# Food and Nutrition Security: Effective and Emerging Policies & Practices

Hilary Seligman MD MAS
May 5, 2022

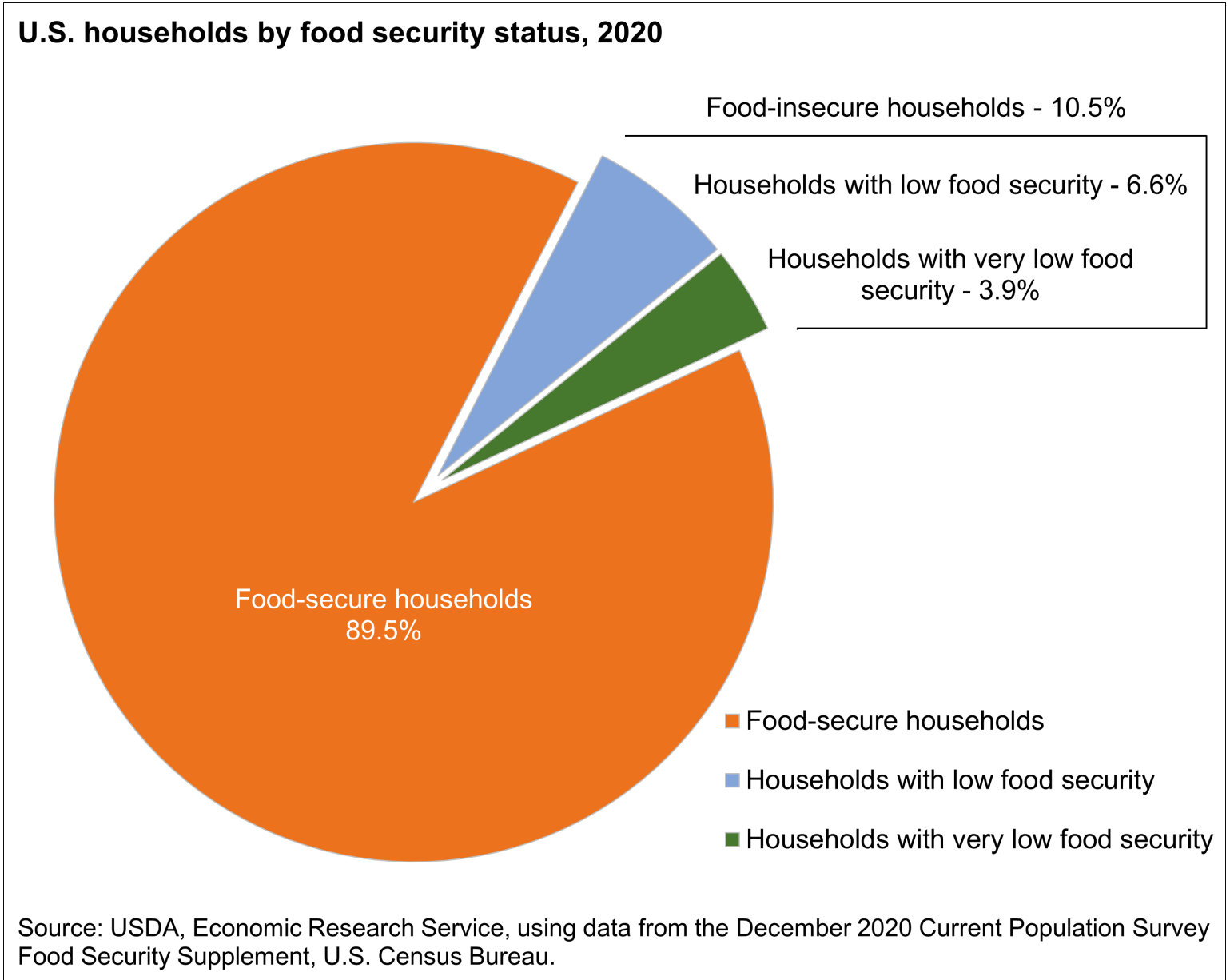
Professor of Medicine and of Epidemiology & Biostatistics, UCSF
UCSF Center for Vulnerable Populations
Director, CDC's Nutrition and Obesity Policy Research and Evaluation Network

UCSF University of California San Francisco

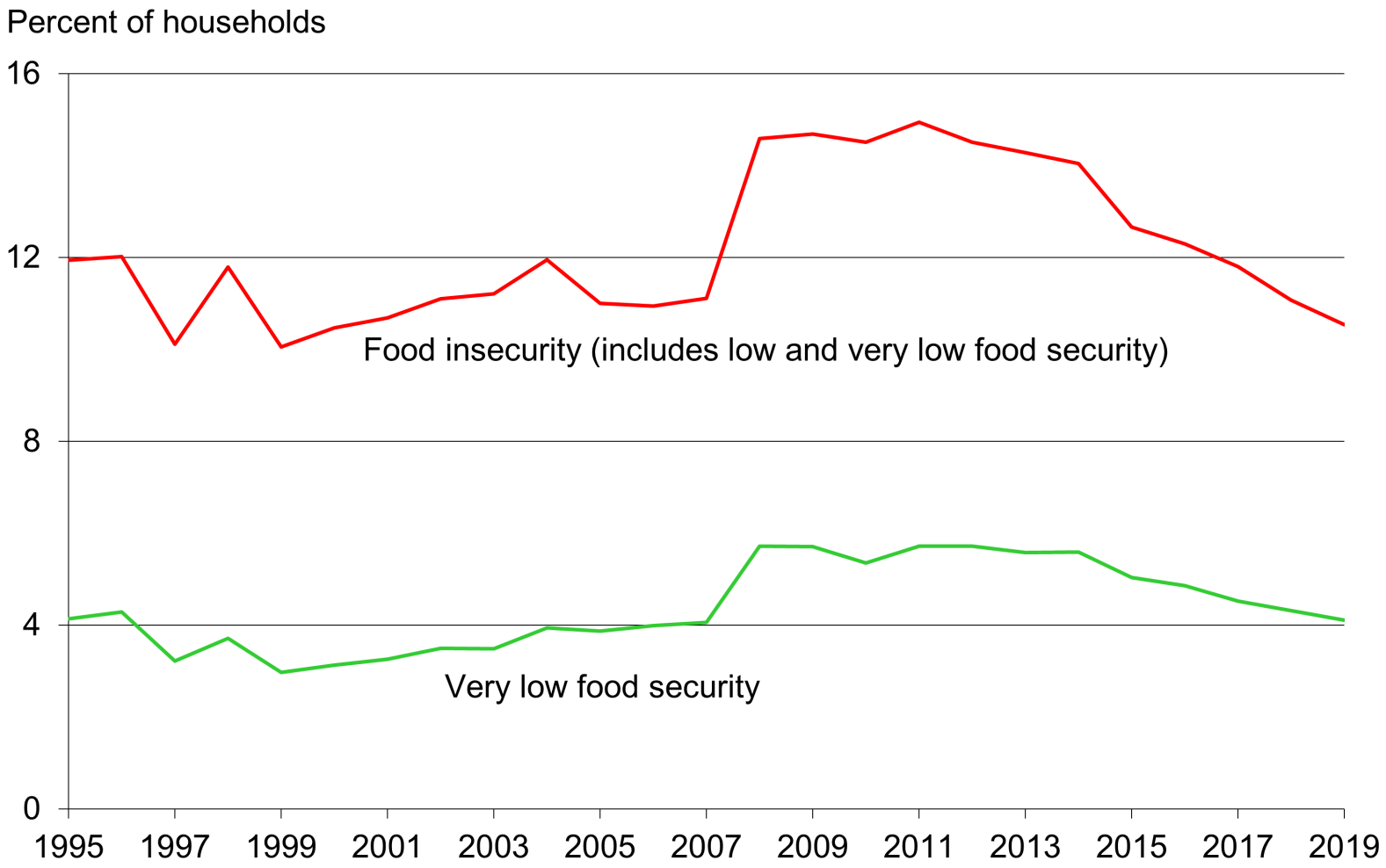
National Clinician Scholars Program

NOPREN Nutrition & Obesity Network POLICY RESEARCH EVALUATION

# 1 in 9 US Households Food Insecure in 2020



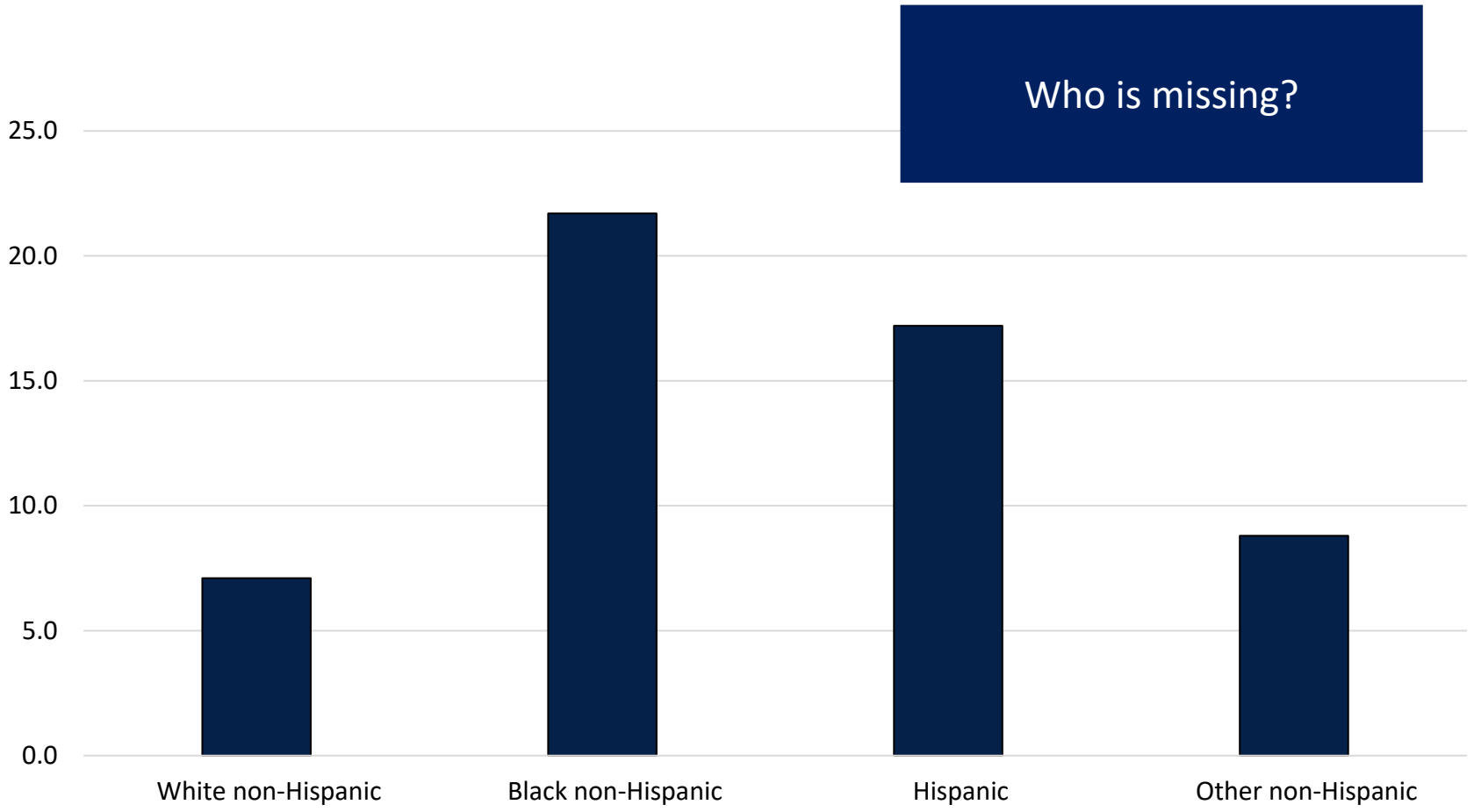
**Trends in prevalence rates of food insecurity and very low food security in U.S. households, 1995-2019**




Note: Prevalence rates for 1996 and 1997 were adjusted for the estimated effects of differences in data collection screening protocols used in those years.

Source: USDA, Economic Research Service, using data from the Current Population Survey Food Security Supplement.

# Disparities in Food Insecurity Rates by Race, 2020

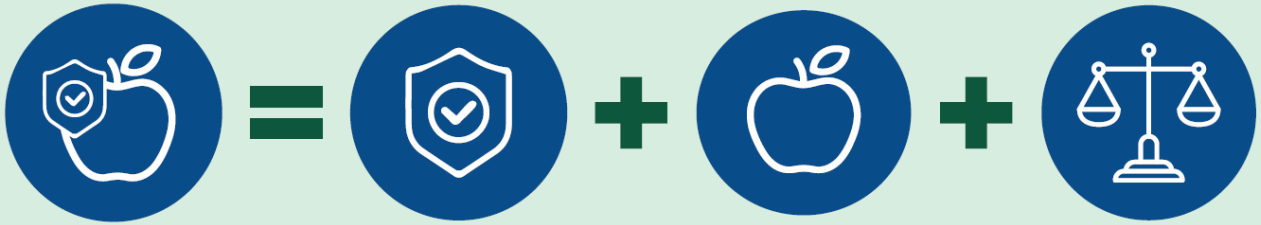



Source: USDA, Economic Research Service, using data from the December 2020 Current Population Survey Food Security Supplement, U.S. Census Bureau

# Nutrition Security

## WHAT IS NUTRITION SECURITY?

Consistent access to nutritious foods that promote optimal health and well-being for all Americans, throughout all stages of life.




## HOW DOES NUTRITION SECURITY BUILD ON FOOD SECURITY?

Food security is having ***enough*** calories.
Nutrition security is having the ***right*** calories.

https://www.fns.usda.gov/resource/usda-actions-nutrition-security

# The Problem:
## Dietary Divide


**High Rates of Food Insecurity**

1 in 9 US households (14.3 million)


**Lack of Affordable Healthy Food**

High Cost
+
Lack of Geographic Access

**Poor Dietary Intake**

1 in 5 LI report ZERO weekly FV purchases

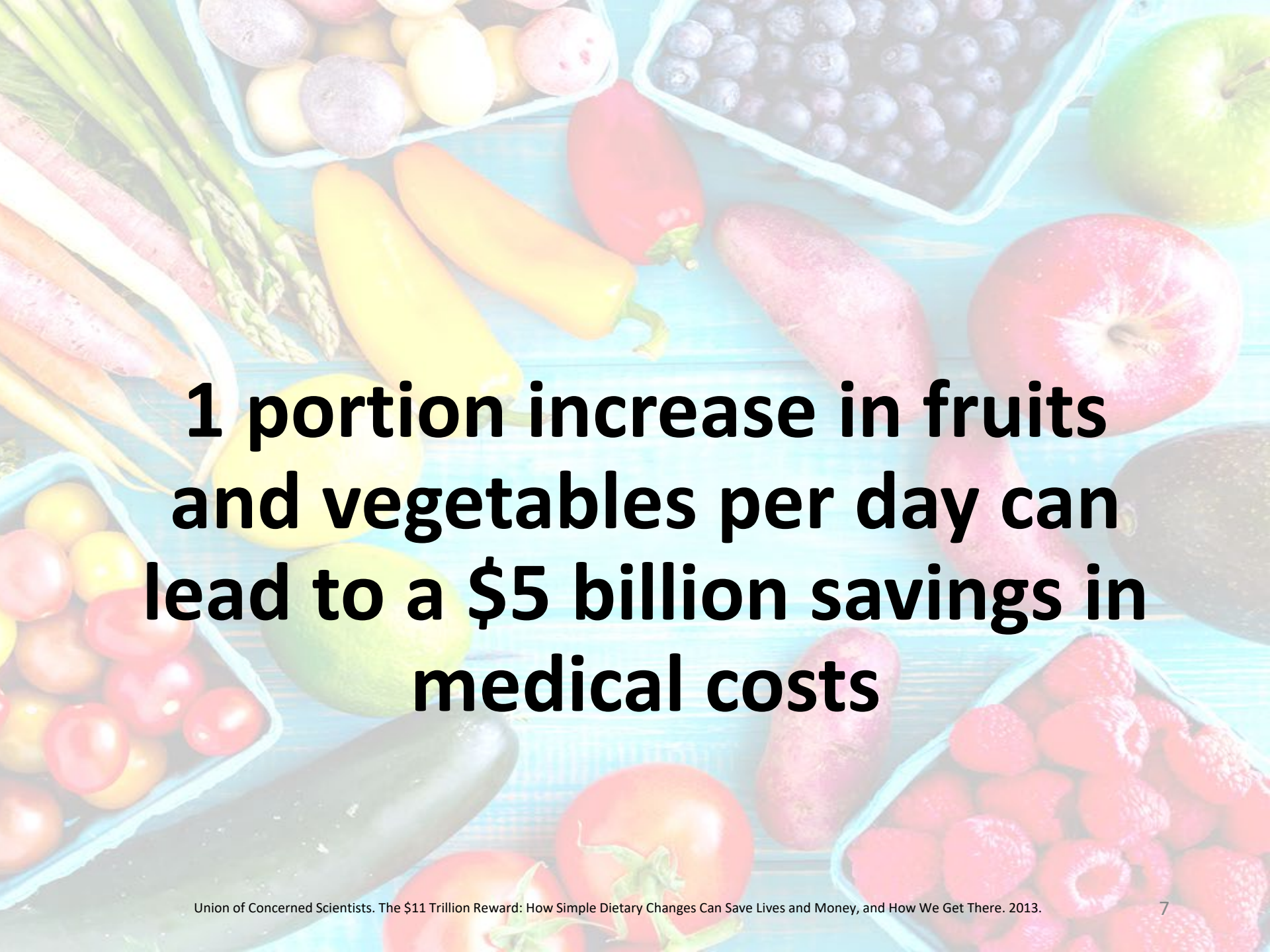
**Chronic Disease**

Poor diet is the #1 cause of death in US

**Health Care Costs**

Over $50 billion dollars*

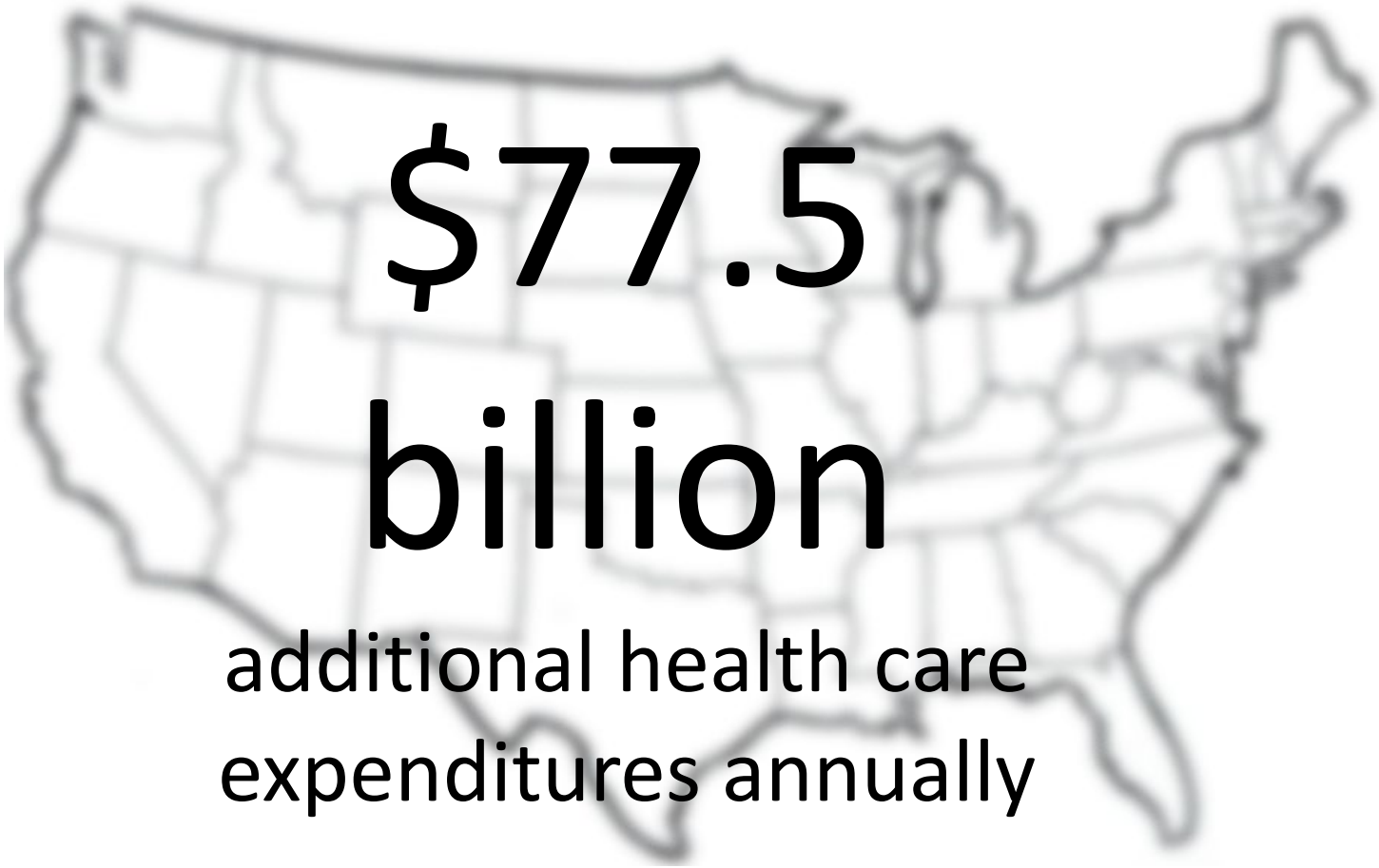
*Jardim TV, Mozaffarian D, Abrahams-Gessel S, Sy S, Lee Y, Liu J, et al. (2019) Cardiometabolic disease costs associated with suboptimal diet in the United States: A cost analysis based on a microsimulation model. PLoS Med 16(12): e1002981. https://doi.org/10.1371/journal.pmed.1002981



# 1 portion increase in fruits and vegetables per day can lead to a $5 billion savings in medical costs

Union of Concerned Scientists. The $11 Trillion Reward: How Simple Dietary Changes Can Save Lives and Money, and How We Get There. 2013.

# Food Insecure Americans Have Higher Health Care Costs



$77.5 billion

additional health care expenditures annually

Berkowitz, Basu, and Seligman. Health Services Research: *2017.*

# Is Re-Alignment Between Health Care & “Social Care” Needed in the US?

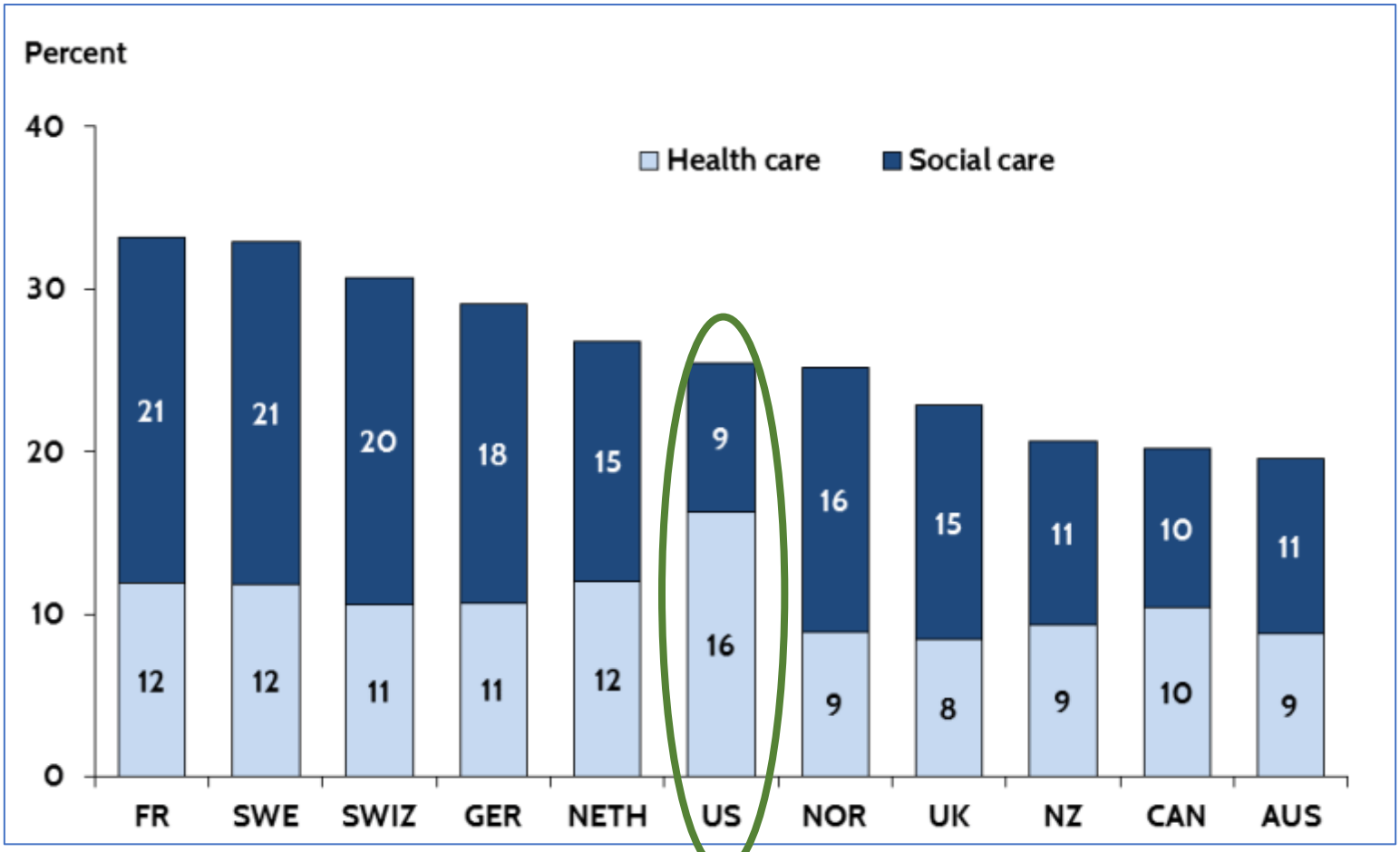
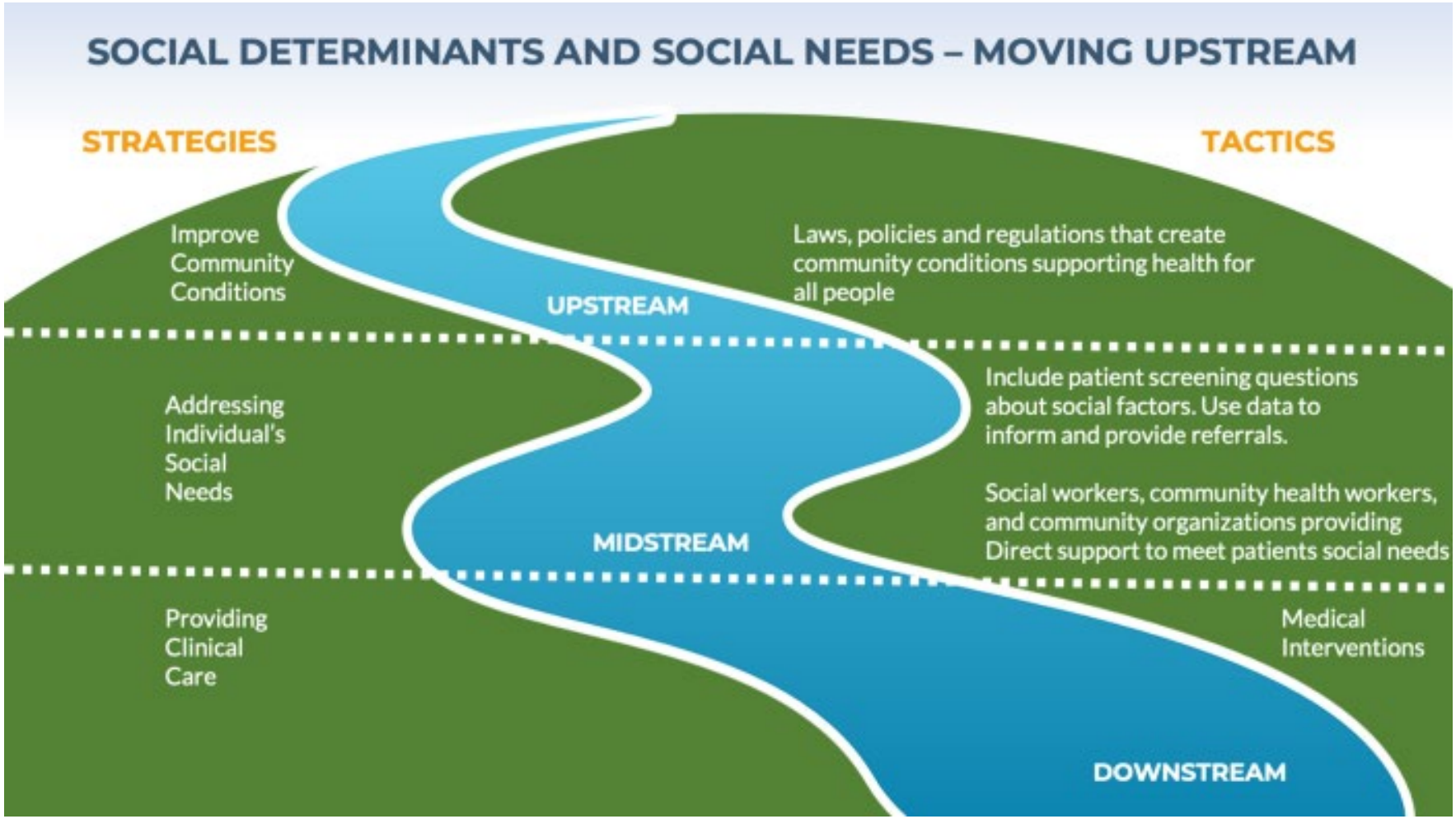


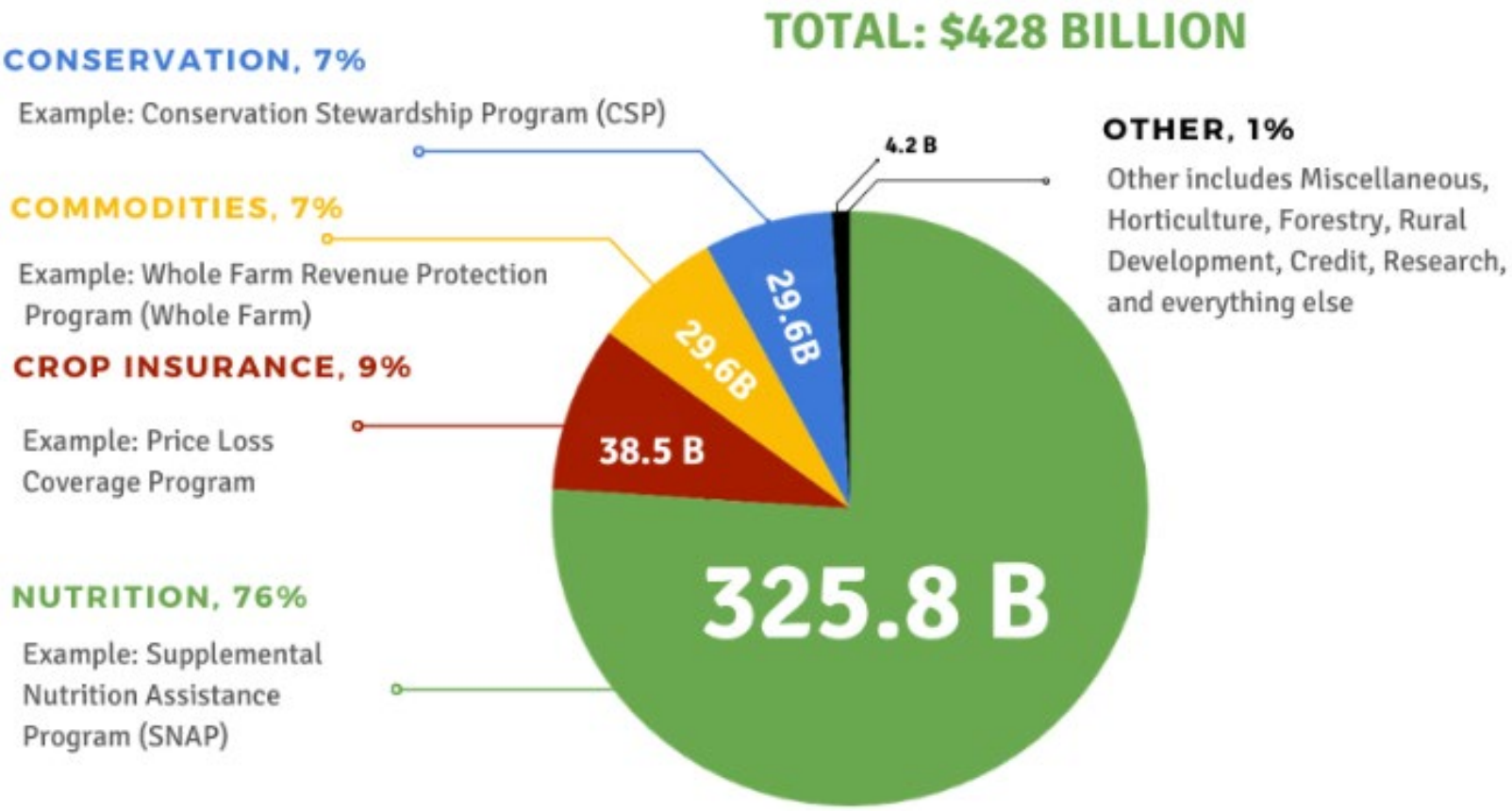

**Figure 1. Health and Social Care Spending as a Percentage of GDP**

Rebalancing Social & Medical Spending to Promote Health. Butler et al. Brookings Institution. 2017



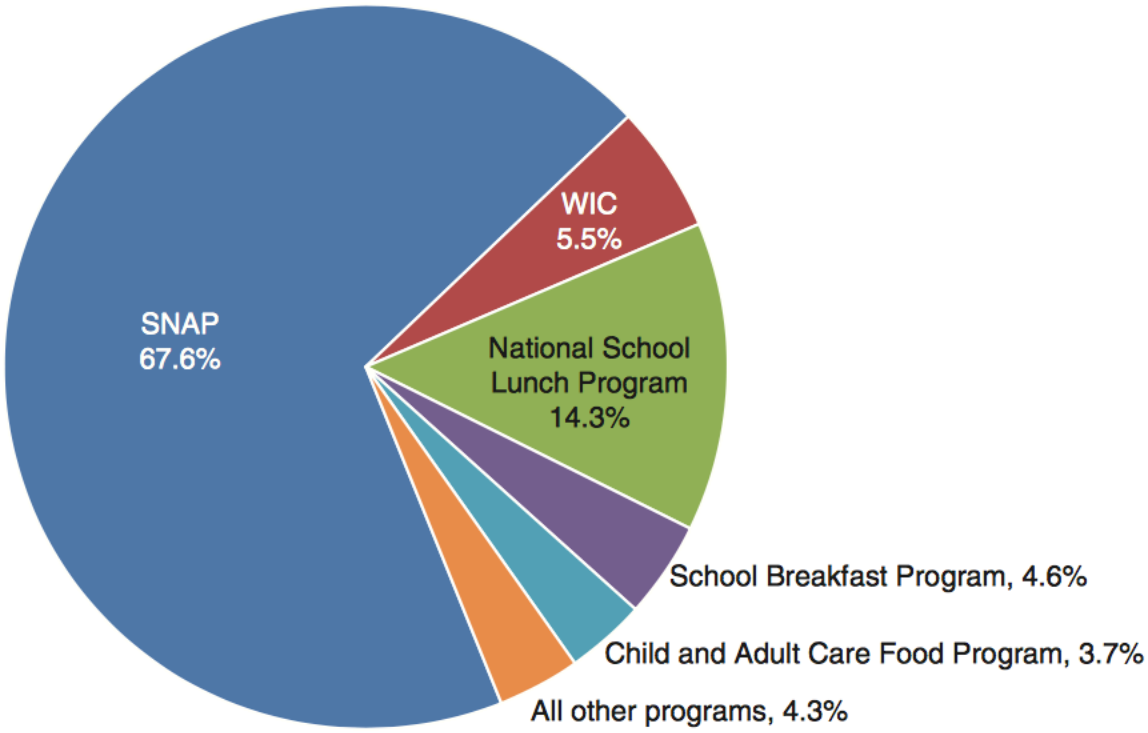

*"Meeting Individual Social Needs Falls Short Of Addressing Social Determinants Of Health," Health Affairs Blog, January 16, 2019. DOI: [10.1377/hblog20190115.234942](https://doi.org/10.1377/hblog20190115.234942)*

# FARM BILL PROJECTED FUNDING, IN BILLIONS 2019-2023



**USDA food and nutrition assistance expenditures by program, FY 2018**

*SNAP accounted for over two-thirds of food and nutrition assistance expenditures*




FY = Fiscal Year. SNAP = Supplemental Nutrition Assistance Program. WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

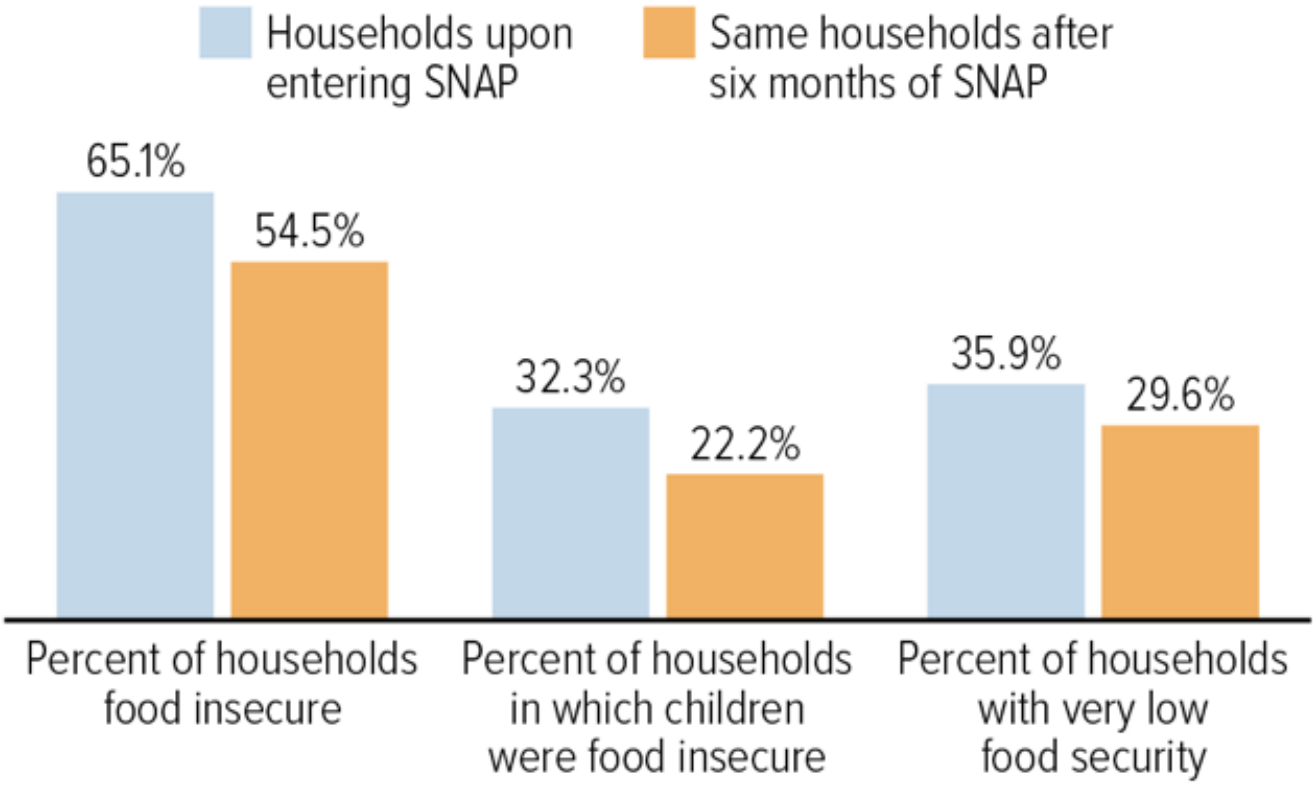
Note: Expenditures for all food and nutrition programs totaled $96.1 billion. They include nutrition family assistance grants to Puerto Rico, the Northern Marianas, and American Samoa; the Commodity Supplemental Food Program; the Food Distribution Program on Indian Reservations; the Nutrition Services Incentive Program; the Summer Food Program; the Special Milk Program; Disaster Feeding; The Emergency Food Assistance Program; and nutrition programs administration.

Source: USDA, Economic Research Service using data from USDA, Food and Nutrition Service.


**Reduces food insecurity by 20-30%**

…although 54% of participants are still food insecure.

# SNAP Helps Families Afford Adequate Food




Note: "Food insecure" = household lacks consistent access to nutritious food at some point during the year because of limited resources. "Households in which children were food insecure" = households in which both children and adults experience food insecurity during the year. "Very low food security" = one or more household members have to skip meals or otherwise eat less at some point during the year because they lack money.

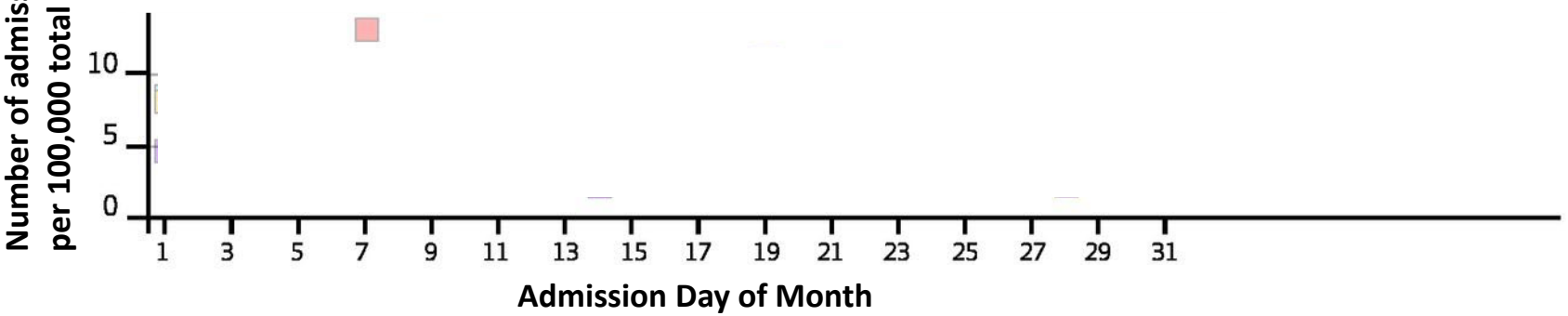
Source: Agriculture Department, "Measuring the Effect of Supplemental Nutrition Assistance Program (SNAP) Participation on Food Security," August 2013. This chart shows the results of a study that looked at longitudinal data comparing SNAP households upon beginning to receive SNAP, and six months after SNAP receipt.

SNAP was designed to support food security. And it does.

Does it also support better health?

# Admissions for Low Blood Sugar Increase by 27% in Last Week of the Month for Low-Income Population

Can SNAP Supplemental Nutrition Assistance Program make a difference?

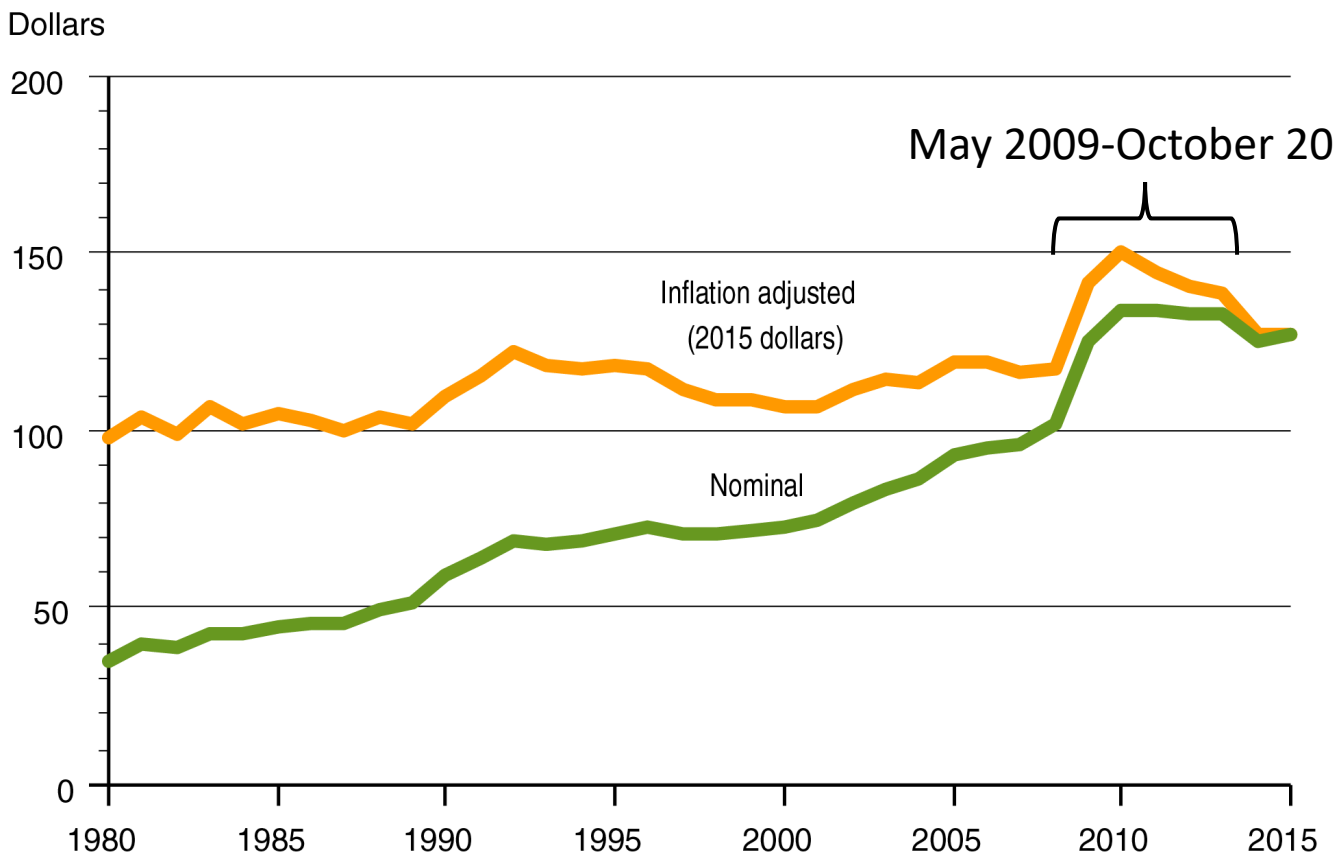



Seligman HK et al. Health Aff 2014;33:116-123

HealthAffairs

# American Recovery & Reinvestment Act

**Average monthly SNAP benefits per person, fiscal 1980–2015**




SNAP = Supplemental Nutrition Assistance Program.
Source: USDA, Economic Research Service using data from USDA, Food and Nutrition Service and U.S. Department of Labor, Bureau of Labor Statistics.

# $54 million averted

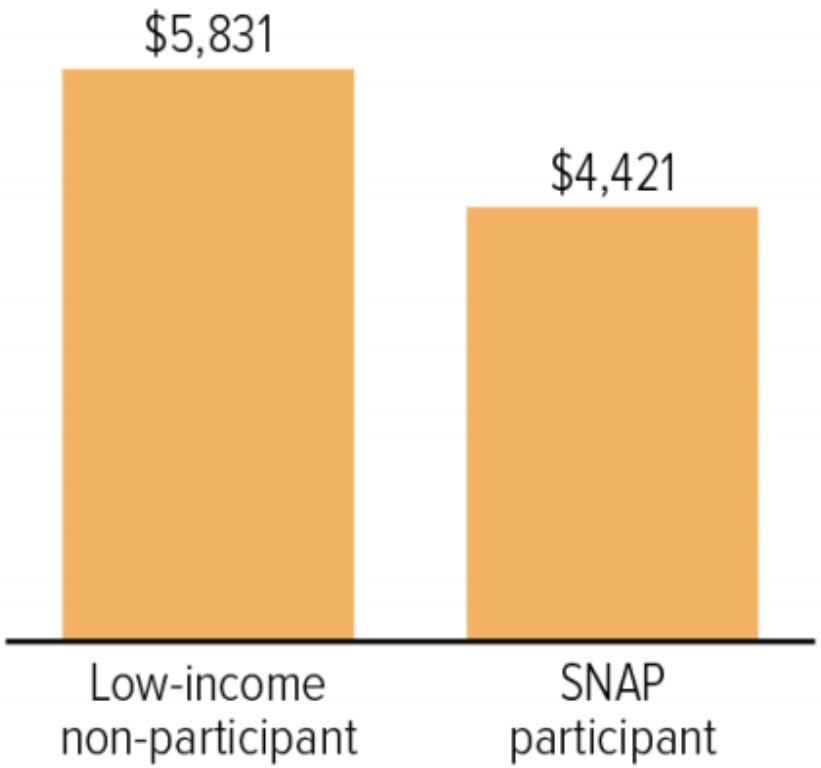
Emergency department and inpatient hospitalization costs *only* for commercially-insured adults between the ages of 19 and 64

Basu S, Berkowitz SA, Seligman HK. *Medical Care*. 2017.

FIGURE 10

## A SNAP Participant Incurs $1,400 Less for Health Care

Estimated annual per-person health care spending



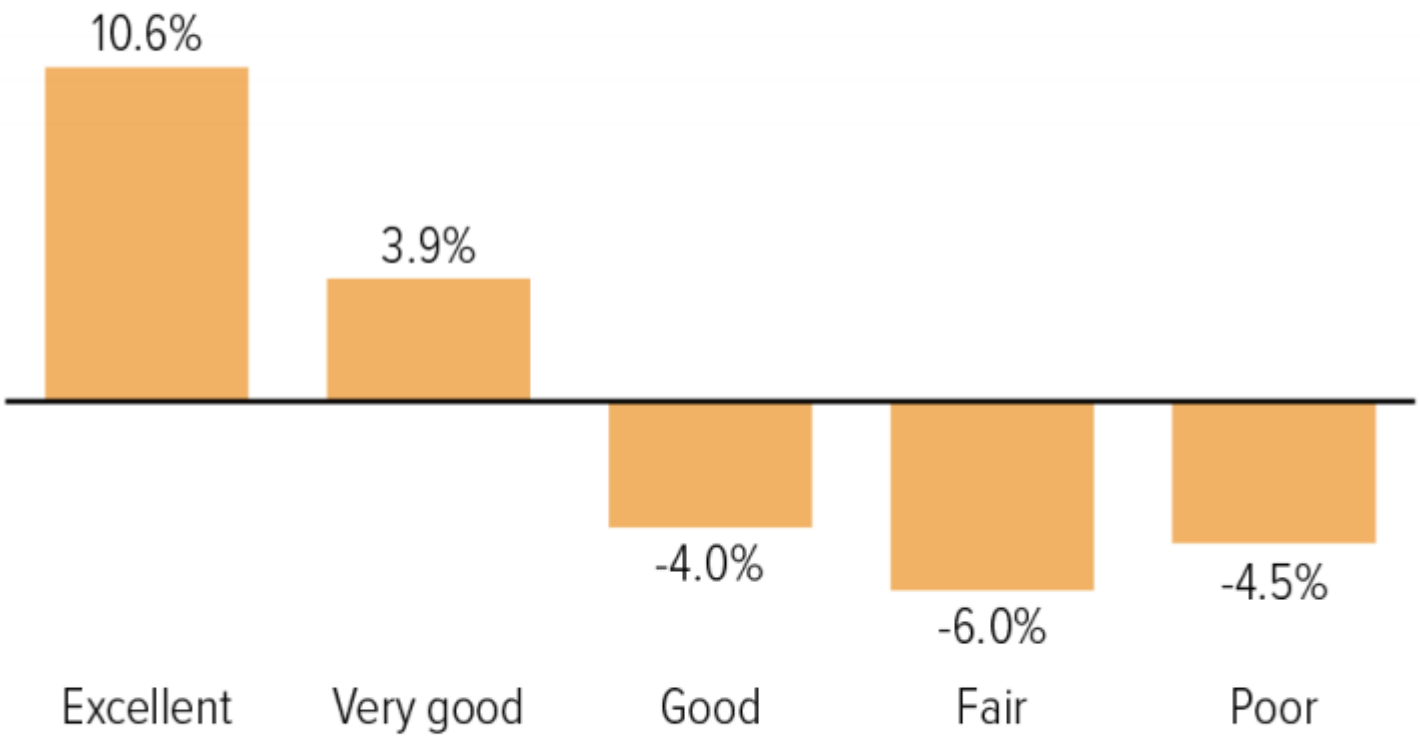

Note: Health care spending includes out-of-pocket expenses and costs paid by private and public insurance, including Medicare and Medicaid.

Berkowitz, Seligman, et al.
JAMA Int Med. 2017

FIGURE 6

## SNAP Participants Report Better Health Than Eligible Non-Participants

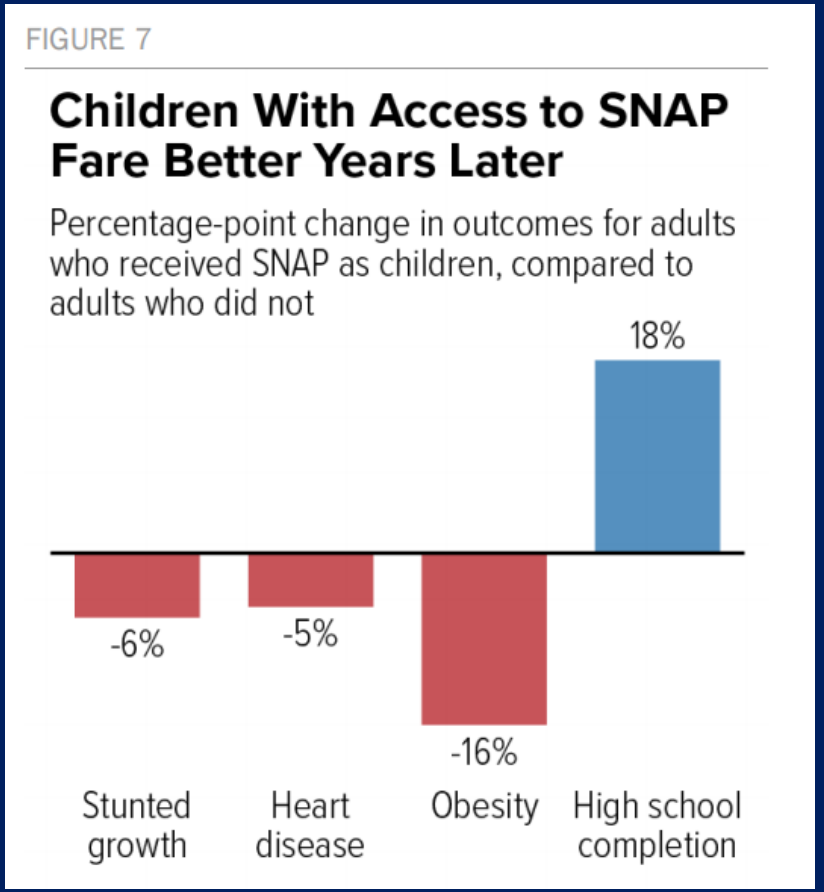
Percent more or less likely to describe health as:




Source: Christian A. Gregory and Partha Deb, "Does SNAP Improve Your Health?" Food Policy, 2015. Adjusted for differences in demographic, socioeconomic and other characteristics. Sample includes adults aged 20 to 64 in households with income at or below 130% of the federal poverty level.

# Children Exposed to SNAP are Healthier

- Healthier at birth
- Less likely to develop metabolic syndrome
- More likely to reach educational and academic potential
- More likely to become economically self-sufficient

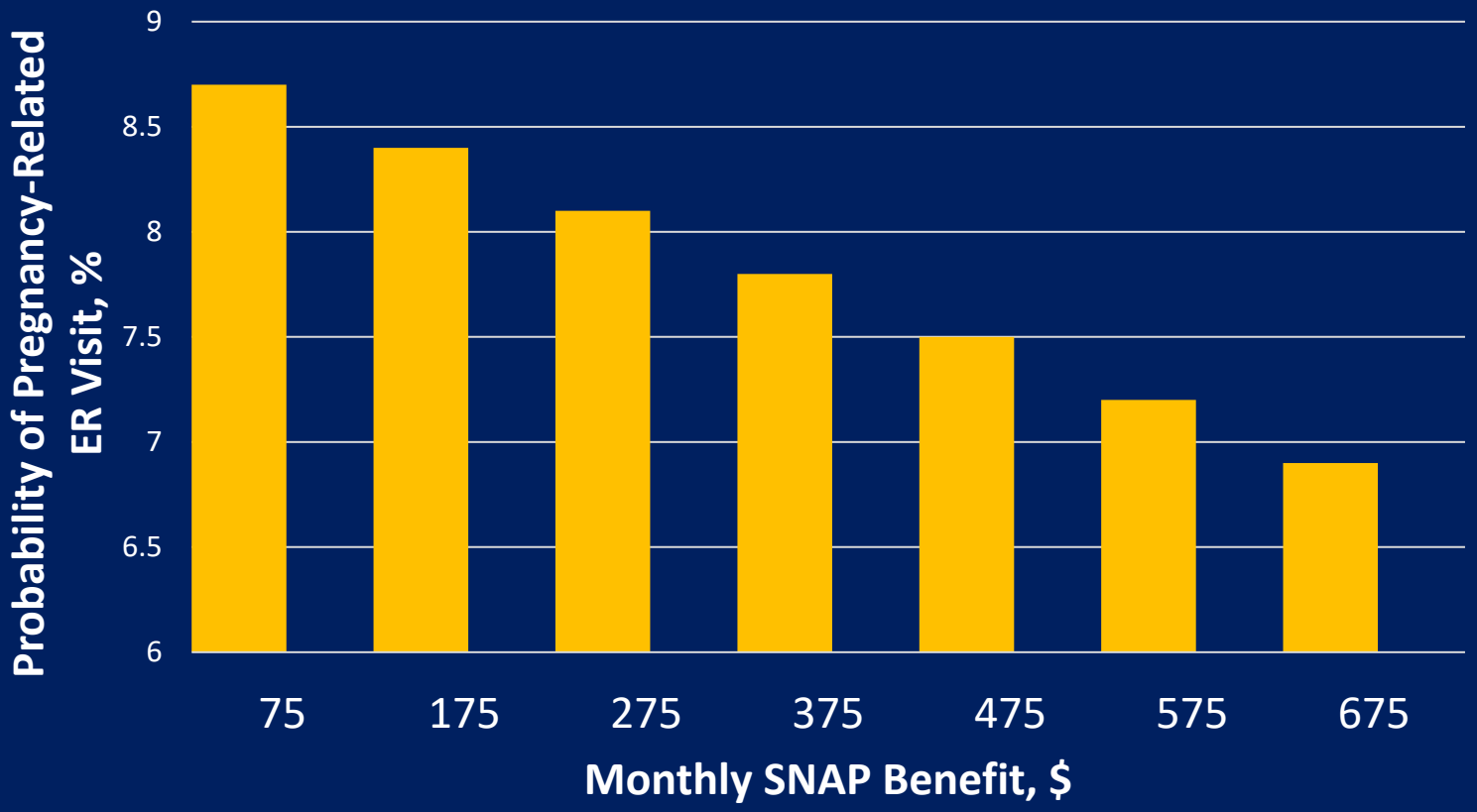



Hoynes H, Schanzenbach DW, Almond D. Long-Run Impacts of Childhood Access to the Safety Net. Am Econ Rev. 2016; 106(4):903–34.

# SNAP & Impact on Health Outcomes

- Less low blood sugar at end of month
- Fewer pregnancy-related ED visits
- Fewer child ED visits for asthma
- Fewer adult ED visits for HTN
- Fewer hospitalizations and shorter length-of-stay
- Lower health care expenditures

# Higher SNAP Benefits Associated with Lower Pregnancy-Related ER Visits

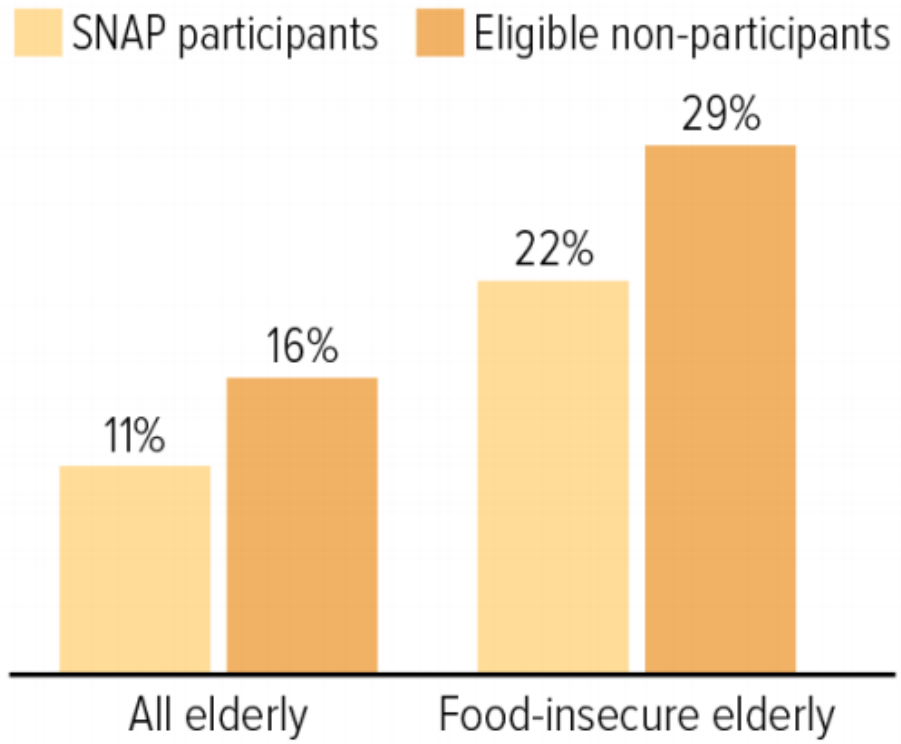



Arteaga, Heflin, & Hodges. Pop Res & Pol Rev, 2018

FIGURE 8

## Elderly SNAP Participants Less Likely to Skip Needed Medications

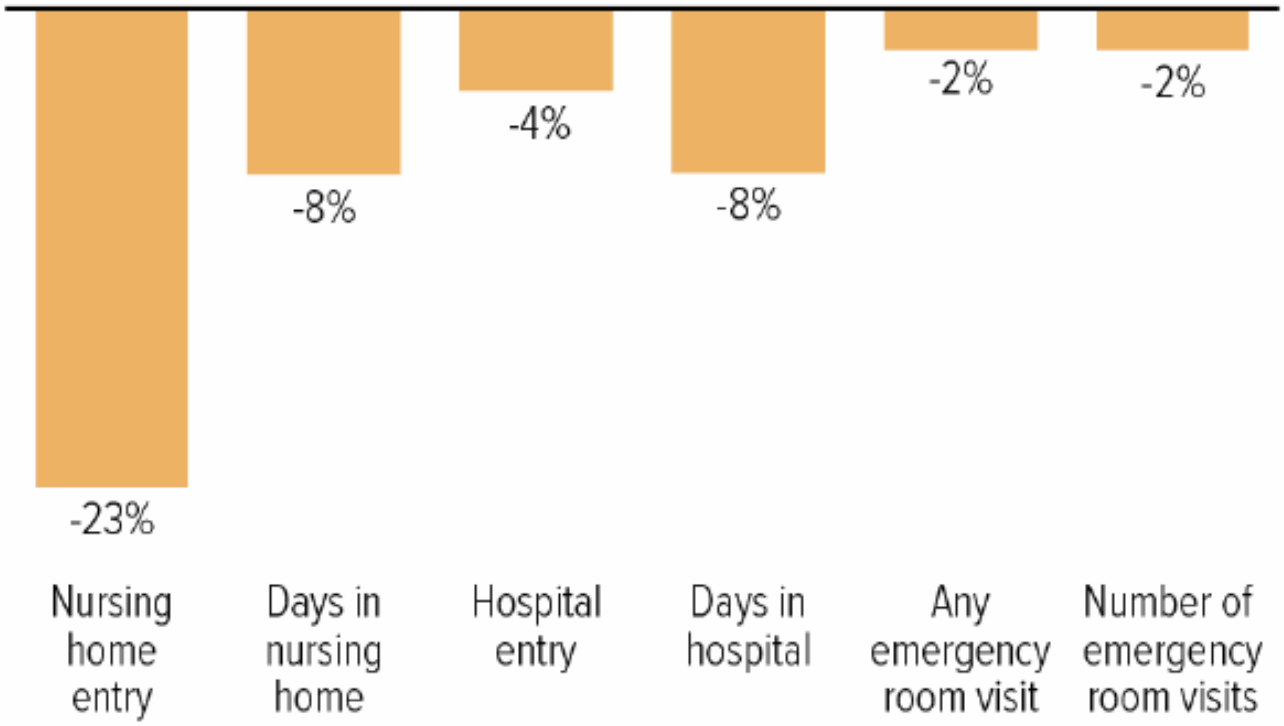
Percent who skip or stop medications, take smaller doses, or delay a prescription due to cost




Source: Mithuna Srinivasan and Jennifer A. Pooler, "Cost-Related Medication Nonadherence for Older Adults Participating in SNAP, 2013–2015." American Journal of Public Health, December 2017

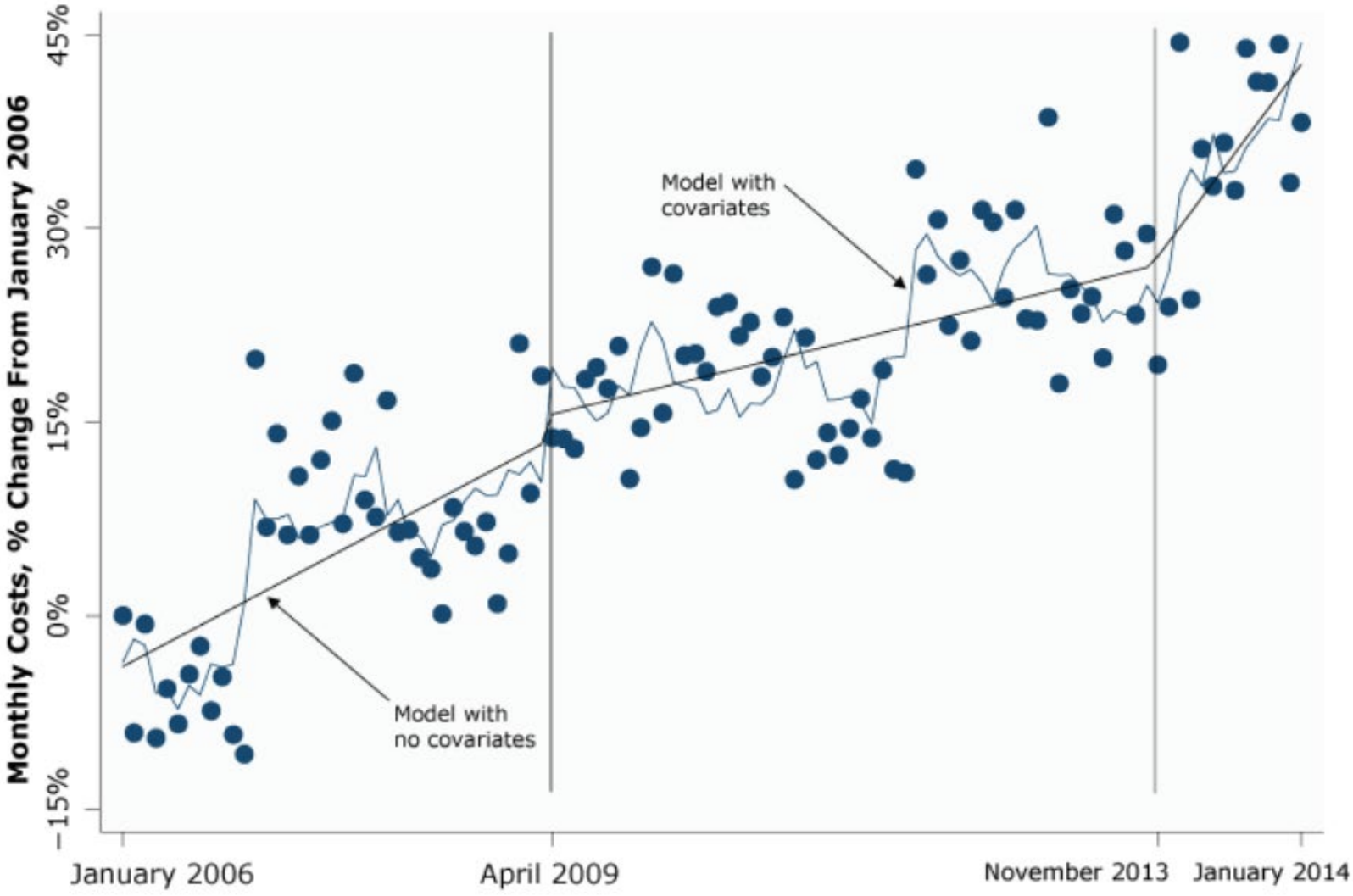
# Elderly SNAP Participants Are Less Likely to Use Health Care Services

Percent relative to low-income elderly non-participants




Source: Sarah L. Szanton et al., "Food assistance is associated with decreased nursing home admissions for Maryland's dually eligible older adults," BMC Geriatrics, July 2017; and Laura J. Samuel et al., "Does the Supplemental Nutrition Assistance Program Affect Hospital Utilization Among Older Adults? The Case of Maryland," Population Health Management, 2017. Adjusted for differences in demographic, socioeconomic and other characteristics. Results for hospital and emerency room visits adjust for proportion of the year on Medicaid. Sample includes adults age 65 and older eligible for both Medicare and Medicaid in Maryland.

# Medicaid Expenditures Decreased During ARRA




Interrupted time series analysis of changes in nationwide inpatient Medicare expenditures in response to changes in SNAP, January 2006–January 2014. SNAP benefits increased monthly by a minimum of 13.6% per SNAP household in April 2009, and this increase expired in November 2013. Sonik, Parish, & Mitra. Prev Chr Dis, 2018.

# Increasing the Public Health Impact of SNAP (2022 Edition)

1. Increase SNAP participation (i.e. reduce participation barriers & stigma)
2. ☑ Increase SNAP benefit adequacy
3. Strengthen requirements for SNAP-authorized retailers to promote healthier retail food environments
4. ☑ Ensure more retailers are authorized for online SNAP
5. ☑ Promote healthier purchases with SNAP benefits (including GusNIP expansion)
6. Increase SNAP-Ed reach and impact (PSE approaches)
7. Strengthen public health impacts of SNAP during disasters and through resilient food systems

# Policies that Decrease Food Insecurity—Proven

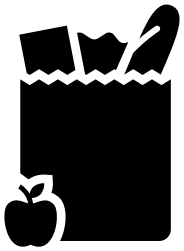
- SNAP
- EITC
- National School Lunch Program & School Breakfast Program
- WIC
- Favorable state and local tax policies for low-income households

# Policies that Decrease Food Insecurity—Promising

- Charitable Food: Food Banks & Food Pantries
- Other Federal Nutrition Programs (besides SNAP & WIC)
- Other federal policies: LIHEAP, Child Tax Credits, Medicaid Expansion
- Cash transfers
- Housing subsidies (esp. permanent housing subsidies)
- Food is Medicine interventions

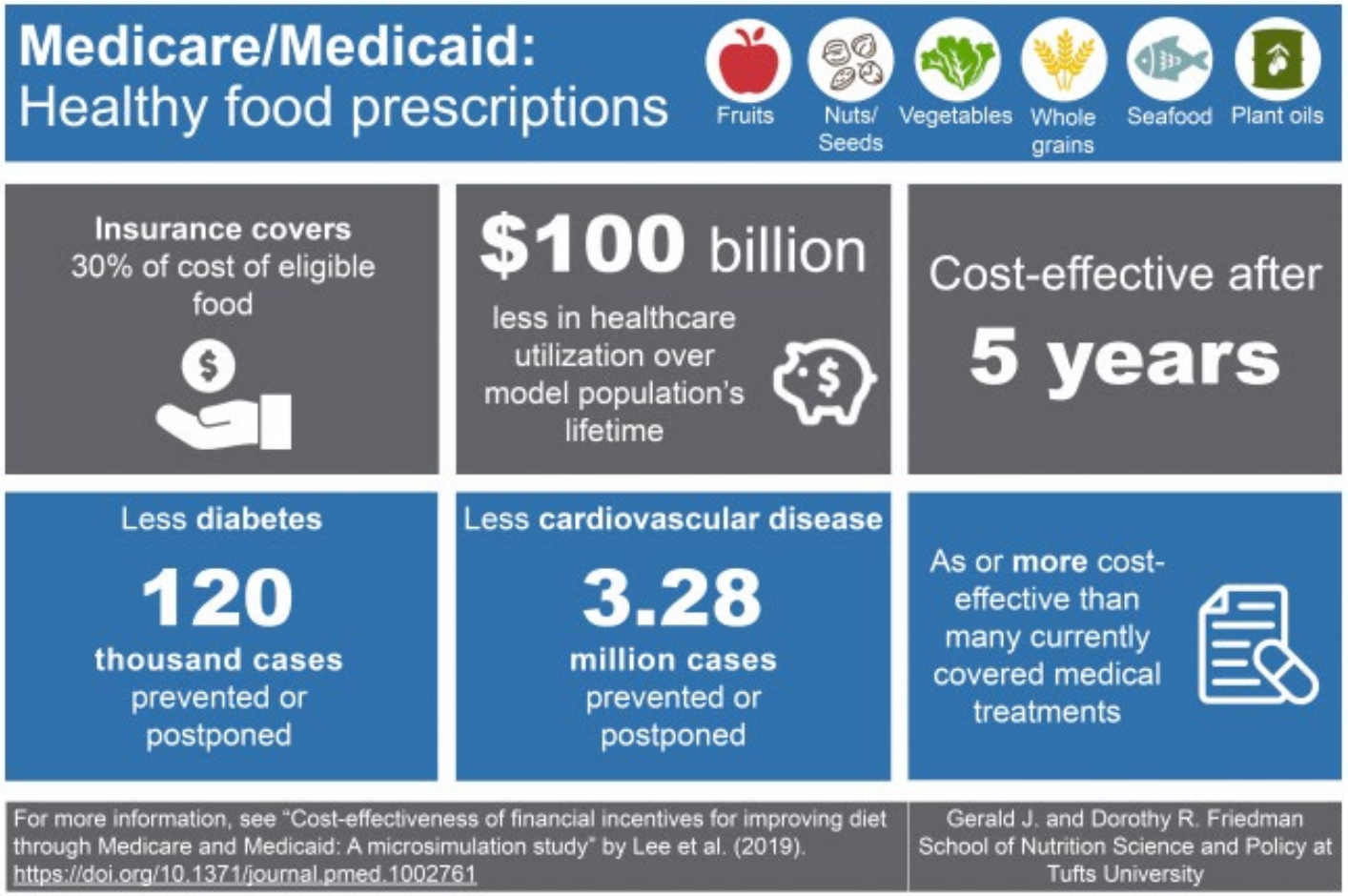
# Food Is Medicine

- Integration of specific food and nutrition interventions in, or in close collaboration with, the health care system
  - Medically-Tailored Meals
  - Medically-Tailored Groceries
  - Produce Prescriptions
  - On-site interventions
- Target population: individuals with or at high risk for serious health conditions
  - Often prioritizes people with or at high risk of food insecurity
  - People with cancer and HIV were first recipients



# Prescribing healthy food in Medicare/Medicaid is cost effective, could improve health outcomes

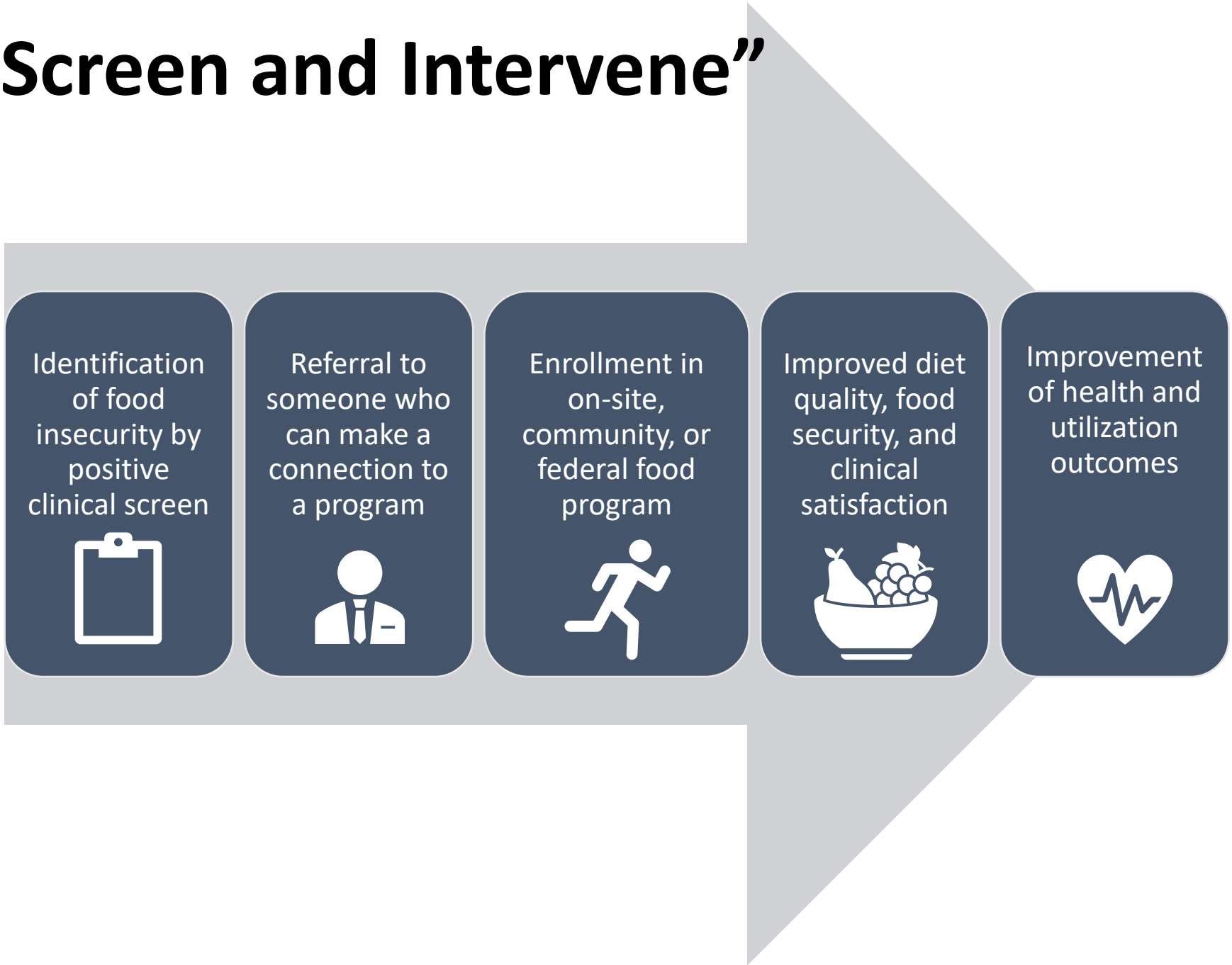
New study finds that health insurance coverage for healthy food could improve health, reduce healthcare costs, and be highly cost-effective after five years

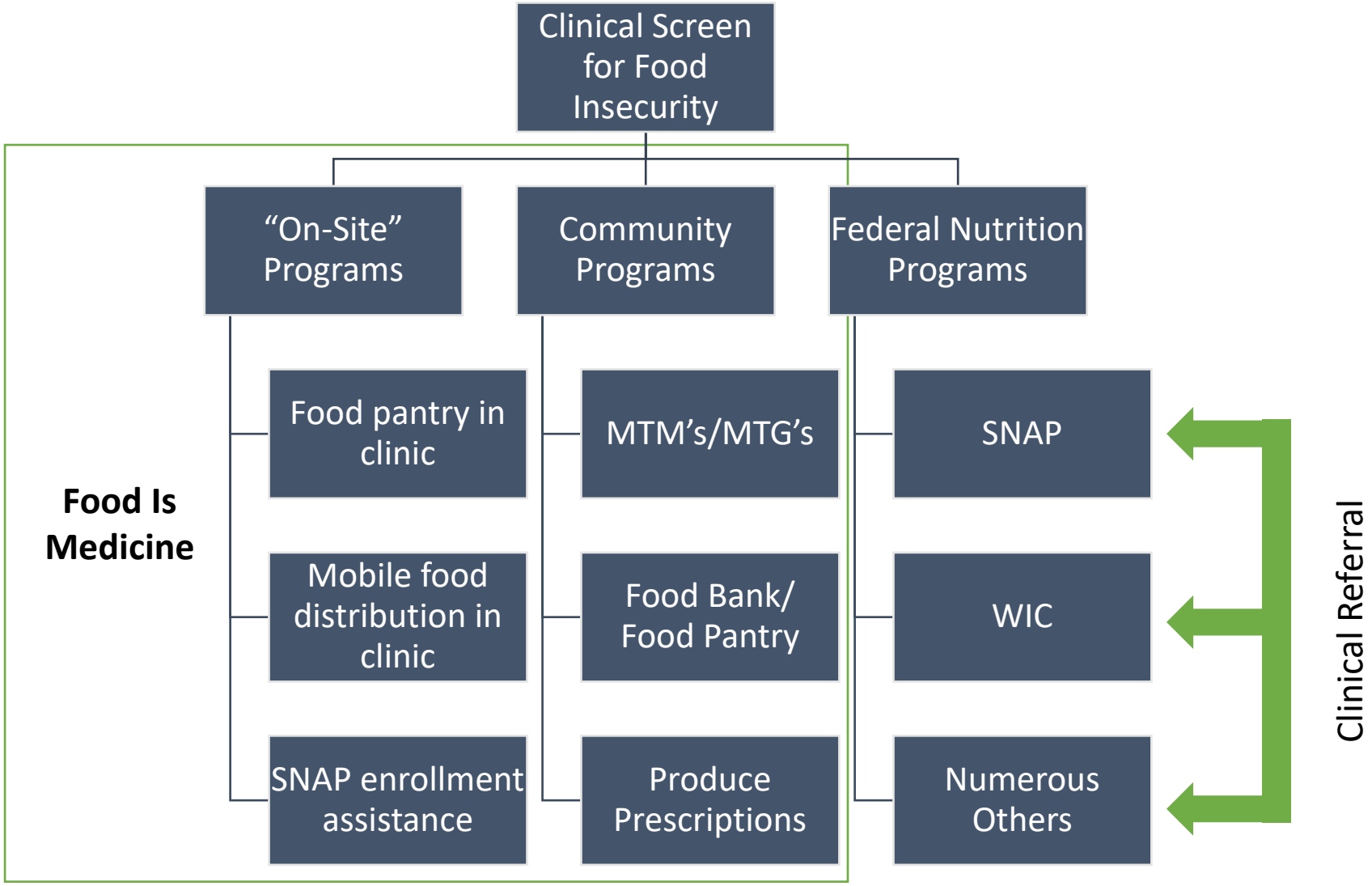



For more information, see "Cost-effectiveness of financial incentives for improving diet through Medicare and Medicaid: A microsimulation study" by Lee et al. (2019). https://doi.org/10.1371/journal.pmed.1002761

Gerald J. and Dorothy R. Friedman School of Nutrition Science and Policy at Tufts University

# “Screen and Intervene”




Clinical Screen for Food Insecurity
"On-Site" Programs
Community Programs
Federal Nutrition Programs
Food pantry in clinic
Mobile food distribution in clinic
SNAP enrollment assistance
MTM's/MTG's
Food Bank/ Food Pantry
Produce Prescriptions
SNAP
WIC
Numerous Others
Food Is Medicine
Clinical Referral

# Federal Nutrition Programs: WIC

- Pregnant & post-partum mothers (6 or 12 months), children up to the age of 5
- Eligibility: <185% FPL at “nutritional risk” based on a prescription from a HC provider
  - Meets definition of FIM intervention
- Benefits are a specific package of healthy food items specific to age
- **Strong evidence WIC improves dietary intake, birth outcomes, immunization rates, child academic performance**

# Medically Tailored Meals

- As a FIM intervention, the referral comes from the health care setting
- Meals tailored to the medical needs of the individual patient that are either picked up or delivered to the home, usually by a partnering community-based organization
- **Relatively strong evidence suggests these interventions can reduce hospital admissions and readmissions, lower medical costs, and improve medication adherence**
- Suitable for populations with the highest burden of disability and illness
- Relatively high cost

# Produce Prescriptions

- Cash value (on voucher or EBT card) redeemable for fruits and vegetables
- When tightly linked to health care, these are FIM interventions
- State and local programs across the US
  - Federal program: WIC
- Lots of heterogeneity across programs
- **Moderate evidence, but rapidly building**
  - Improved dietary intake
  - Improved food security
  - Modelling studies show substantial downstream impacts on health outcomes and health care costs
- Suitable for populations with the lowest burden of disability and illness
  - Often targeted toward those with or at high risk of chronic disease, but can be used for prevention in less targeted populations

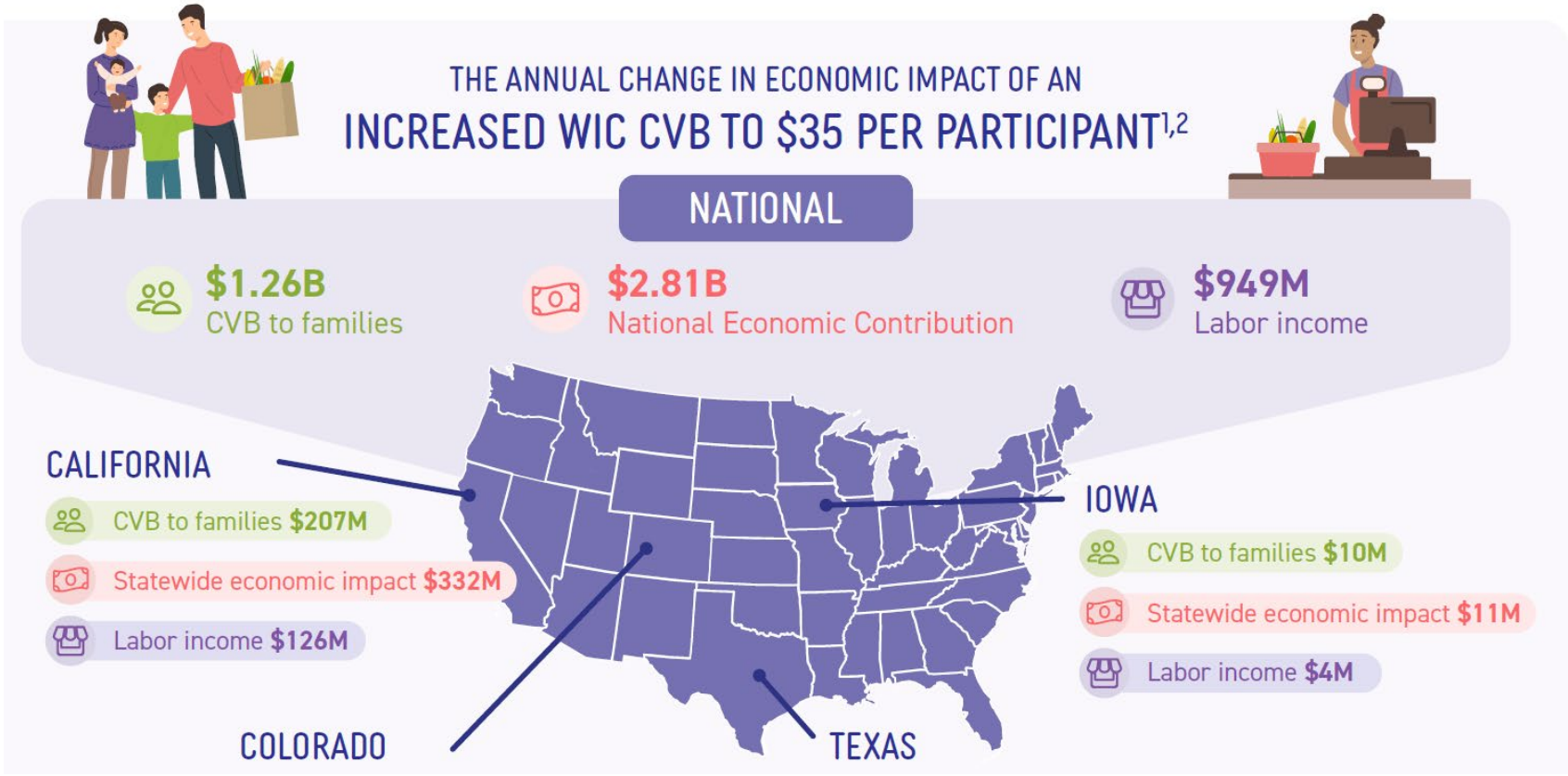
# Medically Tailored Groceries

- Raw ingredients that must be assembled into meals at home
- Lower cost service than medically tailored meals; targets a healthier population that needs less support with meal preparation
- Sometimes operationalized by the same organizations as medically-tailored meals as a way to ease off the program; more often operationalized by food banks
- **Very little health impact data**
  - **No reason to think they function differently than other FIM interventions as long as they reduce food insecurity and support dietary intake similarly**
  - **Preliminary evidence suggests they do**

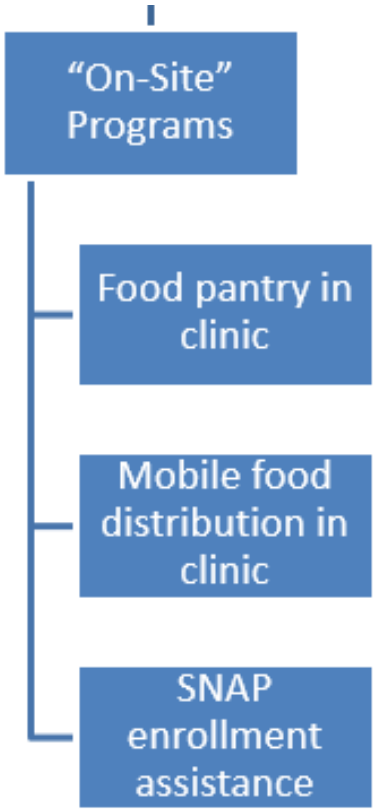
# On-Site Programs

- Onsite food distribution
  - Food pantry permanently located at hospital or clinic, stocked and/or staffed by Food Bank
  - Mobile food distributions at hospital or clinic
  - Take-home meals provided at discharge
- On-site SNAP enrollment assistance during clinic visit or hospitalization

# The Extended Value Proposition

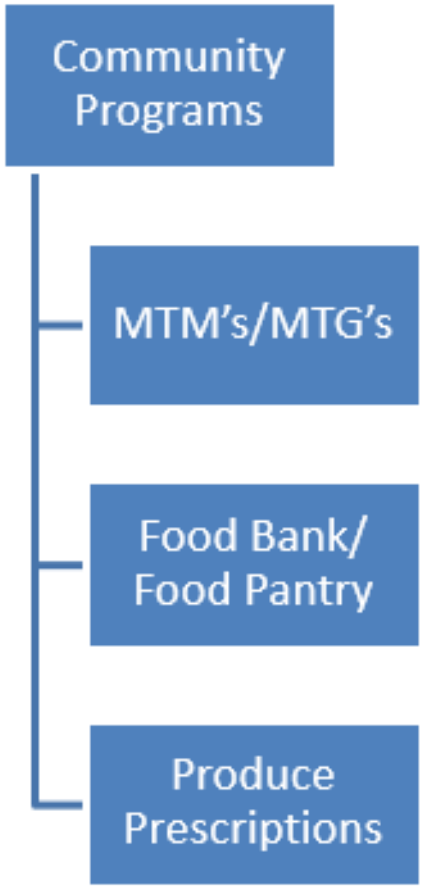


# Levers for On-Site Programming



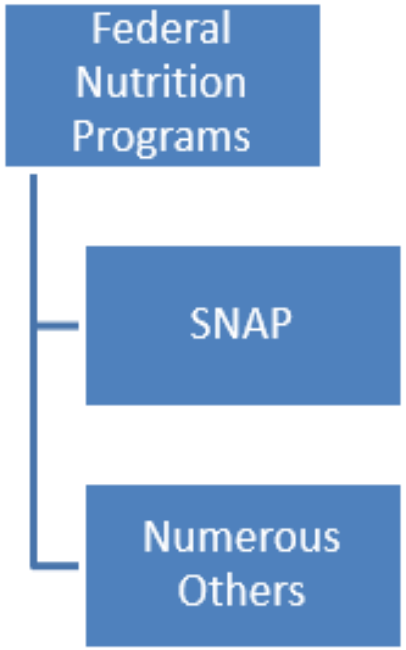

- Transitioning HC funding to general operating funds (rather than community benefits & foundation funding)
  - Longer-term funding
  - More stability in coverage of certain populations
- Streamlining co-enrollment of SNAP and Medicaid (and other benefits)
  - Embedding eligibility workers

# Levers for Community Programs




- Sustainable sources of funding
  - State: Medicaid waivers
  - Federal: Medically Tailored Home-Delivered Meal Demonstration Pilot Act of 2020 (McGovern)
  - Federal: Addition of MTM's/MTG's to Farm Bill
  - Federal: Expansion of Produce Prescription Programs in Farm Bill (GusNIP)
- Implementation of nutrition policies in food banks/food pantries
- More federal/state/local $ support for FB purchases of healthy food

# Policy Levers for Federal Nutrition Programs




- Expand access
  - Coordinate SNAP & Medicaid eligibility
- Insure adequate benefits
- ☑ **Tying benefit levels to cost of the Low Cost Food Plan (not TFP)**
- Streamline enrollment & re-enrollment processes
- Facilitate redemption
  - Online

# Policies With a Lot of Excitement Right Now

- Universal basic income
- Co-enrollment of benefits
- Summer EBT

## Social Determinant of Health

- Fundamental drivers of the conditions in which people are born, grow, live, work, and age
- Focuses on underlying social and economic conditions
- Root causes

## Social Need

- Downstream manifestations of the impact of the social determinants of health
- Acute needs

"Meeting Individual Social Needs Falls Short Of Addressing Social Determinants Of Health, " Health Affairs Blog, January 16, 2019. DOI: 10.1377/hblog20190115.234942

# How might health care address food insecurity as a SDH?

- Implement anchor institution initiatives
  - Institutions that tend not to move location and play vital roles in their local communities and economies
  - Leverage their economic power alongside their human and intellectual resources to improve the long-term health and social welfare of their communities
- Leverage voice to inform policymakers and decision-makers about the important health impact of structural changes to support food security

Barnidge EK, Stenmark SH, DeBor M, Seligman HK. The Right to Food: Building Upon "Food Is Medicine". Am J Prev Med. 2020 Oct;59(4):611-614.

# Thank You!