

# SNAP: Does it support health?

Hilary Seligman MD MAS

Professor of Medicine and of Epidemiology & Biostatistics, UCSF  
Food Policy, Health, and Hunger Program, UCSF Center for  
Vulnerable Populations  
Director, CDC's Nutrition and Obesity Policy Research and  
Evaluation Network  
Senior Medical Advisor, Feeding America

March 12, 2020



---

---

---

---

---

---

---

---

I have no commercial conflicts  
of interest to disclose.

Opinions expressed in this presentation are my  
own and do not necessarily reflect the opinions of  
NIH, CDC, USDA, or Feeding America.



---

---

---

---

---

---

---

---

## Agenda

- Food insecurity and health
- Impact of SNAP on health
- If time: recent and proposed changes to the SNAP program

---

---

---

---

---

---

---

---



---

---

---

---

---

---

---

---

*How can we make a meaningful  
**DIFFERENCE**  
in the clinic when we see  
patients so infrequently &  
for so little time?*

A photograph of a fresh produce section in a grocery store. It shows various fruits and vegetables, including leafy greens, tomatoes, and citrus fruits, displayed on shelves and in bins.

---

---

---

---

---

---

---

---

- **Food security:** Access by all people at all times to enough food for an active, healthy life
- **Food insecurity:** Household-level economic and social condition of limited or uncertain access to adequate food

A collage of six small photographs arranged in a 2x3 grid. The top row shows a woman and a man. The middle row shows a man and a woman. The bottom row shows a man and a woman with a child. The photos depict diverse individuals and families.

United States Department of Agriculture

---

---

---

---

---

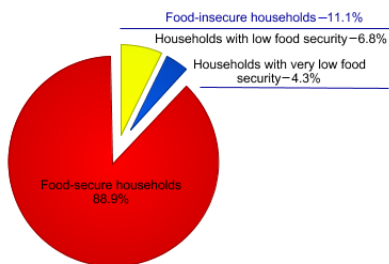
---

---

---

## 1 in 9 US households are food insecure

U.S. households by food security status, 2018



Source: USDA, Economic Research Service, using data from the December 2018 Current Population Survey Food Security Supplement.

---

---

---

---

---

---

---

---

## Risk Factors (Household-Level)

- Children (17%)
  - Children under age 6 (17%)
  - Children with single mother (32%)
  - Children with single father (22%)
- Income <185% FPL\* (32%)
- Black (23%) or Latino (19%)

Nearly 50% of US children and **90% of Black children** used Food Stamps at some point during their childhood.

About 50% of US adults receive Food Stamps at some point between the ages of 20 and 65.

\* FPL=federal poverty level (\$26,200 for household of 4 in 2020)

USDA, Coleman-Jensen, 2017; Rank, 2009.

---

---

---

---

---

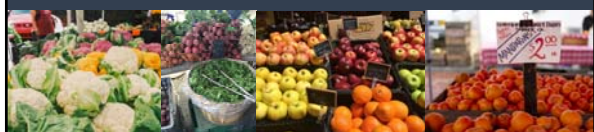
---

---

---

## Hunger

The uneasy or painful sensation caused by a lack of food, or the recurrent and involuntary lack of access to food. (LSRO)



---

---

---

---

---

---

---

---

### Coping Strategies to *Avoid* Hunger

- Eating low-cost foods
  - Eating highly filling foods
  - Small variety of foods
  - Avoiding food waste
  - Binging when food is available
- ➔
- Higher risk of obesity, diabetes, & other diet-sensitive chronic disease
  - Once you are chronically ill, poorer ability to manage your illness



---

---

---

---

---

---

---

---

### Does Food Insecurity Impact Health?



---

---

---

---

---

---

---

---

### Does Food Insecurity Impact Health?



---

---

---

---

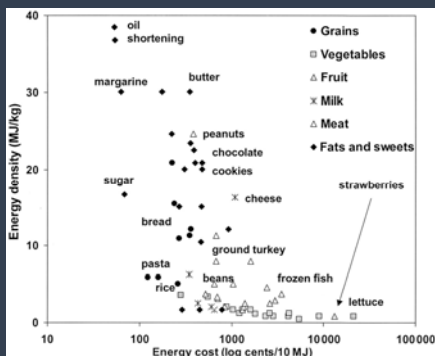
---

---

---

---

### Calorie-for-Calorie, Healthy Foods are Substantially More Expensive



Copyright ©2004 The American Society for Nutrition  
 Drewnowski, A. et al. Am J Clin Nutr 2004;79:6-16

---

---

---

---

---

---

---

---

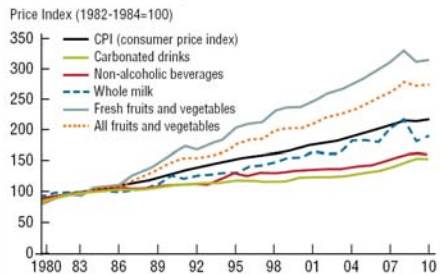
---

---

---

---

**Figure 2.7 Price Indexes for Selected Foods and Beverages, 1980-2010**



Notes: Prices for each group are annual average prices for all urban consumers. All fruits and vegetables include fresh, canned, and frozen. Base period 1982-84=100.  
 Source: National Health and Nutrition Examination Survey data, 2003-2006.

---

---

---

---

---

---

---

---

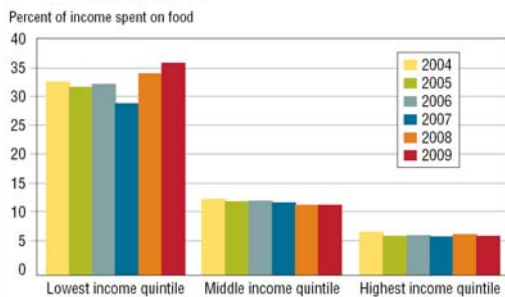
---

---

---

---

**Figure 1.2 Low-Income Households Spend the Greatest Portion of Income on Food**



Note: Average annual incomes for the quintiles in 2009 were \$9,846 for the lowest, \$46,012 for the middle, and \$157,631 for the highest.  
 Source: U.S. Bureau of Labor Statistics.

---

---

---

---

---

---

---

---

---

---

---

---

## Food Costs, Dietary Intake, & Obesity

- Diet recommended by USDA requires low-income family spend 43-70% of their food budget on F&V's
- Increasing dietary potassium to meet 2010 USDA *Dietary Guidelines for Americans* would add \$380 to the average consumer's annual food costs
  - Meanwhile, each 1% additional calories from saturated fat and sugar results in significant decrease in food costs.

Cassady, JADA, 2007; Monsivais, Health Affairs, 2011

---

---

---

---

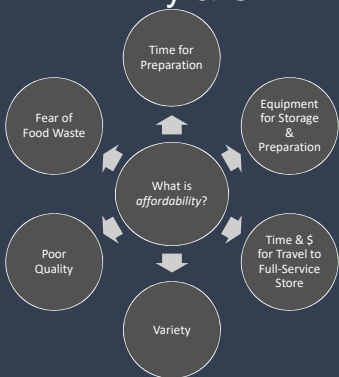
---

---

---

---

## Food Affordability & Cost



---

---

---

---

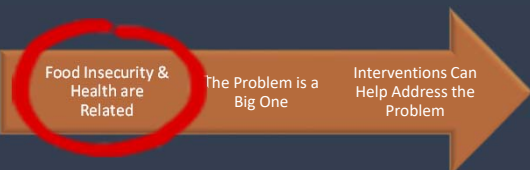
---

---

---

---

## Evolution of Research on Health and Food Insecurity



---

---

---

---

---

---

---

---



---

---

---

---

---

---

---

---

Across the Lifespan:

- Kids: anemia, behavioral problems, poorer mental health, poor cognitive development & academic achievement, hospitalizations, ?obesity
- Adults: obesity (women), diabetes, high blood pressure, heart disease, depression, poorer HIV outcomes, more hospitalizations, poorer mental health
- Elderly: reduced independence

These are just a few of the MANY associations.

---

---

---

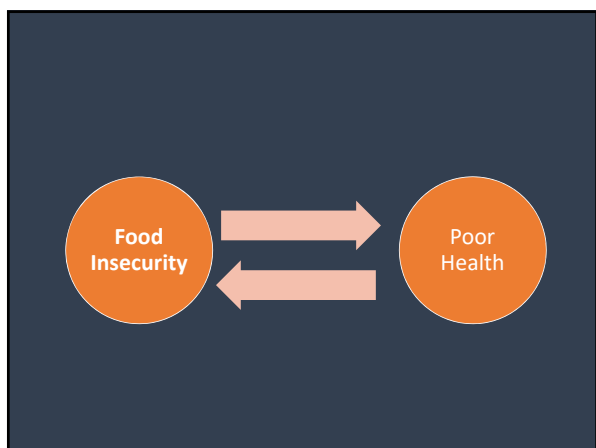
---

---

---

---

---



---

---

---

---

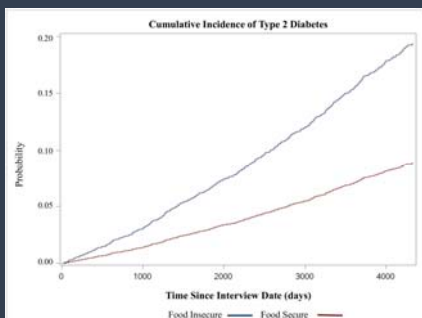
---

---

---

---

## Food Insecurity → Diabetes



Tait, C. A., et al. (2018). "The association between food insecurity and incident type 2 diabetes in Canada: A population-based cohort study." *PLoS one* 13(5): e0195962.

---

---

---

---

---

---

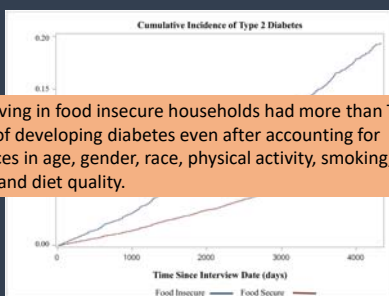
---

---

---

---

## Food Insecurity → Diabetes



People living in food insecure households had more than TWICE the risk of developing diabetes even after accounting for differences in age, gender, race, physical activity, smoking, alcohol, and diet quality.

Tait, C. A., et al. (2018). "The association between food insecurity and incident type 2 diabetes in Canada: A population-based cohort study." *PLoS one* 13(5): e0195962.

---

---

---

---

---

---

---

---

---

---

## Evolution of Research on Health and Food Insecurity



---

---

---

---

---

---

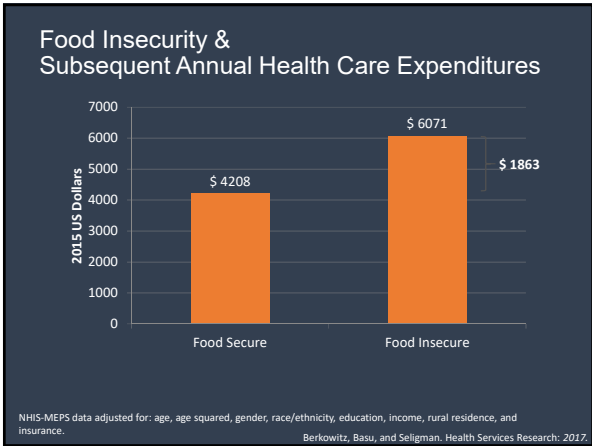
---

---

---

---





---

---

---

---

---

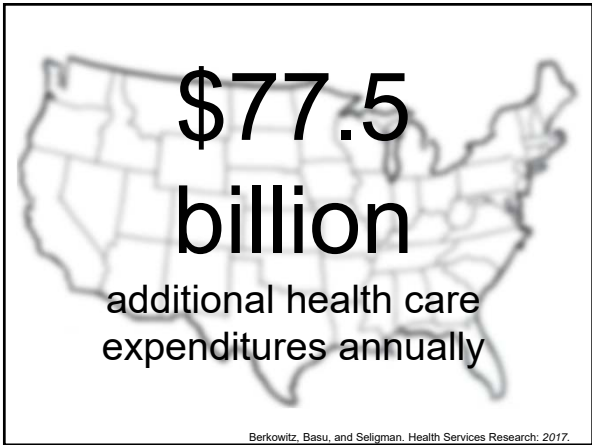
---

---

---

---

---



---

---

---

---

---

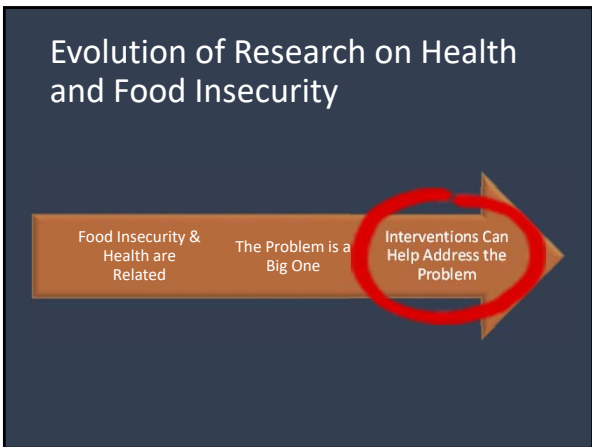
---

---

---

---

---



---

---

---

---

---

---

---

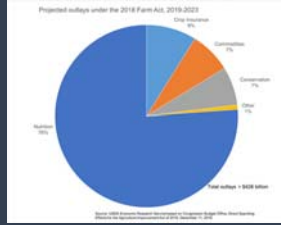
---

---

---

## Supplemental Nutrition Assistance Program (SNAP)

- Formerly called the Food Stamp Program
- CalFresh in California
- Electronic benefits transfer card (EBT)
- Allowable foods
- One of the largest anti-poverty programs in the US




---

---

---

---

---

---

---

---

---

---



Reduces food insecurity by 20-30%

...although 54% of participants are still food insecure.

---

---

---

---

---

---

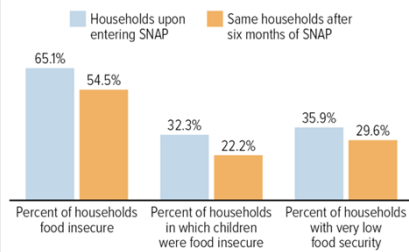
---

---

---

---

### 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?**




---

---

---

---

---

---


---

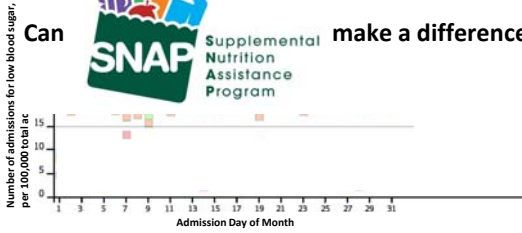
---


---

---

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

Can  Supplemental Nutrition Assistance Program **make a difference?**



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

©2014 by Project HOPE - The People-to-People Health Foundation, Inc.

---

---

---

---

---

---

---

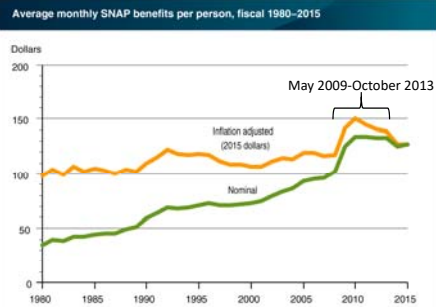
---

---

---

**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.

---

---

---

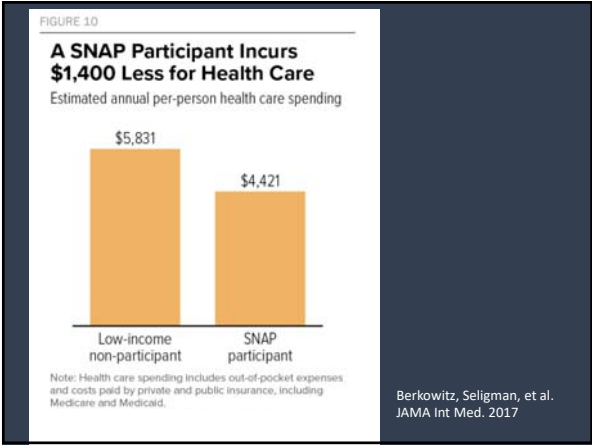
---

---

---

---

---




---

---

---

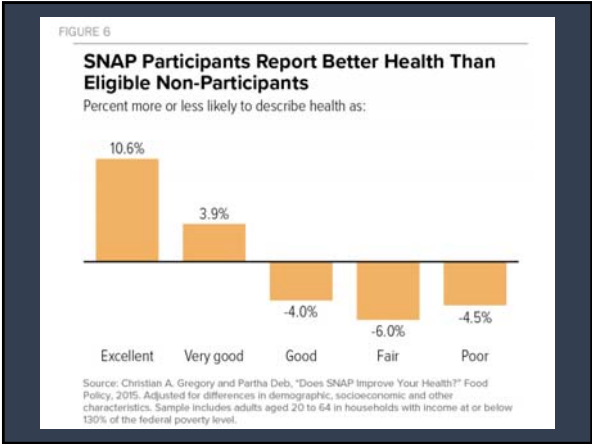
---

---

---

---

---




---

---

---

---

---

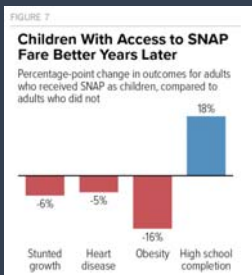
---

---

---

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

---

---

---

---

---

---

---

---

---

---

## SNAP & Pregnancy Outcomes

- 20% of SNAP recipients are women of child-bearing age
- Medicaid recipients in Missouri
- SNAP benefits later in month associated with reduced pregnancy-related Emergency Room visits

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

---

---

---

---

---

---

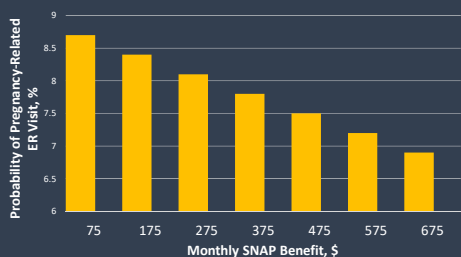
---

---

---

---

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



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

---

---

---

---

---

---

---

---

---

---

## SNAP Benefits Also Reduce Child ER Visits for Asthma

- Higher benefit levels associated with lower risk
  - \$275/month: probability of an ER visit for asthma is 5.73%
  - \$675/month: probability of an ER visit for asthma is 5.43%
- Mechanism partially through “cost-related medication non-adherence”?

Heflin, Arteaga, et al. Soc Sci & Med, 2019

---

---

---

---

---

---

---

---

## SNAP & High Blood Pressure Visits to Emergency Room

- As SNAP benefits increased, probability of an Emergency Room visit for high blood pressure decreased
  - \$100 increase in SNAP benefits will reduce HBP claims by 638 visits per 100,000
  - Especially pronounced at lower benefit amounts
- High blood pressure Emergency Room visits also likely to be partially related to “cost related medication non-adherence”?

Ojinnaka & Heflin. JI Am Soc Hypertens, 2018.

---

---

---

---

---

---

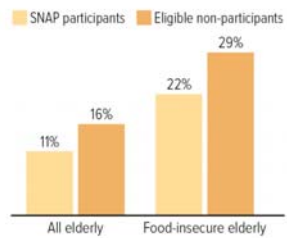
---

---

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

Among MFS, LFS, & VLFS older adults, SNAP reduces CRMN by 9.1%

---

---

---

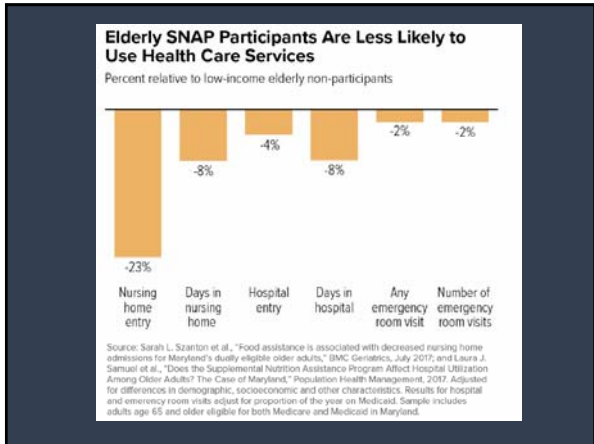
---

---

---

---

---



---

---

---

---

---

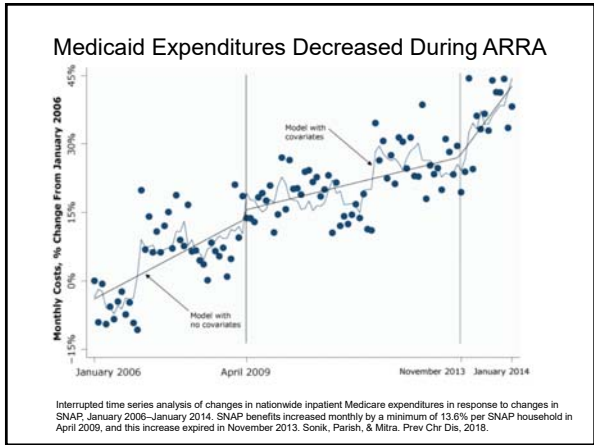
---

---

---

---

---



---

---

---

---

---

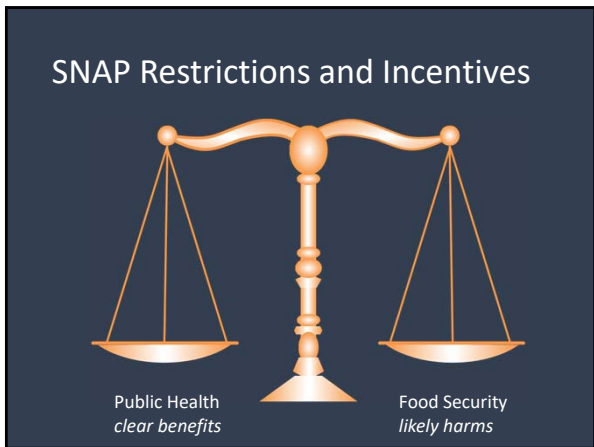
---

---

---

---

---



---

---

---

---

---

---

---

---

---

---

### SNAP Restrictions and Incentives

Is SNAP the right infrastructure to use to solve a food systems problem?

Public Health      Food Security

---

---

---

---

---

---

---

---

### Research on Health and Food Insecurity

Food Insecurity & Health are Related      The Problem is a Big One      SNAP Can Help Address the Problem

---

---

---

---

---

---

---

---

### Important upcoming changes to SNAP at federal level

- Categorical eligibility (finalized)
- Work requirements (proposed)
- Cap deductions for utilities (proposed)
- Public charge (finalized)

---

---

---

---

---

---

---

---



## Categorical eligibility

- Eligibility for one program confers automatic eligibility for other programs, eg SSI→SNAP, TANF→SNAP, Medicaid→SNAP

---

---

---

---

---

---

---

---

## Work Requirements

- "Able-bodied adults without dependents" (ABAWDS)
- Benefits for only three months during a three-year period, unless they certain "work requirements" or meet exemption criteria
  - Work requirements = 20 hours per week or an average of 80 hours per month
  - Beginning September 1, 2018, CalFresh recipients in **San Francisco, San Mateo, and Santa Clara**
- Farm Bill that took effect 2018 did not expand work requirements
  
- *However*, USDA proposed a rule to eliminate the flexibility states have to waive time limits on SNAP in areas with low employment availability

---

---

---

---

---

---

---

---

## Utility deductions

- Cap allowable income deductions for utility expenses
- Eliminates eligibility for some, reduces benefit levels for some, increases benefit levels for some
- Regulatory, rather than legislative, efforts

---

---

---

---

---

---

---

---

## Public Charge: History

- Public charge” test has been a part of federal immigration law for decades
  - Identifies people who depend on government benefits as their main source of income
  - Can be refused permission to enter US (visa) and/or refused green card (lawful permanent residence)
- Does not apply to: refugees/asylees, green card holders (lawful permanent residents) applying to become US citizens
- Under current policy, the only benefits taken into consideration are cash assistance: SSI, TANF, and government-funded, long-term institutional care

NB: I am not an immigration lawyer!

---

---

---

---

---

---

---

---

---

---

## Public Charge: Changes

- Definition changes from someone relying on government as main source of support to someone who participates in government support programs, even if they are eligible
  - Expands benefits considered to those that are not cash assistance: SNAP, Medicaid (MediCal), Medicare Part D, Section 8 Housing (CHIP was considered as well)
  - Gives negative weight for children, seniors, poor health, limited education, LEP, poor credit history, large family, and low income (<250% FPL)
- In effect as of February 24, 2020

NB: I am not an immigration lawyer!

---

---

---

---

---

---

---

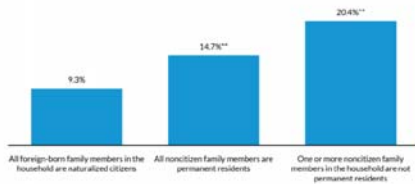
---

---

---

## “Chilling Effect”

**FIGURE 3**  
Share of Adults in Immigrant Families That Avoided Noncash Public Benefits in the Past Year Because of Green Card Concerns, by Household Citizenship and Immigration Status, December 2018



Source: Well-Being and Basic Needs Survey, December 2018.  
 Notes: Adults are ages 18 to 64. Categories are constructed around the citizenship and immigration status of the foreign-born family members in the household, but each group may contain US-born family members (including the respondent). Respondents reported that either they or someone in their family did not apply for or stopped participating in noncash public benefits because they worried it would disqualify them or a family member from obtaining a green card.  
 \*\* Estimate differs significantly from adults in households where all foreign-born family members are naturalized citizens at the 0.05 level using two-tailed tests.

---

---

---

---

---

---

---

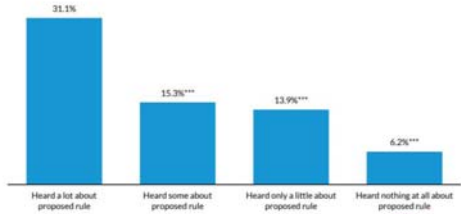
---

---

---

## “Chilling Effect”

**FIGURE 6**  
Share of Adults in Immigrant Families That Avoided Noncash Public Benefits in the Past Year Because of Green Card Concerns, by Awareness of the 2018 Proposed Public Charge Rule, December 2018



Source: Well-Being and Basic Needs Survey, December 2018.  
Notes: Adults are ages 18 to 64. Respondents reported that either they or someone in their family did not apply for or stopped participating in noncash public benefits because they worried it would disqualify them or a family member from obtaining a green card.  
\*\*\* Estimate differs significantly from adults who heard “a lot” about the proposed rule at the 0.01 level, using two-tailed tests.

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

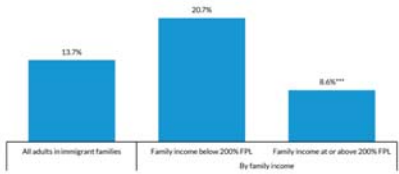
---

---

---

## Impacting Low-Income Households

**FIGURE 7**  
Share of Adults in Immigrant Families That Avoided Noncash Public Benefits in the Past Year Because of Green Card Concerns, Overall and by Family Income, December 2018



Source: Well-Being and Basic Needs Survey, December 2018.  
Notes: FPL = federal poverty level. Adults are ages 18 to 64. Respondents reported that either they or someone in their family did not apply for or stopped participating in noncash public benefits because they worried it would disqualify them or a family member from obtaining a green card.  
\*\*\* Estimate differs significantly from adults in immigrant families with family incomes below 200 percent of FPL at the 0.01 level, using two-tailed tests.

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

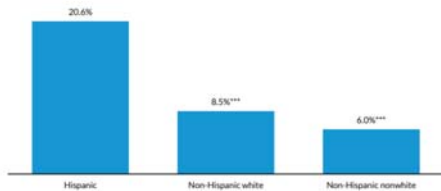
---

---

---

## Impacting Mostly Latinos

**FIGURE 8**  
Share of Adults in Immigrant Families That Avoided Noncash Public Benefits in the Past Year Because of to Green Card Concerns, by Race and Ethnicity, December 2018



Source: Well-Being and Basic Needs Survey, December 2018.  
Notes: Adults are ages 18 to 64. The non-Hispanic nonwhite category includes non-Hispanic respondents who either do not identify as white or identify as more than one race. Respondents reported that either they or someone in their family did not apply for or stopped participating in noncash public benefits because they worried it would disqualify them or a family member from obtaining a green card.  
\*\*\* Estimate differs significantly from Hispanic adults at the 0.01 level, using two-tailed tests.

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

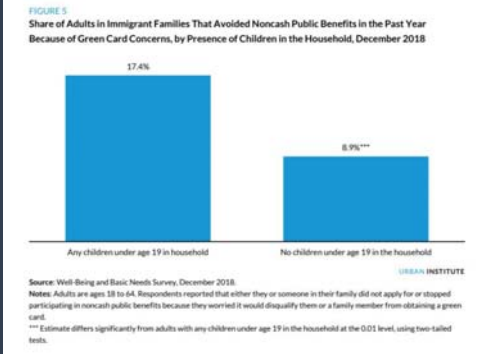
---

---

---

---

## Impacting Mostly Households with Children




---

---

---

---

---

---

---

---

---

---

---

---

## Important upcoming changes to SNAP at federal level

- Categorical eligibility (finalized)
- Work requirements (proposed)
- Cap deductions for utilities (proposed)
- Public charge (finalized)

Estimated Impact (Urban Institute)  
 3.7 million participants lose benefits  
 2.2 million households see benefits drop by > \$127/month  
 Almost 1 million kids lose school meals  
 About 1 million more food insecure people

---

---

---

---

---

---

---

---

---

---

---

---

## Conclusions

- Food insecurity and health are tightly connected
  - Short-term and long-term health implications
- SNAP reduces food insecurity and also the health impacts of food insecurity
- Proposed reductions to SNAP benefits are likely to result in poorer health and increased health care expenditures

---

---

---

---

---

---

---

---

---

---

---

---