Structural Ruralism: Exploring Innovative Strategies to Improve Rural Food Security and Access to Health Services

Background

[note: citations to be included in full proposal] Rural communities face higher rates of hunger than urban areas, and experience unique challenges that contribute to food insecurity, including transportation barriers, lower wages, higher rates of under- and unemployment and limitations on accessing groceries stories and affordable nutritious foods. With respect to health consequences, hunger and food insecurity are associated with diabetes, obesity (primarily among women), hypertension, pregnancy complications, and depression, and national health costs of hunger and food security have been estimated at $160B.

Maine is one of the most rural states in the U.S., with 61 percent of the population living in rural areas. This percentage is > 3 times the national average state percentage and, in Maine, equals 830,000 people. In Maine, 1 in 8 people and 1 in 6 children face hunger. With respect to health resources, health professional shortage areas have been designated in 15 of the State's 16 counties in primary care, mental health and/or dental health. The confluence of these factors suggest that there is unmet need in rural Maine with respect to food security and health access. Critically, and often invisibly, one in six seniors in Maine also experience food insecurity and only 60% of seniors eligible for Supplemental Nutrition Assistance Program (SNAP) benefits in Maine access these resources.

With respect to advancing **health equity**, the term Structural Urbanism has been coined to describe implicit bias in how we think about health service provision. In brief, if one's focus on community health is urban-oriented, it makes sense to argue for centralizing services so that people come to services (e.g., clinics, food pantries). Within this framework, it will always be inefficient to 'provide health' in rural areas because population densities are too low for cost effectiveness.

With this proposed project, we are interested in examining infrastructural needs for supporting food security, nutrition and health in rural areas under-evaluated via the lens of Structural Urbanism. Contextually, this means evaluating: how rural is defined and why the definition matters; strategies and limitations with respect to rural food availability (retail, direct-to-consumer, delivery); rural infrastructure (internet access, road coverage, services available for grocery distribution and delivery and/or medical coverage and access; food storage infrastructure); rural food procurement via gardening, fishing, hunting, trapping, and trade; rural emergency food assistance options and access strategies; and evaluation of **Social Determinants of Health** frameworks in rural areas.

Principal Project Team (Co-PIs)

The project team represents an interdisciplinary consortium including Food Studies at University of Southern Maine (USM); and the Colleges of Engineering and Nursing at University of Maine, Orono (UMaine). Co-Principal Investigators for this project are:

Karen Merritt, PhD, MPH - UMaine - Civil and Environmental Engineering (adjunct)
Jamie Picardy, PhD - USM - Food Studies
Kathryn Robinson, PhD, MHA/Ed., RN - UMaine – Nursing

Project Research Questions

- How is rural defined and understood? Does this definition limit or render invisible rural needs?
- What innovative solutions in healthcare and business are practiced to reach rural communities and/or low income individuals?
- How can we adapt such practices to address food insecurity and increase health resiliency in rural Maine?
- What infrastructure (social and physical) is needed to develop a network of solutions? What barriers need to be addressed?
- Is there an integrative, sustainable role for academic engagement via Nursing program needs (e.g., service hours, training) to support food security, nutrition and health access in rural areas?

Focus Population and Needs

Our project focus is District 2 of Maine. District 2 is the largest Federal congressional district east of the Mississippi River, comprises approximately 80% of the land area of the State and contains the second highest percent (80%) rural population by District in the U.S. To anticipate, adapt to and influence the future of rural health in Maine, current challenges and trends that require interdisciplinary evaluation include: changes in State demographics (aging population, growth in immigrant communities throughout the State); needs for broadband expansion into rural Maine; and adapting to/accessing new strategies in health care delivery and health service models (telehealth, mobile health).

Hypothesis (H) with Assumptions

H1: Structural access barriers limit food security and health in rural Maine. Through multidisciplinary focus on the underlying social and technological issues, unmet needs with respect to food security, nutrition and health can be identified and constructively addressed.

We recognize that rural looks different in different parts of the U.S. Our focus is on identifying key barriers to access in one of the most rural areas of the U.S. and designing a roadmap – literally and metaphorically – to remove these barriers. Our research team backgrounds/expertise include nursing, food systems, public health engineering and geography/GIS. Our research team community connections include non-profit organizations, research institutes and direct service providers focused on food security, community health and wraparound services in rural areas in the State. Potential community partner organizations with whom we are currently either individually or collaboratively engaged include:

Public Health and Food Policy

- Healthy Acadia
- Maine Rural Health Research Center
- Maine Public Health Association
- Wabanaki Reach and Wabanaki Public Health and Wellness
- Island Institute
- Healthy Communities of the Capital Area
- Maine Mobile Health
- UMaine Orono - Healthcare Nursing Program Partners
- Maine Food Policy

Food Security and Nutrition

- Good Shepherd Food Bank
- Maine Network of Community Food Councils
- Maine Snap-Ed (UNE)
- Good Food Bus | St. Mary's Nutrition Center (Androscoggin County, ME)
- Magic Food Bus | Healthy Peninsula (Hancock County, ME)
- Mano en Mano (Washington County, ME)

Activities Supported by this Grant: Challenges (C) and Outcomes (O)

Year 1: Examine Existing Frameworks, Limitations & Opportunities for Rural Services Access

C1: Definitions and barriers that create or perpetuate health disparities in rural areas

O1: Draft policy paper exploring Structural Ruralism as approach to rural service provision
O2: Identification and outreach to existing service provision programs in Maine focused on rural and/or public health, nutrition and rural policy to engage with for implementation ideas

Year 2: Determine Resource Potential & Identify Case Study Test/Site or Pilot Program

C1: Identify a case study test or pilot program for demonstration of innovation

O1: Finalize Structural Ruralism policy paper in collaboration with community partners
O2: Create framework for implementing case study test or expansion of existing program as pilot

Years 3 & 4: Implement a Pilot Project

O1: Model/case study/ demonstration that builds on an existing program; possible strategies:
- Broaden service area and/or extend seasonal distribution in areas serviced by mobile food provision programs;
- Develop program to train/include nutritionist, SNAP and social services support personnel in local food pantries (Healthy Acadia Navigator vision);
- Include public health nursing training in mobile medical service provision.

O2: Roadmap the strategy for service provision and what is required to make it sustainable
O3: Roadmap the strategy for coop/service hours/practicum engagements for nursing training

Year 5: Final Deliverables

O1: Program review/exploration of how results can be implemented elsewhere in the rural US.
O2: Nursing policy paper - strategies to build robustness in public health nursing programs

Budget Summary

Year	Budget
Y1	$50K
Y2	$50K
Y3	$150K
Y4	$150K
Y5	$70K

Personnel (30%); Direct Costs (15%); Indirect Costs (30%); Community Partners (25%)