Cancer Prevention in Rural Communities: Challenges and Opportunities to Decrease Risk

Monica L. Baskin, PhD
Professor
Division of Preventive Medicine
University of Alabama at Birmingham

IOM National Cancer Policy Forum
Washington, DC
October 26, 2015

UAB COMPREHENSIVE CANCER CENTER
Knowledge that will change your world

Disclosure

- The projects described in this presentation were/are supported by Grant Numbers U01CA086128, U01CA114619, U01U54CA153719, R01CA160313 from the National Cancer Institute (NCI).

- Presentation contents are solely the responsibility of the presenter and do not necessarily represent the official views of the National Institutes of Health (NIH).

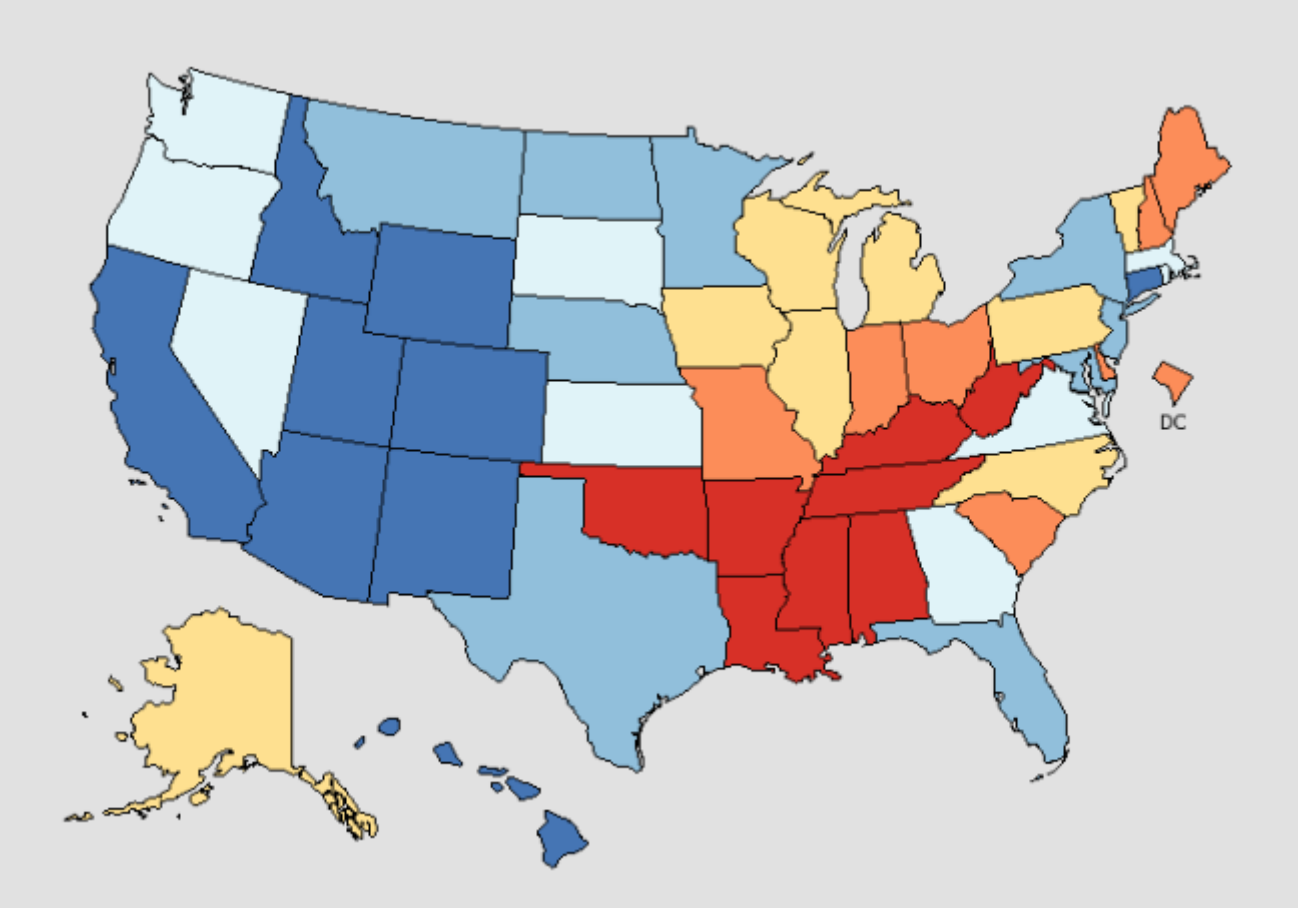
Talking Points

- What role does nutrition, physical activity and obesity play in cancer prevention?
- What are some challenges to maintaining “healthy lifestyles” in rural communities?
- Where are the opportunities for cancer prevention in rural communities?

Cancer: Public Health Significance

- Cancer is the 2nd leading cause of death in the United States.
  - In 2013, more than 584,000 people died from cancer(CDC, 2015)
  - Beyond loss of life, the costs of cancer (direct medical costs, lost productivity due to illness and premature death) were estimated at $263.8 billion in 2010. (NIH, 2011).
- More than 14 million people living in the US have a current or prior cancer diagnosis.

Age-Adjusted Death Rates* for United States, 2011
All Cancer Sites, All Races (includes Hispanic), Both Sexes, All Ages



Source: State Cancer Profiles, http://statecancerprofiles.cancer.gov/
Accessed May 2015.

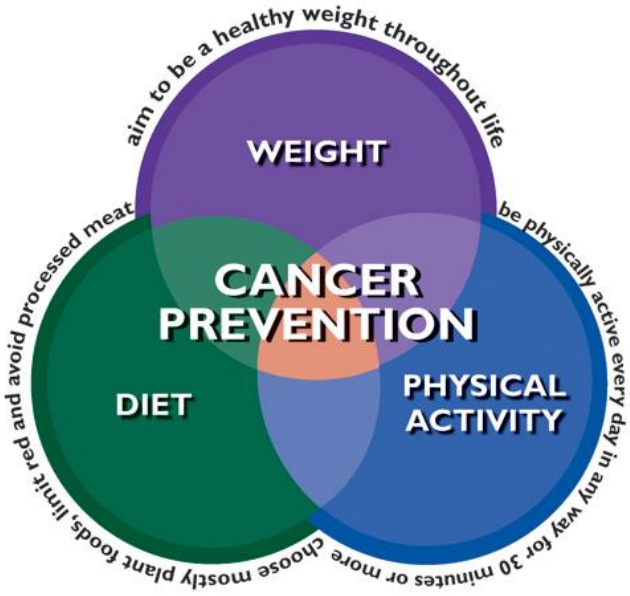
Cancer and Rural United States

- Residents of rural areas may experience higher risk of cancer
  - Limited healthcare facilities and other resources
  - Limited transportation
  - Lower incomes
  - More time working
  - Focus more on treatment than prevention
  - Higher rates of obesity and tobacco use

Source: Centers for Disease Control and Prevention.
http://www.cdc.gov/cancer/healthdisparities/basic_info/challenges.htm

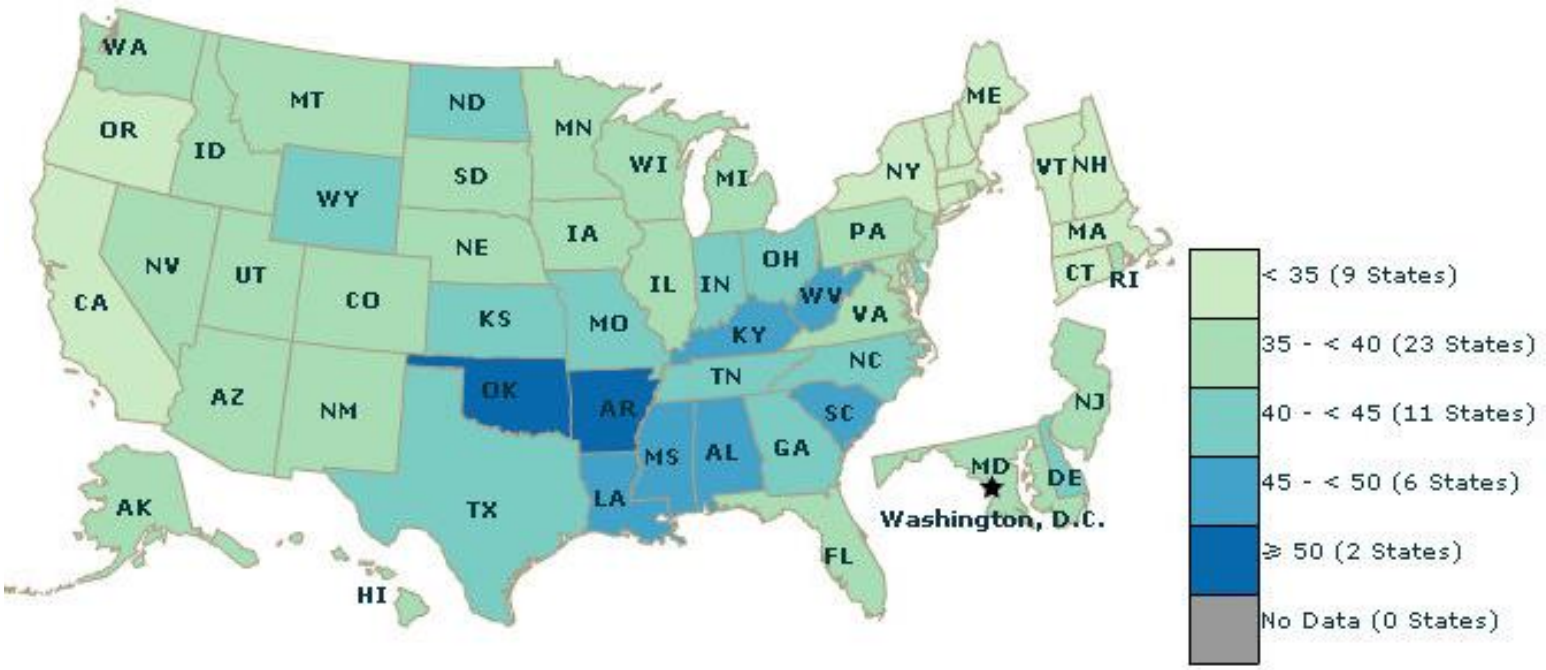
Health Behaviors

- A healthy diet can help sustain a healthy weight and lower risk of cancers
- Regular physical activity protects against the buildup of excess body fat and against cancer, independently
- Overweight and obesity contribute to an estimated 20% of all cancer-related deaths



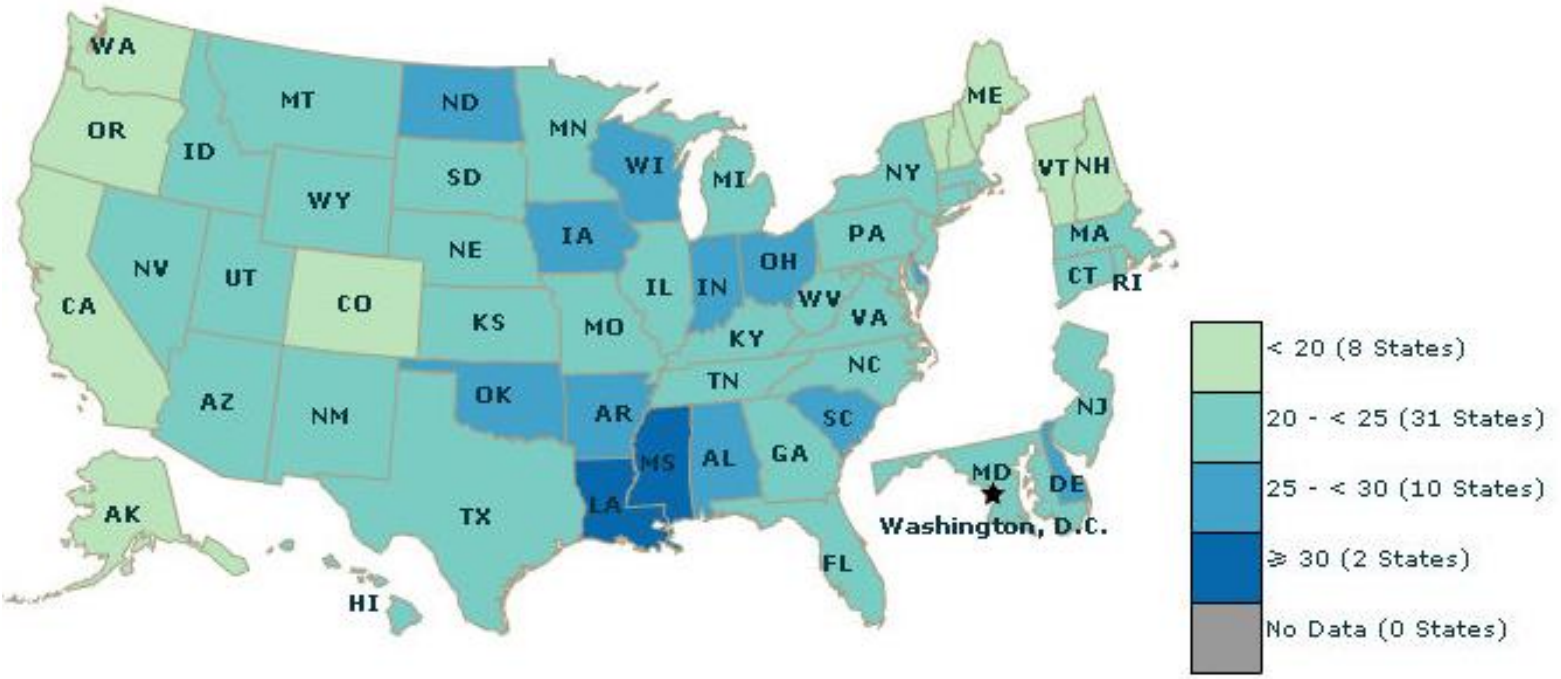
American Institute for Cancer Research (2009). Obesity and Cancer: The Link. Available at: www.aicr.org

Percent of adults (≥ 18 years) who report consuming fruit less than one time daily*(2013)



Source: http://www.cdc.gov/nccdphp/DNPAO/index.html.

Percent of adults (≥ 18 years) who report consuming vegetables less than one time daily*(2013)



Source: http://www.cdc.gov/nccdphp/DNPAO/index.html.

Challenges to Healthy Eating

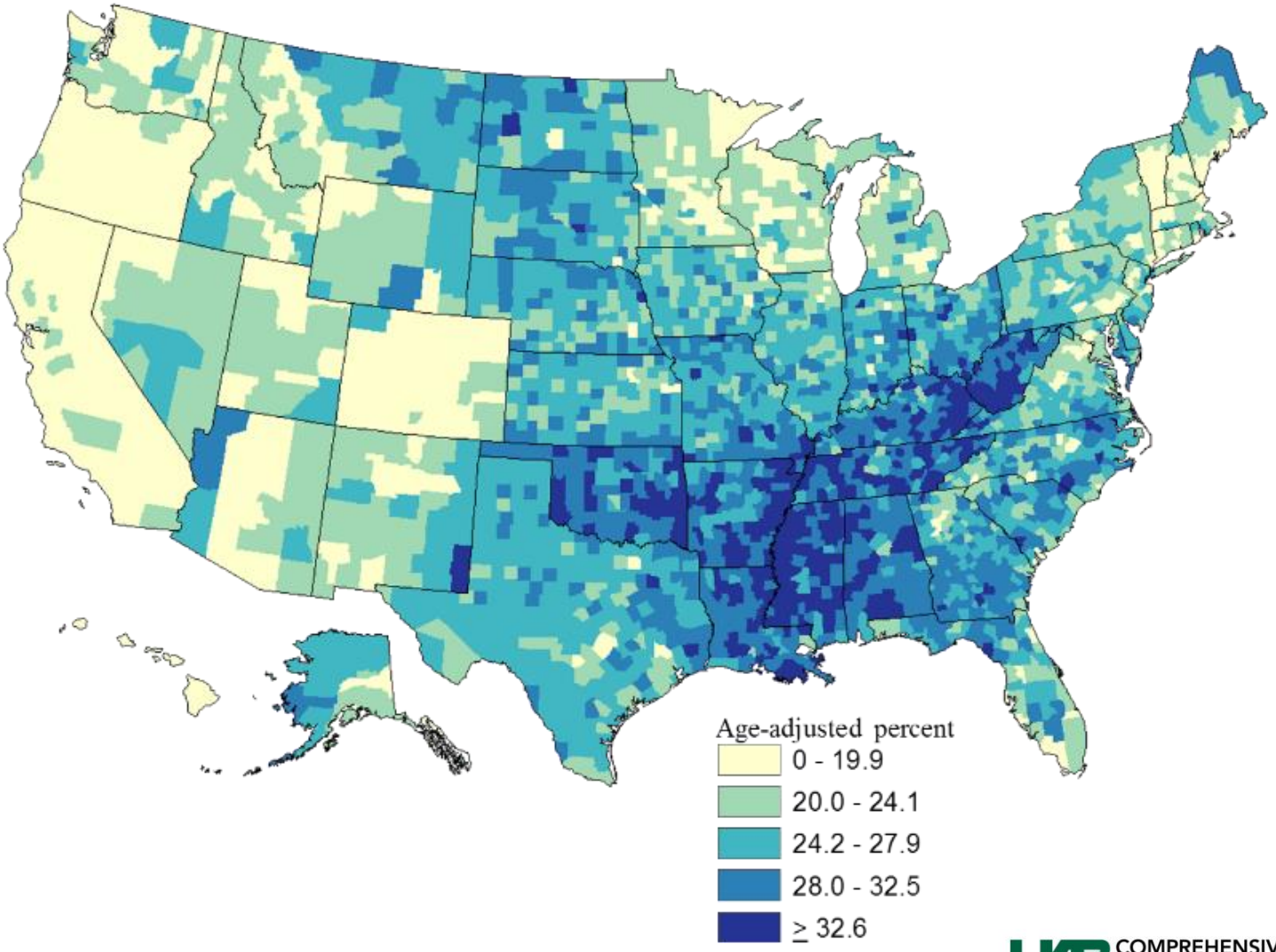
- Larger portion sizes served at family meals.
- Limited access to healthy affordable foods: smaller grocers/convenience stores.
- Southern dietary pattern (added fats, fried foods, eggs, organ and processed meats, sugar-sweetened beverages) associated with increased risk of chronic disease.

Seguin, R. et al., Understanding barriers and facilitators to healthy eating and active living in rural communities. J Nutr Metab; 2014. Dec 11

Shikany, JM et al., Southern dietary pattern is associated with hazard of acute coronary heart disease……*Circulation*; 2015, 132(9): 804-14

Risk Factor: Physical Inactivity

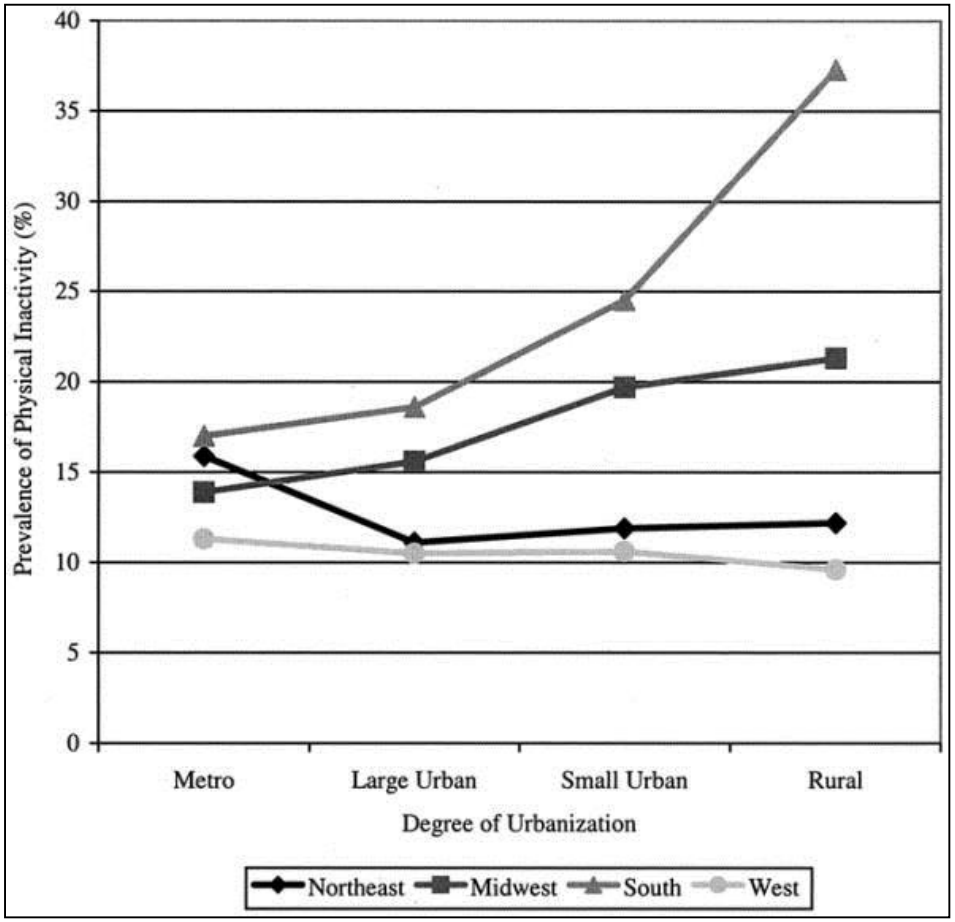
Age-adjusted County-level Estimates of Leisure-time Physical Inactivity among Adults aged ≥ 20 years: 2011



Source: www.cdc.gov/diabetes

UAB COMPREHENSIVE CANCER CENTER
Knowledge that will change your world

Geographic Differences



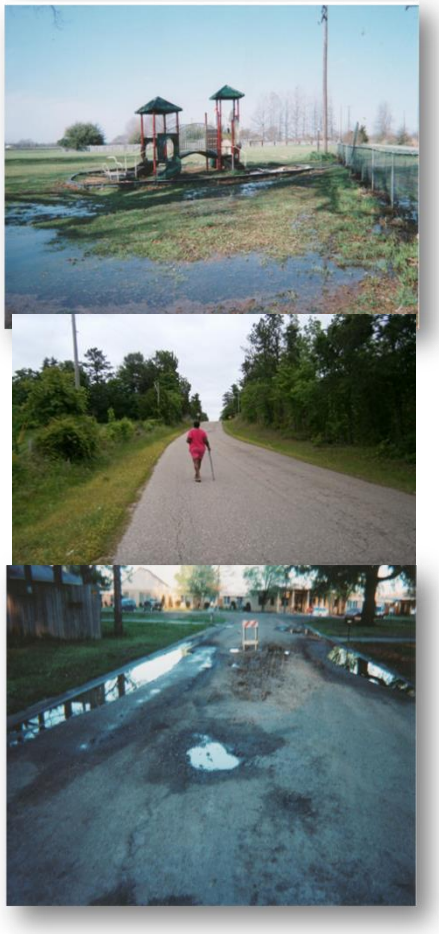
Nonoccupational Physical Activity by Degree of Urbanization and U.S. Geographic Region.
REIS, JARED; BOWLES, HEATHER; AINSWORTH, BARBARA; DUBOSE, KATRINA; SMITH, SHARON; LADITKA, JAMES

Medicine & Science in Sports & Exercise. 36(12):2093-2098, December 2004.

FIGURE 1 - Nonoccupational leisure-time physical inactivity by degree of urbanization# and geographic region# of the United States: 2001 BRFSS; # see Appendix.

Challenges to Active Living

- Limited Access/Availability of Services
  - Fewer parks, recreational facilities, etc. and/or greater distances to get to them
- Built Environment
  - Limited connectivity and sidewalks
  - Highways
  - Infrastructure and weather



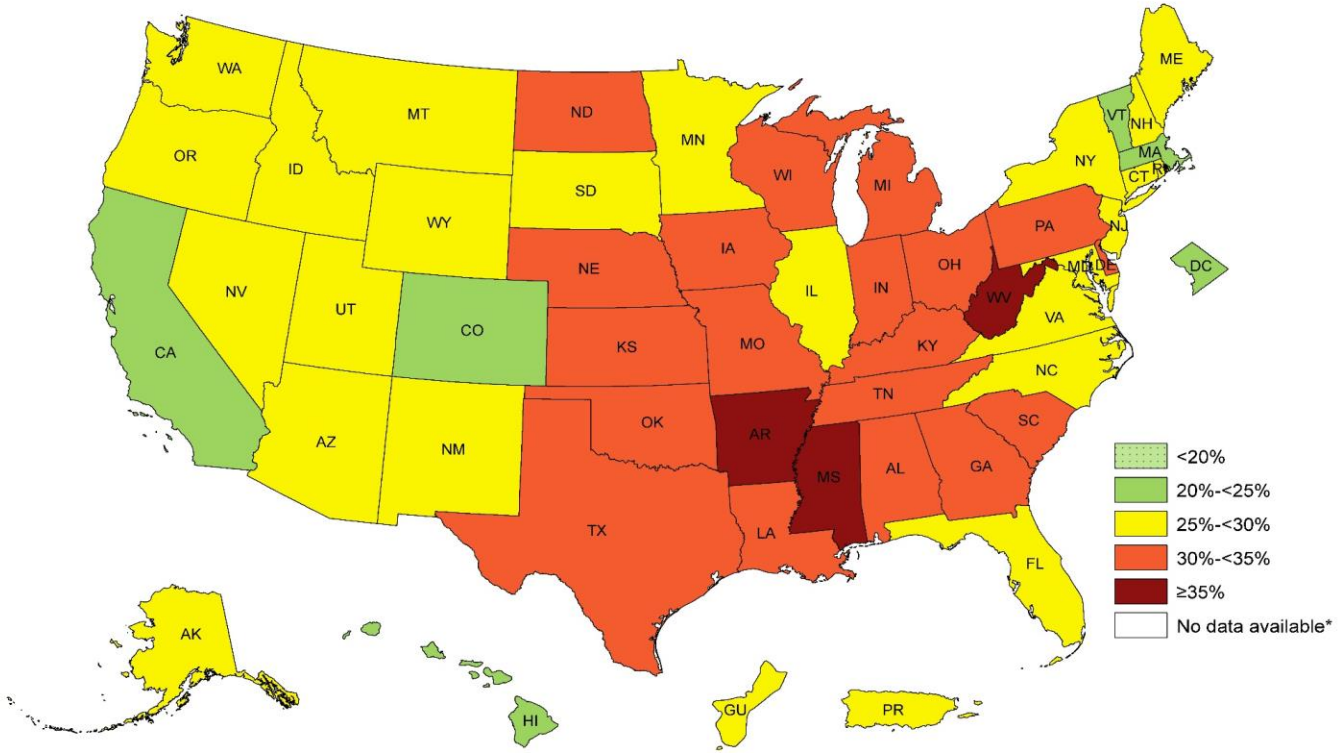
Robinson, JC, et al. Assessing environmental support for better health: active living opportunity audits in rural communities in the southern United States. *Prev Med*. 2014, 66:28-33.

Umstattd Meyer, MR, et al. Rural Active Living: A call to action. *J Public Health Manag Pract*. 2015, Aug 31.

Risk Factor: Obesity

Prevalence of Self-Reported Obesity Among U.S. Adults by State and Territory, BRFSS, 2014

¶ Prevalence estimates reflect BRFSS methodological changes started in 2011. These estimates should not be compared to prevalence estimates before 2011.



Sources: http://www.cdc.gov/obesity/data/adult.html

UAB COMPREHENSIVE CANCER CENTER
Knowledge that will change your world

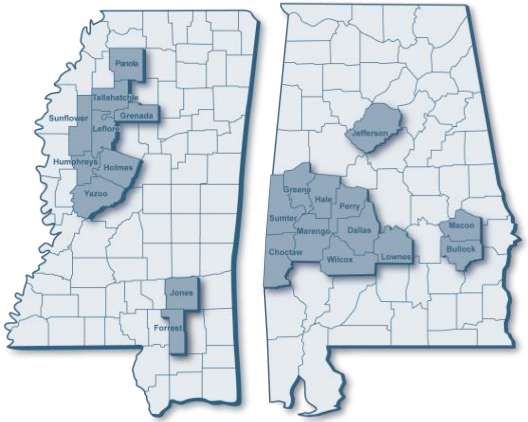
Lessons Learned

Deep South Network for Cancer Control

2000-2016
Edward Partridge, MD – Principal Investigator
Claudia Hardy, MPA – Program Director

U01CA086128, U01CA114619, and 1U54CA153719

- Unique 15-year collaboration between academic researchers, health professionals and specialists, local leaders, and community volunteers from Alabama and Mississippi to eliminate cancer health disparities by conducting community based participatory education, training and research.
  - Cancer outreach and screening
  - Promotion of healthy behaviors
  - Weight management
  - Training



UAB COMPREHENSIVE CANCER CENTER
Knowledge that will change your world

Lessons Learned

Community-Based Participatory Research (CBPR)

A collaborative approach to research that equitably involves all partners in the research process and recognizes the unique strengths that each brings. CBPR begins with a research topic of importance to the community and has the aim of combining knowledge with action and achieving social change to improve community health and eliminate health disparities.

W.K. Kellogg Community Scholar's Program (2001)

Lessons Learned

Community Health Advisors as Research Partners (CHARPs)

- Individuals who are indigenous to the community and agree to be a link between community members and the service delivery system

Service C., Salber E. (eds.): *Community Health Education: The Lay Health Advisor Approach*. Durham, NC, Duke University Health Care System, 1979.

Hardy, CM, et al. (2005). African American community health advisors trained as research partners: recruitment and training. *Fam Comm Health*. 28(1):28-40

Lessons Learned

U54CA153719

R01CA160313

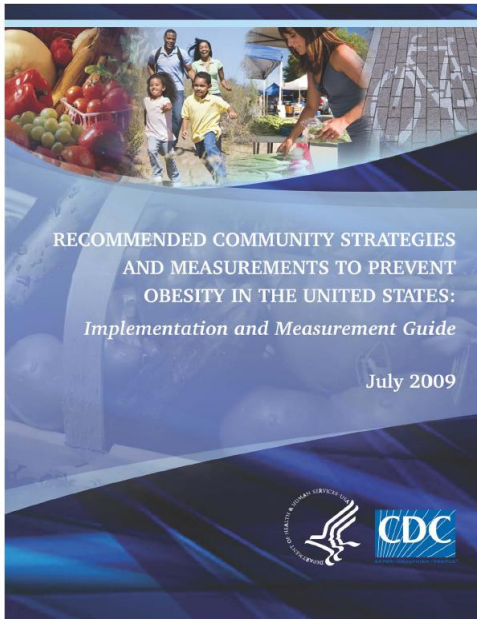
- Embedded in a long-term academic-community partnership focused on eliminating cancer disparities in the Deep South
- Behavioral weight loss program adapted from evidence-based behavioral trials[1,2,3] and delivered by trained local staff and volunteers.
- Community strategies selected from evidence-based models[4] and delivered by local government or community-based organizations.

[1] Wadden et al., *Obes Res*. 2004; 12(Suppl 3): 151S-62S;
[2] Svetkey et al., Ann Epidemiol. 2003; 13(6):462-71.
[3] Brantley et al., Clin Trials. 2008; 5(5):546-56.
[4] Khan et al., MMWR Recomm Rep. 2009; 58(RR-7):1-26.

UAB COMPREHENSIVE CANCER CENTER
Knowledge that will change your world

Lessons Learned

Community Strategies



Khan, LK, Sobush K, Keener D, et al. Recommended community strategies and measurements to prevent obesity in the United States. *MMWR Recomm Rep.* 2009; 58(RR-7):1-26.

Promote Availability of Affordable Healthy Food and Beverages	
Increase availability of healthier food and beverage choices at public service venues (e.g., vending machine options)	Improve availability of grocery or supermarkets in underserved areas
Provide incentives to retailers to locate in/offer healthier food choices in underserved areas	Improve opportunities to purchase from farms/farmers

Strategies to Create Safe Communities that Support Physical Activity	
Improve access to outdoor recreational facilities	Enhance personal safety in areas where persons are or could be physically active
Enhance infrastructure supporting walking	Enhance traffic safety in areas where persons are or could be physically active

Lessons Learned

Community Strategies

- Awarded “mini-grants” to local communities
  - Expansion of Farmer’s Market and Community Garden
  - Incentives for Farmer’s Market Purchases
  - Park Improvements
  - Indoor Walking Trail

Lessons Learned

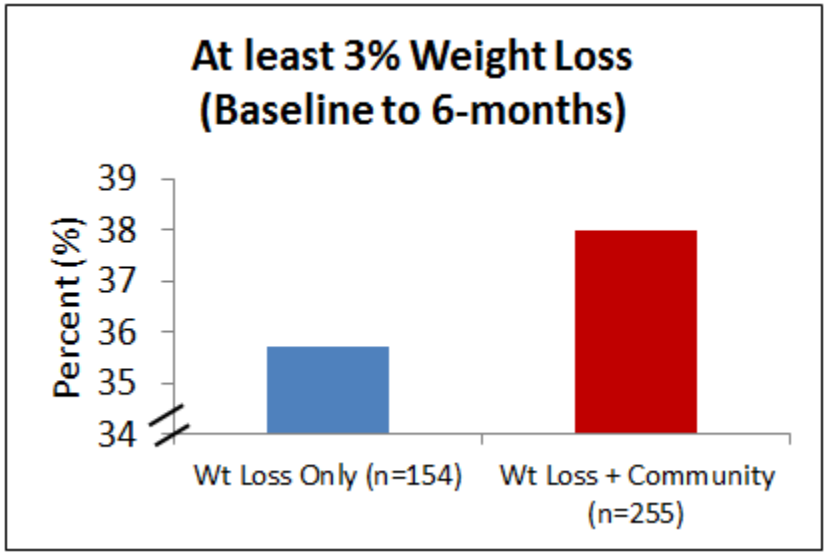
Participant Recruitment and Retention

- The JTBH trial (recently completed) enrolled 409 overweight or obese African American women from eight rural counties part of the Deep South Network. High retention was noted at 6-, 12- and 24-months (99.5%, 98.5%, and 75%, respectively).

- The DSN CARES study (ongoing) has met over 50% of targeted enrollment of 450 cancer survivors and family members. With average retention of 98% among counties reaching the initial follow-up period.

Lessons Learned

Participant Outcomes



Journey to Better Health

- Statistically ($p < 0.001$) and clinically significant weight loss among both intervention conditions (similar improvements in waist circumference, blood pressure, total cholesterol and triglycerides) at 6-months.

Lessons Learned

Conclusions

- CBPR methods associated with significant reach of target population
- Multi-level intervention for cancer prevention can be effectively implemented by non-professional local staff and volunteers
- Findings suggest initial improvements in health outcomes and good potential for program sustainability

Opportunities

What We Don't Know

- Very limited published research targeting cancer prevention in rural communities
- Long-term impacts and sustainability of existing programs is not clear
- What are the key factors to support programs with limited traditional resources (e.g., access to primary care, cancer centers, etc.)?

Opportunities

What We Can Do Now

- Increase efforts to target rural communities for cancer prevention research and practice
- Take advantage of community engagement to develop and implement programs that meet the unique needs and resources of rural communities
- Seize opportunities in the Affordable Care Act to engage community health workers and other non-licensed professions in the provision of preventive services AND evaluate these programs

Questions

THANK YOU!!

mbaskin@uab.edu

UAB COMPREHENSIVE CANCER CENTER
Knowledge that will change your world