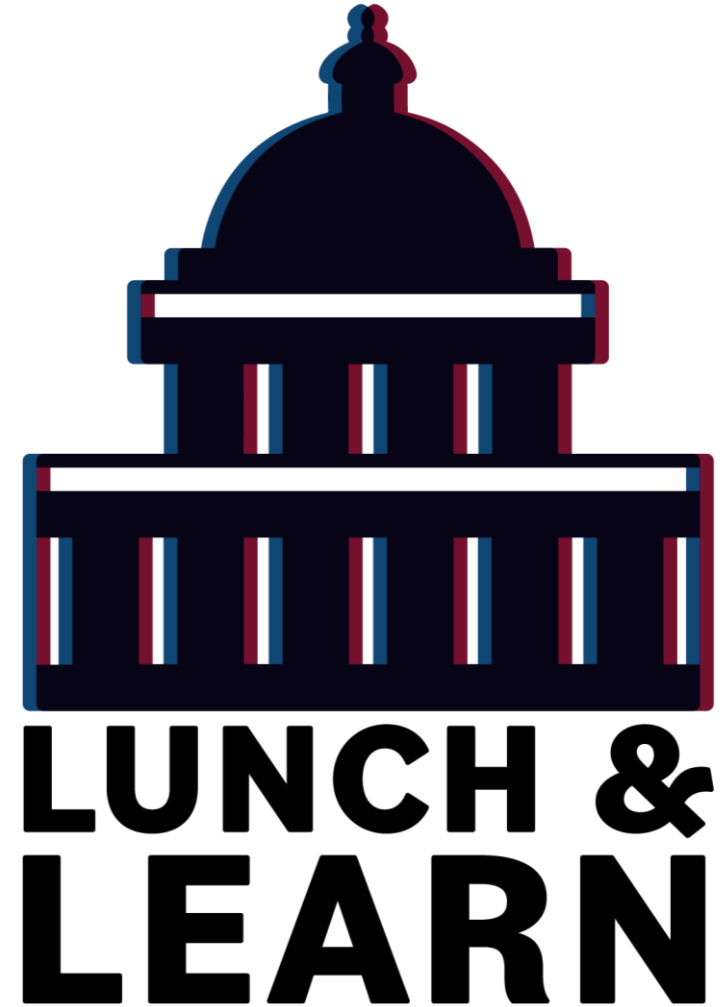




Food is Medicine Programs in Texas

A Texas Research-to-Policy
Collaboration (TX RPC) Project
Lunch & Learn Presentation



Welcome!

Today's room is sponsored by Representative Howard – thank you!

- About the TX RPC Project
 - Dr. Hoelscher
- Food as Medicine Programs in Texas
 - Dr. van den Berg
 - Dr. Polinard
 - Ms. Chevalier

Let us know how we can support your office's legislative health policy interests in the interim and for the 2025 legislative session!



TX RPC Project Funding provided by:



Michael & Susan Dell
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Texas Research-to-Policy Collaboration (TX RPC) Resources



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**Rapid Response
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**Texas Child Health
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**Texas Legislative
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Health Policy Resources

Food is Medicine

KEY TAKEAWAYS

1. Food insecurity is associated with chronic diseases (e.g., obesity, diabetes).
2. Food is Medicine initiatives strengthen the connection between food and health.
3. Food is Medicine program increases access to healthy food.

Background

Food insecurity is defined as limited or no access to adequate food to meet one's needs for an active and healthy lifestyle.

- Food insecurity is **higher among low-income populations**.
- According to a report by the U.S. Department of Agriculture, 15.5% of the U.S. population is food insecure, equating to approximately 1 in 6 Texas households.
- In the United States, households headed by a single mother are at the highest risk of food insecurity.
- Around \$3.87 trillion is spent on healthcare costs related to chronic diseases.

The 2022 White House's National Action Plan on Hunger and Food Insecurity aims to reduce the number of people who are food insecure by 2030.

Nutrition security is the state of being free from hunger, having access to adequate food for active and healthy lives, and having access to a nutritious diet.



Paid Family Leave and Maternal & Infant Outcomes

TX RPC Project Legislative Rapid Response

Background

Enacted in 1993, the Family and Medical Leave Act (FMLA) allows for leave to qualified workers with certain conditions. The FMLA allows for leave to qualified workers with certain conditions. The FMLA allows for leave to qualified workers with certain conditions.

The FMLA and PFL primarily provide unpaid leave to workers who are unable to take time off because of a family member's illness or other family-related issues.

Paid Family Leave & Maternal & Infant Outcomes

- PFL improves mothers' mental health.
 - Mothers are 9% more likely to report day-to-day demands of parenting.
- PFL improves both mother's and child's health.
 - PFL fosters better child-parent relationships, positive caregiving skills, and positive parenting.
- PFL improves child health outcomes.
 - Increases the likelihood of stronger immunity, reduced mortality, (9-11)
 - Reduces the likelihood of (especially among Black & Hispanic children)
 - Decreases the likelihood of year of life by almost half (12)
 - Increases timely immunization (14)
 - Reduces rates of physical and mental health problems (15)
 - Reduces the likelihood of Delirium/Hyperactivity Disorder (16)



Maternal & Child Health

KEY TAKEAWAYS

1. The quality of a mother's health before, during, and after pregnancy has lifelong impacts on the health and well-being of both mother and baby.
2. The maternal mortality crisis is compounded in Texas by the number of maternity care deserts across the state.
3. The best approach for preventing maternal death is ensuring adequate health care services before, during, and after pregnancy.
4. Midwives, doulas, home-visiting nurses, and community health workers can help bolster the maternal care workforce, especially in rural communities.
5. Ensuring adequate and timely data collection and analysis of state maternal and infant morbidity and mortality is important to monitor trends.

PROBLEM

The quality of a mother's pregnancy determines the well-being of her infant and is also the time when the foundations of a child's *lifelong health* are built. (1)

- Prenatal experiences like maternal malnutrition, elevated levels of stress hormones, or exposure to toxins are linked to disease outcomes later in life through: (a) physiologic changes that can impact either the developing fetus directly or (b) the health of the mother, which in turn affects fetal development. (2,3)

Pregnancy can also impact the health of the mother beyond the birth of her child.

- Some women will develop medical issues like pre-eclampsia or gestational diabetes during pregnancy. (4) These issues can lead to long-lasting impacts.
- Women with these conditions see higher lifelong risks for cardiovascular disease, type 2 diabetes, and stroke. (5)
- Pre-eclampsia, a serious form of high blood pressure during pregnancy, is linked to hemorrhaging, one of Texas's leading causes of pregnancy-associated deaths. (6,7)

FOR YEARS, THE U.S. HAS HAD THE HIGHEST MATERNAL MORTALITY RATES OF ANY OTHER HIGH-INCOME COUNTRY

The maternal mortality crisis in the U.S. is well documented.

- The most recent data published in 2022 by the National Center for Health Statistics show 23.8 maternal deaths for every 100,000 live births in 2020, up 30% in just two years from 17.4 per 100,000 in 2018. (8)
- Racial disparities in maternal mortality have persisted for years. (9) Black women in the U.S. are almost three times as likely to die from pregnancy complications than white women are, regardless of socioeconomic status. (8)



E-Newsletters

PUBLIC HEALTH NEWS & UPDATES

TEXAS RESEARCH-TO-POLICY COLLABORATION PROJECT
Maternal & Child Health
October 2024

Texas continues to face a maternal morbidity and mortality crisis

The Texas Research-to-Policy Collaboration (TX RPC) Project recently published a health policy resource covering **maternity & perinatal care deserts**. This topic has been the focus of multiple news articles this month as the release of the 2024 March of Dimes **Nowhere to Go: Maternity Care Deserts Across the US 2024 REPORT** brought it to light.

The state-wide maternal morbidity and mortality crisis has resulted in part from the lack of geographical access to maternity and perinatal care. Traveling further to attend healthcare appointments can make it difficult to receive adequate prenatal, labor & delivery, and postpartum care, increasing the likelihood of adverse outcomes.

[Read about the crisis.](#)



TX RPC Project Researcher Publications

Featured Publication

[Cardiovascular health profile is favorably associated with brain health and neurocognitive development in adolescents](#)

Maintaining cardiovascular health is essential for early adolescents' brain development and cognitive function (decision-making, problem-solving, emotional regulation), which is related to their academic and social achievements.

- This study explored the associations of health behaviors and indicators with adolescents' (11-12 years) brain development and cognitive function.
- Findings from this study indicate physical activity and overall cardiovascular health are associated with better executive cognitive function.
- Adolescents with healthier sleep status, normal body weight, and better overall cardiovascular health had a larger brain volume.
- Efforts should promote healthy behaviors (such as healthy diet, physical activity, avoidance of nicotine, and healthy sleep) in adolescents to improve cardiovascular health, brain health, and development.

Texas

[Blunt smoking during emerging adulthood: Characterizing transitions in cannabis and cigar co-use among a diverse cohort in Texas.](#)

General

[Perceptions of the addictiveness of low-nicotine cigarettes versus typical cigarettes and exposure to tobacco industry-sponsored corrective campaign](#)

[Physical activity and sedentary time among U.S. adolescents before and during COVID-19: findings from a large cohort study](#)

[Child care center staff readiness to change in an early childhood obesity prevention program](#)

Lunch & Learn Recap: Texas SPAN Survey Data

The most recent TX RPC Project Lunch & Learn presentation by Dr. Deanna Hoelscher covered Childhood Obesity Prevalence in Texas After COVID: Findings from the 2021-2023 Texas SPAN Survey.



[View the Presentation Slides](#)

Texas Child Health Status Reports

SPAN Data Explorer | About Texas SPAN | Diet | Physical Activity / Sedentary Behavior | Health Status



About Texas SPAN

This Texas SPAN Data Explorer provides state-level representative data on school children from 2002 to 2019-2020.

The overall goal of Texas SPAN is to measure the health of school-aged children in Texas, including other related behaviors.

The Texas SPAN Project was conducted by researchers at the Michael & Susan Dell Center for Health Science Center in Houston (UTHealth) School of Public Health in Austin, with funding from the Texas students and their parents surveyed by year:

- 2000-2002: 4th, 8th and 11th graders
- 2004-2005: 4th, 8th and 11th graders
- 2009-2011: 4th graders and their parents; 8th and 11th graders
- 2015-2016: 2nd graders and their parents; 4th, 8th and 11th graders
- 2019-2020: 2nd graders and their parents; 4th, 8th and 11th graders

Healthy Children, Healthy State:

Child Nutrition in Texas

Michael & Susan Dell Center for Healthy Living

TEXAS CHILDREN AREN'T MEETING NUTRITION GUIDELINES.

The USDA Dietary Guidelines¹ recommends focusing on a wide variety of fresh fruits and vegetables, whole grains, fat free or low fat dairy products, and high protein foods. They also recommend limiting added sugars and saturated fats and reducing sodium intake.

Nutrition Crisis¹

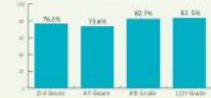
On a given school day:

- Over 2.5 million (32%) of Texas children do not eat any vegetables.
- Over 1.5 million (19%) of Texas children do not eat fruit.
- 28% of 8th graders and 36% of 10th graders do not eat breakfast.
- Over 80% of Texas children eat at least one "sweet" or "salty" snack (candy, frozen dessert, cakes, French fries, or chips).

Risks: Current & Lifetime^{2,3}

- A healthy diet is associated with better physical, psychological, and social health.
- Skipping breakfast leads to overweight & obesity.
- Children who eat more fruits & vegetables have lower body weight.
- A high sugar, low fiber diet is related to lower creativity test scores.

Texas students who do not consume at least 5 servings of fruit & vegetables each day:¹



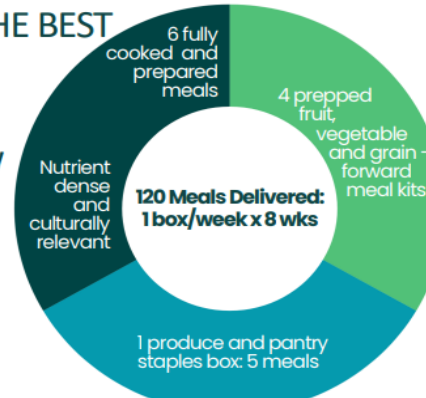
How we can improve Texas children's nutrition

- Strategies in schools
 - Ensure all school children have access to a healthy breakfast
 - Label food in school cafeterias, e.g., DO, SEOW, WHOA
 - Implement a proven, coordinated school health program, such as CATCH
 - Limit unhealthy food & drink marketing to young children
 - Ensure fast food kids meals default to healthy choices, such as milk or water, instead of sugary drinks



Center Webinars

FOOD IS THE BEST MEDICINE: PROGRAM OVERVIEW



Inside TCHMB A Conversation with Collaborative Leadership

Perinatal Quality Collaboratives (PQCs)

Logos of participating PQCs: MPQC, VNPQC, IL PQC, nyspQC, OPQC, CPCQC, UWNQC, CMQCC, tchmb, LaPQC, MSPQC, FPQC, VNPC, TIPQC, Ga PQC, and others.

Legend:

- CDC/Division of Reproductive Health funded states
- Participating state
- Not CDC funded

Legislative Resources

TX RPC Project Resources

go.uth.edu/RPCresources

Texas Child Health Status Reports

go.uth.edu/TexasChildHealth

Texas Legislative Bill Tracker

go.uth.edu/LegTracker

TX RPC Project Newsletter Archive

go.uth.edu/RPCnewsletter

Michael & Susan Dell Center Webinar Series

go.uth.edu/CenterWebinars

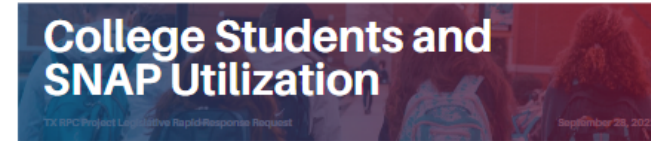


Scan to view our
Legislative Initiatives



Rapid Request Responses

- Legislators complete the [Rapid Response Form](#)
- TX RPC Project team will conduct research and prepare report based on requested topic
 - Reports reviewed by TX RPC Project researchers, UTHealth Government Relations
- Provide requested information to legislator



Student Demographics^[1]

Most of today's college and other post-secondary students, about 71%, are considered "non-traditional" students. They may be financially independent from their parents, work full time, are enrolled part-time, are caretakers, or do not have a traditional high school diploma. The average age of college enrollment is 21, but 26 is the average age for all college students. More than one in five (22%) college students reported being parents or caring for a child dependent, with 14% stating they are single parents.

Food Insecurity Impacts Education^[1-3]

According to a 2020 survey, more than a fifth of research university students (22%) reported food insecurity. Students who are under 21 are less likely to report food insecurity, but students over 30 are more likely to be hungry. Despite these high rates of food insecurity, even before COVID-19, while more than one in six (18%) college students were eligible, only 3% of college students were receiving Supplemental Nutrition Assistance Program (SNAP) benefits.

In a 2016 study:

- Nearly a third (32%) of food insecure students believed hunger impacted their education
- More than half (56%) reported that hunger kept them from buying textbooks
- A quarter (25%) of students who reported food insecurity also reported dropping a class
- More than half (53%) of students reported missing class in 2016 due to hunger

The Policy Landscape^[4]

In December 2020, the US House passed the Consolidated Appropriations Act (CAA). This act carved out an exception for higher education students enrolled at more than half time, who were previously ineligible to receive Supplemental Nutrition Assistance Program (SNAP) benefits if they met certain criteria: They must be eligible for Federal Work Study and have an expected family contribution of \$0. This exception will be in effect through the end of the declared COVID-19 Public Health Emergency (PHE), which is currently set to end on October 13, 2022, though it has been extended multiple times.

Summary of Search Results^[5-8]

Based on a preliminary search for legislation related to college students and SNAP, the TX RPC project team identified four states that have proposed or passed relevant legislation. Three states (Louisiana, Connecticut, and California) enacted laws related to this issue. One state (West Virginia) had Senate and House companion bills that appear to have stalled in committee.

It is important to note that no states have made the exception permanent because the rules about SNAP eligibility and college enrollment are set at the federal level and cannot be expanded at the state level.





Food is Medicine

Alexandra van den Berg, PhD, MPH

Joi Chevalier, MA, CCA

Elizabeth Polinard, PhD, RN



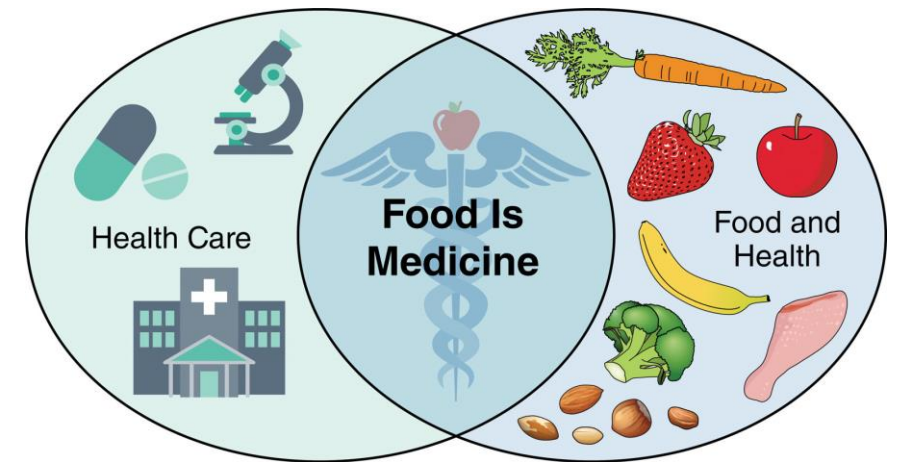
Background

- ❖ Diet quality is a major driver of chronic disease
- ❖ About 90% of Americans eat less than the amount of fruits and vegetables recommended by Dietary Guidelines for Americans
 - ❖ Diet quality disproportionately lower among individuals of color and those with lower incomes
- ❖ Food insecurity and nutrition insecurity are 2 factors contributing to low diet quality
- ❖ Need for food and nutrition interventions and policy to improve food security and nutrition security in order to improve health outcomes within the system



Background

- ❖ One approach is Food Is Medicine (FIM)
 - **FIM** is the provision of healthy and culturally relevant nutrition to prevent, manage, or treat specific clinical conditions in a way that improves health outcomes and reduces health care costs, by addressing food insecurity in order to help with disease self-management



Food is Medicine Programs

Cashlike FIM Intervention

- Healthy food prescription programs provide subsidies, vouchers, coupons, or other ways to make healthy foods more available and affordable
- Conducted as partnerships between health care systems and food retailers, sometimes with a third-party coordinating organization

In Kind Intervention

- Provide either unprepared groceries that a beneficiary must prepare or fully prepared meals
- Can be either medically tailored (eg, chosen according to comorbidities of individual served) or non tailored (eg, generally healthful food but not chosen on the basis of any specific clinical condition)



Condition-Specific Study Results

Health Condition	Outcome	Result
Multiple health conditions	Emergency department visits	↓
	Inpatient admissions	↓
	Overall health care costs	↓
	Admission to skilled nursing facility	↓
	Self-reported healthier eating	↑
	Self-reported health status	↑
Type 2 diabetes	Healthy Eating Index Score	↑
	Dietary quality (18-item Multifactor Screener)	↑
	Food security	↑
	Hypoglycemia	↓
	Depression (Patient Health Questionnaire)	↓
	Binge drinking	↓
	Hospitalizations and ED visits	—
	Self-reported diabetes management and awareness	↑
	Diabetes distress	↓
	HbA1c	—
	BMI	↓
	Tradeoffs between health care and food	↓

FIM programs can prevent 6 million hospitalizations annually and lead to savings estimated at \$13.6 billion per year in our \$4 trillion healthcare system.

This table provides a snapshot of the key outcomes that have been measured for different health conditions, noting if a medically tailored meal intervention was associated with a statistically significant increase (↑), decrease (↓), or no impact (—).



Condition-Specific Study Results

Health Condition	Outcome	Result
HIV/AIDS	Food security	↑
	Dietary quality (18-item Multifactor Screener)	↑
	Depression (Patient Health Questionnaire)	↓
	Binge drinking	↓
	BMI	-
	HIV Stigma Scale	-
	Hospitalizations and ED visits	-
	Self-reported ART adherence	↑
	Tradeoffs between health care and food	↓
Heart failure	Kansas City Cardiomyopathy Questionnaire Score	↑
	Kansas City Cardiomyopathy Questionnaire Clinical Score	-
	Cardiac and serological biomarkers	-
Chronic liver disease	Paracenteses	↓
	Ascites-specific quality of life metrics	↑
	Days in the hospital	↓

FIM programs can prevent 6 million hospitalizations annually and lead to savings estimated at \$13.6 billion per year in our \$4 trillion healthcare system.

This table provides a snapshot of the key outcomes that have been measured for different health conditions, noting if a medically tailored meal intervention was associated with a statistically significant increase (↑), decrease (↓), or no impact (-).



CMS Policy Advances

Timeline of New Medicare Advantage Plan Benefit Flexibilities



Notes: Years correspond to when policy changes took effect. MA = Medicare Advantage; CMMI = Center Based Insurance Design; CMS = Centers for Medicare and Medicaid Services.

* Included in CY 2019 Rate Announcement and Final Call Letter.

** Enacted as part of the CHRONIC Care Act, BBA of 2018.

Source: Thomas Kornfield et al., *Medicare Advantage Plans Offering Expanded Supplemental Benefits: A Fund*, Feb. 2021). <https://doi.org/10.26099/345k-kc32>

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U.S. Begins Allowing Medicaid Money to Be Spent on Food
 Biden administration allows states to tap funds for nutrition to battle chronic diseases, improve health

By [Stephanie Armour](#) and [Kristina Peterson](#)
 Feb 12 2023 8:00 am ET

WASHINGTON—The Biden administration has started approving state requests to use Medicaid to pay for groceries and nutritional counseling as policy makers explore whether “food as medicine” programs can lead to broad health benefits and trim costs.

A growing body of research suggests that addressing food insecurity can improve health as well as deliver savings by reducing medical visits, the need for medication, or by helping control serious illness. The programs have also appealed to some GOP lawmakers who believe states should have more control over their Medicaid programs.

Press release

CMS Redesigns Accountable Care Organization Model to Provide Better Care for People with Traditional Medicare

Feb 24, 2022 | Innovation models, Medicare Parts A & B

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Global and Professional Direct Contracting Model Transitioning to ACO Realizing Equity, Access, and Community Health (REACH) Model

Building on the Biden-Harris Administration’s priorities for a better health care system, today the Centers for Medicare & Medicaid Services (CMS) announced a redesigned Accountable Care Organization (ACO) model that better reflects the agency’s vision of creating a health system that achieves equitable outcomes through high quality, affordable, person-centered care. The ACO Realizing Equity, Access, and Community Health (REACH) Model, a redesign of the Global and Professional Direct Contracting (GPDC) Model, addresses stakeholder feedback, participant experience, and Administration priorities, including CMS’ commitment to advancing health equity.



Food as Medicine Benefits Offerings

SSBCI* Offering	No. of Medicare Advantage Plans		
	2020	2022	Increase
Food & Produce	101	763	7.5x
Meals (beyond limited basis)	71	403	5.7x

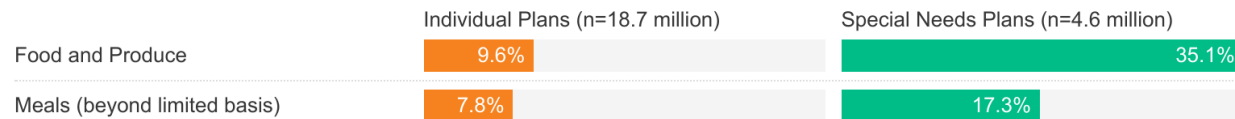
Medicare Advantage plans offering **food benefits** to address chronic disease **have grown significantly** since first allowed in 2020

* SSBCI = Special Supplemental Benefits for the Chronically III

2.3 million participants can access meals as a benefit through Medicare Advantage plans, and 3.5 million can access food & produce

Figure 6

Share of Medicare Advantage Enrollees in Plans with Special Supplemental Benefits for the Chronically III (SSBCI), by Benefit and Plan Type, 2022



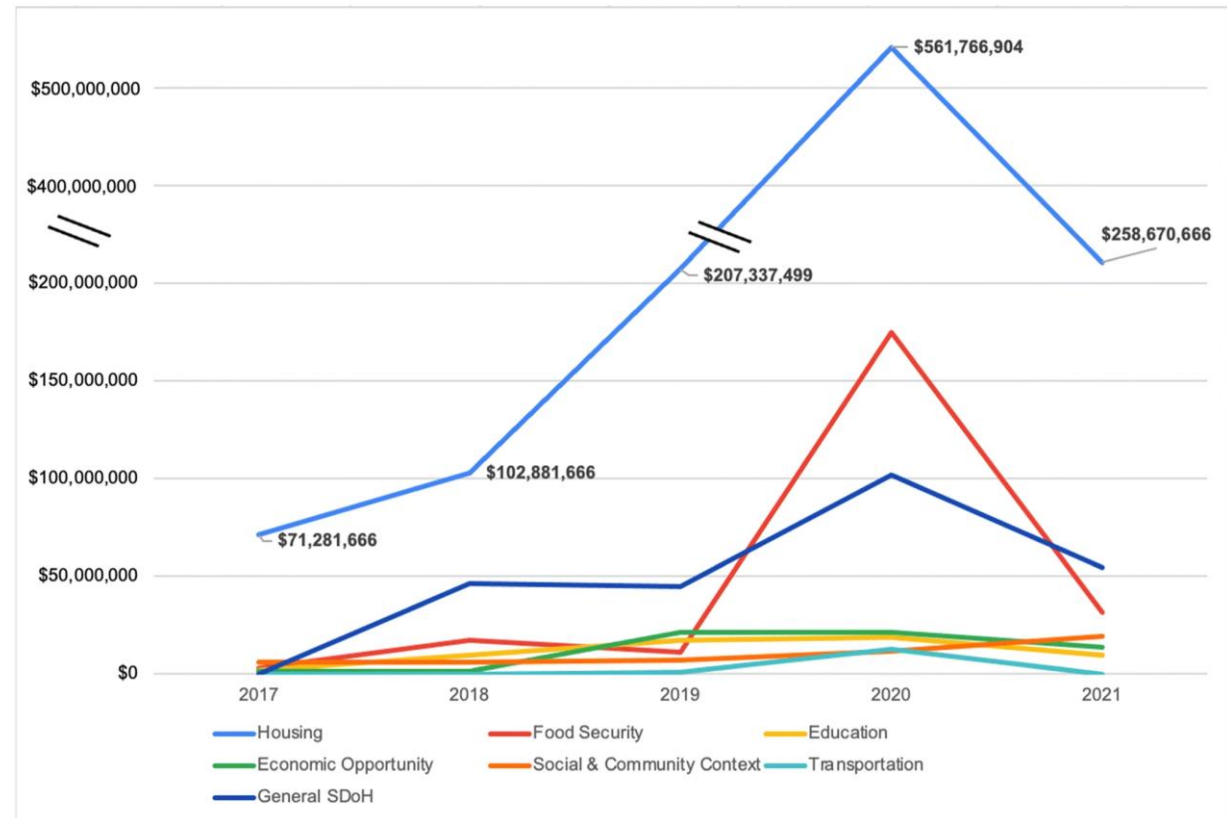
NOTE: Some plans may offer variations of the same plan, but with different SSBCI benefits, so shares enrolled may be slight overestimates of actual enrollment. Social needs include access to community or plan-sponsored programs and events, such as non-fitness club memberships, community or social clubs, and park passes. Indoor air quality equipment and services may include temporary or portable air conditioning units, humidifiers, or dehumidifiers. General supports for living such as housing may be provided. Services supporting self-direction may include services to assist in the establishment of decision-making authority for healthcare needs (e.g., power of attorney for health services) and/or may provide education such as financial literacy classes. Individual plans are plans open for general enrollment and exclude employer group health plans and SNPs.

SOURCE: KFF analysis of CMS Landscape and Benefit files for 2022.



Trends in NMDoH Spending

- Social, environmental and economic conditions—so called non-medical of health (NMDoH)—are acknowledged as having a material impact on health outcomes. Per one study, NMDoH account for 80% of a person’s modifiable contributors to health outcomes.
- There is a growing evidence base that investment by health systems in NMDoH leads to reduced medical costs and improvement in key health metrics (e.g., admission / readmission rates, disease biomarkers).
- From 2017 to 2021, the top 20 private health insurers in the US increased their spend on NMDoH related programming. Food security was the second highest category of spend (after housing) with \$238 million invested over that time period.
- The onset of the COVID pandemic in 2020 resulted in a spike in spending; 2021 spending was still 3.6x higher than 2017 and 1.2x higher than 2019.



Source: Velasquez, D.E., Srinivasan, S. & Figueroa, J.F. Trends in Social Spending by Private Health Insurers. J GEN INTERN MED (2022). <https://doi.org/10.1007/s11606-022-07878-7>



Innovations in “Food is Medicine” —Health Insurers & Plans

Insurers have launched new, innovative programs providing quality food as a benefit. A few examples:

- **Florida Blue** is investing \$3.73 million in combating food insecurity through grants to 10 community organizations, the payer said Oct. 19. The payer's philanthropic arm, Florida Blue Foundation, has provided over \$16 million in grants to tackle food insecurity over the last four years.
- The states of **Massachusetts and Oregon** will test medically tailored meal pilots in their Medicaid programs.
- California awarded **Molina Healthcare, Anthem Blue Cross Partnership Plan and Centene subsidiary Health Net** contracts to manage the state's Medicaid programs. The contracts require the organizations to address social determinants of health, including food and housing insecurity.
- **CareFirst BlueCross BlueShield** is using healthcare analytics company Socially Determined's SocialScape platform to identify people facing health risks from financial strain, food insecurity and health literacy challenges.
- **Centene subsidiary WellCare of North Carolina** launched the Health Opportunities pilot program in May. The pilot is the nation's first comprehensive program to test nonmedical interventions, such as providing healthy food boxes and addressing transportation needs of Medicaid beneficiaries.
- **Blue Cross and Blue Shield of North Carolina** contributed \$3.2 million to a University of North Carolina at Chapel Hill and UNC Health Alliance study on food insecurity and people with hypertension.



Policy Innovations in “Food is Medicine”

- In 2019 and 2020, CMS (the Centers for Medicare & Medicaid Services) **expanded the types of supplemental benefits that can be offered under Medicare Advantage (MA) to include meals**, among others. In 2021 CMS issued guidance on SDoH offerings for state Medicaid providers and named home-delivered meals as a key service.
- In December 2022, CMS issued a proposed rule that includes the establishment of a health equity index which would incentivize MA and Medicare Part D plans to more robustly address chronic disease and to improve health outcomes of underserved populations
- In September 2022, the **Biden-Harris Administration** issued a National Strategy on Hunger, Nutrition, and Health to end hunger in the US. One of five pillars is *Integrate Nutrition & Health*, which highlights the **need to “prioritize the role of nutrition and food security in overall health—including disease prevention and management”**
- In conjunction with the launch of the White House strategy, **the American Health Association and the Rockefeller Foundation announced an institute dedicated to demonstrating the efficacy and ROI of “food as medicine”** to encourage more private sector participation and funding.



Current FIM projects in Central Texas

Program and Organization	Target Population	Purpose
FBM (Ascension Seton, UTHealth Houston, Farmshare Austin, The Cook's Nook)	Postpartum mothers experiencing food insecurity	To address food insecurity, improve maternal and child health outcomes, and support postpartum recovery through food access and social support
FoodRx (Ascension Seton)	Postpartum mothers and their babies	To improve dietary health, reduce food insecurity, and enhance maternal and infant outcomes through integrated care and nutritious food access
Veggie Rx (Farmshare)	Patients with diabetes or pre-diabetes	To address food insecurity and improve fresh produce intake among participants
Mobile Farmacy (Central Texas Food Bank)	Food-insecure patients	To improve access to nutritious food and strengthen the connection between healthcare and food security for vulnerable populations



Texas Research-to-Policy
Collaboration Project

Food is Best Medicine (FBM)

1 in 8 Texans
Experience
Food Insecurity

Food Insecurity
=
Poor Maternal
Health Outcomes

Severe
Maternal
Morbidity and
Mortality

50% of Birthing
Patients are
Un/Underinsured



Postpartum Food Insecurity in Texas

For Postpartum Women, FI is linked to:

- Poorer mental health outcomes³
- Higher rates of postpartum depression³
- Higher likelihood of infant hospitalization⁴



1. Feeding Texas. What is food insecurity? <https://www.feedingtexas.org/learn/what-is-food-insecurity/>. Accessed September 27, 2023

2. Berkowitz SA, Basu S, Gundersen C, Seligman HK. State-Level and County-Level Estimates of Health Care Costs Associated with Food Insecurity. *Prev Chronic Dis.* 2019;16:180549. doi:10.5888/pcd16.180549

3. Tarasuk V, Gundersen C, Wang X, Roth DE, Urquia ML. Maternal food insecurity is positively associated with postpartum mental disorders in Ontario, Canada. *J Nutr* 2020; 150:3033-3040. doi: 10.1093/jn/nxaa240.

4. Laraia BA, Borja JB, Bentley ME. Grandmothers, fathers, and depressive symptoms are associated with food insecurity among low-income first-time African-American mothers in North Carolina. *J Am Diet Assoc* 2009;106:1042-1047. doi: 10.1016/j.jada.2009.03.005.

Food is Best Medicine

8 weekly home deliveries starting within 30 days postpartum

- Ineligible food insecure moms or those unwilling to join the study receive \$100 grocery gift card*

100% remote participation

- Short online application ensures easy program access. ~7 min
- English/Spanish options cater to many participants

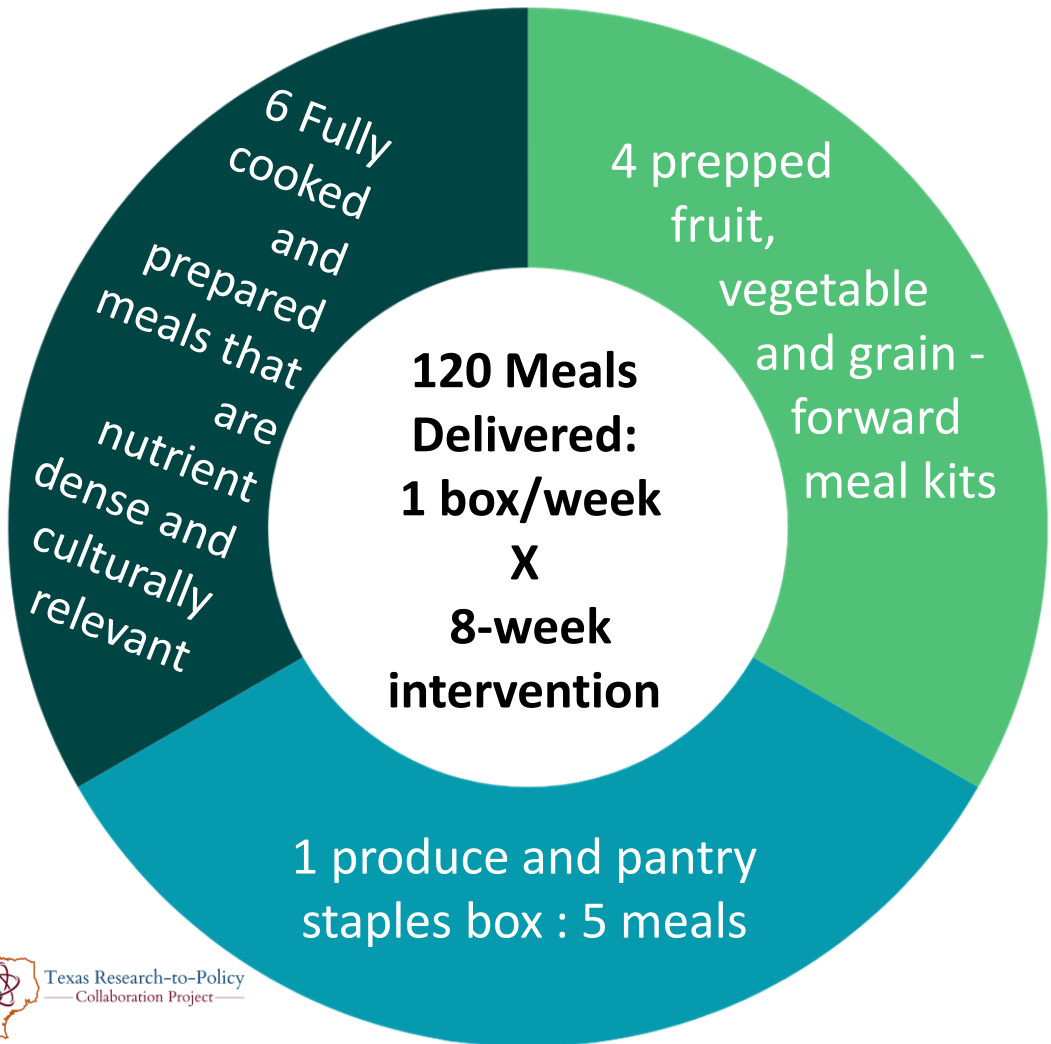


Food *is the*
best medicine

Weekly Deliveries include:

- ✓ 6 fully cooked meals
- ✓ 4 vegetable & grain meal kits
- ✓ \$15 worth of selected produce and groceries via online marketplace

Food is Medicine Program Overview



FBM Process

01 Labor and Delivery Admission History at Ascension - Intake Food Insecurity Screening

Question:

“In the last 12 months, did you ever eat less than you felt you should because there wasn’t enough money for food?”

Additional Inclusion criteria: 1) Postpartum less than 30 days, 2) Literate in English or Spanish, 3) Live in the program service area, 4) 18 years - 45 years old

**02 Social Work Follow-up
and Referral to FBM
Program Coordinator**

**03 Online Eligibility
Confirmed/Registration**

04 Food Delivery x 8 Weeks



Partners

ATCOHRE/ASCENSI ON FOUNDATION



Ascension Seton
Medical Center Austin
maternity patients

Elizabeth Polinard
Victoria Threadgould

UTHEALTH HOUSTON AT AUSTIN



Program management,
implementation and
evaluation

Chris Reyes
Sandra van den Berg

THE COOK'S NOOK



Nutrient dense,
culturally relevant
prepared meals and
meal kits

Joi Chevalier

FARMSHARE AUSTIN



Organic produce from
the farm, shelf-stable
pantry items, and
food delivery

Andrea Abel
Alicia Fischweicher

Collaboration Among Partners



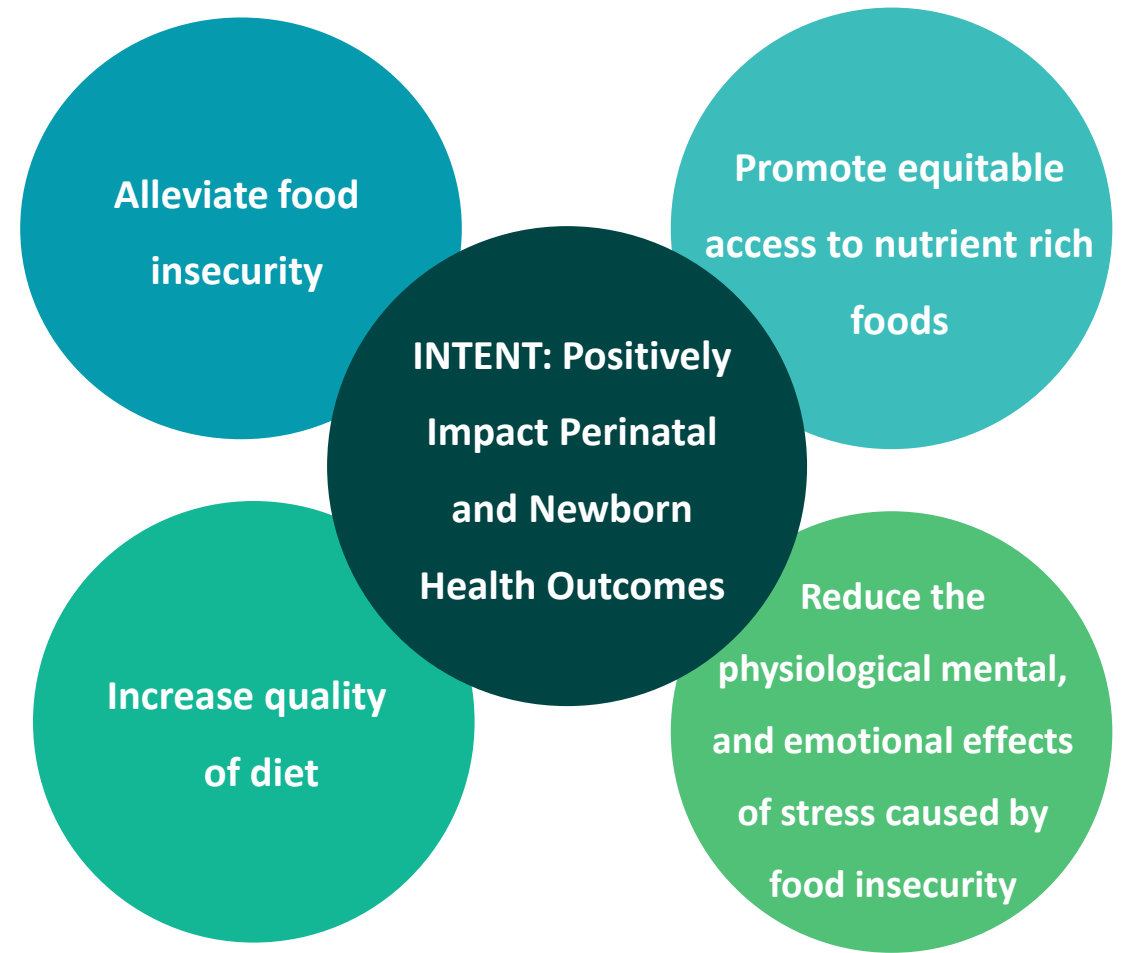
FBM: Overarching Intent and Goals

Mission Statement:

- To leverage community partnerships to improve health outcomes and promote equitable access to nutrient-rich food for parents and their newborn children.

Vision Statement:

- A community where all postpartum women, regardless of income and insurance status, have access to healthy, nutritious food during their vital healing period.



Current State

01

Over 400 HEB gift cards distributed

02

Over 1510 food deliveries made

03

Two grant-funded research projects in progress



**205 unique households;
11,560 lbs of produce delivered**

Food is the Best Medicine Outcomes

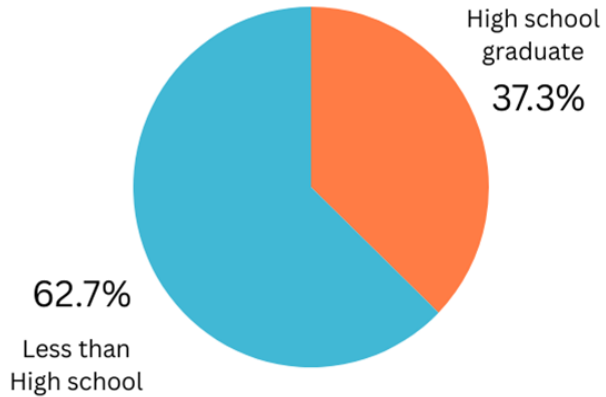
Diet Quality	With a focus on F&V consumption, measured using selected items from the 26-item NCI DSQ screener.	Mental Health Status	Edinburgh Postnatal Depression Scale
Food Security	Measured with the 6-item validated USDA screener.	Home Cooking	Assessed using a 3-item validated scale.
Breastfeeding Rates	Measured using items from the CDCs Infant Feeding Practices Study	Rationing Coping Strategies	Measured using a 5-item validated scale.



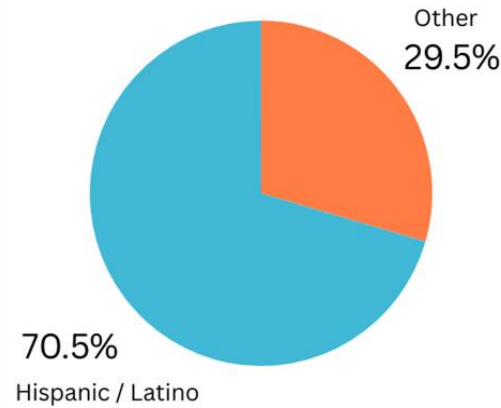
Preliminary data: Sociodemographics

Average Age: 28 years old
Sample Size: n = 113

Education Level



Race / Ethnicity



Food Insecurity

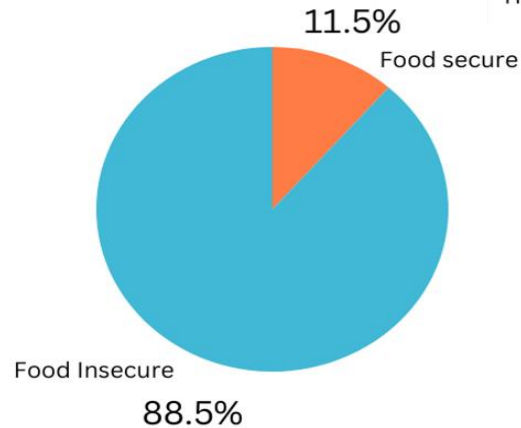


Figure 2. Sociodemographic Characteristics of All FBM Participants

n = 113



Average household size **5.3** people

84% of participants annual household income is below \$25,000

71% of participants identify as Hispanic, Latino, or Mexican American

37% of participants reported their highest level of education as "less than high school"

Demographic characteristics of All FBM Participants

Preliminary Results

- Significant decrease in food insecurity
- Significant increase in grain consumption
- Significant increase in fruit consumption
- Trend in increase in vegetable consumption
- Trend in decrease in soda consumption
- Trend in decrease in postpartum depression



FBM Participant Feedback

What has being part of the food delivery program meant to you?

"It has meant SO much! We are over the income limit for SNAP by less than 45\$ and so we don't qualify. **Access to food is a real struggle for our family. This program has meant SO much to us.** Honestly, I don't know what we would have eaten some days without this food. It helped us be able to eat and feed our kids and it was healthy too. We are truly grateful. We are also sad the program ended! We miss it for sure. Thank you for every single thing that you do to help people like us."

"Pues muy contenta porque siempre me ayudan con las comidas"

- **"Well, very happy because they always help me with the meals."**

"Muy agradecida con ustedes por tener la capacidad de ayudarnos el cariño y comprensión por nosotros los emigrantes"

- **"I am very grateful to you for having the ability to help us, for the care and understanding you show us as immigrants."**

"There were meals coming when it felt impossible to get to the grocery store, let alone prepare meals."

"I felt cared for in a challenging time by the community in a way I haven't really felt before."

FBM Participant Feedback

Is there anything else you'd like us to know?

"Agradecerles nuevamente e instarles a que sigan con el Programa; ayudando a otras personas que realmente necesitan; hay circunstancias en las que sentimos que no encontramos salida o solución y estas pequeños gestos hacen la Diferencia Gracias!! 🙏"

- "Thank you once again and encourage you to continue with the Program; helping other people who truly need it. **There are times when we feel like we can't find a way out or a solution, and these small gestures make a difference.** Thank you!! 🙏"

"It Was Nice To Have Something To Look Forward To At The End Of My Weeks! And Also Finding Out About Different Resources! But Lastly Also Finding Out About Getting More Bang For My Buck When Grocery Shopping!"

"Que sigan apoyando a las mujeres que lo necesitan por si es una gran ayuda"

- "Keep supporting more women who need it; it's truly a big help."

"I want to thank you all for your kindness. You guys have helped me to through this journey so much easier. I hope you and your family always in happy, healthy and wealthy. **Please share more program like this to all women across the United States, and I hope the world will be inspired by this program too.** Everyone should have good access in healthy food."

"Pueden enseñarme a cocinar saludable Por ejemplo las zanahorias caramelizadas me encantaron"

- "Can you teach me how to cook healthy? For example, I loved the caramelized carrots."

Goals Beyond the Pilot Study



Increase the project beyond the initial 24-month pilot study



Expand Food is the Best Medicine

- Include prenatal through 6 months postpartum
- Broaden delivery to additional Travis Co. zip codes
- Add additional Ascension Seton hospitals (local and nationwide)



Affect System Change with Ascension Seton for long-term impact

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QUESTIONS?



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