Food is Medicine

Population Health Clerkship with the Greater Boston Food Bank

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Key Demographics

- The Greater Boston Food Bank (GBFB) serves the people of Eastern Massachusetts
  - Each month, 142,900 residents of Eastern Massachusetts receive a healthy food item from GBFB
  - 1 in 11 people in Eastern Massachusetts are food insecure
    - Food insecurity is defined as a “household-level economic and social condition of limited access to food”
- GBFB serves people of all ages and races
  - 1 in 9 children are food insecure
  - 1 in 5 people served by GBFB is 60+ years old
- GBFB serves those who are food insecure
  - A majority of food insecure people are living in poverty
  - Food insecurity also affects those with “low assets, low human capital, low physical and mental functional, among others.”

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The Greater Boston Food Bank. Fiscal Year 2018 Impact. https://www.gbfb.org/our-impact/our-results/gbfb-impact/. 2019.
Gundersen, C. and Ziliak, J. Food Insecurity Research in the United States. Applied Economic Perspectives and Policy, 2018.

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Key Demographics

Nationally, food insecurity tends to affect these demographics more heavily:

- Households with children
- Single parent households
- Households with a Black or Hispanic head of household
- Households with income below 185 percent of the federal poverty line
- Households in cities and rural areas (verus suburban)

Characteristic	Estimate
English	87.7%
Spanish	12.4%
Other	8.9%

Poverty is the largest contributing factor to food insecurity in the United States. **Veteran status, disability status, and SNAP participation** are also associated with food insecurity.

Choose between paying for food and paying for other expenses (ever in the past 12 months)	Estimate
Medicine/Medical Care	60.3%
Utilities	60.8%
Housing	59.5%
Transportation	51.9%
Education	31.0%

Types of household coping strategies used in the past 12 months	Estimate
Purchasing inexpensive, unhealthy food	68.5%
Receiving help from family or friends	44.7%
Watering down food or drinks	43.3%
Selling or pawning personal property	32.0%

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West, Erin Foster, et al. Massachusetts Food Insecurity: Landscape and Innovation. 2014, Massachusetts Food Insecurity: Landscape and Innovation, julianagyeman.com/wp-content/uploads/2018/01/Massachusetts-Food-Insecurity-Report_12.5.2014.pdf.
Taitelbaum, Daniel J. Hunger in Eastern Massachusetts 2014. Greater Boston Food Bank, 2014, Hunger in Eastern Massachusetts 2014, gbfb.org/wp-content/uploads/2016/10/hunger-eastern-ma-2014.pdf.

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Key Demographics

Of the families that the GBFB serves:

- 87.8% of households have at least one member with high school diploma or equivalency & 57% of households have at least one member with education beyond high school including 15.6% that have earned a degree from a four-year college or higher.
- In 67.1% of households receiving food assistance, the main income earner is not employed and in 86.1% of those households, the main income earner has been out of work for more than one year.
    - 80% of those out of work are not able to look for work because they are **elderly and retired, disabled** or **in poor health**, or are **taking care of someone who is disabled or in poor health**.
    - In households where the main income earner is working, less than half (43.9%) are estimated to be working over 30 hours per week.
- 29.4% of households have medical bills that they have not been able to pay. 60.3% of households have had to make the difficult choice between paying for food and paying for medicine/medical care.

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Taitelbaum, Daniel J. Hunger in Eastern Massachusetts 2014. Greater Boston Food Bank, 2014, Hunger in Eastern Massachusetts 2014, gbfb.org/wp-content/uploads/2016/10/hunger-eastern-ma-2014.pdf.

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Medical implications - Children, Adults, Seniors

Food insecurity is associated with many health consequences

- Iron deficiency anemia
- Asthma
- Poor oral health
- Chronic disease (diabetes, hypertension, hyperlipidemia)

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https://www.healthaffairs.org/doi/full/10.1377/hlthaff.2015.0645

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Psychosocial Implications - Children, Adults, Seniors

Food insecurity is associated with behavioral/cognitive problems

- Depression, anxiety, suicidal ideation
- Decreased non-cognitive performance
- Limited activities of daily living

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https://www.healthaffairs.org/doi/full/10.1377/hlthaff.2015.0645

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Financial burden

Food insecurity is associated with higher total healthcare cost

- 23% higher (marginal), 49% higher (low), and 121% higher (very low)
- Mean annual healthcare expenses $6,072 vs. $4,208
- Inpatient care - 24% higher cost, readmission twice as likely
- Increased use of primary care services

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Applied Economic Perspectives and Policy (2018) volume 40, number 1, pp. 119–135. doi:10.1093/aepp/ppx058
https://foodismedicinema.org/

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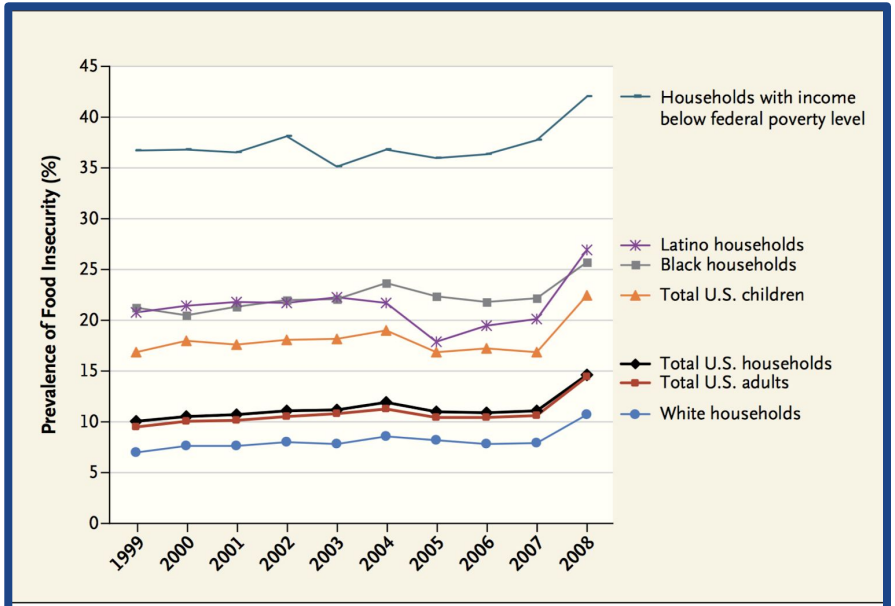
Disparities and Food Insecurity



Prevalence of Food Insecurity in the United States, 1999–2008.

- Populations disproportionately affected by food insecurity: ethnic minorities, single mothers, children, elderly.
- The rates of food insecurity in Black and Hispanic households have been higher than the national average among all households since 1995.
- Single mother-led households in the US have a higher incidence of food insecurity than any other demographic group, at 31.6%.

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https://www.gbfb.org/news/press-releases/greater-boston-food-bank-reaches-milestone-widening-income-gap-increases-demand-food-support/
https://hungerandhealth.feedingamerica.org/2019/04/addressing-root-causes-food-insecurity-u-s-disparities-discrimination/
https://www.socialconnectedness.org/wp-content/uploads/2018/02/Food-Insecurity-in-America-Putting-Dignity-and-Respect-at-the-Forefront-of-Food-Aid.pdf

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Interprofessional Teams of Care Within Food Insecurity

- **Professions:**
  - **Dietitians**
  - **Research Team**
  - **Physicians**
  - **Executive Directors of Food Banks**
  - **SNAP Associates**
- **Inter-Professional Relationships**
- **Care Coordination**
  - Working on a referral program between physicians and food banks
  - Advocacy Efforts
  - Data Collection and Research Management

- **Groundwork-** *Patient-facing professionals* (Dietitians, physicians, SNAP workers, food pantry workers)
  - Working in hospitals, private offices, community centers
  - Either recommend food assistance resources to patients, or connect them with benefits directly.
  - Direct relationships with patients, but no control of resources
- **Bigger picture** - *Administrative* - (Food bank directors, food bank workers, research teams)
  - Work in central locations like the Greater Boston Food Bank
  - Ensure a continuous supply chain of resources to food pantries
  - No contact with patients, but can effect structural change via resource management
- **Communication with physicians**
  - Physicians can refer patients to food pantries or SNAP resource centers.
  - The resources available for food insecure patients are often underutilized by health care organizations due to lack of awareness, despite the high food-insecurity rates.

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Advocacy for the Food Insecure

- **Greater Boston Food Bank (Local)**
  - Legislative priorities:
    - Breakfast After the Bell: federally funded initiative
    - MA Emergency Food Assistance Program: state legislation
    - U.S. Farm Bill
- **Project Bread (Local)**
  - Legislative Priorities:
    - “Close the SNAP Gap” campaign to develop a common application for MassHealth, SNAP, and other income based benefits
    - Child Nutrition and WIC Reauthorization Act
- **Feeding America (National)**
  - Largest domestic hunger-relief organization (umbrella organization of the GBFB)
  - Policy staff based in Washington, D.C.
  - Hunger PSA campaign with Ad Council supported by $60 million donations annually

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Major Areas of Advocacy for NGOs

MA State:

- Child nutrition - through Breakfast After the Bell
- Massachusetts Emergency Food Assistance Program (MEFAP)

Federal:

- SNAP - under the Farm Bill
- The Emergency Food Assistance Program (TEFAP) - under the Farm Bill
- Opposing “Public Charge” - would deter immigrants from accessing SNAP

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Consequences of Advocacy Successes and Failures

- Expansion of funding for food insecurity and other government programs can have major effects
  - An expansion of MEFAP projected for the 2020 Fiscal Year increases funding by $800,000, which the GBFB estimates will be an increase of over 1 million healthy meals
  - An increased in the minimum wage to $15 could lead to 18,000 households becoming food secure
- Despite expansion of certain programs, the needs of all Massachusetts residents are not met
  - The GBFB estimates that 31% of those who are food insecure are not eligible for government assistance and must rely on charitable food programs to meet their needs
  - The gap between what is provided and what Massachusetts residents need remains an issue that advocacy groups continue to bring attention to
  - The average SNAP benefit is $1.38/meal and the average meal in Massachusetts is $3.55

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The Massachusetts Food is Medicine State Plan

- Goals: Improve healthcare outcomes and lower healthcare costs
  - Aim to do this by scaling the efforts current in place (from SNAP to medically tailored meals to nutrition referrals) to meet the population in need in a sustainable way
- Target food-insecure populations, but aim at addressing the overall link between nutrition and chronic disease in all populations
- Made up of three task forces
  - Provider Nutrition Education and Referral Task Force
  - Community-Based Organization Task Force
  - Research Task Force
- Students can become involved in this organization, or the >50 organizations participating in this effort

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4. Service and experiential learning

Need: Food insecurity (1 in 11 people in Eastern Massachusetts!)

- Focused on serving individuals already coming to food pantries, but our survey is investigating how to implemental referrals from health care professionals

Volunteering opportunities:

- Greater Boston Food Bank: Food sorting
  - Sorted 4,050 pounds of food, which equates to 4,758 meals for their clients
- North Shore Community College Mobile Market: Unloading, sorting and distributing GBFB food to clients (~250 clients)
- Connery Elementary School Pantry: Unloading, sorting and distributing GBFB food to children and their families (~300 families)
- Community Servings: Preparing food items to create medically tailored meals
- American Red Cross Food Pantry: Unloading, sorting and distributing food to clients (3 days worth of food to 375 families)

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What we learned

- The importance of addressing food insecurity with patients
  - Dedicating time to ask patients about food and hunger during clinic visits
  - Reducing stigma regarding food insecurity
- How to connect patients to available resources
  - Local resources (community based organizations, mobile markets, food pantries)
  - Federal resources (SNAP)
- How to advocate for patients experiencing food insecurity
  - Becoming literate on resources available for patients
  - Engaging in local, state, and federal policy initiatives to address food insecurity

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