

# Measuring the Rural Built Environment for Active Living

Muskie School of Public Service

David Hartley, PhD, MHA  
Anush Hansen, MA, MS  
Maine Rural Health Research Center  
University of Southern Maine  
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## Scientists Still Seeking Cure for Obesity

The Onion - 2004

I came down with obesity 2 years after I got married. I know it was hard for my husband to watch me suffer from this disease. When he caught obesity a year later, he got so depressed he couldn't do anything but sit on the couch. Some days, we sit and watch television from dawn to dusk, hoping for news of a breakthrough.



## Overview

- What is rural?
- The rural environment and rural people
- Active Living
- Measurement tools – what they do
- Why a special rural instrument is needed
- What are the RALA tools?
- Uses of RALA tools for community engagement
- Uses of RALA tools for evaluation
- Adapting other tools for rural use



## The RALA Approach

Engages community members in identifying strengths and needs in their own community

Builds public support locally

Identifies opportunities for improvement in both physical environment and policy/program environment

Relies on community members' local knowledge to assess equitable impact on disparities populations



## Experience the Benefits of Physical Activity...

### \* CANINE CONSTITUTIONAL



A brisk walk in the park keeps Maren B in shape between dog shows. His owner, Columbus resident Cathy Stumbo, got up early to give her 3-year-old Doberman his regular workout. They typically log 10 miles in Berlin Park.



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## What is rural? The rural US experience

5.7% engaged in Agriculture

22% public sector

22% service sector (education and health)

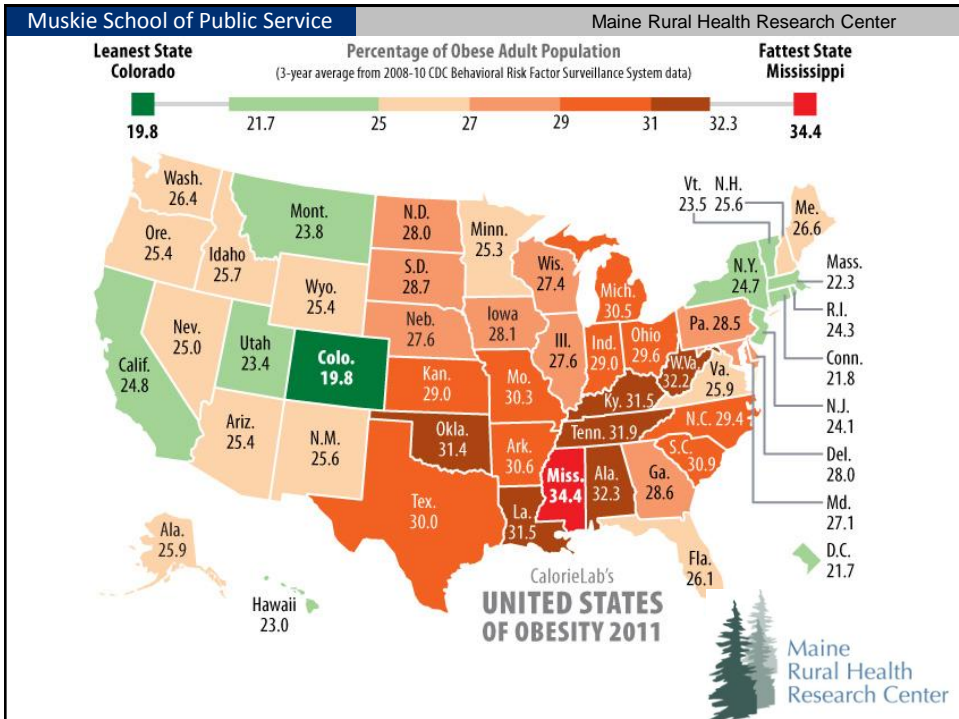
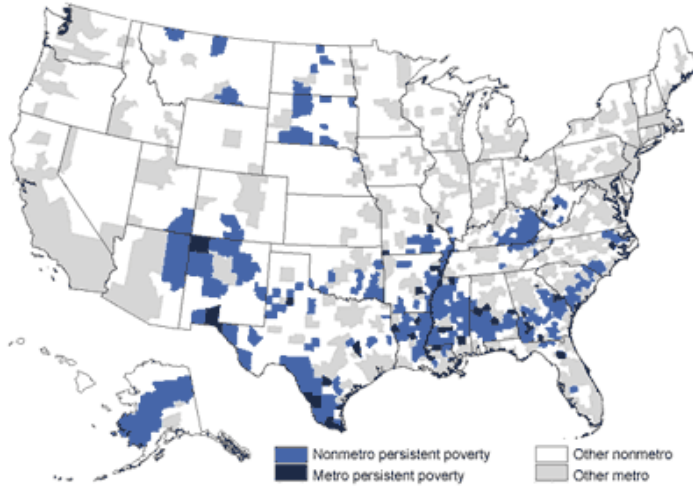
Median household income is 75% of urban

85% of poor counties (>20% <FPL) are rural

88% of persistent poverty counties are rural



# What is rural? Persistent Poverty



## Go for a walk?



## Ride on the shoulder?



## Background – Active Living

Multidisciplinary approach to linking the “built environment” with PA and obesity prevention.



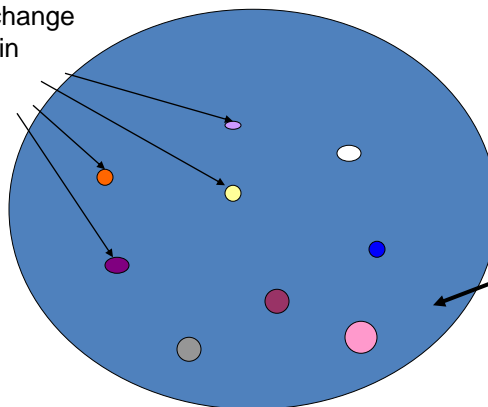
4 domains:

- recreation
- transportation
- occupation
- household



## Environmental Prevention

We can try to change conditions within each individual



But to see real lasting change we need to change conditions in the shared environment

**Blaming kids for lack of physical activity is like blaming fish for dying in a polluted stream.**



## How does all this work in rural towns?

- Low population density
- Low socio-economic status
- Few sidewalks, parks, trails
- Fewer children walk or bike to school
- Schools often located outside of town



## Assessment Instruments

Details including copies of instruments and publications are available at Active Living Research website:

<http://www.activelivingresearch.org/>





## Development of the RALA tools

- First, developed rural active living conceptual model
- Found urban-based environmental audit tools inappropriate for most rural settings
- Necessary to adapt, simplify, and add items and domains to address unique qualities of rural communities
- New protocol for selecting and assessing 'segments' in rural communities
- Need to include elements of program and policy environments
- Development of scoring system



## Active Living for Rural Youth

### Environmental factors include:

- Physical environment (built and natural, as measured by density, diversity, and design)
- Policy environment (zoning, transportation, and school policies)
- Program environment (including programs designed to increase PA in the community, in the home, at work/school, or outside the community)



## Focus Groups & Key Informants

### ➤ Focus group participants asked to discuss:

- general PA habits throughout the 4 active living domains
- barriers to PA in their community
- desired opportunities for PA
- knowledge of PA programs in their community

### ➤ Key informants asked to describe:

- features of the community available to youth for PA
- level of PA among youth in their community
- general health of community
- physical or programmatic barriers to activity



## Physical Environment

- *“The general layout is not conducive to everyday PA. It is very spread out, so you have to drive everywhere.”*
- *“They are building the new middle school right next to the high school, way out of town...There is no real way for kids to walk/ride to the high school/new middle school.”*
- *“All students take the bus or get rides to school – there’s no walking to school.”*
- *“They should put a playground near the school – we have nothing to do! It’s just like a parking lot and a field...”*
- *“The school needs a real track – running on that dirt hurts!”*



## Program & Policy Environment

- *"For practices there are no late buses...I have to get a ride."*
- *"My brother and I both wanted to do the Y, but my mom could only afford for one of us to go."*
- *"(We need) more family events that get younger people involved in doing things they can continue doing as teenagers and beyond."*
- *"There should be a janitor at the school gym on the weekends so we could use it."*
- *"There's a small swimming place, but it costs \$5 to use it..."*

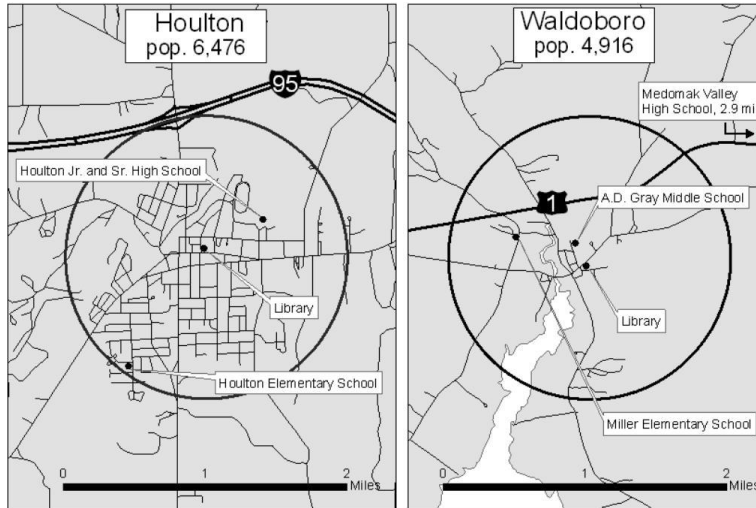


## Methods: RALA tools development

- Assessed existing active living audit tools to determine their usefulness and significance in rural communities:
  - Irvine-Minnesota Inventory (Day et al., 2006 )
  - Inventory of Resources Related to Health for Cities and Towns in Vermont (University of Vermont Center for Rural Studies, 2005)
- Incorporated elements from formative conceptual model development to create a more relevant rural tool, including:
  - Density, diversity, design
  - Transportation options
  - School- and community-based programs and policies
  - Town-wide amenities



## Population Density. Intersection Density



## Methods: RALA tools development

Split into 3 separate instruments:

- Town-wide Assessment
- Program and Policy Assessment
- Street Segment Assessment

Tools designed to be used together to capture activity-friendliness of rural towns but can be completed at different times

Street Segment Assessment may only be relevant for rural towns with walkable town centers or with highly-resourced areas

In some towns, completing the Street Segment Assessment may not add any additional value



## Methods: RALA tools development

**Town-wide Assessment** - Demographic and geographic characteristics, school locations, and presence/location/condition of physical activity amenities:

- bike paths
- public pool
- skate park
- ice-skating rink
- YMCA/recreation center
- playgrounds

**Program and Policy Assessment** – Community- and school-based programs and policies:

- sliding fee scale for town rec. programs
- regular snow clearing from sidewalks
- public transportation
- walk to school programs
- school late busses
- public access to school facilities

**Segment Assessment** – Individual segment audits:

- |                       |                                 |                         |
|-----------------------|---------------------------------|-------------------------|
| - land use            | Presence/condition of features: | Subjective assessments: |
| - topography          | - public/civic                  | - walkability           |
| - walkability         | - commercial                    | - aesthetic appeal      |
| - connectivity        | - school                        |                         |
| - residential density | - industrial                    |                         |



## The RALA Codebook

Helps conceptualize organization of town, identify where community resources are located, and determine whether to select segments

Item-by-item description of each tool

Describes segment selection process:

Begin with town “central point” (e.g. library, town hall, town green)

Four segment zones: Town Center Zone, Neighborhood Cluster Zone, Isolated School Zone, and Thoroughfare Zone



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Zones:

- Town Center
- Thoroughfare
- Neighborhood
- Isolated School**

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## Where is the RALA being used?

- Gaffney, South Carolina
- Barrie, Ontario
- Nova Scotia
- Southern Queensland, Australia
- Manistique, MI
- Albuquerque, NM
- Harlingen, TX
- Florence County, SC
- Morgantown, West Virginia
- Norman, OK
- Carrboro, North Carolina
- Chapel Hill, North Carolina
- Steamboat Springs, Colorado

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# Developing a Scoring System

- Developed scoring system for PPA & TWA using:
  - Expert advisory panel
  - Two-phase Delphi process
- Scoring system piloted in 7 rural communities: 3 in CO & 4 in NC
  - Recruited researchers/communities who were already using RALA
  - Worked with community liaison to help organize and instruct community members to use the tools and scoring system
- Held conference call “debriefing sessions” with each team
  - Learned how to make the RALA scoring system more efficient and useful
  - Heard community assessors creating dialogue and change with others as they used the RALA/scoring
- Tested inter-rater reliability of scoring tools



Town name: \_\_\_\_\_  
 Auditor name: \_\_\_\_\_

**Rural Active Living Assessment (RALA)  
PROGRAM AND POLICY ASSESSMENT Tool**

Town Programs and Policies	Check One
<b>1. Does the town have a policy that requires bikeways or pedestrian walkways in new public infrastructure projects?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know <input type="checkbox"/> N/A
Comments:	
<b>2. Does the town regularly clear snow from sidewalks?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know <input type="checkbox"/> N/A
Comments:	
<b>3. Does the town have a public recreation department that offers physical activity programming?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
<i>If Yes:</i>	
3a. Do they offer physical activity programming for local youth?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
3b. <i>If Yes:</i> What age range is served by these programs? _____	
3c. Do they offer physical activity programming for local adults?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
3d. <i>If Yes:</i> What age range is served by these programs? _____	
3e. Are physical activity resources/facilities available for local resident use outside of programming?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
3f. Does the recreation department provide scholarships or offer a sliding fee scale for lower income residents?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know

## Scoring the PPA

#	Column A DOMAIN/ITEMS	Column B ASSIGNED POINTS <i>(snows in your town)</i>	Column C ASSIGNED POINTS <i>(does NOT snow in your town)</i>	Column D MY TOWN'S POINTS
<b>1.</b>	<b>Town Policies</b>			
<b>I T E M S</b>	Town has policy requiring bikeways/pedestrian walkways in new public infrastructure projects.	<i>Yes</i> (7 points) <i>No</i> (0 points)	<i>Yes</i> (10 points)	+ _____ points
	Town regularly clears snow from sidewalks <i>(if applicable)</i>	<i>Yes</i> (3 points) <i>No</i> (0 points)	<i>No</i> (0 points) n/a	+ _____ points
				----- = _____ <b>(TOTAL SCORE: TOWN POLICIES)</b>

School Programs and Policies	Check One
<b>6. Does the town have any "Walk to School" programs or other programs that encourage children to walk or bike to school?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
Comments:	
<b>7. Does the town participate in the National "Safe Routes to School" program?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
Comments:	
<b>8. Do the public schools in the town offer other sponsored physical activity initiatives for students?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
Comments:	
<b>9. Do the public schools in the town allow public access to their recreation facilities after school hours?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
Comments:	
<b>10. Do the public schools have a late bus option for children that stay after school for sponsored activities?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
Comments:	



## Scoring the PPA

4.	SCHOOL PROGRAMS	ASSIGNED POINTS	MY POINTS
<b>I T E M S</b>	There are “Walk to School” programs or other programs that encourage children to walk or bike to school	Yes (15 points) No (0 points)	+ _____ points
	Schools are participating in other activities (excluding “Walk to School” programs) that are included in the National “Safe Routes to School” program.	Yes (5 points) No (0 points)	+ _____ points
	Schools offer other sponsored physical activity initiatives for students (do not include gym/phys-ed classes)	Yes (10 points) No (0 points)	+ _____ points
			----- = _____ <b>(TOTAL SCORE: SCHOOL PROGRAMS)</b>

Rural Active Living Assessment (RALA)  
TOWN-WIDE ASSESSMENT Tool

**I. Town demographics and characteristics:**

Please complete the following table to summarize town-wide demographics and characteristics for your community.

Q#	Demographic/Characteristic	
1.	Town Name:	_____
2.	County Name:	_____
3.	Town Population:	_____
4.	Total Town Area:	_____ square miles
5.	Town Population Density:	_____ per square mile
6.	County Population:	_____
7.	Total County Area:	_____ square miles
8.	County Population Density:	_____ per square mile
9.	General Town Topography: (check one)	<input type="checkbox"/> flat <input type="checkbox"/> hilly <input type="checkbox"/> mountainous <input type="checkbox"/> Other: _____
10.	Presence of “Town Center”? (check one)	<input type="checkbox"/> Yes – one distinct town center <input type="checkbox"/> Yes – multiple town centers <input type="checkbox"/> No town center <input type="checkbox"/> Other: _____
11.	General Town Street Pattern: (check one)	<input type="checkbox"/> Grid <input type="checkbox"/> Radial <input type="checkbox"/> No distinguishable pattern <input type="checkbox"/> Other: _____
12.	Location of Public High School School Name: _____	<input type="checkbox"/> within 1 mile of town center <input type="checkbox"/> between 1 and 5 miles from town center <input type="checkbox"/> more than 5 miles from town center
13.	Location of Public Middle School School Name: _____	<input type="checkbox"/> within 1 mile of town center <input type="checkbox"/> between 1 and 5 miles from town center <input type="checkbox"/> more than 5 miles from town center
14.	Location of Public Elementary School School Name: _____	<input type="checkbox"/> within 1 mile of town center <input type="checkbox"/> between 1 and 5 miles from town center <input type="checkbox"/> more than 5 miles from town center

## Scoring the TWA

#	DOMAIN/ITEMS	ASSIGNED POINTS	MY TOWN'S POINTS
<b>1.</b>	<b>SCHOOL LOCATION</b>		
<b>I T E M S</b>	There is an <u>elementary</u> school in my town that children can walk to.	<i>Yes</i> (6 points) <i>No</i> (0 points)	+ _____ points
	There is a <u>middle</u> school in my town that children can walk to.	<i>Yes</i> (5 points) <i>No</i> (0 points)	+ _____ points
	There is a <u>high</u> school in my town that children can walk to.	<i>Yes</i> (4 points) <i>No</i> (0 points)	+ _____ points
			----- = _____ <b>(TOTAL SCORE: SCHOOL LOCATION)</b>

Amenity	Distance from town center <i>(check one)</i>	Condition <i>(check one)</i>	Access <i>(check all that apply)</i>
1. Hiking or Walking Trail(s)	<input type="checkbox"/> Yes – within 1 mile of town center <input type="checkbox"/> Yes – 1 to 5 miles from town center <input type="checkbox"/> Yes - 5 to 15 miles away from town center <input type="checkbox"/> Yes – beyond 15 miles away from town center <input type="checkbox"/> No – town does not have this amenity	<input type="checkbox"/> Fair/Poor <input type="checkbox"/> Good/ <input type="checkbox"/> Excellent	<input type="checkbox"/> Clearly marked signs for amenity <input type="checkbox"/> Designated parking for amenity <input type="checkbox"/> Sidewalks leading to amenity
Comments:			
2. Biking Path(s)	<input type="checkbox"/> Yes – within 1 mile of town center <input type="checkbox"/> Yes – 1 to 5 miles from town center <input type="checkbox"/> Yes - 5 to 15 miles away from town center <input type="checkbox"/> Yes – beyond 15 miles away from town center <input type="checkbox"/> No – town does not have this amenity	<input type="checkbox"/> Fair/Poor <input type="checkbox"/> Good/ <input type="checkbox"/> Excellent	<input type="checkbox"/> Clearly marked signs for amenity <input type="checkbox"/> Designated parking for amenity <input type="checkbox"/> Sidewalks leading to amenity
Comments:			
15. Other Amenity: _____ _____	<input type="checkbox"/> Yes – within 1 mile of town center <input type="checkbox"/> Yes – 1 to 5 miles from town center <input type="checkbox"/> Yes - 5 to 15 miles away from town center <input type="checkbox"/> Yes – beyond 15 miles away from town center <input type="checkbox"/> No – town does not have this amenity	<input type="checkbox"/> Fair/Poor <input type="checkbox"/> Good/ <input type="checkbox"/> Excellent	<input type="checkbox"/> Clearly marked signs for amenity <input type="checkbox"/> Designated parking for amenity <input type="checkbox"/> Sidewalks leading to amenity

## Scoring the TWA

	TRAILS	ASSIGNED POINTS	MY POINTS
<b>I T E M S</b>	There is a <u>Hiking or Walking Trail</u>	-Yes, within 5 miles of town center (8 points) -Yes, 5-15 miles of town center (5 points) -No (0 points)	+ _____ points
	There is a <u>Biking Path</u>	-Yes, within 5 miles of town center (8 points) -Yes, 5-15 miles of town center (5 points) -No (0 points)	+ _____ points
	There is some <u>Other</u> Type of Trail*	-Yes, within 5 miles of town center (4 points) -Yes, 5-15 miles of town center (1 points) -No (0 points)	+ _____ points
	* "Other" can include a different type of trail used for physical activity, or an additional hiking/walking/biking trail		= _____ (TOTAL SCORE: TRAILS)

## Street Segment Assessment (SSA)

Walkability	Types <small>(check all that apply)</small>	Condition <small>(check one for each type)</small> 1 = poor/fair; 2 = good/excellent	
8. Sidewalks	<input type="checkbox"/> Both sides of street <input type="checkbox"/> One side of street <input type="checkbox"/> Intermittent <input type="checkbox"/> Footpath only <input type="checkbox"/> None	<input type="checkbox"/> 1 <input type="checkbox"/> 1 <input type="checkbox"/> 1 <input type="checkbox"/> 1	<input type="checkbox"/> 2 <input type="checkbox"/> 2 <input type="checkbox"/> 2 <input type="checkbox"/> 2
9. Buffers and shoulders	<input type="checkbox"/> Sidewalk buffer <input type="checkbox"/> Defined shoulder <input type="checkbox"/> None	<input type="checkbox"/> 1 <input type="checkbox"/> 1	<input type="checkbox"/> 2 <input type="checkbox"/> 2
10. Cross walks and pedestrian signage	<input type="checkbox"/> Crosswalks <input type="checkbox"/> Crossing signals <input type="checkbox"/> Pedestrian signs <input type="checkbox"/> Children at play signs <input type="checkbox"/> None	<input type="checkbox"/> 1 <input type="checkbox"/> 1 <input type="checkbox"/> 1 <input type="checkbox"/> 1	<input type="checkbox"/> 2 <input type="checkbox"/> 2 <input type="checkbox"/> 2 <input type="checkbox"/> 2
11. Other safety features	<input type="checkbox"/> Traffic lights <input type="checkbox"/> Stop signs <input type="checkbox"/> School flashing lights <input type="checkbox"/> Speed bumps <input type="checkbox"/> Public lighting <input type="checkbox"/> None	Comments:	
12. Road/Traffic characteristics	<b>Road Type:</b> <input type="checkbox"/> Paved multi-lane roads <input type="checkbox"/> Paved single lane roads <input type="checkbox"/> Unpaved roads  <b>Road Condition:</b> <input type="checkbox"/> Poor/fair <input type="checkbox"/> Good/excellent	<b>Posted speed limit:</b> _____ <input type="checkbox"/> None posted  <b>Traffic Volume:</b> <input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	
13. Barriers	<input type="checkbox"/> Highway <input type="checkbox"/> Train tracks <input type="checkbox"/> Private property—no trespassing <input type="checkbox"/> Industrial zone <input type="checkbox"/> Natural features <input type="checkbox"/> Other _____ <input type="checkbox"/> None	Comments:	
14. Connectivity:	Do sidewalks, a bikepath or other trail link this segment to other parts of town / attractions or to another segment or road? <input type="checkbox"/> Yes <input type="checkbox"/> No	Condition of connectors: <input type="checkbox"/> 1 <input type="checkbox"/> 2	

Land Use	Types (check all that apply)	Condition (check one for each type): 1 = poor/fair, 2 = good/excellent	
15. Residential	<input type="checkbox"/> Single family detached homes	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Multi-family homes / apartments	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Moderately densely settled	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Mobile homes	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Other _____	<input type="checkbox"/> 1	<input type="checkbox"/> 2
Density:	<input type="checkbox"/> None		
16. Public/civic	<input type="checkbox"/> Library	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Museum	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Community center	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Post office	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Town offices	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Courthouse	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Police station	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Fire station	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Church / religious	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Hospital/health center	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Athletic fields/courts	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Playground	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Other _____	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> None		
17. Commercial	<input type="checkbox"/> Restaurant / café	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Bar	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Food market	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Theater	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Gas station	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Convenience store	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Small retail	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Big box retail	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Fitness center	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Private medical office	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Private other office	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Other _____	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> None		
18. Schools	<input type="checkbox"/> Elementary (public)	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Middle (public)	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> High (public)	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Private school	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Other _____	<input type="checkbox"/> 1	<input type="checkbox"/> 2
<input type="checkbox"/> None			
19. Industrial/agricultural	<input type="checkbox"/> Light industrial area	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Heavy industrial area	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Farmland area	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> Other _____	<input type="checkbox"/> 1	<input type="checkbox"/> 2
<input type="checkbox"/> None			
Comments:			

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## Using the RALA Tools for Community Engagement

Treats entire town as the “neighborhood”

Helps communities document what their local physical, program, and policy landscape offers and what it lacks in terms of physical activity opportunities for youth

Communities can use this information to identify/prioritize:

- strengths that exist in their town that they may enhance,
- gaps they could address when finding ways to promote
- physical activity among youth and the community as a whole



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## Some Unanswered Questions

- What is the best balance between:
  - School curriculum + after school programs
  - “Neighborhood” unstructured activities
  - Non-school programs (camps, YMCA, etc.)
  - Active transport (walking and biking to destinations)
- What do rural parents mean by “safety?” Is it different from what urban parents mean?
- What are good models for improving rural transportation options?
- Where does the food environment fit in?



## Assessing the Rural Food Environment

- Does “food desert” mean the same thing in a rural area?
- What proportion of rural residents have cars?
- What proportion of rural residents hunt? garden?
- How many rural households have a large freezer?
- How does a low-volume rural grocery store provide a wide selection of fresh fruit and vegetables?



# Fresh and Frozen Food



## Original NEMS - store

## NEMS – rural Maine

Original NEMS - store	NEMS – rural Maine
milk	milk
fresh fruit	fruit – fresh, frozen or canned
fresh vegetables	vegetables fresh, frozen or canned
ground beef	lean ground beef
hot dog	not included
frozen dinners	frozen dinners
Baked goods	not included
beverages – soft drinks and juice	100% fruit juice
bread	whole grain bread, rice, cereal
chips	not included
	low-fat cheese
	low-fat yogurt



# Questions



## Contact Information

David Hartley, PhD, MHA

Maine Rural Health Research Center

Muskie School of Public Service

University of Southern Maine

[davidh@usm.maine.edu](mailto:davidh@usm.maine.edu)

