Prioritizing Nutrition Security: Emerging Approaches in Research and Practice
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<tr>
<th>Institute of Bioenergy, Climate, and Environment (IBCE)</th>
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<tr>
<td>- Amber Campbell (Economic Recovery Team Liaison)</td>
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<td>- Daniel (Patrick) Cassidy</td>
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<td>- Hannah Moshay</td>
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<td>- Eric Norland</td>
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<td>- Megan O’Rourke (Climate Team Liaison)</td>
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<td>Institute of Food Safety and Nutrition (IFSN)</td>
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<td>- Mark Carter</td>
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<td>- Helen Chipman</td>
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<td>- Sheila Fleischhacker (Co-Team Lead)</td>
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<td>- Lydia Kaume</td>
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<td>- Mallory Koenings</td>
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<td>- Stephanie Morriss (Data Analyst, Web Liaison)</td>
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<td>- Suzanne Stuka (DIE Team Liaison)</td>
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<td>Institute of Food Production and Sustainability (IFPS)</td>
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<td>- Robert Godfrey (Co-Team Lead)</td>
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<td>- Danielle Farley</td>
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<td>- Kevin Kephart (Climate Team Liaison)</td>
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<td>- Vijay Nandula (Food Loss &amp; Waste Liaison)</td>
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<td>- Angelica Van Goor</td>
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<td>Institute of Youth, Family, and Community (IYFC)</td>
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<td>- Keesha Corbin (Climate Team Liaison)</td>
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<td>- Amber Gellert</td>
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<td>- Cassandra Huey (Executive Secretary)</td>
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<td>- Joshua Stull</td>
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<td>Office of Communications</td>
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<td>- Faith Peppers</td>
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NIFA’s Nutrition Security Webinar Series

Join USDA’s National Institute of Food and Agriculture (NIFA) for its new virtual Nutrition Security Webinar Series. The series will feature speakers across a range of backgrounds and disciplines as they lead discussions about nutrition security during and beyond the COVID-19 pandemic.

BACKGROUND

Food and Nutrition Security in the United States
Today’s Panelists

Dariush Mozaffarian, MD, DrPH
Dean
Friedman School of Nutrition Science & Policy
Tufts University

Emily Engelhard, MA
Managing Director of Thought Leadership in Research
Feeding America

Panelists’ bios available at –
https://nifa.usda.gov/program/nifa-nutrition-security-webinar-series
Today’s Panelists

Los Angeles County Public Health Nutrition & Physical Activity Program Team

Julia Caldwell, PhD, MPH
Chief Research Analyst

Dipa Shah-Patel, MPH, RD
Director

Kelly Warner, MPH, RD
Program Manager

Panelists’ bios available at –
https://nifa.usda.gov/program/nifa-nutrition-security-webinar-series
Today’s Panelists

Angela Odoms-Young, PhD
Associate Professor
Division of Nutritional Sciences
College of Human Ecology
College of Agriculture and Life Sciences
Cornell University

Panelists’ bios available at –
https://nifa.usda.gov/program/nifa-nutrition-security-webinar-series
Trends in US Food Insecurity, 2001-2019

Households (percent)

- All Households
- Households with Children

Source: USDA ERS – Interactive Charts and Highlight

Source: USDA ERS – Interactive Charts and Highlight
Diet-Related Disease in the U.S.

- More Americans are **sick** than are healthy
  - Half of adults have **diabetes or prediabetes**.
  - More than half have **cardiovascular disease**, causing 841,000 deaths each year – 2,300 deaths each day.
  - 3 in 4 adults are **overweight or obese**.
  - Only **12%** of adults are **metabolically healthy**.

- Tremendous economic costs
  - Healthcare costs have skyrocketed from:
    - 5% to **28%** of federal and **29%** of state budgets
    - **$79 billion** to **$1,180 billion** for US businesses
    - >11,000/year per man, woman, and child in the US

---

Centers for Medicare & Medicaid Services, 2018
American Heart Association, *Heart Disease and Stroke Statistics*, 2018
The Milken Institute, *America's Obesity Crisis*, 2018
True Cost of Food in the United States ($B/year)

- **Human Health**: 1,145
- **Environment**: 350
- **Biodiversity**: 455
- **Livelihoods**: 134
- **Economy**: 21

**Total Excess Costs per Year**: $2.1 trillion

**Sources**:
- True Cost of Food: Measuring What Matters to Transform the U.S. Food System. The Rockefeller Foundation 2021
Nutrition Security

Nutrition security: Consistent access, availability, and affordability of foods and beverages that promote well-being and prevent (and if needed, treat) disease.

- A focus on “food insecurity” has helped address problems of food access and affordability over the last 25 years.
- But, food quality – nutrition – has been underemphasized, with large and rising disparities in diet-related diseases.
- A shift to a broader, more holistic focus on “nutrition insecurity” is the next natural evolution to help us promote equitable well-being for all Americans.
“Our nation suffers from nutrition insecurity. We must do more to ensure access to the nutritious foods that can protect and promote health.”
- Secretary Tom Vilsack, Senate Confirmation Hearing

“It’s a very large problem we have to address,” Vilsack said, adding, “We cannot have the levels of obesity, diabetes and chronic disease that we have. It will literally cripple everything we’re trying to do as a country.”

Diabetes is directly linked to both food insecurity and nutrition insecurity, he said, making it incumbent upon the USDA to “modernize our nutrition security and food security systems,” Vilsack said, adding, “We’re dealing with twin issues.”
Major Nutritional Disparities

Percentage of U.S. adults with a poor quality diet (AHA diet score)

Percent of U.S. adults with poor nutritional quality, by income

- Ratio of family income to poverty level:
  - <1.30
  - 1.30-1.84
  - 1.85-2.99
  - ≥3.00

Rehm et al., JAMA 2016
Measuring Food Insecurity

• “The food that I/we bought just didn’t last, and I/we didn’t have money to get more.” Was that often, sometimes, or never true for you in the last 12 months?

• “I/we couldn’t afford to eat balanced meals.” Was that often, sometimes, or never true for you/your household in the last 12 months?

• In the last 12 months, did you/your household ever cut the size of your meals or skip meals because there wasn't enough money for food?
  • If yes, how often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?

• In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money for food?

• In the last 12 months, were you ever hungry but didn't eat because there wasn't enough money for food?
Measuring Nutrition Insecurity?

• Thinking about the last 12 months, how hard was it for you to regularly obtain and eat nutritious foods that support your health and well-being?
  a. Very hard
  b. Hard
  c. Somewhat hard
  d. Not very hard
  e. Not hard at all

[If respondent lives with others]
• Thinking about the last 12 months, how hard was it for you to regularly obtain and eat nutritious foods that support your family’s health and well-being?
## “Best Buy” Policy and Systems Innovations

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<th>Science &amp; Innovation</th>
<th>Healthcare</th>
<th>Economic Incentives</th>
<th>Schools</th>
<th>Worksites</th>
<th>Standards and Labeling</th>
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<td>National Institute of Nutrition (NIN)</td>
<td>Medically tailored meals</td>
<td>Govt feeding programs (SNAP, WIC)</td>
<td>School meal standards</td>
<td>Procurement standards</td>
<td>Additives (trans fat, salt, sugar)</td>
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<td>Public-private partnerships</td>
<td>Produce Prescriptions</td>
<td>Tax policy for food/nutrition innovation</td>
<td>Competitive food standards</td>
<td>Behavioral economics</td>
<td>FOP, menu, and warning labels</td>
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<td>Fundamental discovery</td>
<td>Nutrition education for providers</td>
<td>Tax policy for food/nutrition innovation</td>
<td>Breakfast in the classroom, summer meals</td>
<td>Technology wellness platforms</td>
<td>Marketing to children</td>
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<td>Big data, technology</td>
<td>Nutrition in the EHR</td>
<td>ESG metrics, investor vehicles</td>
<td>Fresh F&amp;V programs</td>
<td>Wellness incentives for healthy food</td>
<td>Qualified health claims</td>
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<td>Billing &amp; quality metrics</td>
<td>B Corps</td>
<td>School gardens</td>
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@DMozaffarian

www.food-price.org, Mozaffarian et al., BMJ 2018
Sources of Calories Among US Adults, 2003-2018

Percentage of daily calories from different food sources, US adults

Liu et al., JAMA Network Open 2021
Sources of Calories Among US Children, 2003-2018

Percentage of daily calories from different food sources, US children

Schools: ~ 9% of calories year round

Liu et al., JAMA Network Open 2021
Addressing Food and Nutrition Insecurity: A Reimagined Food System

• Leverage Federal Nutrition Programs
• Food as Medicine in Healthcare
• FDA Standards and Excise Taxes
• Public Health Infrastructure
• Science and Innovation
• Catalyze the Private Sector
• Federal Food Policy Coordination
Measuring Nutrition & Health in the Charitable Food System

Emily Engelhard
September 27, 2021

NIFA webinar
Prioritizing Nutrition Security: Emerging Approaches in Research and Practice
Our mission is to advance change in America by ensuring **equitable access to nutritious food** for all in partnership with food banks, policymakers, supporters, and the communities we serve.

**Vision:**

**Improved Food Security**

**Outcomes and Strategic Pillars**

- **Feed:** All people have reliable access to a nutritious variety of food
- **Nourish:** All people facing hunger have the support they need to make healthy choices
- **Empower:** All people facing hunger have access to economic mobility pathways

**Unite:** People, partners and lawmakers engage and participate in the movement to end hunger
Evolution of nutrition & health measurement over time

Goal: to improve access, selection, and consumption of nutritious, culturally inclusive foods with and within communities served

Nutrition Guidelines
• Foods to Encourage (F2E)

Survey items
• Food Insecurity
• Dietary Intake
• Healthy Days

Nutrition Guidelines
• Healthy Eating Research (HER) Nutrition Guidelines
• F2E

Survey items
• Food Insecurity
• Dietary Intake
• Healthy Days
• Neighbor Experience

Food Access Measurement Framework
Deeper dive on nutrition guidelines

- **2012**: Foods to Encourage (F2E)
- **2014**: Food Bank Nutrition Policy Course (UC-NPI)
- **2016**: F2E Revision Research
- **2018**: Nutrition Policy Survey (MAZON)
- **2019**: Food Bank Nutrition Standards Expert Panel (HER)
- **2019**: Nutritious Food Revisioning Design Session
- **2020**: Task Force approval of HER Nutrition Guidelines
- **2020**: Public Release of HER Guidelines
- **2022+**: Network Capacity Building Support and Learnings
- **2019-2021**: Nutritious Food Revisioning Task Force
- **2021**: Nutrition in Food Banking Toolkit Published
- **2025**: 2025 Goal

F2E Tracking Pilots and Case Studies

**From** Foods to Encourage (F2E) **to** Healthy Eating Research (HER) Nutrition Guidelines

**Improved data can better inform food bank sourcing and distribution strategies**
Implementation of HER Nutrition Guidelines to drive donor conversations

**EXAMPLE**

**Total Donations** – July – December 2020

- Green: 74%
- Red: 17%
- Yellow: 6%
- Unranked: 3%

Total pounds donated: **3,124 lbs**

- Green ranked food: **2,313 lbs**
- Yellow ranked food: **195 lbs**
- Red ranked food: **533 lbs**
- Unranked food*: **82 lbs**

*Unranked foods: Some donated items go directly to our partner programs or do not go through sortation. We cannot determine the nutrient content of these items.

Green and Yellow ranked foods make up **80%** of all your donations for this period.
Food access is **multi-dimensional**, suggesting a measurement framework that fosters capacity-building across more than one measure, including:

**Access for Non-Participants:**

- Awareness and Comfort

  Community members in need who are not seeking services facing barriers to access

  - High level metric: field 2 survey questions to non-participants
  - In-depth follow-up: targeted interviews with non-participants

**Community-Level Access:**

- Mapping Need & Service

  Mapping proximity-based measures using admin. data on charitable food access & need

  - High level metric: mapping main measure of high-need, low access communities
  - In-depth follow-up: layering additional data of interest

**Client Experience:**

- Direct Neighbor Input

  Experience of access among participants of the charitable food system

  - High level metric: 6-item module
  - In-depth follow-up: targeted community needs assessment
1. How often have you wanted to go to a site for free meals/groceries but have been unable to go because they weren’t open? [Never, Rarely, Sometimes, Often, Always]

2. How often have you had trouble accessing free meals/groceries because you did not have easy access to a car or public transit, couldn’t afford gas/fare, or had trouble carrying your food home? [Never, Rarely, Sometimes, Often, Always]

3. How long does it typically take you to get to a site for free meals/groceries? [30 minutes or less, 31 minutes to 1 hour, More than 1 hour but less than 2 hours, More than 2 hours]

4. How long does it typically take to get your food from the time that you arrive at a site to the time you leave, including waiting in line and filling out any paperwork? [30 minutes or less, 31 minutes to 1 hour, More than 1 hour but less than 2 hours, More than 2 hours]

5. How often can you get the variety and types of foods that you need or want? [never, rarely, sometimes, often, always]

6. Have you ever felt that a staff member or volunteer at a site judged you because of your personal circumstances or other reasons? [strong yes, yes, no, strong no, don’t know or prefer not to answer]
Why Does Understanding and Meeting Neighbor Food Needs and Preferences Matter?

It’s about dignity, respect, and expanding choice and equitable access...seeing our neighbors and ourselves in our wholeness.

Needs and preferences are based on more than just nutrients. They’re also informed by culture, geography, family traditions, historical food access, religion, medical needs, and taste.

People experiencing food insecurity face several barriers to "healthy" dietary intake that exacerbate vulnerability to chronic diseases; many of these barriers stem from structural and institutional racism and community disinvestment.

Food from food banks and food pantries is an important contributor to dietary intake in many households.

Increasing access and consumption of healthy foods is a priority across the charitable food system.

With understanding comes clearer awareness of trade-offs and ROI when aiming to meet the need (e.g., strategy, sourcing, capacity, cost, data, donor, and messaging decisions).
Nutrition in Food Banking Toolkit: Editions 1 & 2 (Summer 2021)

> Aimed at supporting network capacity and knowledge to improve access, selection, and consumption of nutritious, culturally inclusive foods with and within communities served
Questions?
Emily Engelhard, Research

Learn more at HungerandHealth.org
Assessing Nutrition Security in Los Angeles County
Los Angeles County Department of Public Health

Nutrition and Physical Activity Program
Snapshot of Los Angeles County

• 10 million residents
• 4,753 square miles
• 36.6% are SNAP-Ed eligible
• 70% of SNAP-Ed eligible adults are overweight or obese, as compared to 63% of adults overall

The racial/ethnic breakdown is:
48.4% Latino
28.3% White
14.4% Asian
8.5% African American

Image retrieved from: 2020 Census: Counting Los Angeles County - Public Policy Institute of California (ppic.org)
Nutrition and Physical Activity Program

Mission
To advance good nutrition practices and physical activity for all persons in LA County

Organizational Structure
Housed in the Division of Chronic Disease and Injury Prevention

Funding
SNAP-Ed- $13.6 million
Gus Schumacher Nutrition Incentive Program- $1,562,500
Productivity Investment Fund- $300,000
Monitoring and Surveillance of Food Insecurity

Social Determinants of Health
Rising Food Insecurity in Los Angeles County

Introduction

Most researchers are able to consistently access and purchase high-quality, nutritious foods for a healthy life. Nonetheless, recent data from 2018 demonstrate that approximately 15% of U.S. households remain food insecure, which means that they do not have access to sufficient food at all times during the year to purchase healthy foods like fruits, vegetables, lean meats, and foods high in fiber.

Food insecurity is more likely to occur among racial and ethnic minorities and low-income communities. The United States Department of Agriculture (USDA) identifies a household as food insecure if it experiences either: 1. inadequate food security — reports a reduction in the quality, variety, or desirability of diet with little to no indication of reduced food intake, or 2. very low food security — reports multiple indications of disrupted eating patterns and reduced food intake.

Households and individuals in food insecure households often have food shortfalls because they resort to buying lower-quality foods that are high in calories but lacking in nutritional value. For instance, they are more likely to eat in fast food restaurants where foods are served in larger portions and are higher in salt, saturated fat, and added sugars. Thus, they are also at increased risk for poorer health in the long run, as markers of chronic illnesses, salt, saturated fat, and added sugar increase the risks for many chronic health conditions, including high blood pressure, obesity, diabetes, heart disease, stroke, and many types of cancer.

Food insecurity during childhood can lead to delayed development, diminished academic performance, impaired social skills, and early onset of obesity. It is especially important for children to eat healthy foods and to be supported in making healthy food choices early in their development. Doing so may help them sustain healthy eating habits and maintain optimal health and well-being throughout their lives.

To assess trends in the state of food insecurity in households with incomes less than 300% of the federal poverty level (FPL) in Los Angeles County, four cycles of the Los Angeles County Health Survey, from 2002 to 2018, were analyzed.

Figure 1: Food Security Trends among Households <300% FPL, LACHS 2018

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<thead>
<tr>
<th>Year</th>
<th>Very Low Food Security</th>
<th>Food Insecurity</th>
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<tr>
<td>2005</td>
<td>25.5%</td>
<td>12.8%</td>
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<td>2011</td>
<td>30.7%</td>
<td>11.3%</td>
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<tr>
<td>2015</td>
<td>29.2%</td>
<td>10.6%</td>
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<tr>
<td>2018</td>
<td>26.8%</td>
<td>9.9%</td>
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Data Driven Policies

- Food Insecurity Screening in County Clinics, December 2017
- Reducing Both Food Waste and Food Insecurity In Los Angeles County, February 2019
The Need to Measure Nutrition Security

• Unique role of local health department to increase access to healthy food

• Nuanced information is necessary to inform our program

• Include questions on nutrition security in next Los Angeles County Health Survey
How is "nutrition security" defined in the literature?

- Conducted literature review from 2000–2021
- Limited research on “Nutrition Security” compared to those that focus on “Food Security" or "Food and Nutrition Security"

“Nutrition Security is an integral component of Food Security”

Most recent definition (Mozaffarian et al, 2021)

- “Nutrition Security is having consistent access, availability, and affordability of foods and beverages that promote well-being and prevent (and if needed, treat) disease”

How is nutrition security distinct from Low Food Security?

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<th>Low Food Security</th>
<th>Nutrition Security</th>
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<td>• Old label = Food insecurity without hunger</td>
<td>• Consistent access, availability, and affordability of foods and beverages that promote well-being and prevent disease</td>
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<tr>
<td>• Reports of reduced quality, variety, or desirability of diet. Little or no indication of reduced food intake</td>
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Do existing validated tools measure "nutrition security" at a population level?

• 18-Item USDA Food Insecurity Module has one question that gets at nutritional quality
  ‘{I/We} couldn't afford to eat balanced meals.’ Was that often true, sometimes true, or never true for you and your household in the last 12 months?

• Validated Dietary Recall Modules assess dietary quality at the individual level (Powell and Greenberg Screening Tool)

  How often do you eat five or more fruits/vegetables servings a day? 0-1 days a week, 2-3 days a week, 4-5 days a week, 6-7 days a week
How are others in LA County operationalizing "nutrition security"?

• Interview with Leah's Pantry Executive Director, Adrienne Markworth
• Discussion with Data Workgroup of Food Equity Roundtable
• Feedback from DPH Health Assessment Unit
Los Angeles County Health Survey

- Population based telephone survey conducted every three years
- Adult and Child (<18 years) questionnaires
- 2018: 7,000 adult interviews and 5,000 child interviews
- Conducted in English, Spanish, Cantonese, Mandarin, Vietnamese, and Korean
- Opportunity to add new nutrition security questions for 2022
Current Questions in LA County Health Survey

- Consumption/Diet Quality
  - Total servings of fruits and vegetables eaten yesterday
  - Total servings of sugar sweetened beverages on an average day
  - Frequency of fast-food consumption per month
- Public Program Participation
  - SNAP/CalFresh participation
  - WIC participation
- Food Insecurity questions
  - Six-item short form
Other Measures

• USC Understanding America Study – Coronavirus Tracking Survey – LA County

• Swiss Health Survey

• Perspectives on Eating Healthy Among Food Pantry Clients (Dave J.M. et. al Health Equity 2017)
  • Qualitative study identified barriers to healthy eating: financial uncertainty, cost of healthy foods, lack of time, rationing food within family, lack of transportation, lack of adequate kitchen equipment, lack of nutrition knowledge and skills, and social support network
Proposed LA County Health Survey Questions

The next questions are about healthy foods. Healthy foods are foods that promote good health and prevent disease. These foods include fruits, vegetables, whole grains, beans, fish, and lean meats. Less healthy foods can include foods that are highly processed, packaged, and high in salt, sugar, and unhealthy fats.

1. In the last 12 months, how often have you or your household had to buy less healthy foods because healthy foods were too expensive?
Answer options include: Often, sometimes, never, don’t know, refused
2. Many people believe it’s important to eat healthy foods but find it difficult to do so for a variety of reasons. Please indicate how often the following statements were true for you or your household in the last 12 months. Answer options include: Often true, sometimes true, never true, don’t know, refused

   a) Healthy foods are too expensive
   b) There are not a lot of healthy foods for me to choose from at the stores I usually shop
   c) I don’t live near any stores or food pantries that have healthy foods
   d) I don’t have a car or an easy way to get to a store that has healthy foods
   e) I don’t have time to shop for groceries or cook
   f) I don’t have adequate cooking equipment or ways to store food
   g) I don’t know how to cook
   h) I don’t know what foods are considered healthy foods
   i) I don’t think I qualify for food assistance programs like food stamps (also known as SNAP, CalFresh, or EBT) or WIC that would help me buy healthy foods
   j) Other – please specify:_________
Conclusion

• Public Health Departments play a critical role in addressing nutrition security

• Challenges with operationalizing nutrition security

• Newly collected nutrition security data will help to address long standing equity issues

• Data will geographically pinpoint where public health resources and programs are needed
Thank You!
Opportunities, Challenges and Emerging Approaches to Reduce Diet-related Disparities and Accelerate Nutrition Equity: Implications for Prioritizing Nutrition Security

ANGELA ODOMS-YOUNG, PHD
ASSOCIATE PROFESSOR
DIVISION OF NUTRITIONAL SCIENCES
CORNELL UNIVERSITY
Overview

• Racial/Ethnic and Socioeconomic Disparities in Diet in the United States.

• Prioritizing Nutrition Security to Achieve Health Equity and Promote Food Justice: Potential Challenges/Considerations/Recommendations
Racial/Ethnic and Socioeconomic Disparities in Diet in the United States

- Poor nutrient/food group intakes and overall dietary quality in Blacks and Indigenous populations compared to Whites, Asian, and in most studies, Hispanic populations.
- Blacks and Indigenous populations have a higher burden of diet-related chronic disease.
- Black, Indigenous, and Hispanic populations have higher rates of food insecurity.
- Black and Indigenous communities have lower availability of healthy food options and higher availability of food outlets associated unhealthy food options.
- Findings in Hispanic/Latinx populations has been mixed.

Kris-Etherton et al., 2020; Warne and Westcott, 2019; Lee-Kwan et al., 2017; Satia, 2009; Kant et al., 2007;
Applying a Nutrition Security Framing Could Help Address Disparities and Promote Equity, IF....

- Prioritizing Nutrition Security to Achieve Health Equity and Promote Food Justice: Potential Challenges/Considerations
  - Think beyond poverty to focus on other determinants including racism.
  - Consider individuals that are marginally food insecure, nutrition insecure.
  - Acknowledge and avoid more structural and cultural violence: recognition is required for reconciliation.
  - Avoid a reductionist approach.
  - Consider First Food Equity
Think beyond poverty to focus on other determinants including racism.

  
  - Among U.S. children participating in WIC, nutrient intake of Hispanic children was greater than non-Hispanic White children for fiber and potassium (Zimmer et al., 2019).
  - Conversely, nutrient intake of non-Hispanic Black children was lower than that of non-Hispanic White children for calcium and vitamin D and higher in sodium (Zimmer et al., 2019).
  - There was one instance of better nutrient intake among non-Hispanic Black children compared to non-Hispanic White children; saturated fat intake was lower (Zimmer et al., 2019).
Think beyond poverty to focus on other determinants including racism.

  - Among nonparticipants, households headed by a black individual purchased more calories from processed meats, sweeteners, and sugar-sweetened beverages than households headed by a white individual and purchased more total sugars and sodium (p’s < 0.05).
  - All five of these disparities persisted among SNAP participants (p’s < 0.05).
  - Further disparities between white and black households emerged among SNAP participants that were not present among nonparticipants including purchases of junk foods or in purchases of total calories.
  - Additionally, for desserts, salty snacks, and candy, nonparticipant black households showed significant advantages over nonparticipant white households (i.e., purchased less of these categories, p’s < 0.05), but among SNAP participants, these advantages disappeared.

Multivariate adjusted differences, comparing black to white households’ per capita per day purchases of foods, beverages and nutrients among SNAP participants and nonparticipants (n = 89,043 household-by-quarter observations), controlling for sociodemographic characteristics, geographic market, and number of purchases made during the quarter. A positive difference indicates black households had higher adjusted mean purchases compared to white households.
Consider individuals who are marginally food insecure, nutrition insecure

- Gregory and Coleman-Jensen, 2017
  - Adults in households with lower food security status have elevated probabilities of chronic disease.
  - Adults in very low food-secure households are 10.5 percentage points more likely than adults in high food-secure households to be diagnosed with hypertension.
  - Adults in households with very low food security were 15.3 percentage points more likely to have any chronic illness than adults in households with high food security.
  - Adults in households with marginal food security were 9 percentage points less likely to report excellent health, compared to those in households with high food security, and 1.3 percentage points more likely to report poor health.
- Studies also show poor mental and physical health outcomes for mothers and children that are marginally food insecure (Cook et al., 2013; Gundersen, 2015).
- Studies suggest that fruit and vegetable prescription programs may have a stronger impact on the diets of individuals that are marginally food insecure.
To Understand the Relationship between Structural Racism, Diet, and Health...Think More than Nutrients

- Dietary practices/Food Consumption Behaviors happen in bodies that have been impacted by racism and trauma.
- The historical, social, physical, and marketing contexts in which people access/acquire food and the economic costs associated with that acquisition.
- Individual and community capacity and economic, and social resources available including money, education, knowledge, and skills.
- Food identity, culture, and culinary/agricultural traditions that impact food production, preservation, preparation, and presentation.
Acknowledge and avoid more structural and cultural violence: recognition is required for reconciliation.

- Acknowledge how the problem
  - Colonization disrupted traditional food systems
  - Land dispossession
  - Structurally violence policies
  - Acknowledge the impact of years of oppression and intergenerational trauma.
  - Industrial food system and ethnically targeted food marketing
  - Think chances not choices to not further marginalize and disempower communities
  - Examine history BIPOC traditions and culture
Historical Overview of African - Americans

Vast MAJORITY of African - Americans do NOT live in USA & we speak SPANISH & PORTUGESE

The Trans-Atlantic Slave Trade Uprooted Millions
Number of enslaved Africans arriving on the American continent and in Europe (1501-1866)

- United States 389,000
- Cuba 779,000
- Hispaniola* 926,000
- Jamaica 1,020,000
- Other Caribbean 2,007,000
- Brazil 4,722,000
- Argentina/Uruguay 67,000

Present-day nation states indicated
* Dominican Republic/Haiti
Source: Slavevoyages.org
Avoid a reductionist approach

Insecurity
1. uncertainty or anxiety about oneself; lack of confidence.
2. the state of being open to danger or threat; lack of protection.

Nutrition
1. the process of providing or obtaining the food necessary for health and growth.
2. food or nourishment.
**Socioeconomic Position**

- **Ethnicity (Racism)**
- **Intersectionality (Gender and Social Class)**

**Material Circumstances**
- Food/Water Insecurity
- Higher Food Costs
- Lower Food Access
- Limited Control of the Food System
- Higher Time Costs
- Environmental Injustice
- Housing Insecurity/De-valuing Housing
- Racial Segregation
- Fewer Health/Nutrition Professional Diversity

**Behaviors and Biological Factors**
- Transgenerational/Intergenerational Epigenetic Effects
- Lower Food/Nutrition Resource Supports (e.g. Cultural Food/Nutrition Knowledge and ways of knowing)

**Psychosocial Factors**
- Race-related stressors (e.g. Microaggressions/Interpersonal Racism, Implicit Bias, Internalized Racism, Post-traumatic Slave Syndrome, culture/historical trauma, Anti-black stigma and Inferiority)

**Social Cohesion & Social Capital**

**Health/Nutrition System**

**Intermediary Determinants of Social Determinants of Health**

**Structural Determinants/Social Determinants of Health Inequities**

- Governance
- Macroeconomic Policies (e.g. slavery)
- Social Policies Labor Market, Housing, Land (e.g. land loss, redlining)
- Public Policies Education, Health, Social Protection (e.g. school funding)
- Culture and Societal Values

**Socioeconomic and Political Context**

- Macroeconomic Policies (e.g. slavery)
- Public Policies Education, Health, Social Protection (e.g. school funding)
- Culture and Societal Values

**Nutrition/Food Equity and Diet-related Health and Well-being**
Consider First Food Equity

- Patel, Johnson & Meier, 2020
Key Takeaways

- Promoting nutrition security is a critical ingredient to building back better
- Emerging approaches have promise but more work remains

You’re a part of prioritizing nutrition security!

- Ending the Pandemic
- Responding to the Economic Downturn
- Addressing the Hunger and Food Insecurity Crisis
- Centering Climate in Agriculture, Food, and Forestry
- Building Back Better for Rural Economies
- Advancing Racial Equity
NIFA Nutrition Security Webinar Series
Questions – Sheila.Fleischhacker@usda.gov
Strengthening Intersections between Climate Change, Food Systems, and Nutrition Security: NIFA’s Aims & Activities

Date: Wednesday, October 20\textsuperscript{th} at 3:30 to 4:00 pm EST

NIFA Panelists:

- **Keesha Corbin**, MPH, Program Specialist, Division of Youth and 4-H, Institute of Youth, Family, and Community and NIFA Climate Change Team Executive Secretary
- **Amy Ganguli**, PhD, National Program Leader, Institute of Bioenergy, Climate, and Environment
- **Robert Godfrey**, PhD, Division Director of Animal Sciences, Institute of Food Production and Sustainability
- **Lydia Kaume**, PhD, RDN, National Program Leader, Division of Nutrition, Institute of Food Safety and Nutrition
- **Kevin Kephart**, PhD, NIFA Climate Team Lead
- **Emma Moran**, PhD, Biologist & Analyst
- **Megan O’Rourke**, PhD, National Science Liaison – Climate Change

https://nifa.usda.gov/program/nifa-nutrition-security-webinar-series