcomes	Suicidal Ideation



Food Insecurity Detrimental Effects on Children

- 🕂 Overall Health
- 🕂 Mental Health
- Developmental Delays
- Educational Outcomes
- Hospitalizations

- Iron Deficiency
- **†** Asthma
- Birth Defects

and many more associations



11

Food Insecurity Screening

- There are a number of easy-to-use screeners to assess food insecurity
- Some tools available in more comprehensive screeners that assess other social determinants
- Consider using the Hunger Vital Sign[™] 2 question screener due to ease of use, general acceptability, validity, and translation into multiple languages



Hunger Vital Sign

1. "Within the past 12 months, we worried whether our food would run out before we got money to buy more."

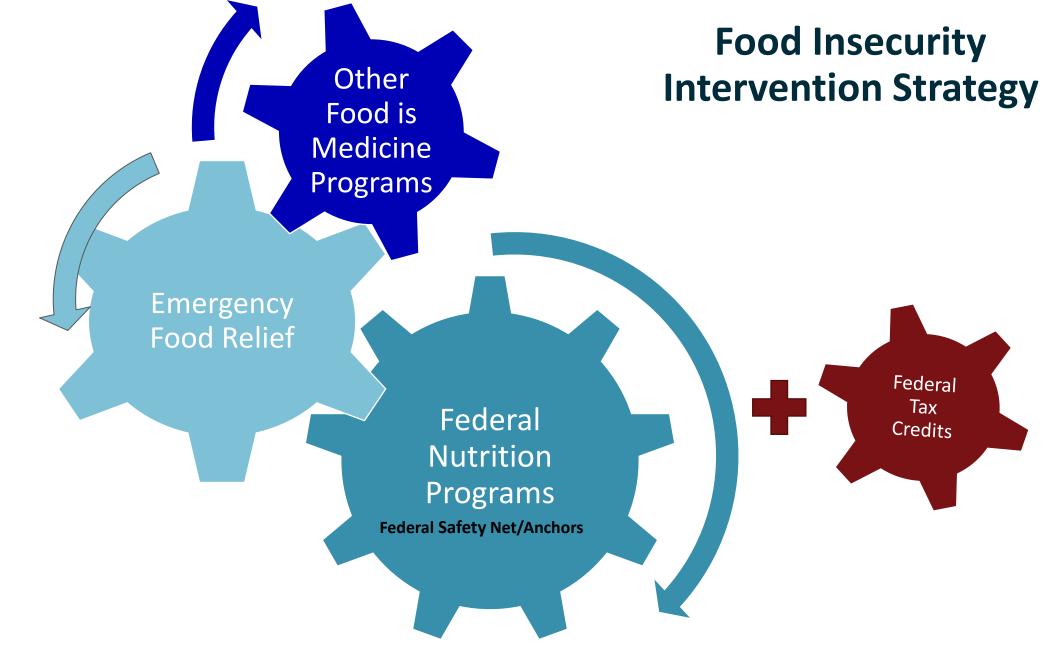
2. "Within the past 12 months, the food that we bought just didn't last and we didn't have money to get more."

• <u>Yes</u> or <u>No</u> in the last 12 months.

• Recommended: <u>Often True</u>, <u>Sometimes True</u>, or <u>Never True</u>, <u>Don't</u> <u>Know/Refuse to Answer</u> for you in the last 12 mo.

> If at least 1 question is positive, the screener is positive, and family is "at risk" for food insecurity

Source: Hager et al., <u>Pediatrics</u>, 2010; Makelarski et al., <u>AJPH</u>, 2017





Source: Stenmark et al., Health Affairs, 2021

Copyright 2022 DC Health | Government of the District of Columbia

Other "Food is Medicine" Programs

Food is Medicine: Achieving Food and Nutrition Security from Health Care to Population Health

The Food is Medicine pyramid describes an evolving framework of programs and interventions in healthcare and population health that integrate food-based nutrition interventions at multiple levels for specific needs of different focus populations.





Source: Task Force on Hunger, Nutrition, and Health, 2022

References and Resources

- Alaimo, K. (2005). Food Insecurity in the United States: An Overview. *Topics in Clinical Nutrition*, 20(4), 281–298. <u>https://doi.org/10.1097/00008486-200510000-00002</u>
- Anderson, S.A. (1990). Core indicators of nutritional state for difficult-to-sample populations. The Journal of Nutrition, 120(11S), 1559–1600. <u>https://doi.org/10.1093/jn/120.suppl_11.1555</u>
- Ashbrook, A., Essel, K., Montez, K., & Bennett-Tejes, D. (2021). Screen and Intervene: A Toolkit for Pediatricians to Address Food Insecurity. Food Research & Action Center. <u>https://frac.org/wp-content/uploads/FRAC_AAP_Toolkit_2021_032122.pdf</u>
- Capital Area Food Bank. (2022, June 27). Hunger Report 2022. Retrieved October 1, 2022, from https://hunger-report.capitalareafoodbank.org/report-2022/
- Castner, L. & Henke, J. (2011). Benefit Redemption Patterns in the Supplemental Nutrition Assistance Program. *IDEAS Working Paper Series from RePEc.*
- Coleman-Jensen, A., Rabbitt, M. P., Gregory, C., & Singh, A. (2022). Household Food Security in the United States in 2021. ERR-309, U.S. Department of Agriculture, Economic Research Service. <u>https://www.ers.usda.gov/webdocs/publications/104656/err-309.pdf?v=9115.1</u>
- Essel, K., & Courts, K. A. (2018). Epidemiology and Pathophysiology of Food Insecurity. In SpringerBriefs in Public Health (pp. 1–21). Springer International Publishing. <u>https://doi.org/10.1007/978-3-319-76048-3_1</u>
- Feeding America. (2020). Food Insecurity among Overall (all ages) Population in the United States. Map the Meal Gap. Retrieved October 1, 2022, from https://map.feedingamerica.org/
- Gitterman, B., Chilton, L. A., Cotton, W. H., Duffee, J. H., Flanagan, P., Keane, V. A., Krugman, S. D., Kuo, A. A., Linton, J. M., McKelvey, C. D., Paz-Soldan, G. J., Daniels, S. R., Abrams, S. A., Corkins, M. R., de Ferranti, S. D., Golden, N. H., Magge, S. N., & Schwarzenberg, S. J. (2015). Promoting Food Security for All Children. *Pediatrics (Evanston)*, 136(5), e1431–e1438. <u>https://doi.org/10.1542/peds.2015-3301</u>
- Hager, E.R., Quigg, A. M., Black, M. M., Coleman, S. M., Heeren, T., Rose-Jacobs, R., Cook, J. T., Ettinger de Cuba, S. A., Casey, P. H., Chilton, M., Cutts, D. B., Meyers, A. F., & Frank, D. A. (2010). Development and validity of a 2-item screen to identify families at risk for food insecurity. *Pediatrics (Evanston)*, 126(1), e26–e32. <u>https://doi.org/10.1542/peds.2009-3146</u>
- Makelarski, J. A., Abramsohn, E., Benjamin, J. H., Du, S., & Lindau, S. T. (2017). Diagnostic Accuracy of Two Food Insecurity Screeners Recommended for Use in Health Care Settings. In American Journal of Public Health (Vol. 107, Issue 11, pp. 1812–1817). American Public Health Association. <u>https://doi.org/10.2105/ajph.2017.304033</u>
- Nord, M. (2013). Youth Are Less Likely to be Food Insecure than Adults in the Same Household. Journal of Hunger & Environmental Nutrition, 8(2), 146–163. <u>https://doi.org/10.1080/19320248.2013.786667</u>
- Stenmark, S., Sheward, R., Marcil, L., Bovell-Ammon, A., Bruce, C., & Ettinger de Cuba, S.A. (2021). The American Rescue Plan Act, A Critical Opportunity To Improve Child And Family Health. *Health Affairs (Project Hope)*. <u>https://doi.org/10.1377/forefront.20210804.897720</u>
- Task Force on Hunger, Nutrition, and Health. (2022). Ambitious, Actionable Recommendations to End Hunger, Advance Nutrition, and Improve Health in the United States. <u>https://informingwhc.org/wp-content/uploads/2022/08/Informing_White_House_Conference_Task_Force_Report_Aug22.pdf</u>
- USDA. (2022, September 7). Trends in U.S. food security. USDA ERS Interactive Charts and Highlights. Retrieved October 1, 2022, from <u>https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-u-s/interactive-charts-and-highlights/</u>







Delivering hope, one meal at a time[®]

The Case for Medically Tailored Meals and Medical Nutrition Therapy

Addressing Food Insecurity in Patients with Chronic Diseases

Carrie Stoltzfus, MPH Executive Director, Food & Friends Washington, DC



Copyright 2022 DC Health | Government of the District of Columbia

Agenda

Who we are and what we do

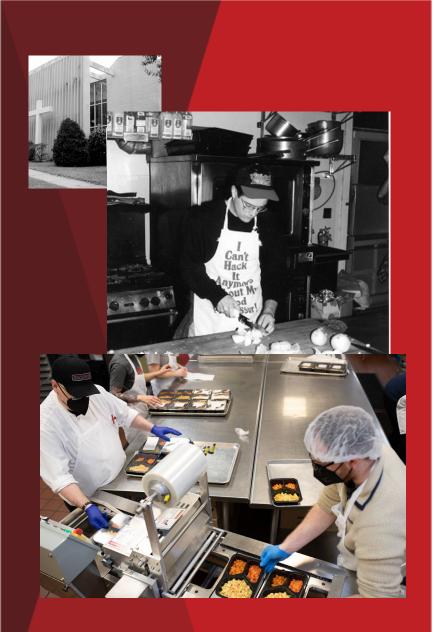
Why and how this works

► How we support health care providers











Introduction to Food & Friends

- Founded in 1988 to serve DC residents living with HIV/AIDS
- Expansion to other illnesses including cancer, diabetes, heart failure, kidney failure, COPD, and cystic fibrosis
- We improve the lives and health of those with a serious illness by providing:
 - specialized meals designed to meet their medical and dietary needs
 - nutrition counseling
 - a sense of community through relationships with staff and volunteers



Definition of Medically Tailored Meals

A Medically Tailored Meal (MTM) is much more than a healthy meal

- Targeted to someone with a serious illness
- Referral from health provider or health plan
- Meal plans are overseen by a registered dietitian; can be layered (ex. Diabetic: heart healthy, soft)
- Meals are paired with nutrition counseling





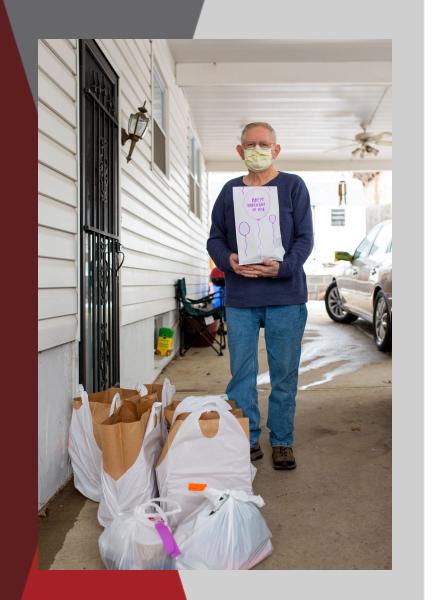
Evidence base for medically-tailored meals



 Fewer inpatient admissions Fewer skilled nursing admissions Lower cost of care (Berkowitz et al., JAMA, 2019) 	 Higher healthy eating index scores Fewer instances of hypoglycemia Improved mental health (Berkowitz et al., <u>Health Affairs</u>, 2018)
 Increased adherence to antiretroviral therapy Improved diabetes self-management Decreased depressive symptoms Reduced instances of sacrificing food for health care or prescriptions or vice versa 	 Reduced cost of care More likely to be discharged to home than to inpatient care
(Palar et al., <u>Journal of Urban Health</u> , 2017)	(Gurvey et al., <u>Journal of Primary Care &</u> <u>Community Health</u> , 2013)



5





- Serious or chronic illness
- Nutritionally compromised -ex. weight loss, nausea, fatigue
- Need assistance with some activity of daily living

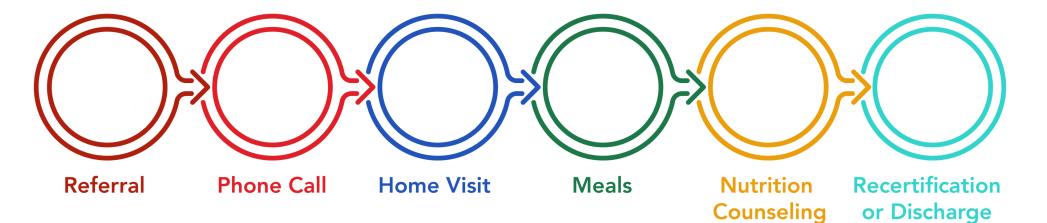
No income or age requirement



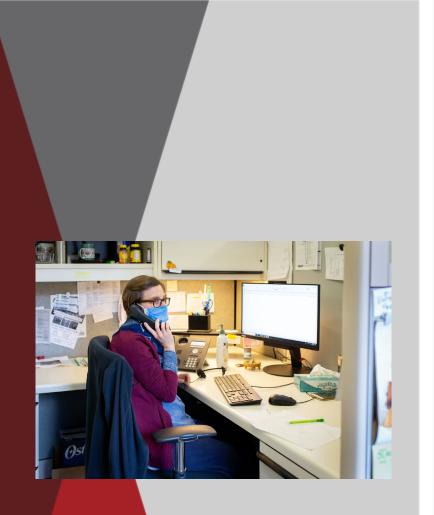




The Food & Friends Client Experience







Case Study Example: COPD

Healthcare Professionals

- 70 year-old gentleman, illness progressing for 10 years
- Oxygen tank, physical limitations
- Discussion of texture modifications, smaller frequent meals, calories, protein





We support health care providers

- Food designed to meet the nutritional needs of those with serious illnesses
- Dietitians take the time to speak with clients about medications, symptoms, side effects
- We're intervening on nutrition in the setting where people make their nutrition decisions—in the home
- Referrals are easy: multiple formats for referral, any staff at provider site can refer



References and Resources

- American Dietetic Association. (2022). Chronic Obstructive Pulmonary Disease (COPD). In Nutrition Care Manual. https://www.nutritioncaremanual.org/
- Berkowitz, S., Terranova, J., Randall, L., Cranston, K., Waters, D. B., & Hsu, J. (2019). Association Between Receipt of a Medically Tailored Meal Program and Health Care Use. JAMA Internal Medicine, 179(6), 786–793. <u>https://doi.org/10.1001/jamainternmed.2019.0198</u>
- Berkowitz, S., Terranova, J., Hill, C., Ajayi, T., Linsky, T., Tishler, L. W., & DeWalt, D. A. (2018). Meal Delivery Programs Reduce The Use Of Costly Health Care In Dually Eligible Medicare And Medicaid Beneficiaries. *Health Affairs*, 37(4), 535–542. <u>https://doi.org/10.1377/hlthaff.2017.0999</u>
- Gurvey, J., Rand, K., Daugherty, S., Dinger, C., Schmeling, J., & Laverty, N. (2013). Examining Health Care Costs Among MANNA Clients and a Comparison Group. *Journal of Primary Care & Community Health*, 4(4), 311–317. <u>https://doi.org/10.1177/2150131913490737</u>
- Nguyen, H.T., Pavey, T. G., Collins, P. F., Nguyen, N. V., Pham, T. D., & Gallegos, D. (2020). Effectiveness of Tailored Dietary Counseling in Treating Malnourished Outpatients with Chronic Obstructive Pulmonary Disease: A Randomized Controlled Trial. *Journal of the Academy of Nutrition and Dietetics*, 120(5), 778–791.e1. <u>https://doi.org/10.1016/j.jand.2019.09.013</u>
- Palar, K., Napoles, T., Hufstedler, L. L., Seligman, H., Hecht, F. M., Madsen, K., Ryle, M., Pitchford, S., Frongillo, E. A., & Weiser, S. D. (2017). Comprehensive and Medically Appropriate Food Support Is Associated with Improved HIV and Diabetes Health. *Journal of Urban Health*, 94(1), 87–99. <u>https://doi.org/10.1007/s11524-016-0129-7</u>
- Food & Friends. (n.d.). Retrieved October 1, 2022, from <u>https://foodandfriends.org/</u>
- Food is Medicine Coalition. (n.d.). Retrieved October 1, 2022, from <u>http://www.fimcoalition.org/</u>





Integrating Healthcare into Community-based Settings

Addressing Food Insecurity in Patients with Chronic Diseases

Kristy McCarron, MPH Vice President, Community Health and Wellness YMCA of Metropolitan Washington Washington, DC



Agenda

Healthcare-Community Integration:

- Why integrate with community-based organizations
- How to integrate with community-based organizations
 - Establishing partnerships between community-based organizations and healthcare organizations
 - Establishing workflows between community-based organizations and healthcare organizations



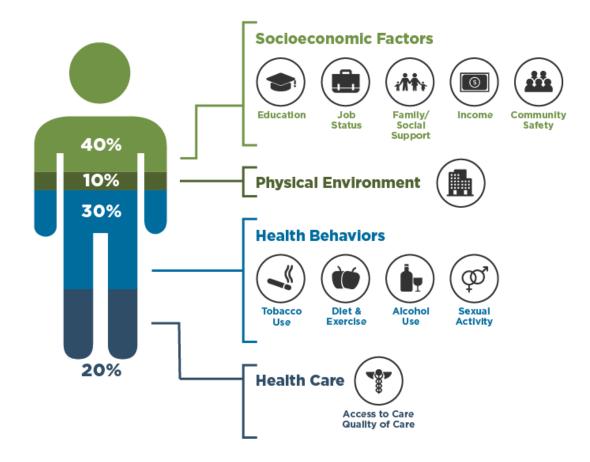


Healthcare-Community Integration: The Why

The changing landscape of healthcare promotes a shift toward population health, value-based care, and a focus on the factors that influence health outside of clinical walls.



An individual's health is mostly determined by their community





Source: Institute for Clinical Systems Improvement, Going Beyond Clinical Walls: Solving Complex Problems (October 2014)

Community-based organizations (CBOs) play an important role in enhancing health outcomes

- Trusted resources
- History of providing social services
- Community navigation
- Evidence-based chronic disease *prevention* and *management* programs:
 - The Diabetes Prevention Program
 - Medically Tailored Meals
 - SNAP-Education
 - Diabetes Self-Management

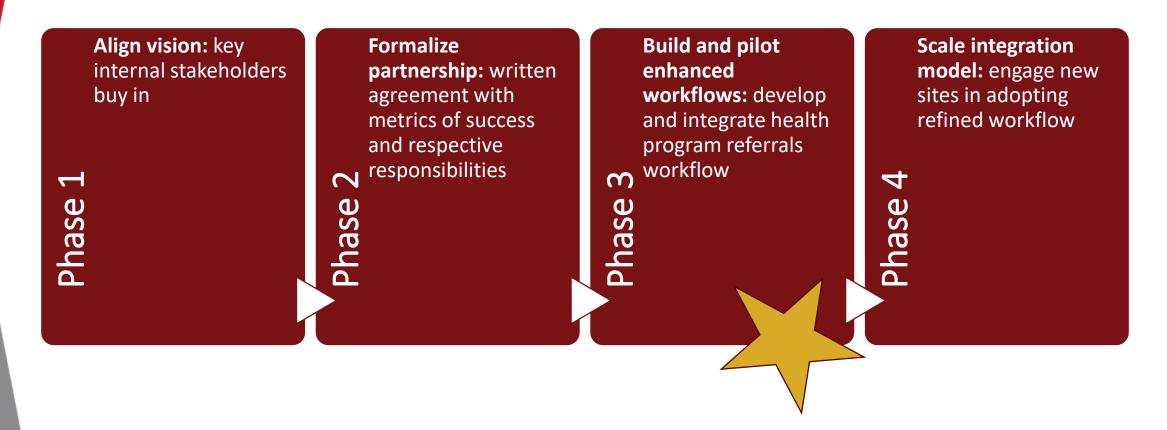




Healthcare-Community Integration: The How

Formalizing partnerships between CBOs and healthcare organizations

Four Phases of Partnership Development as seen by YMCA of the USA





Source: Center for Health Care Strategies (2017): Working Together Toward Better Health Outcomes. https://www.chcs.org/media/Working-Together-Toward-Better-Health-Outcomes.pdf

Building workflows between CBOs and clinicians





ç

Who receives the referral?

- A referral is sent to the CBO, who then reaches out to patient
- A referral is given to the patient who is then responsible for reaching out to the CBO

Clinician sends referral to CBO via agreed upon referral format, includes key patient info



How does the referral get to the CBO?

- Secure E-Fax to the CBO's referral number or email
- Local Health Information Exchanges (HIE), such as CRISP DC
- Local referral systems, such as findhelp.org (formerly known as Aunt Bertha) or UniteUs
- Direct messaging via Secure HISP emails

Clinician sends referral to CBO via agreed upon referral format, includes key patient info



What information is included in a referral to the CBO?

- Patient name and contact info
- Patient demographics
- Preferred language
- Preferred communication
- Practice/provider name and contact info
- Relevant patient clinical information (varies based on program, such as BMI, BP reading, A1c, etc.)
- Preferred CBO service location

Clinician sends referral to CBO via agreed upon referral format, includes key patient info



What information is shared back with the clinician?

- Patient identifier
- Practice/provider identifier
- CBO service location
- Patient program outcomes (varies based on program)

CBO shares patient outcomes upon completion



Patient screening for prediabetes





Photo courtesy of YMCA of the USA

Provider refers patient to local CBO

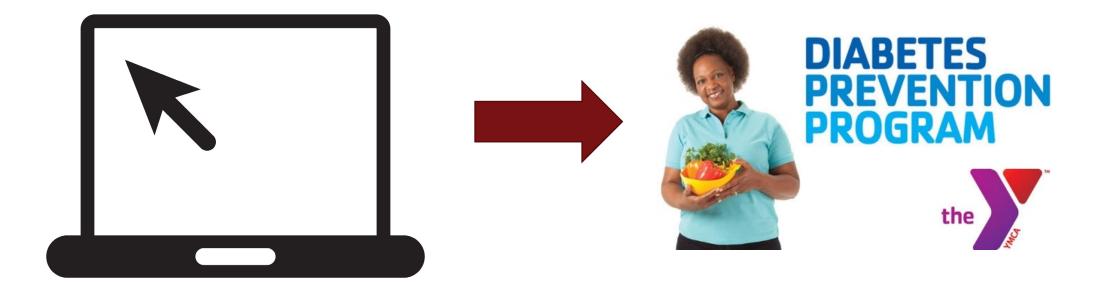




Photo courtesy of YMCA of the USA

Patient enrolls and participates in program





Photo courtesy of YMCA of the USA

The CBO shares information back with the provider

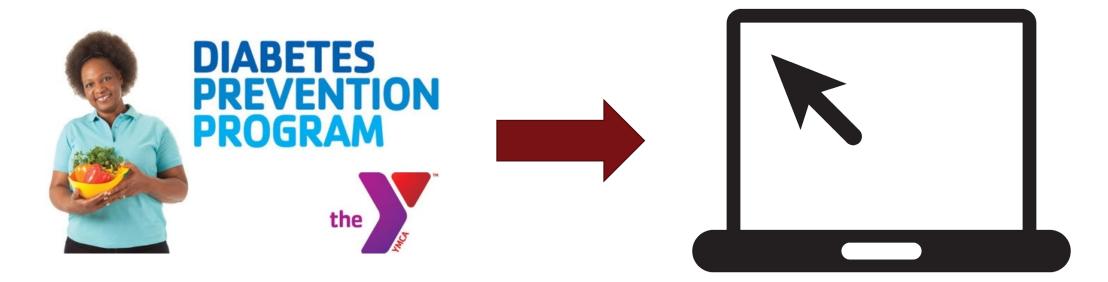




Photo courtesy of YMCA of the USA

Provider monitors progress





Photo courtesy of YMCA of the USA

Ways clinicians can help

Provide or help secure space for program sessions

Provide direct referrals to eligible patients Ask your Medicaid Managed Care Organizations what partnerships they have with CBOS Engage leadership in conversation about developing systematic approach to program referrals



In Summary

- Leveraging the strengths of healthcare organizations, clinicians and communitybased organizations can enhance population health.
- Such partnerships should include clear metrics of success and continuous quality improvement.
- Clinicians can work with community-based organizations to establish bidirectional referral pathways.



Panel Discussion



Kofi Essel, MD, MPH, FAAP Assistant Professor of Pediatrics Children's National Hospital The George Washington University School of Medicine & Health Sciences Washington, DC **Carrie Stoltzfus, MPH** Executive Director Food & Friends Washington, DC Kristy McCarron, MPH Vice President Community Health & Wellness YMCA of Metropolitan Washington Washington, DC





Knowledge Check Questions

Copyright 2022 DC Health | Government of the District of Columbia

What step typically occurs last in families experiencing food insecurity?

- A. Food anxiety
- **B.** Quality of foods reduces
- C. Quantity of foods reduces
- D. Variety of foods decreases



What is the overall prevalence of food insecurity in households in the United States of America?

- A. 5%
- **B**. 10%
- **C**. 25%
- **D**. 35%
- **E**. 45%



A medically-tailored meal is designed for:

- A. Someone at risk of illness
- **B.** Someone diagnosed with a serious illness
- **C.** Someone experiencing food insecurity
- D. Seniors with limited income



One of the nutrition issues that may affect a person with COPD is shortness of breath?

- A. True
- **B.** False



What are the greatest contributors to an individual's health outcomes?

- A. Socioeconomic factors
- B. Physical Environment
- C. Health Behaviors
- D. Health care



What are ways that clinicians can enhance a partnership with a community-based organization (CBO)?

- A. Provide direct referrals to a CBO
- B. Inquire with public and private insurance companies about the CBO programs that they may already provide or pay for
- **C.** Engage leadership in providing a systematic approach to program referrals
- D. All of the above



What step happens first in the community-based organization (CBO) referral process?

- A. Clinician sends referral using agreed-upon system
- **B**. CBO provides updates to clinician
- C. Patient provides consent for referral
- **D.** CBO shares patient outcomes



DC HEALTH

GOVERNMENT OF THE DISTRICT OF COLUMBIA

899 North Capitol Street NE, 5th Fl, Washington, DC 20002

