Evaluating the Reach, Effectiveness, and Adoption of an Extension Family & Community Health Program Implemented to Change the Rural Context for Weight Health

Brooke Mischkot, URAP Apprentice; Dr. Deborah John, Faculty Mentor

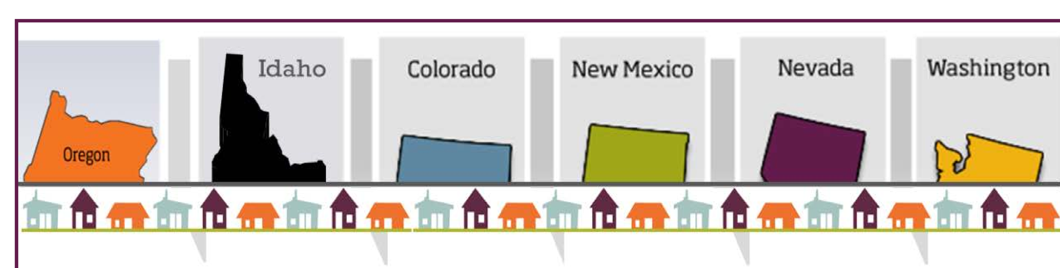
Background:

The overarching goal of Generating Rural Options for Weight Healthy Kids and Communities (GROW HKC) is to prevent childhood obesity. The five year integrated research and Extension project included selected rural communities within Oregon and five participating Western states (WA, ID, NV, CO, and NM). Rural people encounter place-based factors that may be considered obesogenic, which include poorer food options (highly processed, low cost, and energy dense), reduced physical activity opportunities and supports, increased reliance on automobiles, and social aspects such isolation and neighborhood safety.

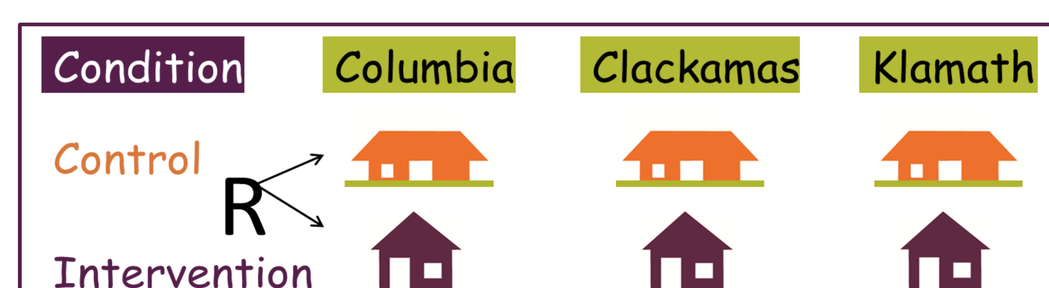
Oregon State University Extension Service

Specific Aims:

Aim 1: To explore and model the rural obesogenic environment in Oregon and five Western states (ID, CO, NM, NV, WA) and inform Extension Communities of Practice.



Aim 2 : Plan, implement and evaluate a multilevel intervention targeting rural home, school, and community contexts to improve eating habits, increase physical activity and improve BMI trends in elementary school-age children.



Oregon Research Design:

Aim 1: Develop an understanding of the rural community environment based on information given by residents that documented supportive or obstructive local attributes for habitual healthful eating and physical activity among youth and families. Using participatory action research and HEAL MAPPS™ tools (Figure 1), GROW HCK engaged communities in exploring and explaining the rural food and physical activity contexts that are experienced as obesity preventing or promoting.

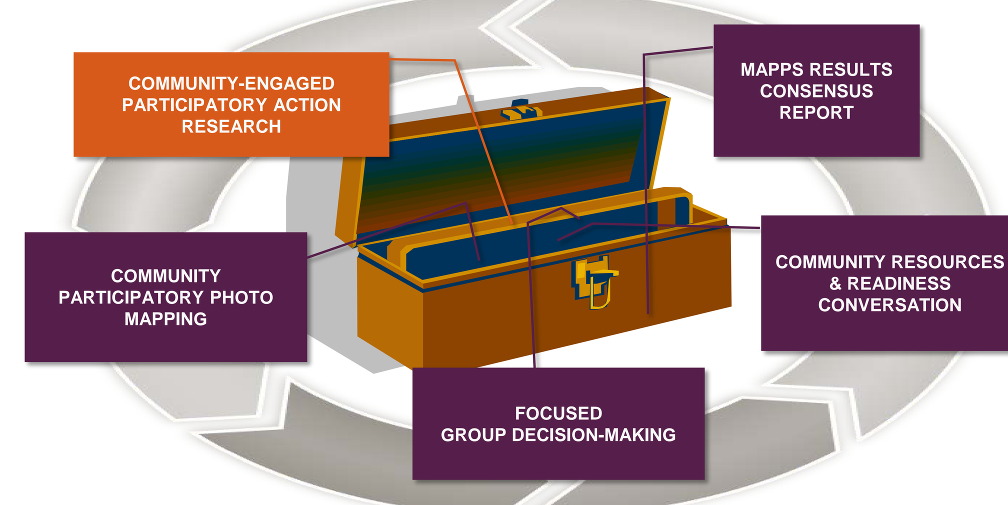


Figure 1: Healthy Eating Active Living: Mapping Attributes using Participatory Photographic Survey

Aim 2:Utilize locally generated data to plan, implement and evaluate a multilevel intervention targeting changes in rural community, school, and home contexts to more easily support healthful eating habits and increased physical activity, and improve BMI trends in elementary school-age children (Figure 2). To do so, Extension Family & Community Health faculty located in Clackamas, Columbia, and Klamath counties were trained to support healthy community change as a partner in developing resources, readiness and capacity for environmental actions that promote weight healthy rural lifestyles. In two communities in each county, participatory action research tools were created and employed to engage residents and community stakeholders, assess community attributes, plan and guide community-driven, environmentally based obesity prevention strategies using either GROW (n=3) or SNAP-Ed (n=3) program intervention strategies.

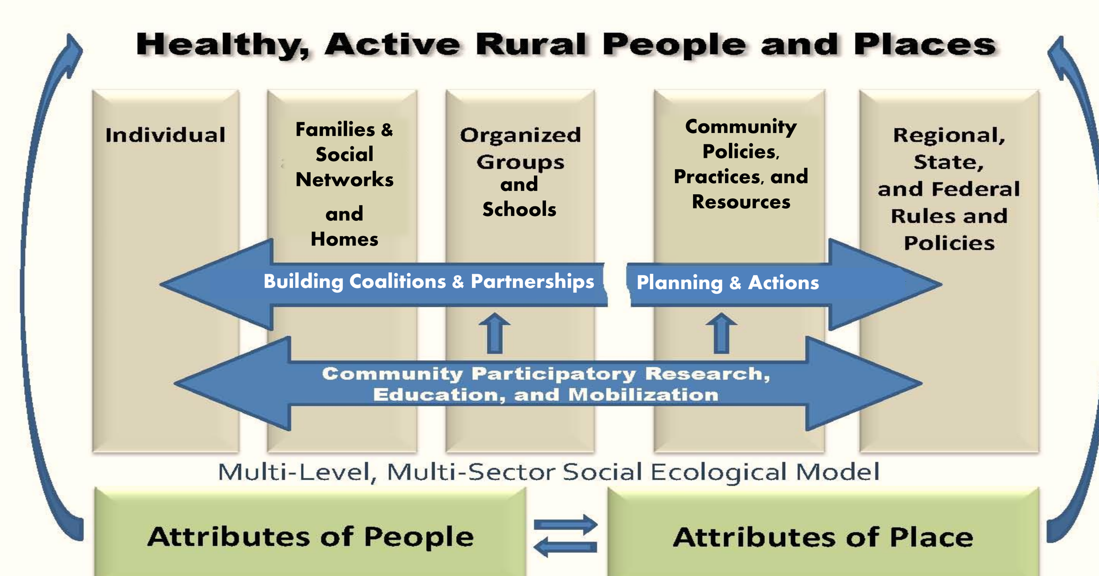


Figure 2: People and Places Framework for Weight Healthy Community Development

Process Evaluation:

A process evaluation using the ***RE-AIM*** framework was conducted to better understand the ***Reach*** of Extension interventions, ***Effectiveness*** of strategies ***Adopted*** by communities and ***Implemented*** to provoke and ***Maintain*** changes to the obesogenic context and promote a culture of weight health. Artifacts from Extension programming, including faculty daily effort and activity logs, field notes, meeting minutes, resource procurement, partnership agreements, and documentation of changes in school and community resources were managed using OneNote. Qualitative data from all sources were organized, coded, and analyzed using QSR NVivo 10 (Figure 3). Data source documents were organized categorically by state and community categories to facilitate queries within and across communities and states.

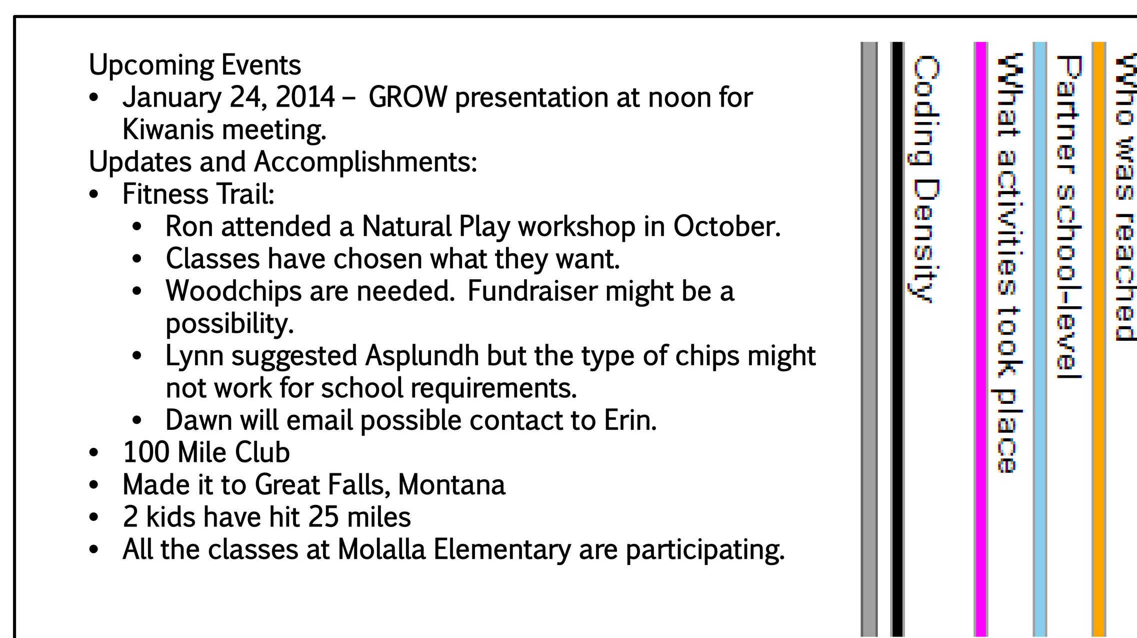
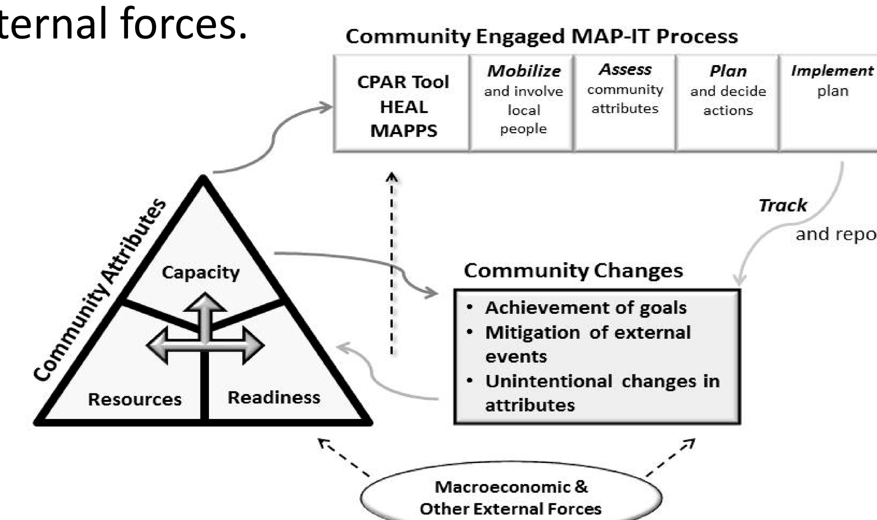


Figure 2: QRS NVivo Qualitative Data Management and Coding Software

Clackamas County, OR

The focus of my URAP project was the Clackamas County intervention. Coded data were queried to determine thematic indicators and describe community capacity building activities and strategies implemented in each county and community. The model below depicts community change, evaluated as a function of community attributes (capacity, resources, and readiness) and community processes (actions that may or may not be taken by a community), as occurring in the context of larger external forces.



Extension Activities and Strategies

Rural community-level: Extension efforts and activities aimed at community-level adoption and implementation of strategies (exclusive of those in partnering elementary schools) were coded into capacity, readiness, and resource nodes to evaluate the process of building a community context and culture of weight health.

Partner elementary school-level: Extension efforts and activities aimed at elementary school-level adoption and implementation of strategies were coded into capacity, readiness, and resource nodes to evaluate the process of building a school context and culture of weight health.

Residential Family/family home-level: Extension efforts and activities aimed at family home/household level adoption and implementation of strategies (changing behaviors, knowledge, and attitudes) were coded into capacity, readiness, and resource nodes to evaluate the process of building a home context and family culture of weight health.

Emerging Themes:

Community Capacity Building: The increase in community groups abilities to define assess, analyze and act on health concerns of importance to their members, evaluated as:

Conclusion:

In Clackamas County, domains of capacity building that emerged from first order coding included:

- Diverse and inclusive citizen participation
- Expanded leadership
- Strategic agenda - problem assessment – tangible progress toward need-based goals
- More effective organizations-role of agents/agencies

Acknowledgement:

Thank you Dr. Deborah John and Leah Gramlow, MPH, RD for providing me the opportunity to explore factors which influence rural health determinants. With your assistance, I gained experience with qualitative data analysis, which led me to a deeper understanding of rural community weight health disparities and population-level interventions.

More information on GROW HKC can be found at http://extension.oregonstate.edu/growhkc/ .