The Impact Of Food insecurity In New Mexico

By Mekhi Bradford and Lukas Lee Baires

Justice Code

National Society of Black Engineers

Pre-College Initiative

Table Of Contents

The Impact of Food Insecurity in New Mexico

Abstract

Food insecurity remains a critical issue in the United States, with New Mexico experiencing disproportionately high rates compared to the national average. This paper explores the nature of food insecurity and its contributing factors. We propose a conceptual app using data analytics to develop a solution, *CommuniEats*, a platform designed to address food insecurity by optimizing food distribution, reducing waste, and improving access to nutritious meals in vulnerable communities. This paper outlines the background, methodology, and potential impact of this approach, emphasizing the role of collaboration with experts and organizations such as Roadrunner Food Bank and Feeding America.

Background

My interest in the impact of food insecurity in New Mexico began with a personal experience. A recently unemployed neighbor, new to the community, came to our apartment seeking food for her children. Despite my family's limited resources, my mother cooked a meal for the family and shared half of our groceries with them. She also referred the woman to a local food bank. Still, transportation challenges compounded the situation, as neither our family nor the neighbor could access the food bank. Soon after this incident, I arranged for my fellow Justice Code National Society of Black Engineers (NSBE) members to volunteer at one of the largest food banks in New Mexico, the Roadrunner Food Bank, where we learned just how widespread the problem of food insecurity is. We knew that 1 in 5 children in New Mexico are at risk of hunger, and 1 in 7 adults in New Mexico face that same dilemma.

These encounters inspired the concept of an application similar to Uber Eats, DoorDash, or Grubhub, explicitly designed to address food insecurity. Collaborating with a close friend and team member, we conceptualized **CommuniEats**. This app enables individuals experiencing food insecurity to order food discreetly and deliver it to their homes, particularly in vulnerable communities. However, as our idea remains conceptual due to a lack of resources to test and record outcomes, we sought guidance from experts in the field. One such expert was Mr. Brian Brown, Manager of Volunteer Engagement at Roadrunner Food Bank, whom we had worked with during several volunteer sessions in the Roadrunner Food Bank warehouse in 2024. Additionally, we contacted Feeding America's research team to gather relevant data on food insecurity in the United States, specifically focusing on New Mexico. For further research, we

attended workshops, and spoke with with numerous community leaders and policy analyst to better understand the the impact that food insecurity as well as its main contributing factors. We spoke with Dr. Mariana Chilton, author of The Painful Truth About Hunger in America. Dr. Chilton is a Professor at Drexel University's Dornsife School of Public Health. Director of the **Center for Hunger-Free Communities** (founded in 2008). She is trained in anthropology and public health, with a focus on the intersection of poverty, trauma, and hunger. During the workshop with Dr. Chilton, we learned how policy failures and systemic racism remains key factors in the root causes of hunger and food inecurity. We also learned the difference between food deserts and food apartheid. The Albuquerque South Valley neighborhood is a prime example of food apartheid, due to a lack of investment/funding into the neighbordood which results in grocery stores choosing not to build in the vicinity of South Valley community. Convenient stores and liquor stores often build in poorly funded neighborhoods. The end result makes it difficult for families to access well stocked grocery stores, instead they are forced to buy food from small convient stores. During the workshop, Dr. Lauri Andress (Associate Dean for the College of Population Health) demonstrated what a meal purchased in a convenient store might consist of, which was pizza rolls, hot pockets, chips, and soda. Convenient stores do not provide access to a sufficient amount of nutritious foods.

What Is Food Insecurity?

According to the United States Department of Agriculture (USDA), food insecurity is defined as a lack of consistent access to enough food for an active, healthy life for all household members. This issue is a pervasive challenge both in the United States and globally.

In 2023, 13.5% of U.S. households, or approximately 18 million people, experienced food insecurity at some point during the year, according to the United States Economic Research Service. For our project, we narrowed our focus to New Mexico, where food insecurity rates significantly exceed national averages. Data from Feeding America's **Map the Meal Gap** research study highlights that between May 2022 and May 2024, New Mexico consistently recorded hunger rates higher than the national average.

What Does Food Insecurity Look Like?

- Skipping meals
- Forced to choose between paying bills or buying medicine over food, ect.
- Not having access to nutritional foods.

What Are the Major Contributing Factors for Food Insecurity?

- Poverty
- Systemic racism
- Food Deserts/Food apartheid
- Unemployment
- Food wastage (40 % of food is wasted each year)

What Are Some of the Effects of Food Insecurity?

- Health impacts such as chronic conditions like diabetes, hypertension, heart disease, and obesity.

- Mental health contributes to depression, anxiety,

- Developmental problems in children: lack of concentration/focus

- learning disabilities/delays

Notes from the workshop - *The Painful Truth About Hunger And America"* by Mariana Chilton

1. Hunger is not just "lack of food," food insecurity can have both profound physical and psychological impacts.

2. Hunger is caused by things such as socioeconomic struggle, inadequate income, racial/gender discrimination, and poor safety nets.

3. Policy changes are necessary to make a lasting impact. Programs like SNAP and WIC, while beneficial, are not enough.

Main Takeaway: Mariana Chilton, a leading researcher and advocate for food justice, led a workshop focused on her book, *The Painful Truth About Hunger In America*, which explores the complex nature of hunger in the United States. What I was able to conclude from the various speakers was that food insecurity and hunger are more than a lack of food, it is deeply rooted in systemic societal issues including, but not limited to, poverty, racism, and policy failures rather than a result of individual shortcomings. I learned that solving hunger and food insecurity will take a solidarity model over today's charity model. Dr. Chilton advocates for transformative policy changes, including living wages, stronger social safety nets, and community-driven solutions, which can include a conceptual model such as CommuniEats. I hope our communities have the solutions to the injustices we face. Real change comes when we listen to the voices of those impacted and replace charity systems with systems that honor dignity for all.

Conclusion

Addressing food insecurity requires innovative approaches and collaboration among communities, organizations, and policymakers. While **CommuniEats** remains a conceptual application, its potential highlights the importance of leveraging technology to combat systemic issues such as food insecurities. Our application also helps prevent food wastage by preventing prolonged storage of perishable items. Our collaboration and insight from experts like Dr. Mariana Chilton, author of The Painful Truth about Hunger In America, Mr. Brian Brown, Volunteer Coordinator from Roadrunner Food Bank, Feeding America's Research Team's DATA serve as foundational steps toward understanding the many complexities of food insecurity and exploring actionable solutions such as CommuniEats Application.

Acknowledgements

We would like to give a special thanks to our coach, Mrs. Patty Meyer. Thank you for your dedication, hard work, patience, and mentorship. Thank you to Justice Code for providing the opportunity to participate in Supercomputing and for establishing a foundation in STEAM-L. Thank you to the judges for your time and careful consideration. Thanks to Joseph Olonia for your mentorship and data organization. Thank you to Brian Brown, the RRFB volunteer engagement manager, and for hosting Justice Code volunteer opportunities. Thanks to Rae Bennu, a horticulturist, and local business owner for your insight and suggestions. Thank you to Joaqin Lujan, who is the organizer for and founder of Project Feed The Hood for your insight, and the work you do with Project Feed The Hood. Thank you to Lauri Andress, associate dean for the college of population health at UNM for your keen insight, mentorship and all you do for the New Mexico community. Finally, thank you to Dr. Mariana Chilton for your mentorship, for the insight you provided during the workshop, and a very special thank your kind words and encouragement. Thank you for teaching us the difference between solidarity, and charity.
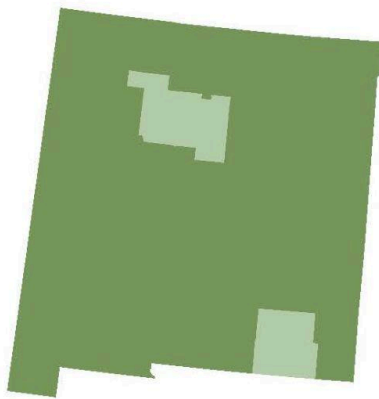
Data

New Mexico

2022 FOOD INSECURITY & FOOD COST IN THE US

Overall Food Insecurity Rate

No Data	0-13.0%	13.1-26.0%	26.1-39.0%	39.1-52.0%	52.1-65.0%

AVERAGE MEAL COST

$3.71

National average cost of a meal is $3.99

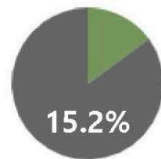#### TOP COUNTIES WITH THE HIGHEST FOOD INSECURITY RATES

Catron

Socorro

McKinley

Sierra

Luna

FOOD INSECURE PEOPLE

321,370

FOOD INSECURITY RATE

15.2%

ESTIMATED PROGRAM ELIGIBILITY AMONG FOOD INSECURE PEOPLE

45% Above SNAP threshold

55% Below SNAP threshold of 165%

Hunger exists in every corner of the United States, but as Feeding America's Map the Meal Gap study shows, food insecurity looks different from one county to the next. In addition to providing data about the prevalence of food insecurity at the local level, Map the Meal Gap estimates the share of food insecure individuals who are income-eligible for federal antihunger programs and provides local variations in food costs.

The study finds that many food insecure individuals do not qualify for federal nutrition programs and must rely on charitable food assistance, suggesting that complementary programs and strategies are necessary to reach food insecure individuals at different income levels. By providing information about hunger at the local level, Map the Meal Gap can help policymakers and service providers identify strategies to best reach those in need of assistance.

# Identifying Racism in the Drivers of Food Insecurity

Introduction

Food insecurity exists in every county in the United States - as does systemic racism in its root causes.

Individuals experience food insecurity within the context of their community and broader environment. Associations between household characteristics and increased risk of food insecurity often reflect underlying inequalities, such as longstanding economic and social disadvantage resulting from systemic racism.

Food insecurity is an economic condition, meaning it is driven primarily by lack of money and other critical resources. This tool outlines five drivers that have been directly linked to food insecurity.

Click on one of the variables below to learn more.
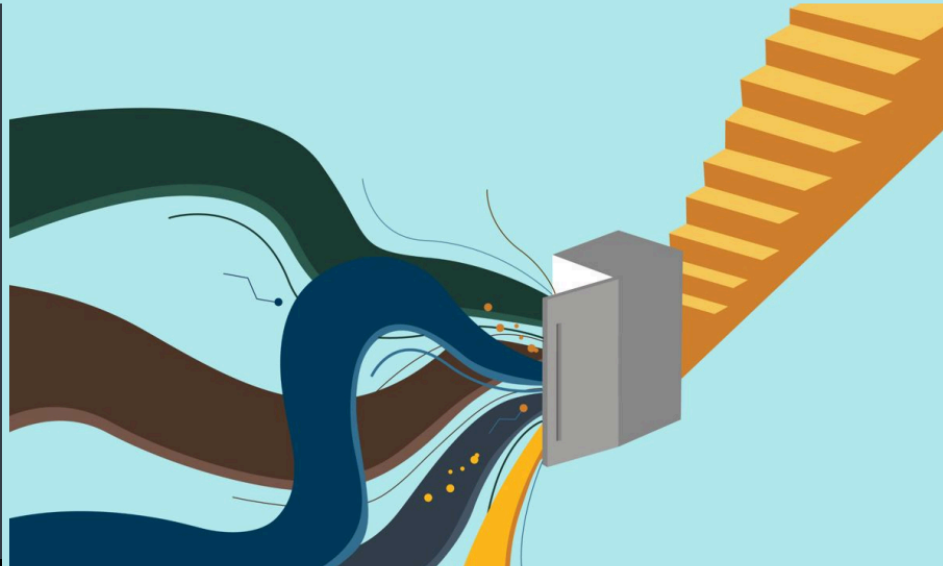
National Food Insecurity Rates by Race or Ethnicity		Disability	Homeownership	Median Income	Poverty	Unemployment
Asian	5%	8%	62%	$107,637	10%	4%
Black	21%	14%	43%	$50,901	22%	9%
Latino	17%	10%	50%	$64,936	17%	6%
Native American	23%	16%	55%	$55,925	23%	9%
Pacific Islander	16%	12%	43%	$76,568	17%	8%
White, non-Hispanic	8%	14%	73%	$81,423	9%	4%

9

Resources

1. Federal and State Nutrition Programs

- Supplemental Nutrition Assistance Program (SNAP)
    - Administered by the NM Human Services Department (HSD), SNAP provides monthly benefits for groceries.
    - Apply online: YesNM or call 1-800-283-4465.
    - Double Up Food Bucks NM: Matches SNAP benefits for fresh produce at participating farmers' markets.
        - Website: Double Up NM
- Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)
    - Provides nutrition support for pregnant women, new mothers, and children under 5.
    - Apply through the NM Department of Health: 1-800-445-6174 or NM WIC.
- National School Lunch Program (NSLP) & School Breakfast Program
    - Free/reduced-price meals for students. Contact local school districts or visit NM Public Education Department.
- Summer Food Service Program (SFSP)
    - Free meals for kids 18 and under during summer. Locations: NM SFSP or text "FOOD" to 304-304.

---

2. Food Banks and Pantries
- Roadrunner Food Bank (Serving statewide)

- - Distributes food through 600+ partner agencies.

    ○ Mobile food pantries, senior programs, and emergency boxes.

    ○ Contact: 505-247-2052 or Roadrunner Food Bank.

- The Food Depot (Northern NM)

    ○ Serves 9 counties with fresh produce, pantry staples, and senior programs.

    ○ Call 505-471-1633 or visit The Food Depot.

- Community Pantry (Echo Food Bank) (Gallup and Northwest NM)

    ○ Focuses on rural and Indigenous communities.

    ○ Website: Echo Food Bank.

---

3. Nonprofit and Community Organizations

- Feeding Santa Fe

    ○ Offers food distributions, cooking classes, and nutrition education.

    ○ Visit Feeding Santa Fe.

- Silver Horizons

    ○ Provides meal delivery and food boxes for seniors.

    ○ Contact: 505-217-0777 or Silver Horizons.

- Indigenous Lifeways

    ○ Supports Native communities with traditional food access and sovereignty programs.

    ○ Connect via Native American Food Sovereignty Alliance.

---

4. Emergency Assistance

- NM 211

  - Dial 2-1-1 or visit NM 211 to find local food pantries, meal sites, and utility assistance.

- Hunger Coalition of NM

  - Advocacy group connecting residents to resources. Visit Hunger Coalition.

---

5. Community-Led Initiatives

- Southwest Organizing Project (SWOP)

  - Addresses systemic inequities impacting food access, especially in BIPOC communities.

  - Visit SWOP NM or call 505-247-8832.

- Agri-Cultura Network (Albuquerque)

  - Urban farming collective providing affordable produce via CSA programs and farmers' markets.

  - Website: Agri-Cultura Network.

- Food Is Free Albuquerque

  - Neighborhood-based sharing of homegrown produce and resources.

  - Connect via Facebook.

---

6. Tribal Resources

- First Nations Development Institute

- ○ Supports Native food systems through grants and training.

- ○ Visit First Nations.

- Pueblo of Isleta Food Distribution Program

- ○ USDA-funded program for tribal members. Call 505-869-9799.

---

7. Advocacy and Policy

- NM Center on Law and Poverty

- ○ Fights for policies to reduce hunger, including SNAP expansion and fair wages.

- ○ Website: NMCLP.

- New Mexico Food and Agriculture Policy Council

- ○ Advocates for equitable food systems. Visit NMFAPC.

Mutual Aid Networks

- Mutual Aid NM (Statewide)

- ○ Grassroots groups providing food, supplies, and support. Find local networks via Mutual Aid NM.

Sources Cited

Gundersen, C., Waxman, E., Engelhard, E., & Brown, J. *Map the Meal Gap 2011: Food Insecurity Estimates at the County Level*. Feeding America, 2011.

Food security in the U.S. | Economic Research Service. (n.d.).

https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us

https://www.jotform.com/app

Interactive Map Identifying Drivers of Food Insecurity

https://public.tableau.com/app/profile/feeding.america.research/viz/IdentifyingRacismintheDriversofFoodInsecurity/Introductionv2?publish=yes

Workshop speakers/presenters:

Mariana Chilton - Doctor and Author of The Painful Truth About Hunger In America

Rae Bennu - Horticulturist and local business owner with a focus on edible landscapes

Joaquin Lujan - Organizer, farmer, and founder of Project Feed the Hood

Lauri Andress - Associate dean for the College of Population Health at UNM, Public health policy analyst

https://www.swop.net/