FOOD INSECURITY, FOOD BANKS, & HEALTH CARE:

A JOURNEY

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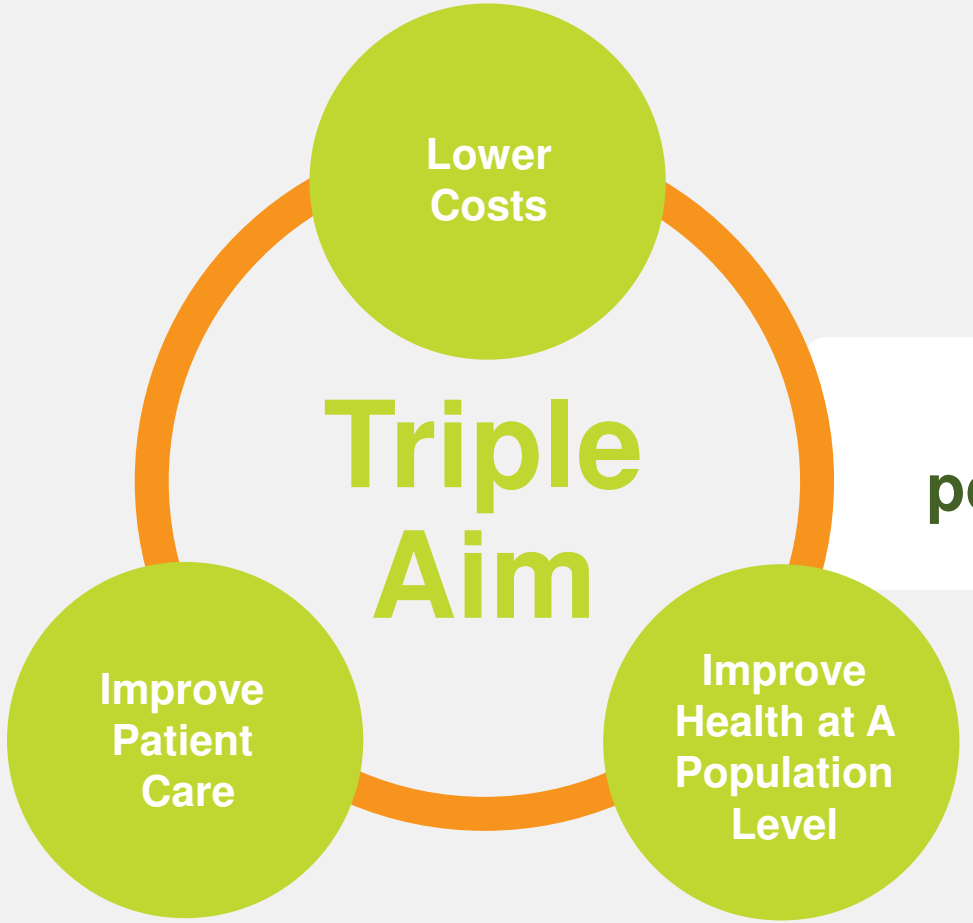
FEEDING AMERICA®

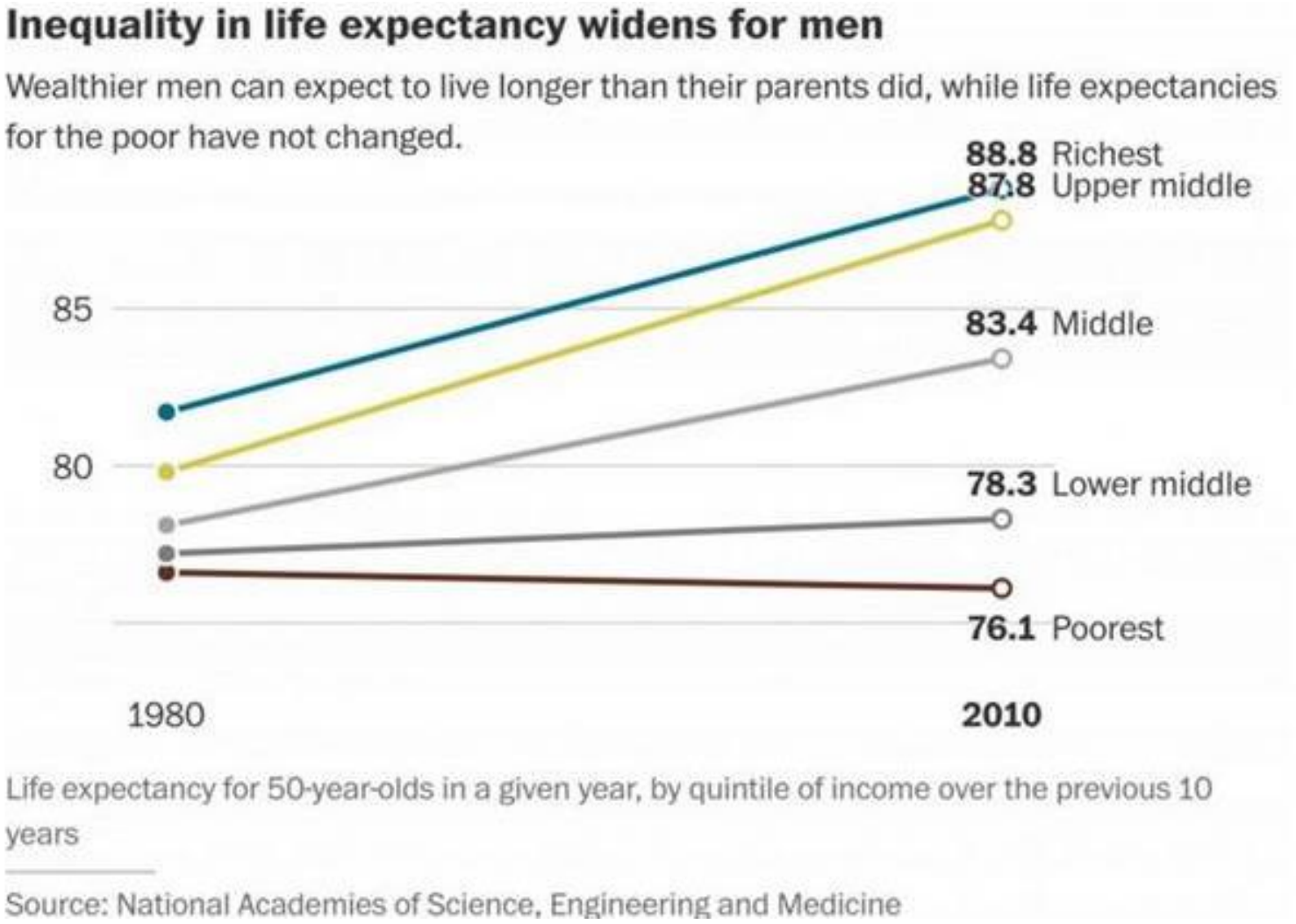
Triple Aim of Health Care



Better care for the whole population at the lowest cost

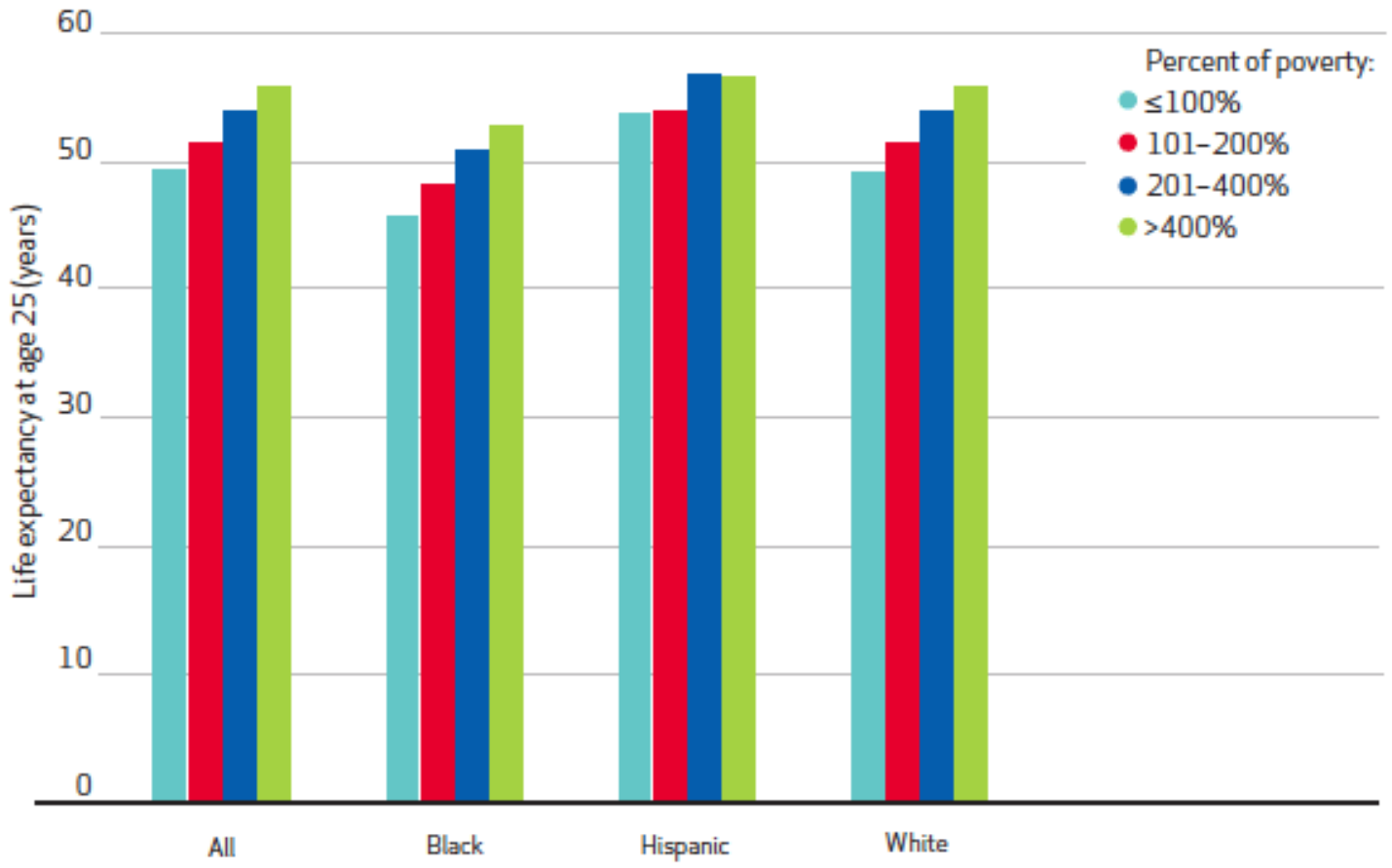
Source: See Donald M. Berwick et al. The Triple Aim: Care, Health and Cost, 27 Health Affairs 759-769 (2008); Institute for Health Care Improvement

Health Disparities: Life Expectancy by Income



Source: WashingtonPost.com

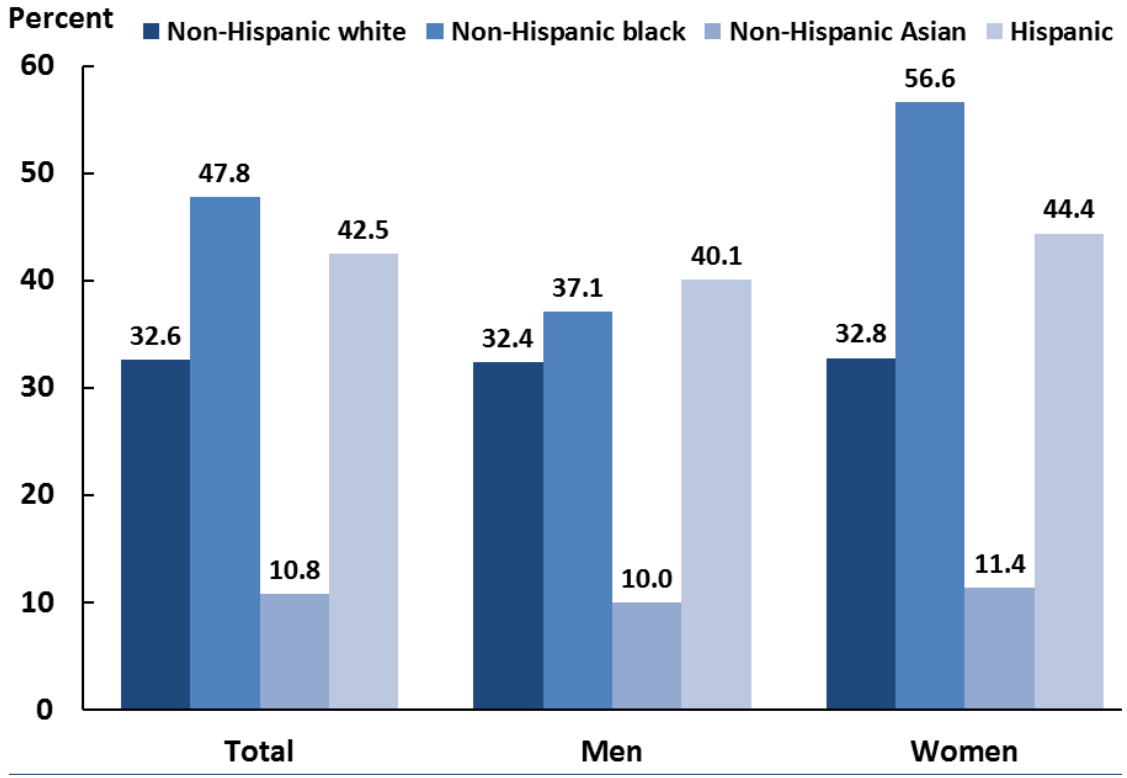
Health Disparities: Life Expectancy by Income and Race/Ethnicity



Source: Health Affairs,2011

Health Disparities: Obesity Rates by Race/Ethnicity

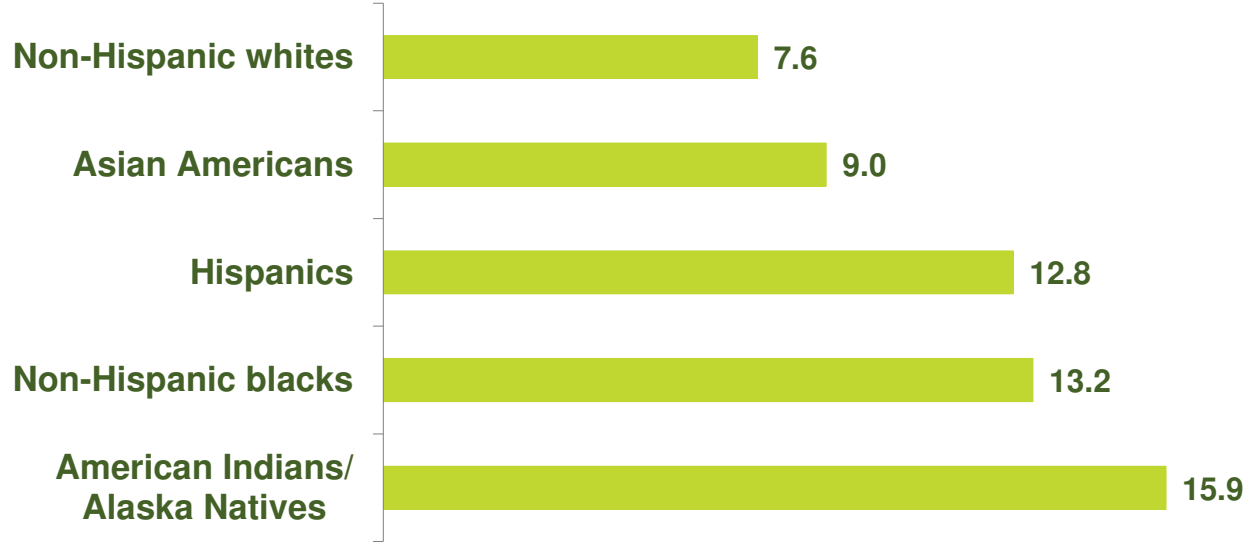
Prevalence of obesity among adults aged 20 and over, by sex and race and Hispanic origin: United States, 2011-2012



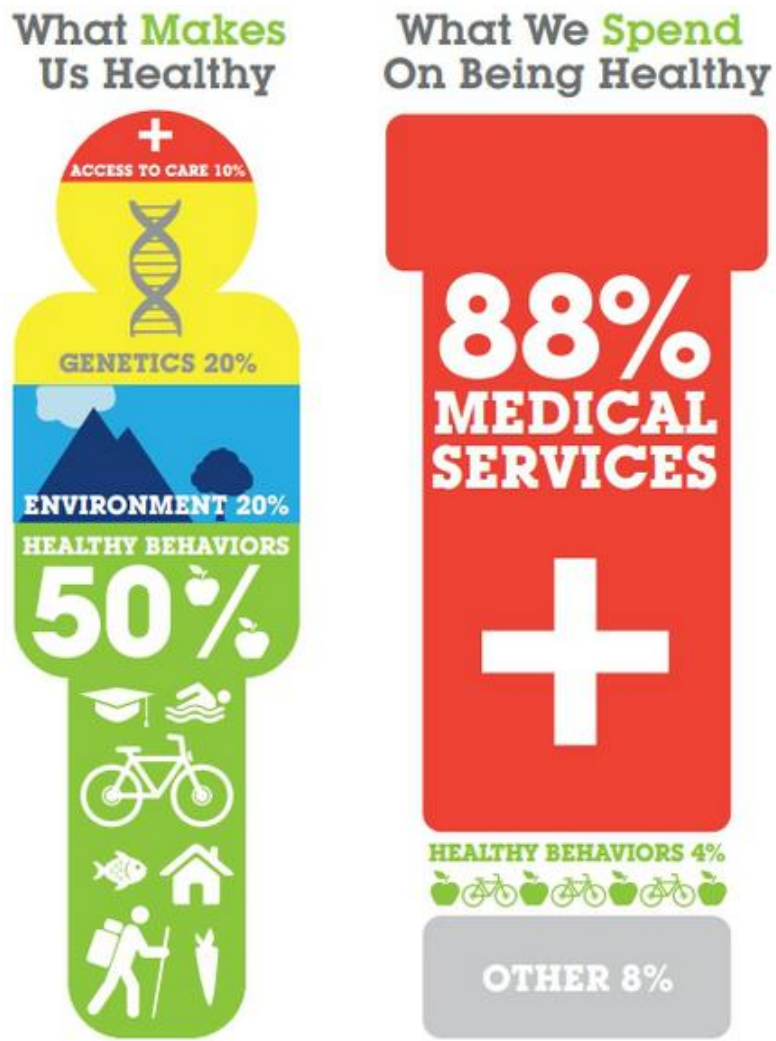
Source: National Health and Nutrition Examination Survey, 2011-2012
http://www.cdc.gov/nchs/data/factsheets/factsheet_disparities.htm

Health Disparities: Diabetes Rates by Race/Ethnicity

Age-adjusted* percentage of people aged 20 years or older with diagnosed diabetes, by race/ethnicity, United States, 2010–2012

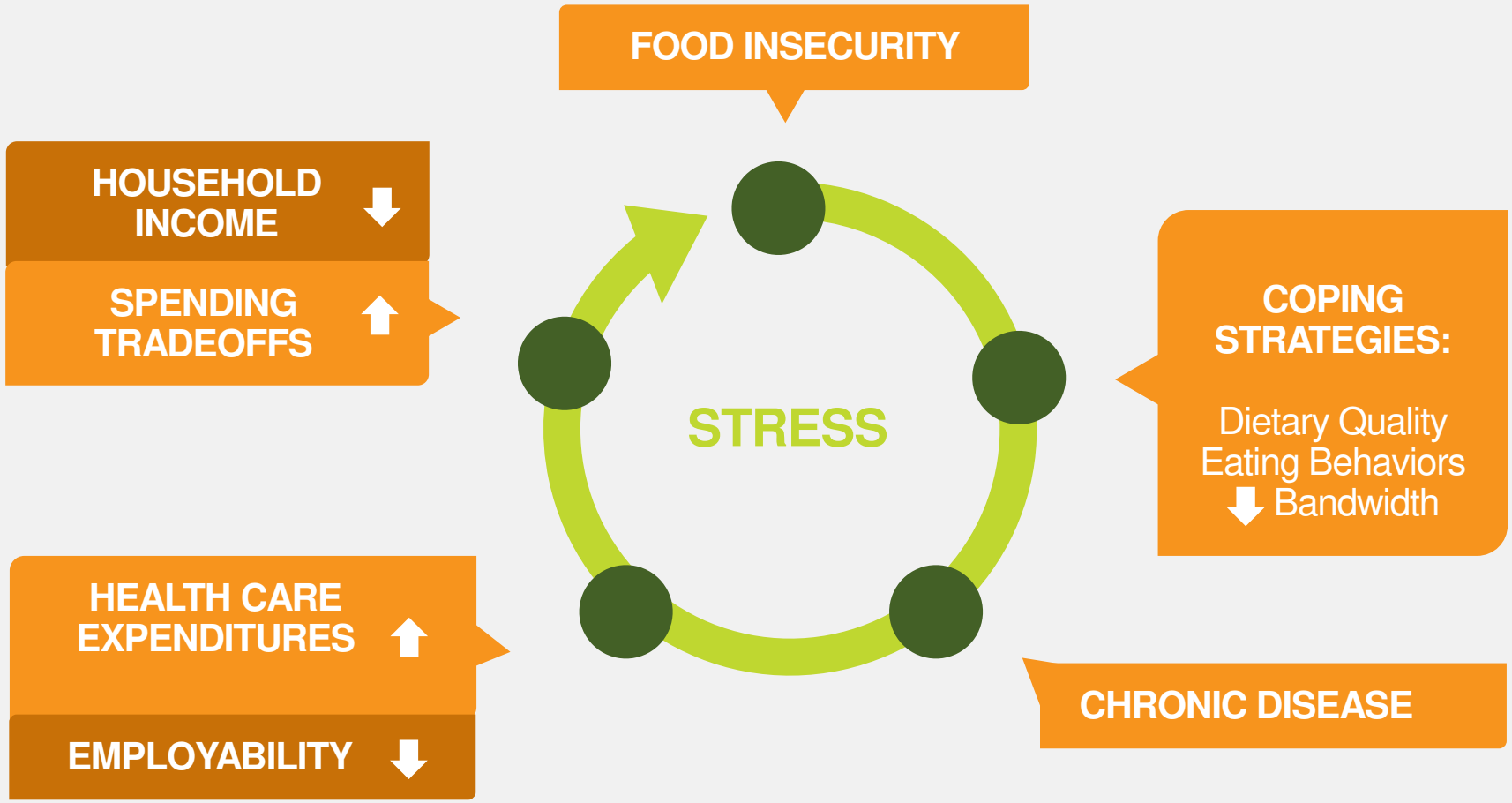


*Based on the 2000 U.S. standard population. Source: 2010–2012 National Health Interview Survey and 2012 Indian Health Service's National Patient Information Reporting System.



Source: Bipartisan Policy Center (http://bipartisanpolicy.org/projects/lots-lose) • Dakotafire Media (www.dakotafire.net)

A Conceptual Framework: Cycle of Food Insecurity & Chronic Disease



Food Insecurity

What we know today

Across the lifespan, food insecurity is associated with:

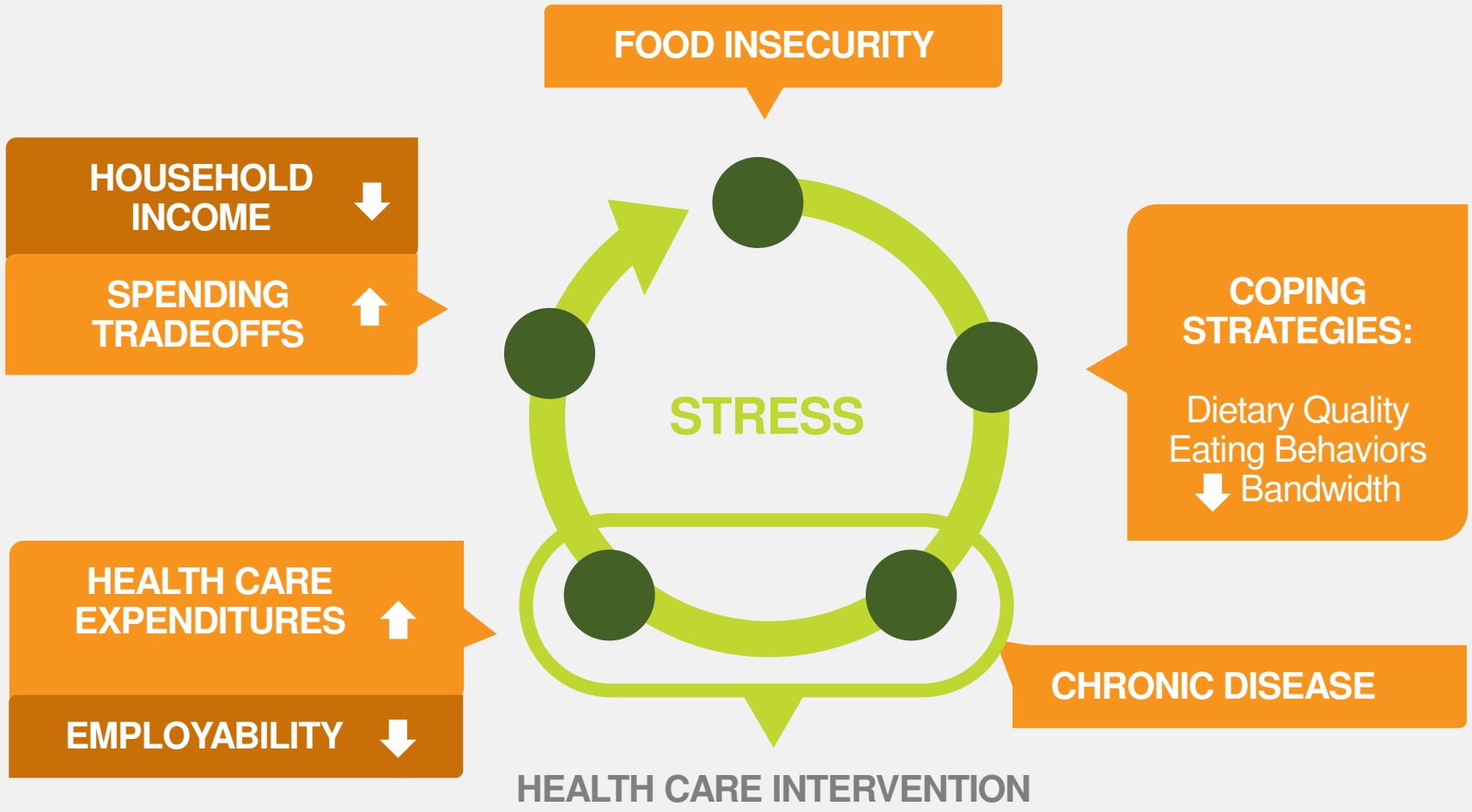
- Poorer dietary intake
- Poorer physical, psychological, and behavioral health
- Poorer disease management

What we *think we* know

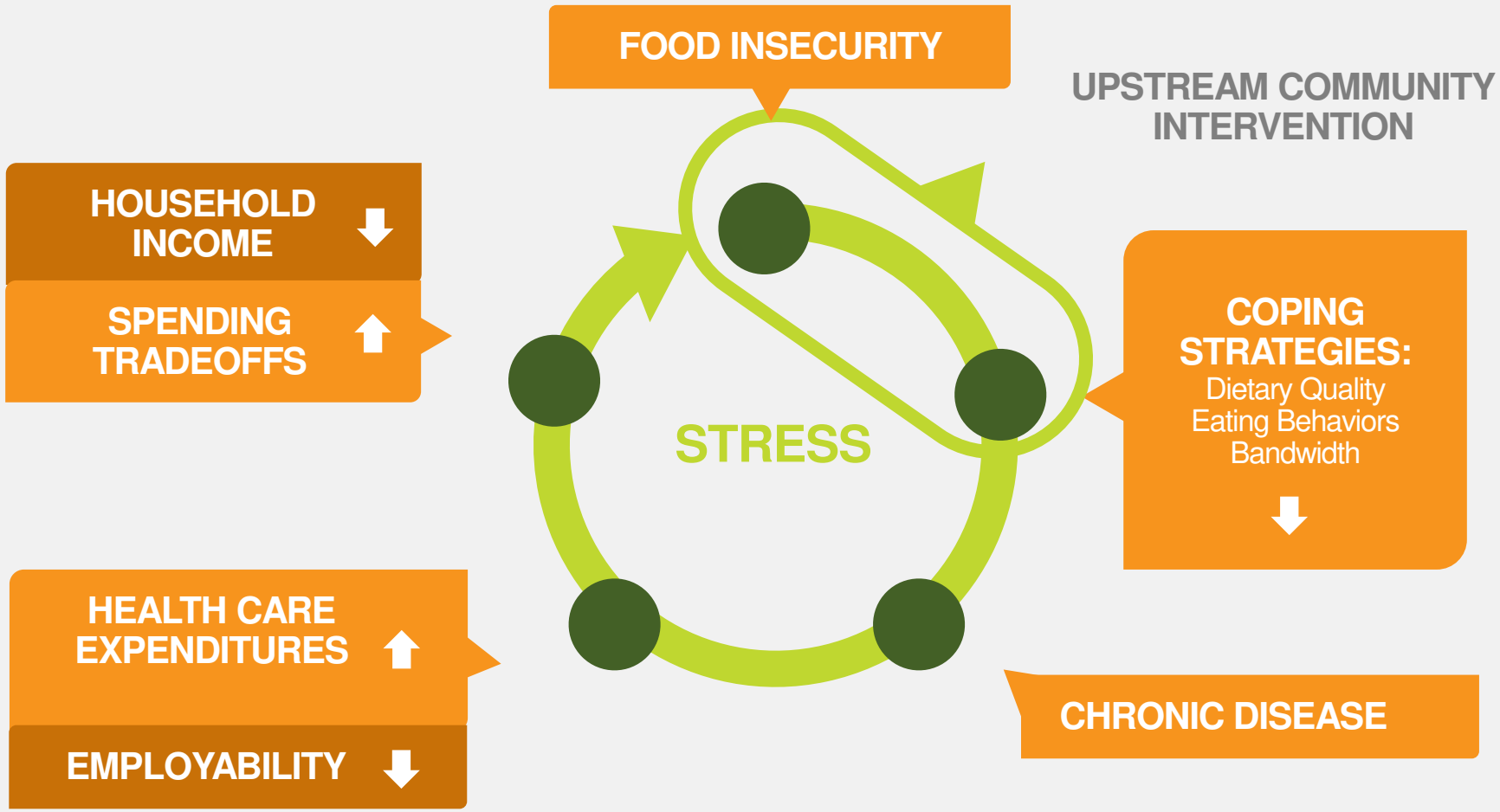
Improving food security results in:

- Better dietary intake & lower weight (SNAP)
- Improved disease management (FA Diabetes Pilot)
- Lower health care costs
- Stability (broadly): better health

A Conceptual Framework: Cycle of Food Insecurity & Chronic Disease



A Conceptual Framework: Cycle of Food Insecurity & Chronic Disease



Health Care vs. Health Promotion

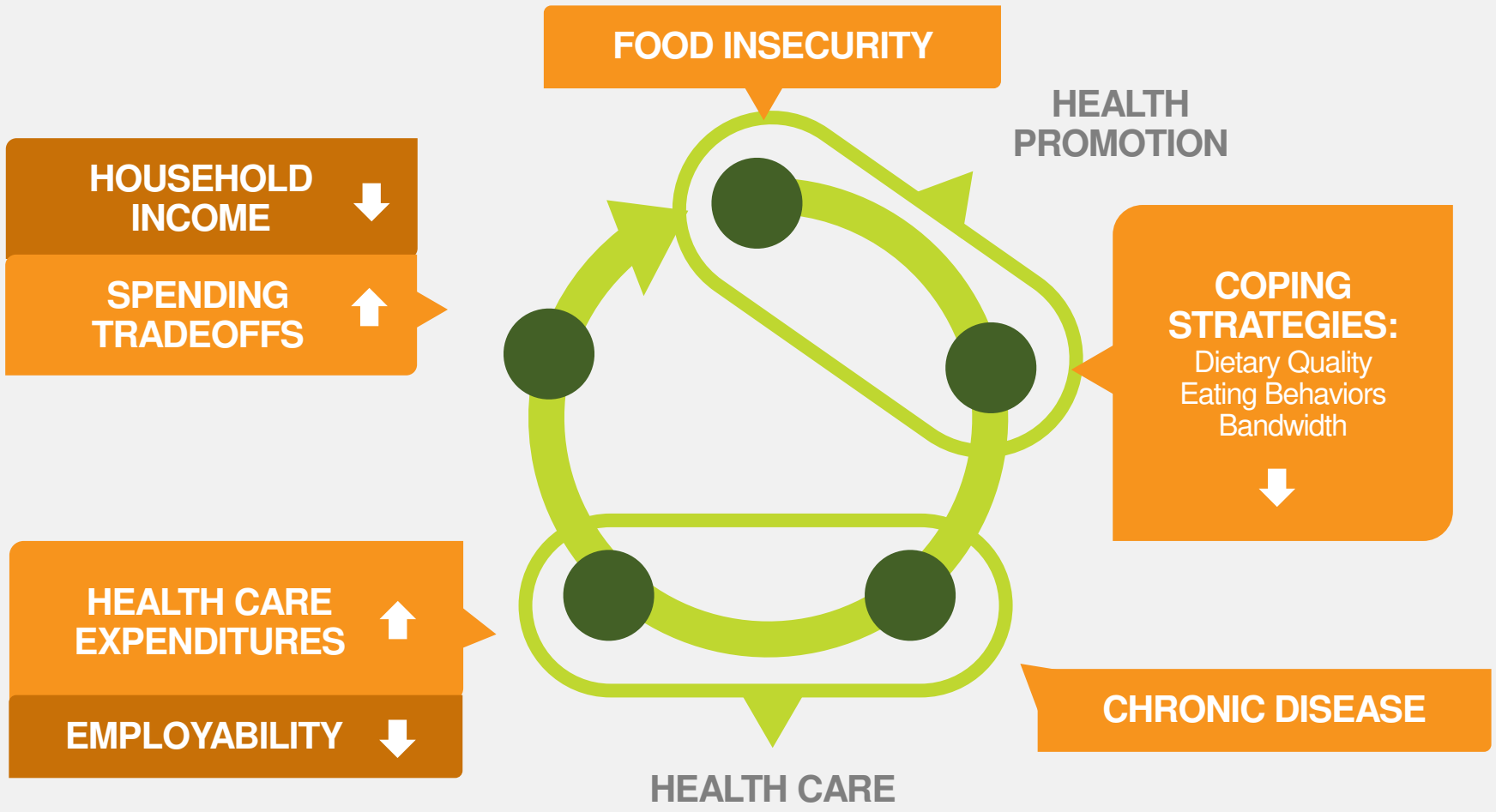
Health Care

Providing direct medical services

Health Promotion

Activities that support health education, access to care, and healthy behaviors

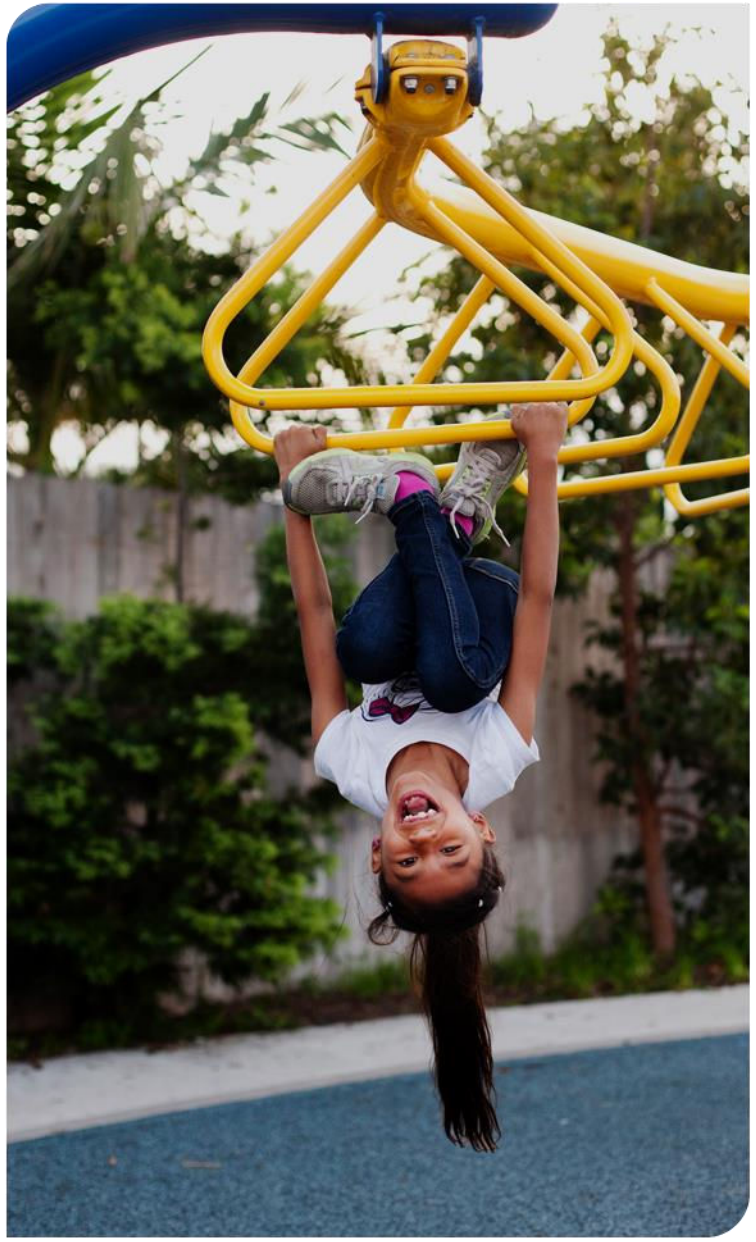
A Conceptual Framework: Cycle of Food Insecurity & Chronic Disease



What would it take for food insecurity interventions to successfully address poor health?

What Would it Take for These Interventions to be Successful?

Food Insecurity and Health Care Costs



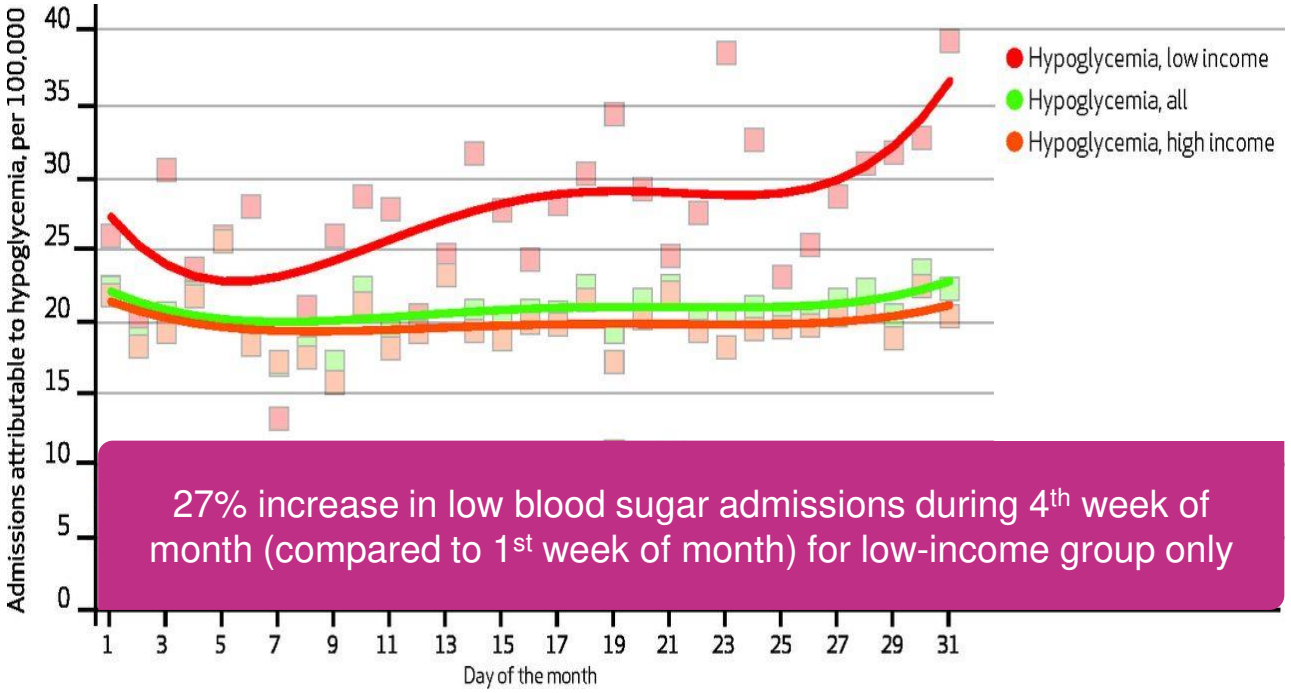
Food Insecurity and Health Care Costs

Variable	Odds of health care expenditure* n = 67 033		Total health care costs per person† n = 59 817	
	Unadjusted OR (95% CI)	Adjusted‡ OR (95% CI)	Unadjusted mean, $ (95% CI)	Adjusted‡ mean, $ (95% CI)
Food insecurity status				
Food secure	1.00 (ref)	1.00 (ref)	1516 (1498–1534)	1438 (1421–1455)
Marginally food insecure	1.03 (0.90–1.17)	1.13 (0.99–1.29)	1748 (1647–1849)	1673 (1579–1767)
Moderately food insecure	1.21 (1.08–1.36)	1.33 (1.18–1.50)	2143 (2037–2249)	1892 (1800–1985)
Severely food insecure	1.54 (1.30–1.81)	1.71 (1.44–2.04)	3078 (2883–3273)	2529 (2370–2688)

Source: Tarasuk, CMAJ, 2015.

Hospital Admissions Attributable to Low Blood Sugar

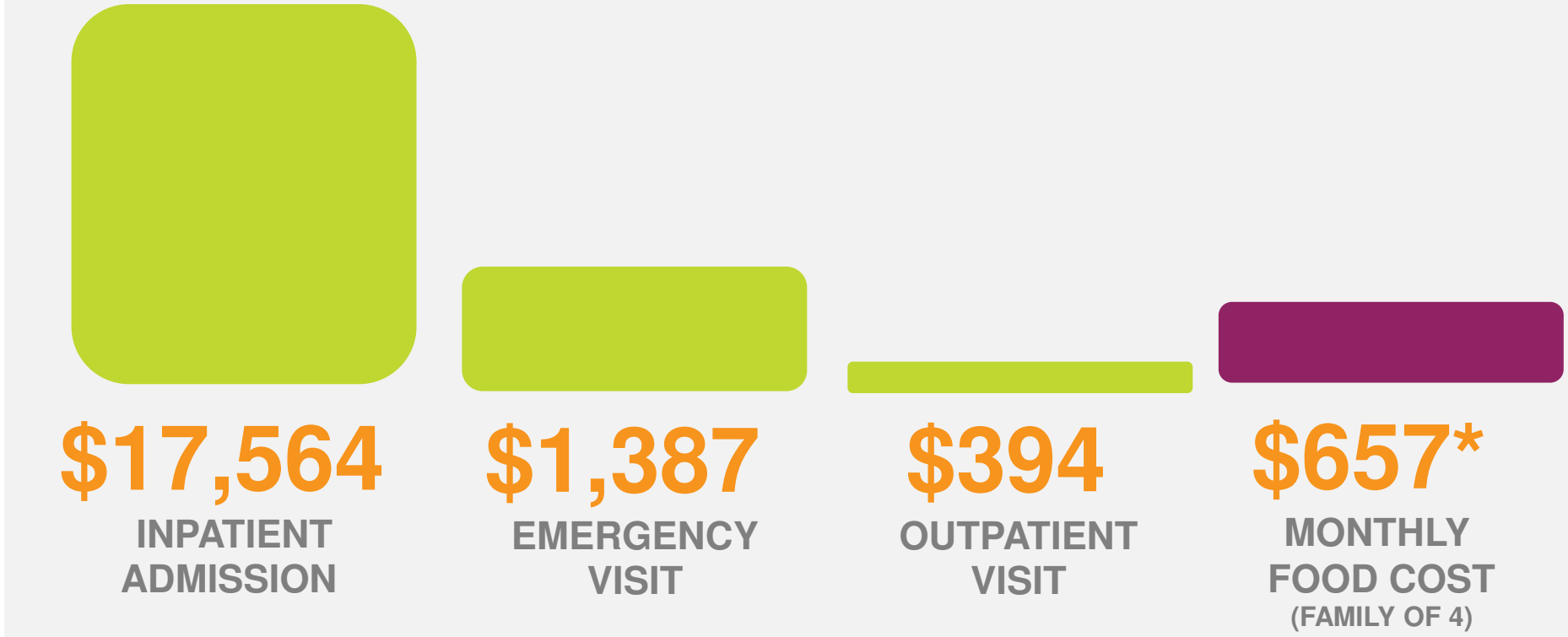
Admissions Attributable To Low Blood Sugar Among Patients Ages 19 And Older To Accredited California Hospitals On Each Day Of The Month, By Income Level, 2000–08.



HealthAffairs

Source: Seligman H K et al. Health Aff 2014;33:116-123

Cost of A Health Care Visit for Low Blood Sugar vs. Food



American Journal of Managed Care, 2011.

*Thrifty Food Plan

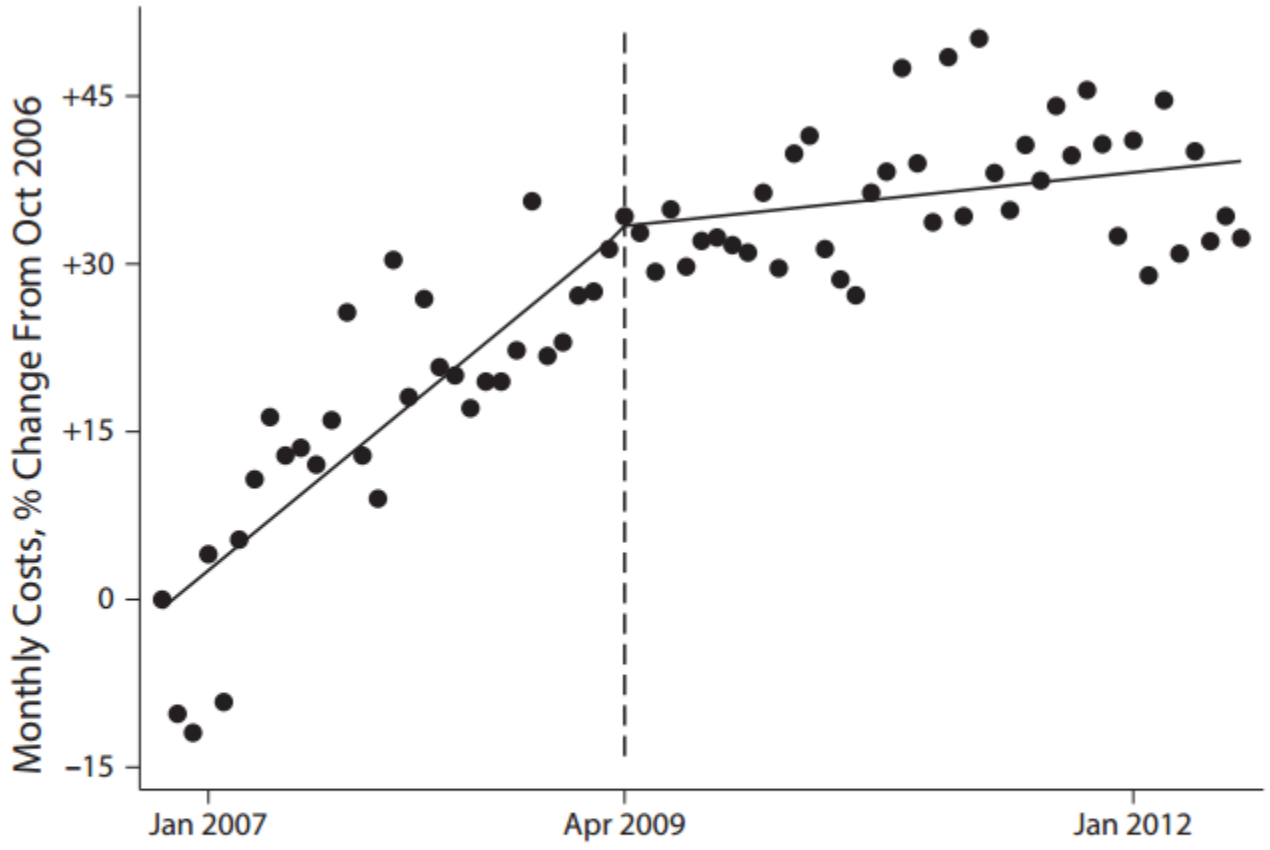
American Journal of PUBLIC HEALTH
A PUBLICATION OF THE AMERICAN PUBLIC HEALTH ASSOCIATION

Massachusetts Inpatient Medicaid Cost Response to Increased Supplemental Nutrition Assistance Program Benefits

Rajan Anthony Sonik, JD, MPH

- Temporary 13.6% increase in SNAP benefit starting in 2009
- Examined changes in healthcare costs to Medicaid
- 6 conditions thought sensitive to food insecurity
  - Sickle cell disease
  - Diabetes
  - Malnutrition
  - Cystic Fibrosis
  - Asthma
  - Inflammatory Bowel Disease

Sonik, AJPH, March 2016.



Note. The fitted line from a model without controls is shown to allow 2-dimensional presentation.

FIGURE 1—Inpatient Medicaid Cost Trends Before and After the April 2009 Supplemental Nutrition Assistance Program (SNAP) Increase: Massachusetts, 2006–2012

- Found decrease in spending trend attributable to increased SNAP benefit

That’s It!

New Developments over the Last 12 Months

- Food insecurity entering the ‘mainstream’ of healthcare
- Recognizing the financial interconnection of food insecurity and health
- Emergence of food insecurity interventions to promote health

American Association of Pediatrics Recommends Universal Screening

POLICY STATEMENT Organizational Principles to Guide and Define the Child Health Care System and/or Improve the Health of all Children

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

Promoting Food Security for All Children

COUNCIL ON COMMUNITY PEDIATRICS, COMMITTEE ON NUTRITION

Available at: http://pediatrics.aappublications.org/content/pediatrics/136/5/e1431.full.pdf

Key Points in AAP Policy Statement

- Recognizes importance of food insecurity for children's physical and mental health, behavior, and developmental outcomes
- Recommendations
  - 2-item screening tool (with yes/no response options) "at scheduled health maintenance visits"
  - Pediatricians should familiarize themselves with community resources
  - Pediatricians should learn how food insecurity impacts health outcomes
  - Pediatricians should be advocates for increasing access/funding to nutrition programs

Resources Suggested to Clinicians

- 2-item screen
- Sparse resources
  - 2-1-1
  - Healthy Food Bank Hub
  - MyPlate

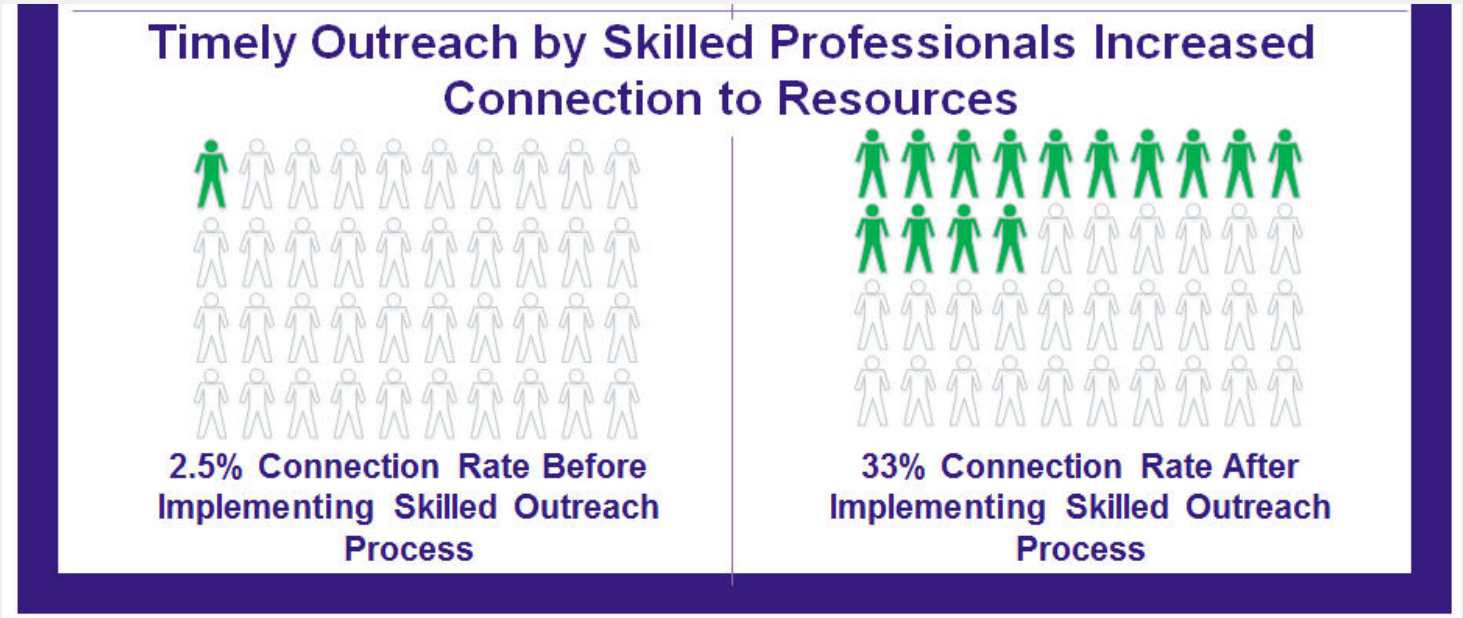
TABLE 2 Screening for Food Insecurity

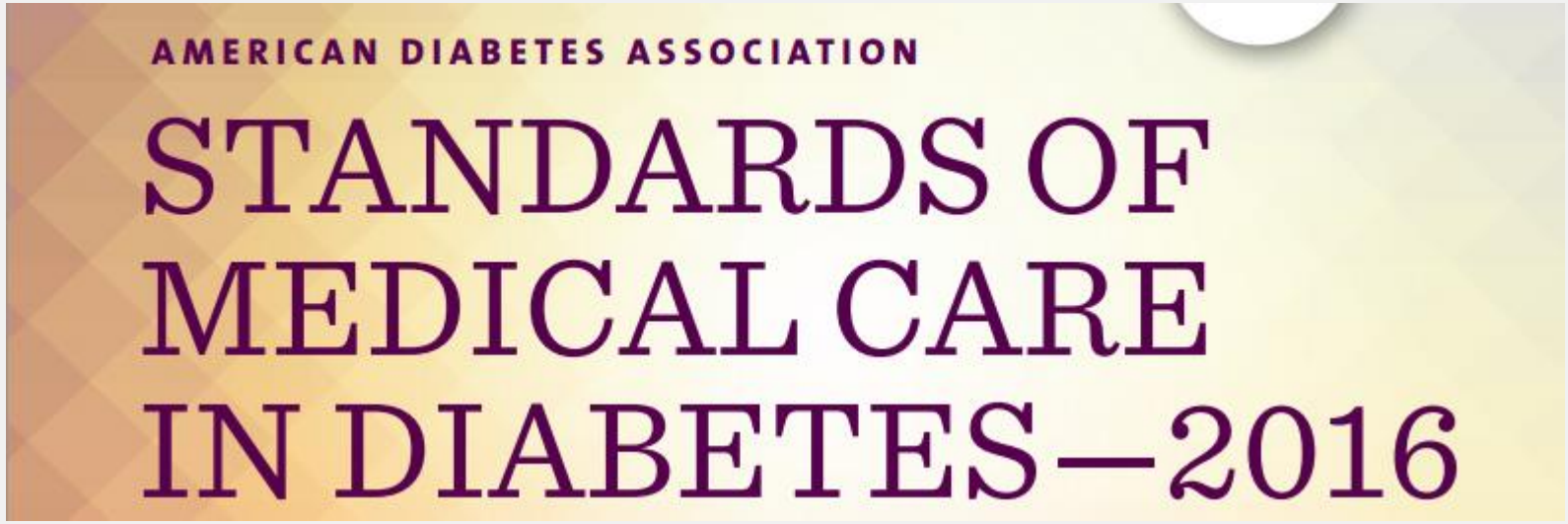
1. Within the past 12 mo, we worried whether our food would run out before we got money to buy more. (Yes or No)
2. Within the past 12 mo, the food we bought just didn't last and we didn't have money to get more. (Yes or No)

Adapted from Hager et al.[35] Although an affirmative response to both questions increases the likelihood of food insecurity existing in the household, an affirmative response to only 1 question is often an indication of food insecurity and should prompt additional questioning.

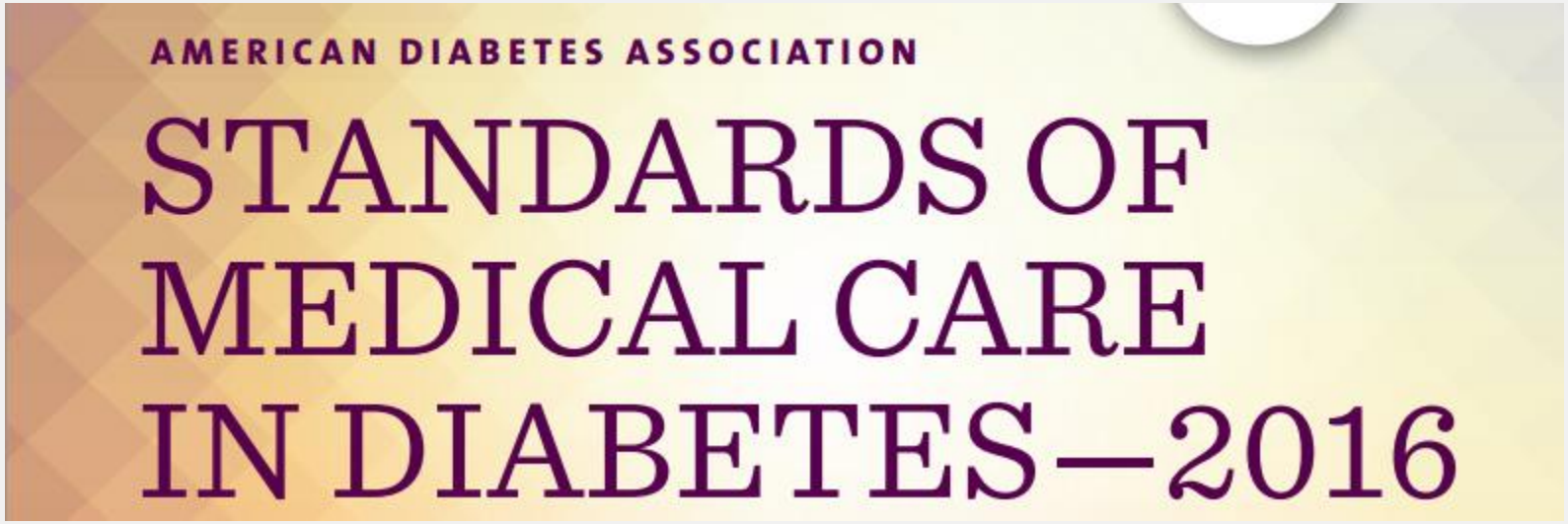
Only Very Early Data on Clinical Screening Programs Available

- Kaiser Permanente of Colorado experience (Dr. Sandra Stenmark): http://healthaffairs.org/blog/2015/07/13/linking-the-clinical-experience-to-community-resources-to-address-hunger-in-colorado/
- Passive referrals are much less efficient than active referrals

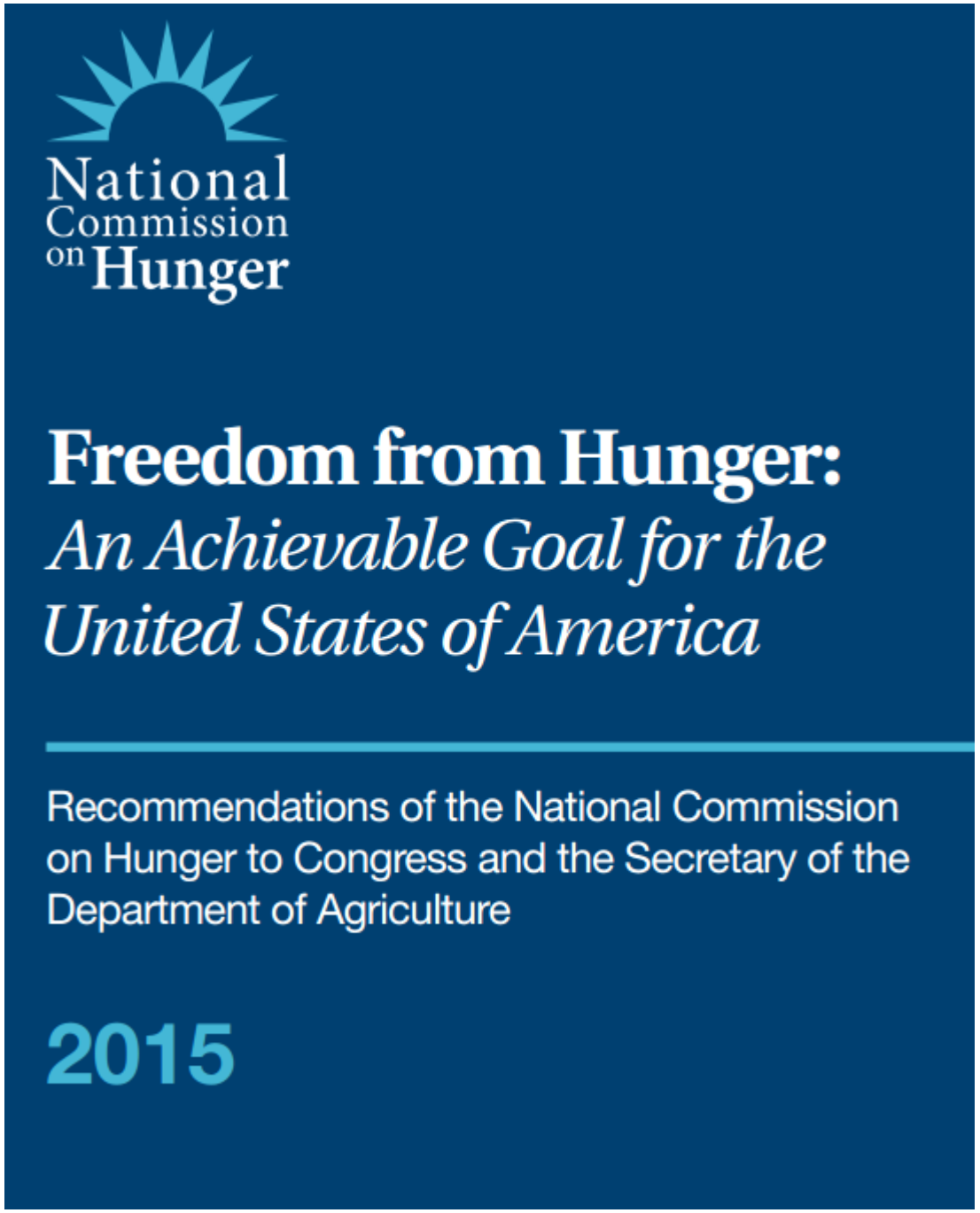




- For the 1st time, advises providers to:
  - "Evaluate hyper and hypoglycemia in the context of food insecurity"
  - "Propose solutions accordingly"



- Offers suggestions re: medication management
- Proposes linkage to community resources



- Defines “hunger” as VLFS
- Recognizes impact of food insecurity on health (at all ages) and the health care system
- Focus on people with disabilities as highly vulnerable group

Slide from Seth Berkowitz MD

Some Specific, Health-Related Recommendations

- SSB's should be excluded from SNAP benefits
- SNAP vendors should comply with standards consistent with health and nutrition (e.g. shelf space, product standards)
- SNAP-Ed should track improvements in participant health (not just dietary intake)
- **Medicare/Medicaid managed care plans should include coverage for meal delivery (with physician recommendation) for seniors and those at serious medical risk or with disability**
- Pilot projects should determine how nutrition education impacts health

Slide from Seth Berkowitz MD

The NEW ENGLAND JOURNAL of MEDICINE

Accountable Health Communities — Addressing Social Needs through Medicare and Medicaid

Dawn E. Alley, Ph.D., Chisara N. Asomugha, M.D., Patrick H. Conway, M.D., and Darshak M. Sanghavi, M.D.

- Major new CMS Program for social needs screening
- Highlights food security as a key social need
- 5 year grants

Community Benefits: A Good Entry Point!?

Highlights:

- Non-profit hospital requirement
- Changed in the Affordable Care Act & IRS Ruling
- *"…prevent illness, ensure adequate nutrition, or address social, behavioral, and environmental factors that influence community health…"*

Two Major Components:

- **Community Health Needs Assessment (CHNA)** – Involve stakeholders to identify, understand and prioritize the health needs of the community
- **Community Health Improvement Plan (CHIP)** – Create a strategy to address those priorities

Community Benefits: Where to Begin

- CHNA & CHIP are publicly available on hospitals' websites

- **Review action plan priorities**
  - What health priority areas overlap with food insecurity/food access efforts?
  - Can you support access to food or other services for clients in priority zip codes or demographic groups?
  - Can you join the steering committee for the next CHNA (many hospitals up for renewal in 2016)?
  - Can you provide hospital administrators/community benefit manager with local food insecurity data?
  - Can the food bank help engage clients or other stakeholders?

Food Banks as Partners in Health Promotion: Creating Connections for Client & Community Health

Highlights Include:

- New developments in health care
- Incentives for health systems
- Partnership opportunities for food banks
- Much more…

Available at http://healthyfoodbankhub.feedingamerica.org/resource/food-banks-as-partners-in-health-promotion/

By Hilary K. Seligman, Courtney Lyles, Michelle B. Marshall, Kimberly Prendergast, Morgan C. Smith, Amy Headings, Georgiana Bradshaw, Sophie Rosenmoss, and Elaine Waxman

A Pilot Food Bank Intervention Featuring Diabetes-Appropriate Food Improved Glycemic Control Among Clients In Three States

- Feasibility of a 4-component diabetes intervention implemented at 3 FB's
  - Point-of-care testing for diabetes
  - Active referral to primary care
  - Diabetes self-management support & education
  - Diabetes appropriate food (shelf-stable & perishable) 1-2X/month
- 687 clients with diabetes

Results: Baseline HbA1c >7.5%

	Baseline	Follow-Up
HbA1c, %	**9.52**	**9.04******
HbA1c>9%, %	52	43****
F&V intake, servings/day	2.8	3.0**
Self-efficacy	6.7	7.2****
Diabetes distress	3.3	2.8****
Medication non-adherence	1.2	1.1*
Trade-offs between food & medicine/diabetes supplies	51	40****

Pre-post, unadjusted analysis of approximately 396 participants.
*p<0.10 **p<0.05 ***p<0.01 *****p<0.001. Results similar for all 687 participants, with pre-post HbA1c reduction from 8.11% to 7.96%.***

Conclusions

- Model for leveraging the charitable food system for health promotion
  - Reach into vulnerable communities
  - Food access & distribution capacity
  - Framework for infrastructure development
- Population level benefits
  - Food reaches the entire household
  - Other diet-sensitive chronic conditions (HIV, cancer, CHF, etc.)

Wrap-up and Future Directions

- Food insecurity entering the ‘mainstream’ of healthcare
  - Expect to see more collaborations with healthcare systems
- Recognizing the financial interconnection of food insecurity and health
- Emergence of food insecurity interventions to promote health

Wrap-up and Future Directions

- Food insecurity entering the ‘mainstream’ of healthcare
- Recognizing the financial interconnection of food insecurity and health
  - Will there be “ROI”
  - Is that what we should be looking for?
- Emergence of food insecurity interventions to promote health

Wrap-up and Future Directions

- Food insecurity entering the ‘mainstream’ of healthcare
- Recognizing the financial interconnection of food insecurity and health
- Emergence of food insecurity interventions to promote health
  - Can we move beyond pilots and demonstrations into sustainable integration into healthcare delivery?

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