



Brittany Woodbury-Utah



Matthew Smith-Texas

Lessons Learned: State Actions and Advocacy to Address Malnutrition

Monday, August 15th at 12 PM ET

defeat malnutrition today

Malnutrition in Utah: Why it matters and what actions to take

Brittany Woodbury

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Project Introduction

Project Introduction

- Utah Malnutrition Advocacy Taskforce
UMAT
- Evaluate current practices
- Provide action items
- Distribute to healthcare professionals
and policy makers

Methodology

- Literature review
- Interviews
- Draft
- Final review

Malnutrition

- Under and over nutrition
- Undernourishment worldwide
 - 9.9% in 2020
- Overnourishment in Utah adults
 - 33.4% overweight
 - 29% obese

Malnutrition: The Problem

Problem

- Causes of Malnutrition
 - Illness related
 - Non-illness related
- Financial costs
- Lack of standardized screening and diagnosis tools
- Lack of awareness

Malnutrition: Taking Action

Strategic Priorities

1. Increase awareness of the prevalence and challenges of malnutrition in Utah
2. Prevent malnutrition in the community
3. Prevent malnutrition in healthcare
4. Adopt standard procedures for the screening and diagnosis of malnutrition
5. Treat malnutrition
6. Improve coordination of community programs, healthcare systems, and policies

Strategic
Priority 1:

Increase awareness of the prevalence and challenges of malnutrition

- Communicate the prevalence of malnutrition to policy makers
- Increase awareness of malnutrition among the general population

Strategic
Priority 2:

Prevent malnutrition in the community

- Promote legislation to maintain or increase funding of community programs
- Provide school and community-based nutrition education
- Expand free school meals and programs

Strategic
Priority 2:

Prevent malnutrition in the community

- Ensure equitable access to food through policy initiatives
- Support breastfeeding in the community and places of employment
- Develop eating habits and family mealtime dynamics

Strategic
Priority 3:

Prevent malnutrition in healthcare

- Identify risk factors and high-risk populations
- Adopt room service models in hospitals

Strategic
Priority 3:

Prevent malnutrition in healthcare

- Ensure adequate protein intake in hospitalized patients through policies, privileging, and insurance coverage
- Provide post-discharge meals for high-risk patients
- Implement fall prevention programs

Strategic Priority 4:

Adopt standard procedures for the screening and diagnosis of malnutrition

- Screening tools
 - Community
 - NutriSTEP for children
 - MST for adults
 - SCREEN II for older adults
 - Healthcare
 - STAMP tool for children
 - MST for adults
 - MST for older adults

Strategic
Priority 4:

Adopt standard procedures for the
screening and diagnosis of malnutrition

- Diagnosis tools
 - Academy and ASPEN indicators to diagnose malnutrition (AAIM) for children
 - AAIM for adults
 - AAIM for older adults

Strategic
Priority 4:

Adopt standard procedures for the screening and diagnosis of malnutrition

- Expand reimbursement for malnutrition diagnosis and treatment to other providers
- Add malnutrition to the active problem list

Strategic Priority 5:

Treat Malnutrition

- Identify any underlying medical causes of malnutrition
- Quickly increase calories and protein intake of persons with malnutrition
 - Begin oral supplements and/or nutrition support
 - Concentrate infant formulas
 - Powerpack foods
- Improve Medicaid coverage for partial nutrition support

Strategic Priority 6:

Improve coordination of community programs, healthcare systems, and policies

- Train a larger number of healthcare professionals to screen for malnutrition
- Work with faith and community groups to increase screening for malnutrition

Strategic
Priority 6:

Improve coordination of community programs, healthcare systems, and policies

- Allocate resources to diverse social and community areas
- Improve coordination of care between hospitals, assisted living, and community settings

COUNTY-LEVEL CHARACTERISTICS DRIVING MALNUTRITION DEATH RATES AMONG OLDER TEXANS

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MALNUTRITION AMONG OLDER ADULTS

- Deficiencies, excesses, or imbalances in a person's consumption of nutrients
- Multi-factorial condition caused by a combination of social, psychological, physical, and medical factors
- Results in severe health consequences, causing diminished physical health, loss of independence, increased hospitalizations and healthcare costs, and even death
- ***Need for multi-level efforts and initiatives to identify at-risk older adults and link them to appropriate programs and services while addressing upstream risk factors***

LEVELS OF INFLUENCE

- Malnutrition is associated with who we are, what we do, and where we live
- Growing importance placed on geography and the physical environment
 - Social environments
 - Dispersion of resources (rural)
 - Inter-agency connectedness
 - Availability, accessibility, and affordability of *quality* healthcare and health-resources
- Examining community infrastructure can help us identify trends and opportunities for meaningful interventions, solutions, and partnerships



STUDY RATIONALE

- The purposes of this pre-COVID study were to
 1. Identify the prevalence of older adult malnutrition death in Texas
 2. Examine county-level characteristics associated with crude malnutrition death rates
 3. Describe assets and opportunities to address and improve malnutrition among older Texans

- Risk and asset mapping is a useful tool for assessing health-related needs, disparities, and inequities within communities
 - Visually layering diverse data sources using geographic information systems (GIS)
 - Identify risk, hot spotting, and the need for targeted efforts
 - Reveal bright spots and well-performing communities



STATISTICAL ANALYSES & MEASURES

- County-level analyses using descriptive statistics
 - Malnutrition – CDC Wonder
 - Rurality and Service Provision – U.S. Health Resources Administration & U.S. Department of Agriculture
 - Population Demographics – U.S. Census & American Community Survey
 - Poverty & SNAP Benefit Receipt – U.S. Census & American Community Survey
 - Food Access – U.S. Department of Agriculture
- Ordinal regression using statistical tertiles
- Geospatial information system (GIS) mapping
 - Food stores, food pantries, Area Agencies on Aging
- Statistical significance for all analyses was determined using the criterion of $p < 0.05$

ABOUT THE COUNTIES (n = 254 in Texas)

- Pre-COVID, **25,195 malnutrition deaths** among adults ages 65 years and older
- Average number of malnutrition deaths by county was 99.19 deaths
 - Ranged from 0 to 3,796 malnutrition deaths
- Overall malnutrition crude death rate in Texas was 65.6 deaths per 100,000 older Texans
 - Ranged by county from 0 to 414.46 deaths per 100,000
- Of the 254 counties, 67.7% were classified as non-metro, and 81.5% were determined as a HPSA in parts of the county (5.5%) or the entire county (76.0%)
- About 1/3 households with residents 60+ received SNAP benefits
 - 62% low access to food within 1 mile; 20% within 10 miles (65+)

FACTORS ASSOCIATED WITH HIGHER CRUDE DEATH

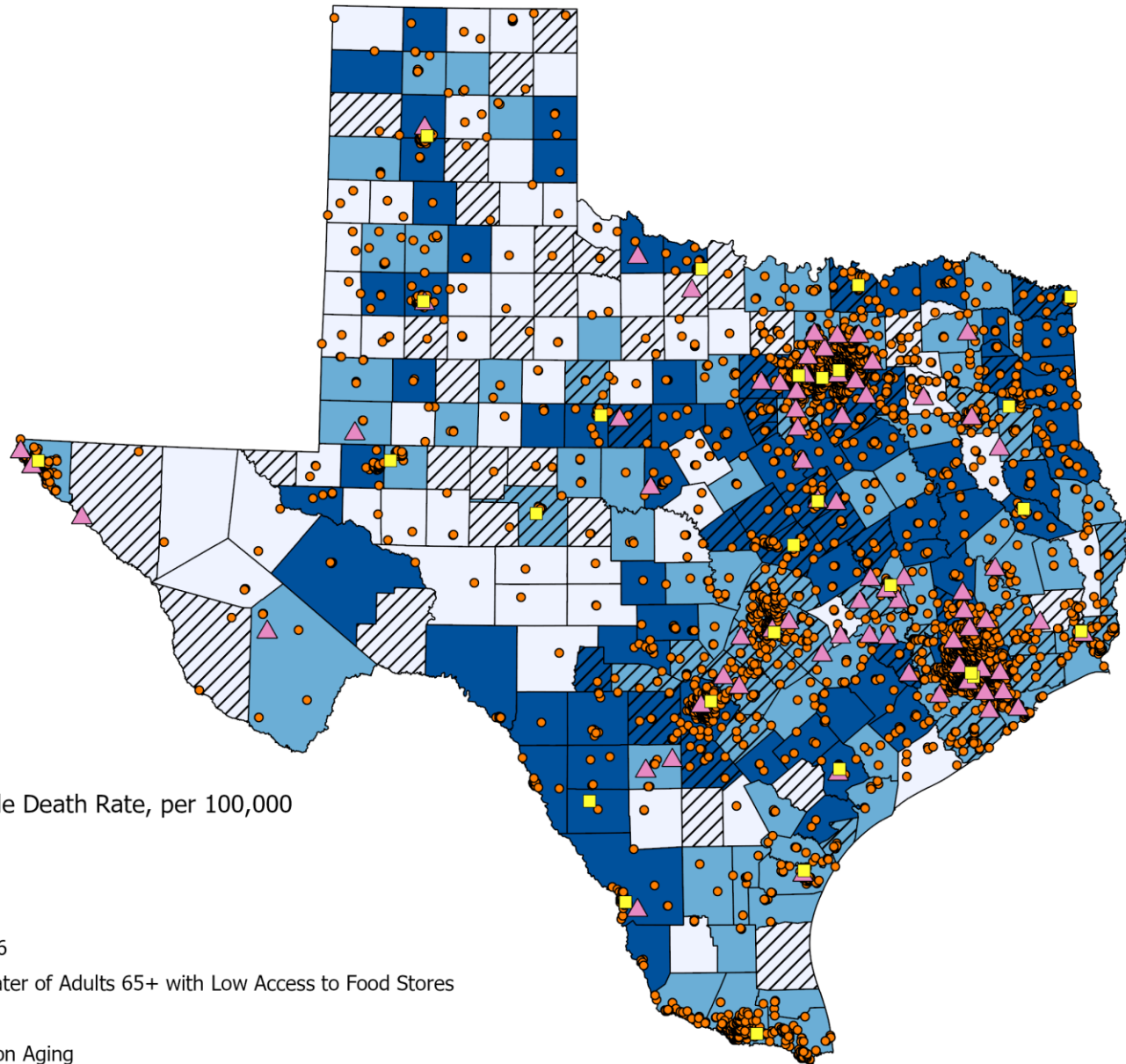
- Risk Factors
 - Counties in higher malnutrition crude death rate tertiles
 - Non-metro counties
 - Larger county population without high school education
 - Larger county population with households in poverty
 - Larger county population ages 65+ years with low access to food within 10 miles
- Protective Factors
 - Counties in lower malnutrition crude death rate tertiles
 - Larger county population of older adults ages 85+
 - Larger county population of Black/African American residents
 - Larger county population of Hispanic residents

FACTORS ASSOCIATED WITH HIGHER CRUDE DEATH

Ordinal Regression for Malnutrition Crude Death Rate Tertiles

	Beta	SE	Wald	P	95% CI	
					Lower	Upper
RUCC: Non-Metro	0.86	0.36	5.56	0.018	0.14	1.57
HPSA: Partial/Full	0.22	0.36	0.36	0.546	-0.48	0.92
Percent of County Population: Age 85+	-0.52	0.21	5.88	0.015	-0.93	-0.10
Percent of County Population: Black/African American	-0.12	0.03	17.62	<0.001	-0.17	-0.06
Percent of County Population: American Indian/Native American	-0.39	0.27	2.16	0.142	-0.91	0.13
Percent of County Population: Asian/Pacific Islander	0.06	0.07	0.62	0.430	-0.09	0.20
Percent of County Population: Native Hawaiian	-1.20	1.05	1.31	0.253	-3.27	0.86
Percent of County Population: Other Race	0.05	0.02	5.04	0.025	0.01	0.10
Percent of County Population: Two or More Races	-0.08	0.10	0.64	0.424	-0.28	0.12
Percent of County Population: Hispanic	-0.03	0.01	5.00	0.025	-0.05	-0.01
Percent of County Population: Without High School Education	0.07	0.04	3.95	0.047	0.01	0.14
Percent of County Households In Poverty	5.69	2.22	6.56	0.010	1.34	10.04
Percent of County Households with 60+ Resident: Receiving SNAP Benefits	0.02	0.01	3.15	0.076	0.00	0.05
Percent of County Population 65+: Low Access to Food within 10 Miles	0.04	0.01	20.34	<0.001	0.02	0.06

Nagelkerke $R^2 = 0.426$



Malnutrition Crude Death Rate, per 100,000

Age 65 +

0.00 - 42.05

42.36 - 80.95

81.16 - 414.46

50% and greater of Adults 65+ with Low Access to Food Stores

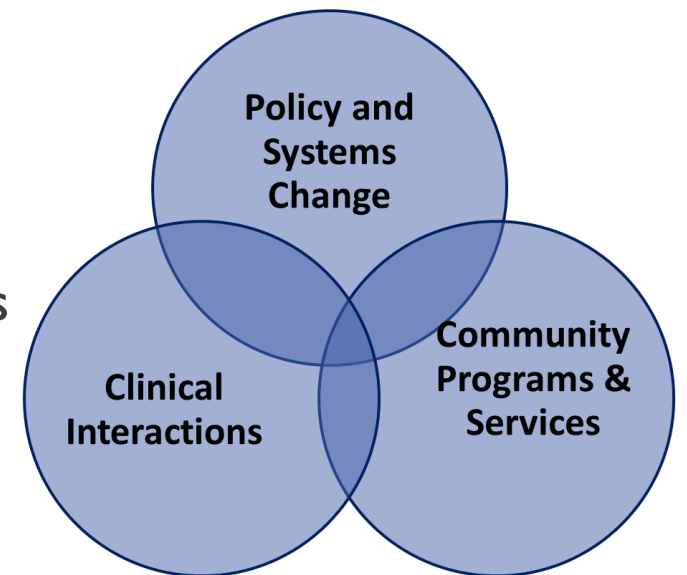
Food Stores

Area Agency on Aging

Food Banks

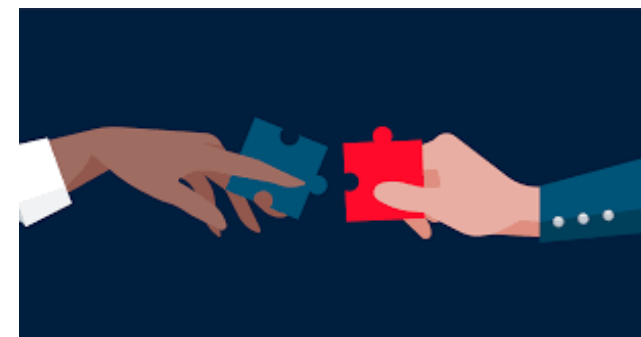
DISCUSSION

- Socioeconomic disadvantages can be root causes of malnutrition crude death rates in Texas
- Protective qualities could make certain counties more equipped to care for and protect their older adults from malnutrition-related death
 - Cultural regard of older generations
 - Intergenerational homes
 - Unique programs and services
 - Unique community partnerships
- Routine updates may guide public health and aging services planners to understand county-level malnutrition risk while supporting protective community aspects



ALIGNMENT WITH LARGER INITIATIVES

- Organizational change and support of coalitions, task forces, and action alliances
- Administration for Community Living (ACL) & National Council on Aging (NCOA)
 - <https://acl.gov/programs/health-wellness/nutrition-services>
 - <https://www.ncoa.org/professionals/health/center-for-healthy-aging/evidence-based-programs>
- Texas Health and Human Services - Texercise Prevents: Malnutrition in Older Texans (& Texercise Nourish)
 - <https://www.hhs.texas.gov/services/health/wellness/texercise/healthy-eating>
- Defeat Malnutrition Today
 - <https://www.defeatmalnutrition.today>
- Age-Friendly Health Systems
 - 4 Ms: What Matters; Medication; Mentation; Mobility
 - <https://www.aha.org/center/age-friendly-health-systems>

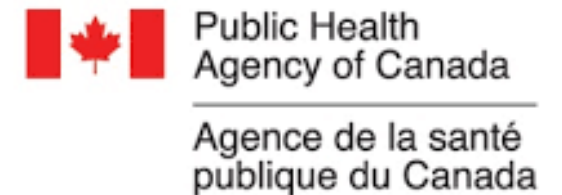


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Bergeron, C. D., John, J. M., Sribhashyam, M., Odonkor, G., Oloruntoba, O., Merianos, A. L., Horel, S., & **Smith, M. L.** (2021). County-level characteristics driving malnutrition death rates among older adults in Texas. *Journal Nutrition, Health, and Aging*, 25, 862-868. doi:10.1007/s12603-021-1626-2

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THANK YOU!

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Thank you!

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- Join Defeat Malnutrition Today!

- <https://www.defeatmalnutrition.today/about>

