Obesity, Cancer, and Weight Control Interventions in Rural Settings

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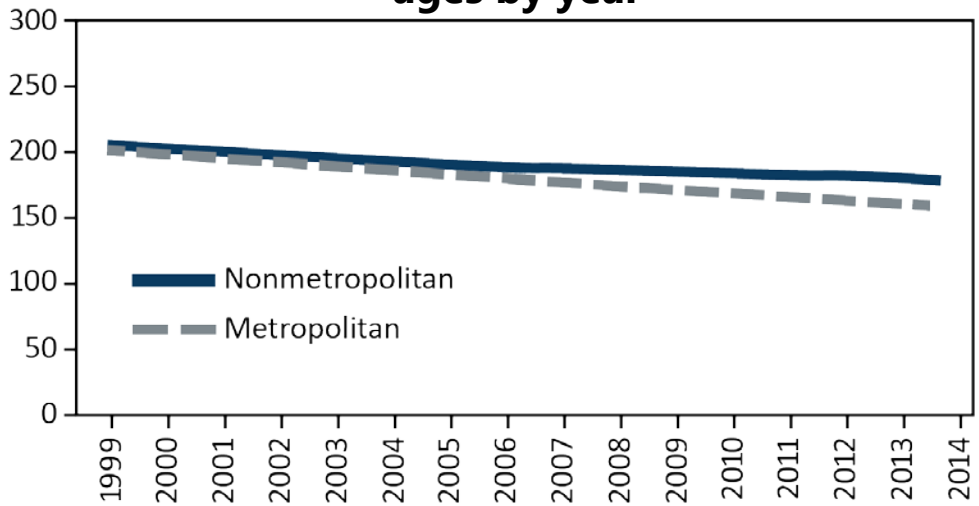
Disclosures

- Nothing to disclose

Death from Cancer Across Rural and Urban Counties, National Vital Statistics

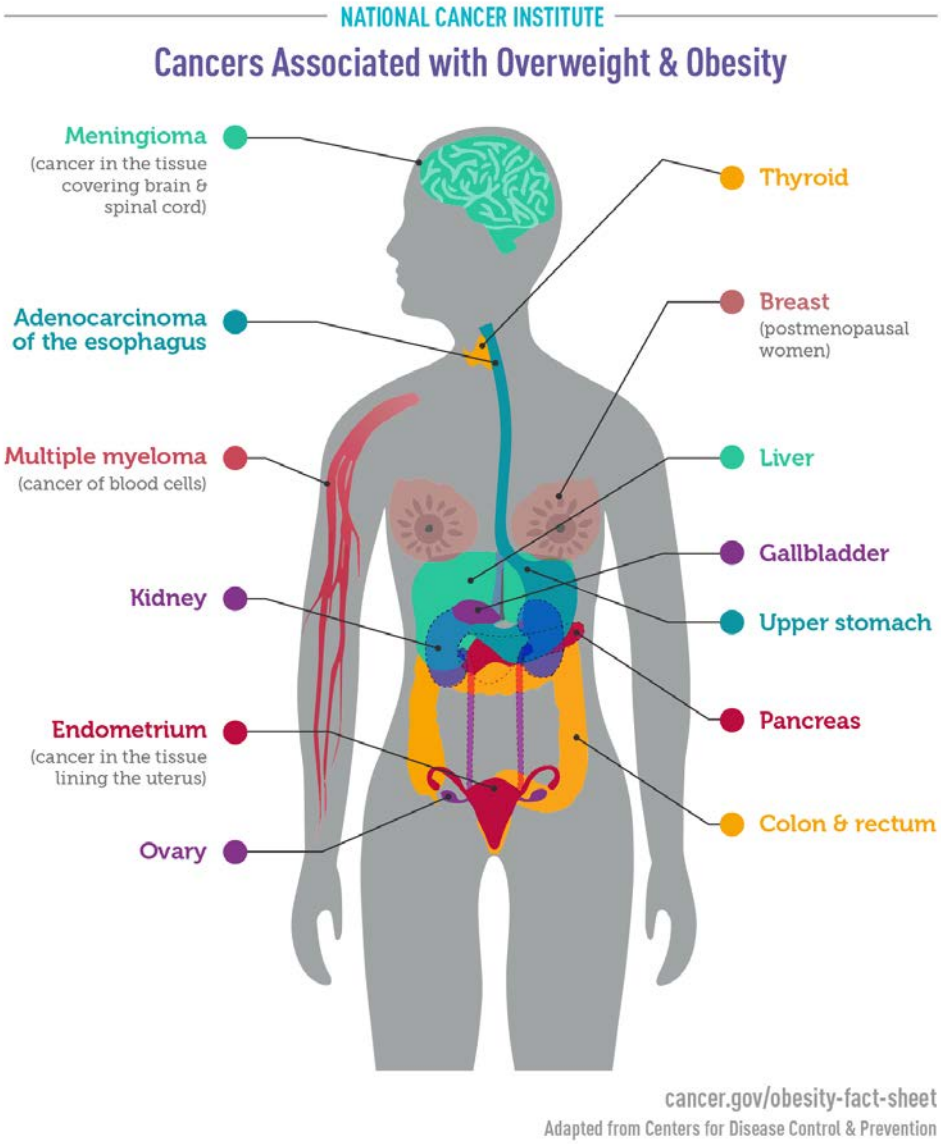
Age-adjusted cancer death rates among all ages by year



Rural Disparities

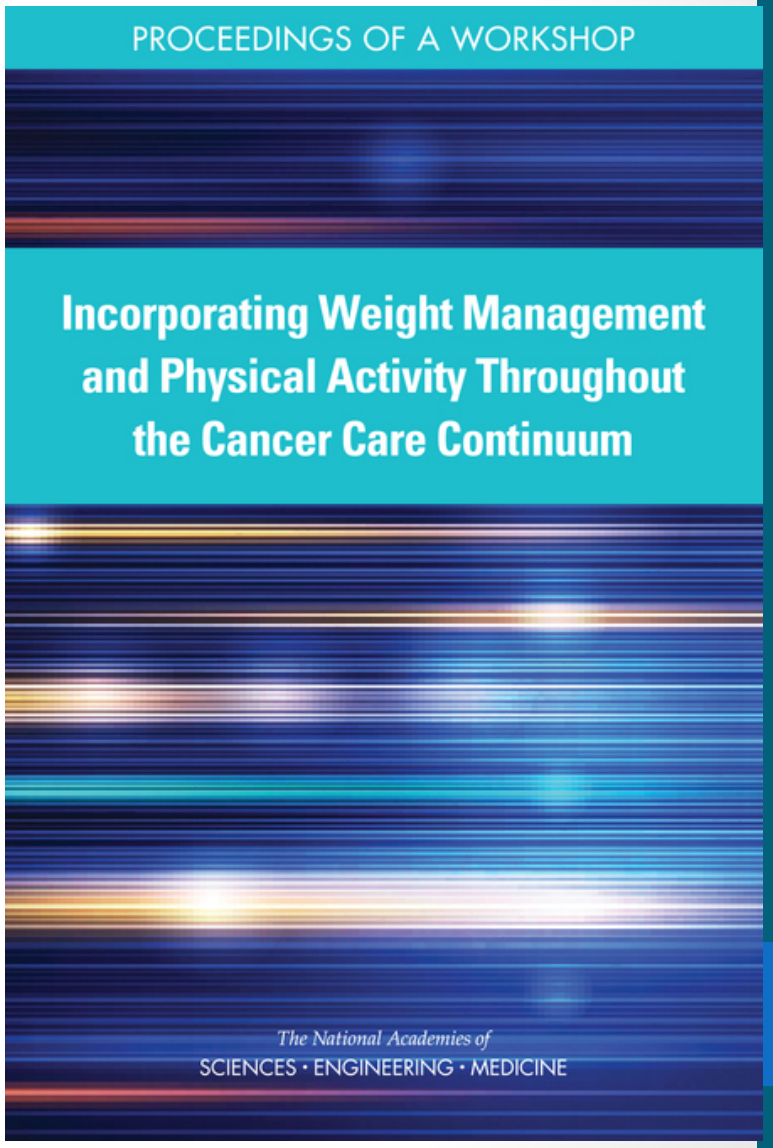
- Diagnosis at later stage
- Access to care issues
- Higher rates of tobacco use
- Higher rates of obesity
- Lower screening rates
- Higher co-morbidities

13 cancers linked to obesity

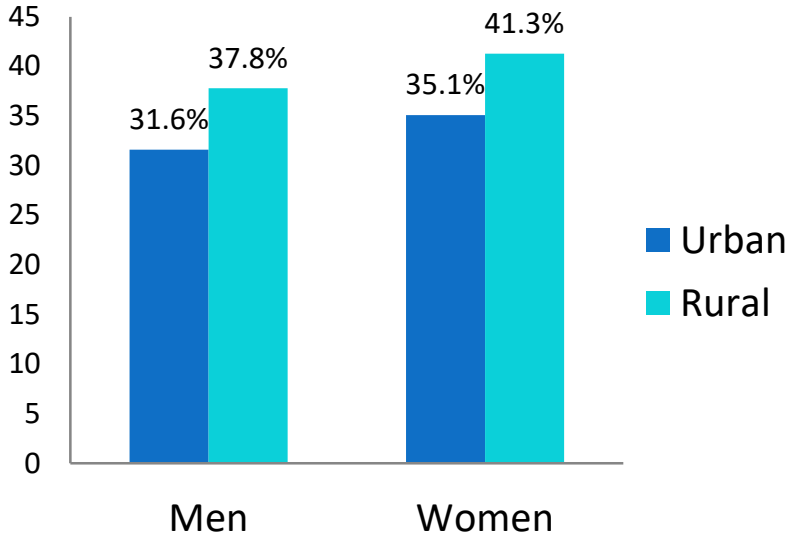


Obesity at cancer diagnosis linked to prognosis for 7 cancer types

- Breast
- Prostate
- Colon
- Ovarian
- Endometrial
- Renal
- Multiple myeloma

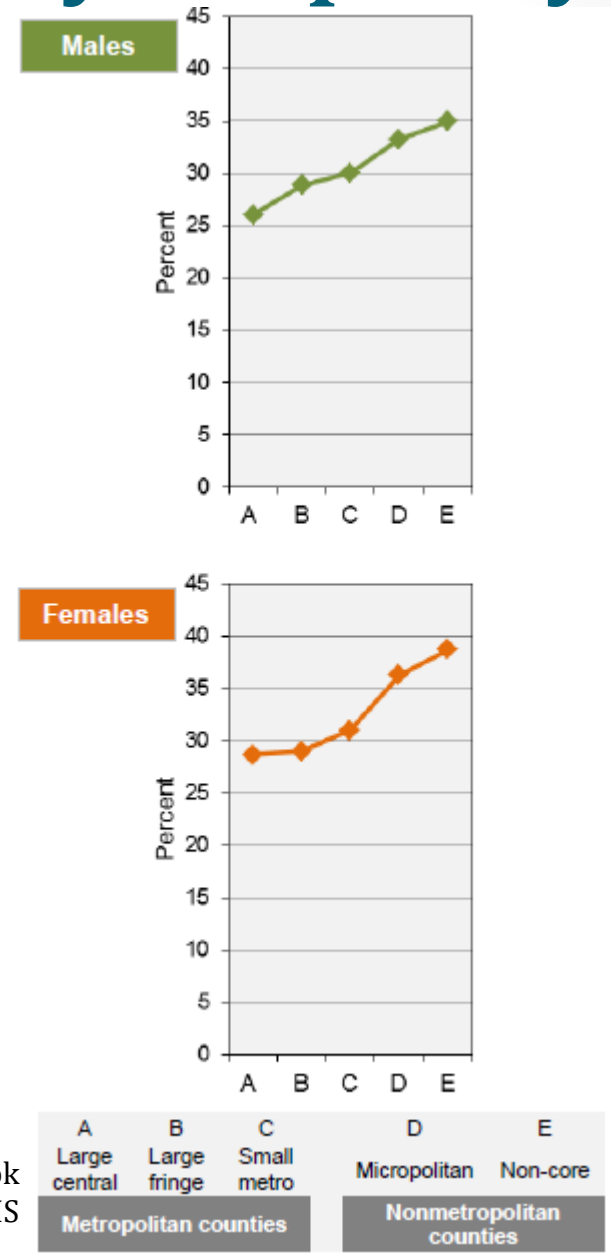


Rural-Urban Obesity Disparity



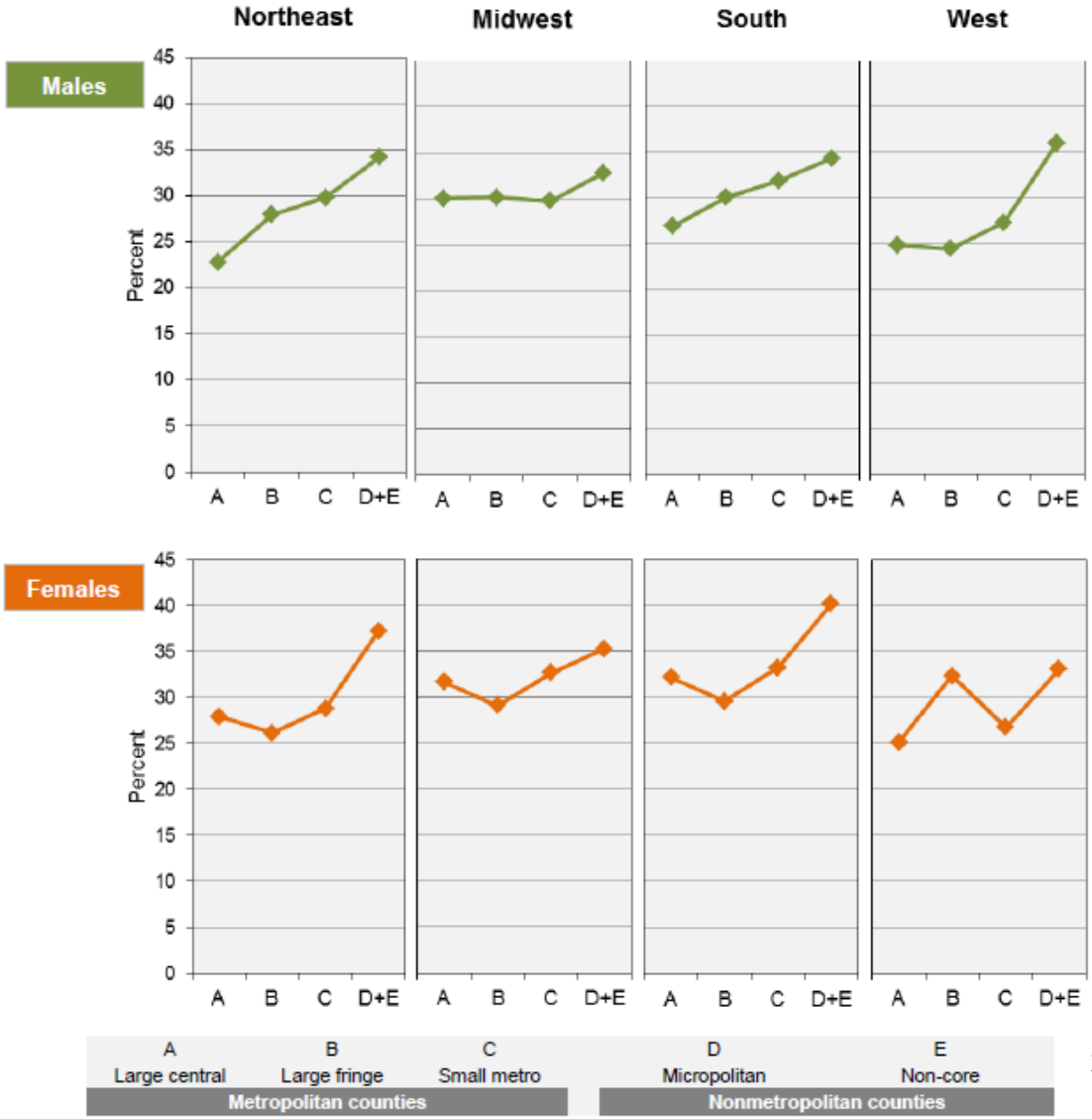
Severe obesity increasing at a rate 3x greater in rural versus urban counties

Befort et al., 2012 NHANES 2005-2008; *J Rural Health*
Hales, 2018, NHANES 2001-2016; *JAMA*



2014 Rural-Urban Chartbook
2010-2011 NHIS

Rural-Urban Obesity Prevalence by Region

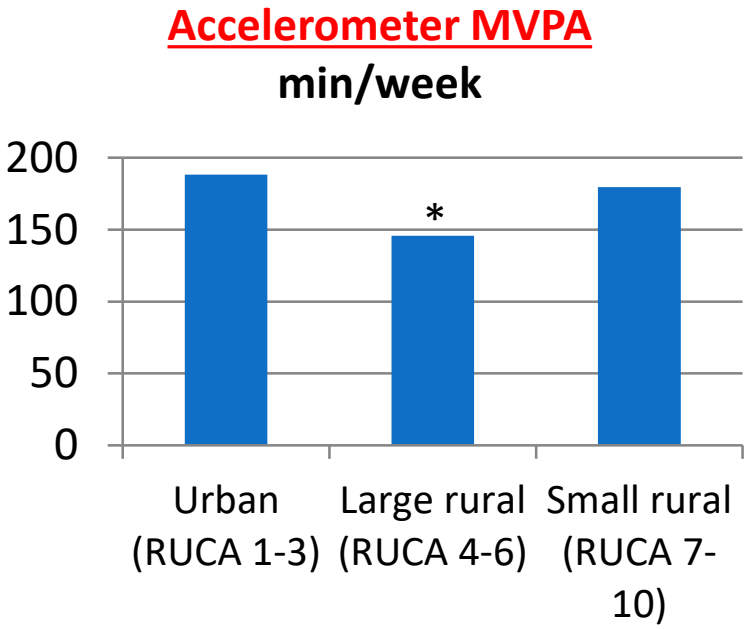


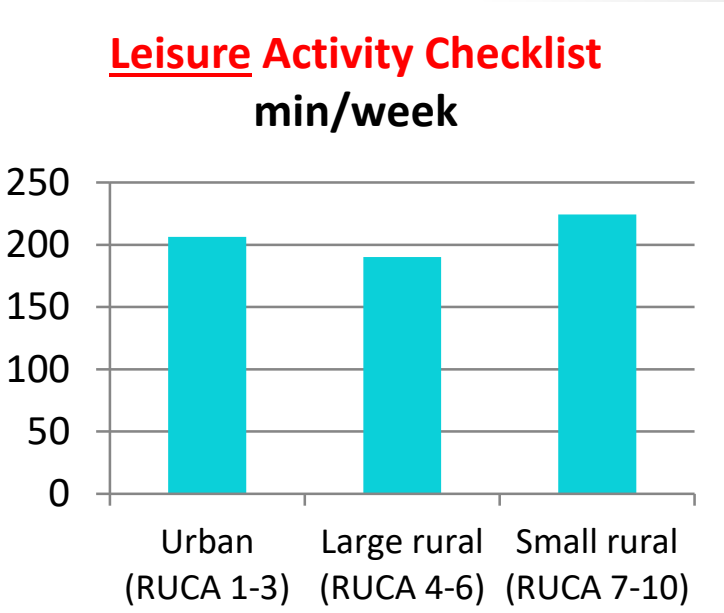
2014 Rural-Urban Chartbook
2010-2011 NHIS

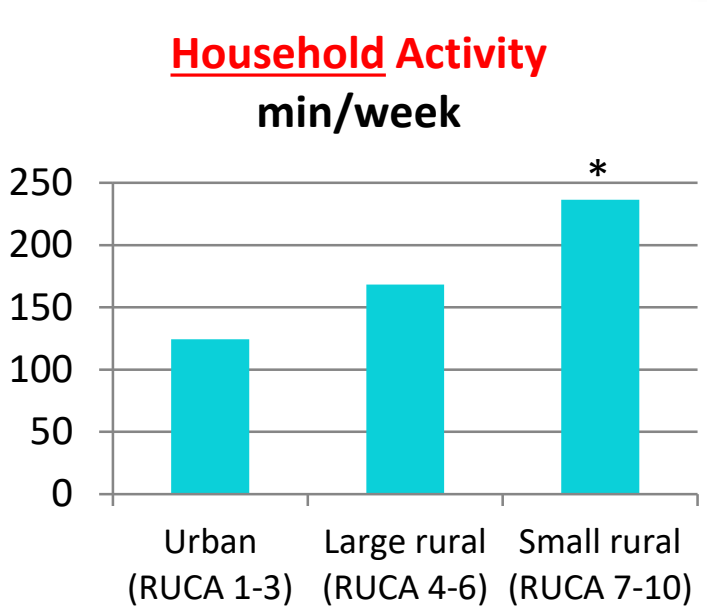
Drivers of rural obesity disparity

- Older age and lower SES
- Physical activity and diet
  - Built and natural environment
  - Access barriers
  - Cultural patterns

Physical activity: NHANES



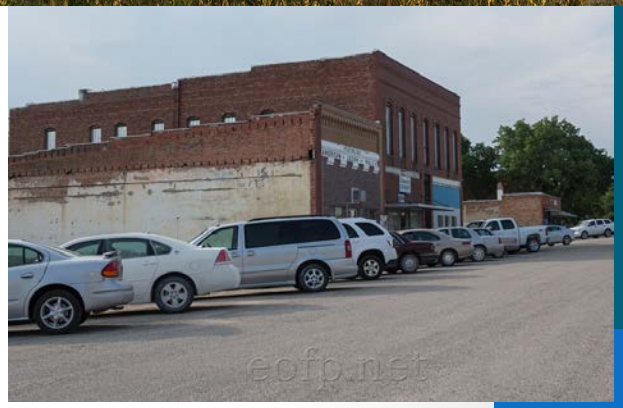




Fan et al., *Prev Chronic Dis* 2014 NHANES 2003-2006

Environmental barriers to physical activity

- Built environment
  - Less access to public parks and trails
  - Lack of well-maintained sidewalks and streets with wide shoulders or foot-paths
  - Neighborhoods perceived as unpleasant
  - Fewer PA facilities (shared use with schools, hospitals, and churches)
- Natural environment
  - Harsh weather (snow, heat, high winds)
  - Lack of shade
- Sociocultural environment
  - Less likely to encounter people exercising or walking for transportation



Hansen et al, 2015. *Current Obes Rep*
Wilcox et al. 2000. *J Epidemiol. Community Health*
Peterson et al, 2004. *J Community Health Nurs*

Food environment

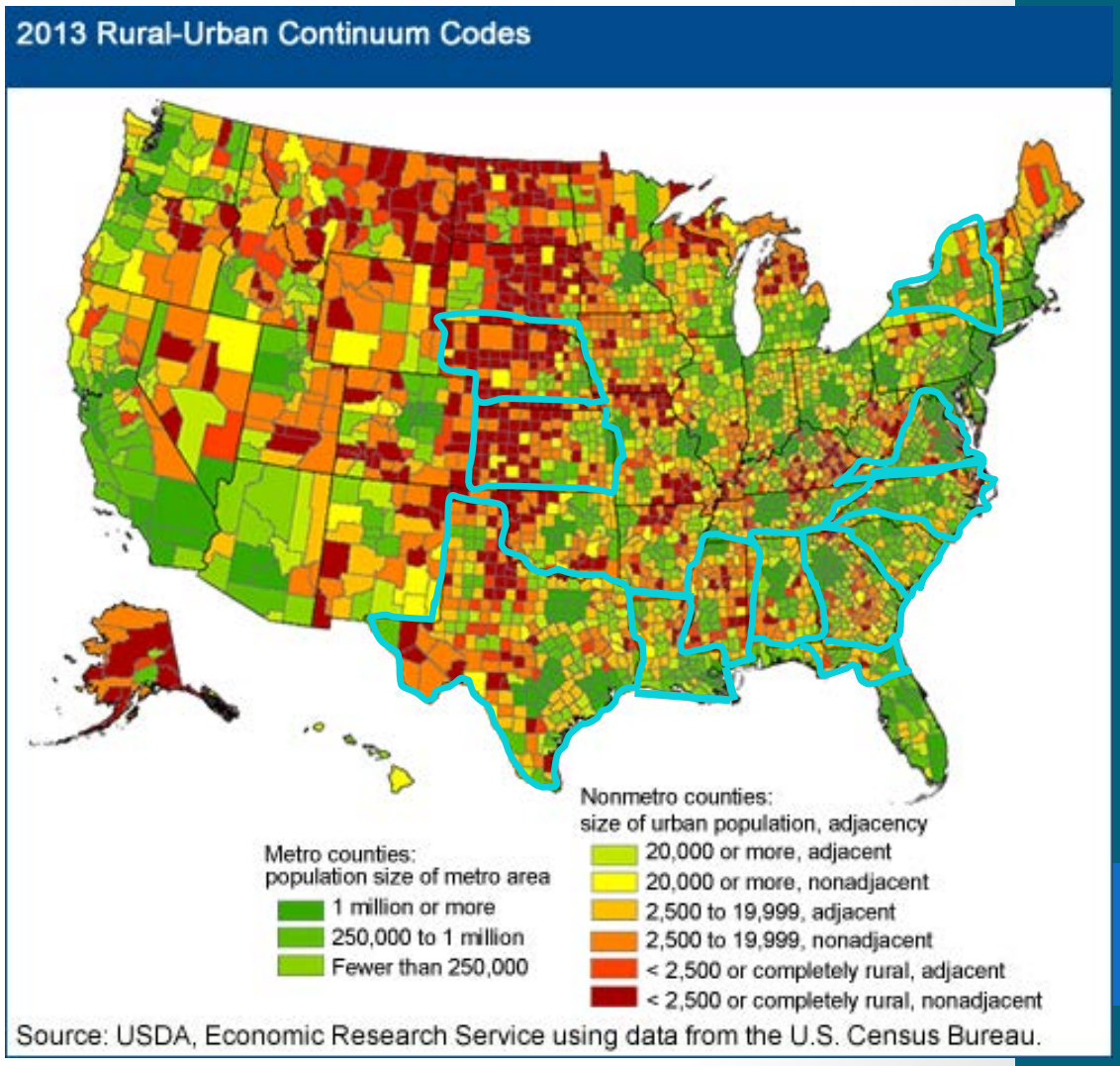
- Small grocery stores with fewer and more costly selection of fresh produce and lean meats

- Access to convenience store and other fast foods

Creel et al., 2008. *BMC Public Health*
Liese et al., 2007. *J Am Diet Assoc*
Lendardson et al., 2015. *Curr Obes Rep*

Rural lifestyle intervention studies

- ~ 50 studies
  - ~ 15 RCTs
- African American population in South
- Hispanic population in Texas
- Predominantly White population in Midwest



Porter et al., 2018. *Obesity Reviews*

How do we reach rural residents?

On-site

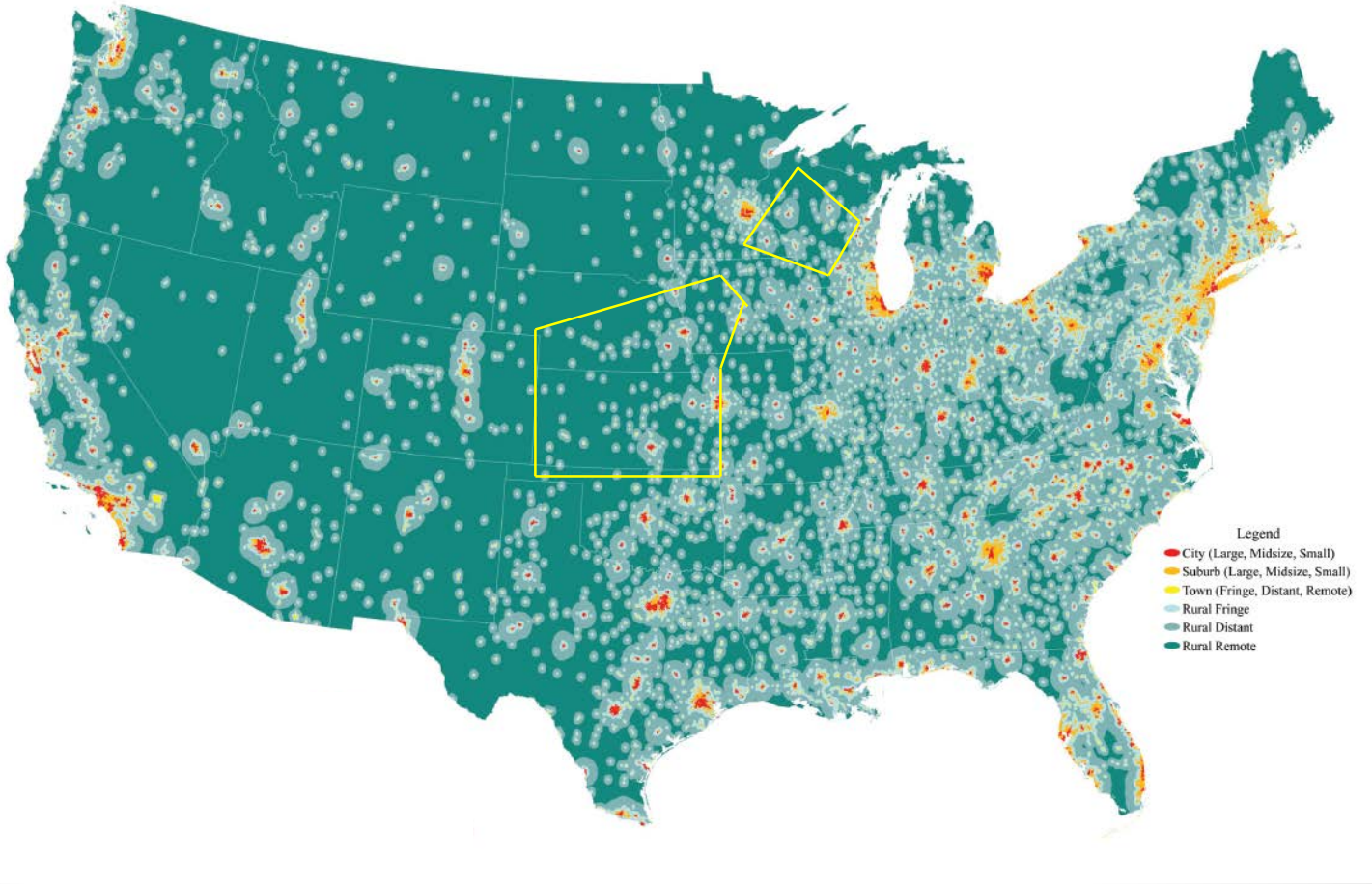
- Churches
- Cooperative Extension Service
- Schools
- Primary care

Off-site

- Phone
- Tele-video
- Web/Mobile app

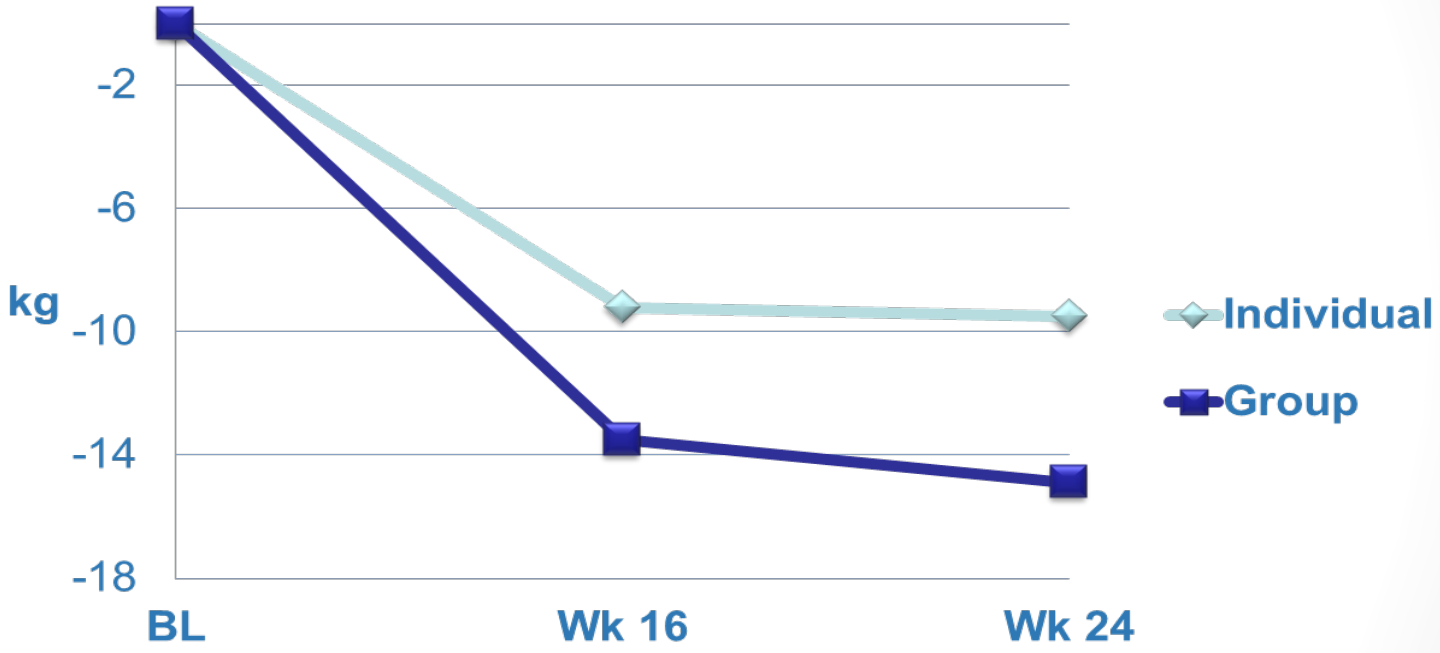
Trials from the rural Midwest

- Breast cancer survivors: Rural Women Connecting trial
- Primary care patients: RE-POWER trial



Group vs. individual phone-based weight loss trial for rural women

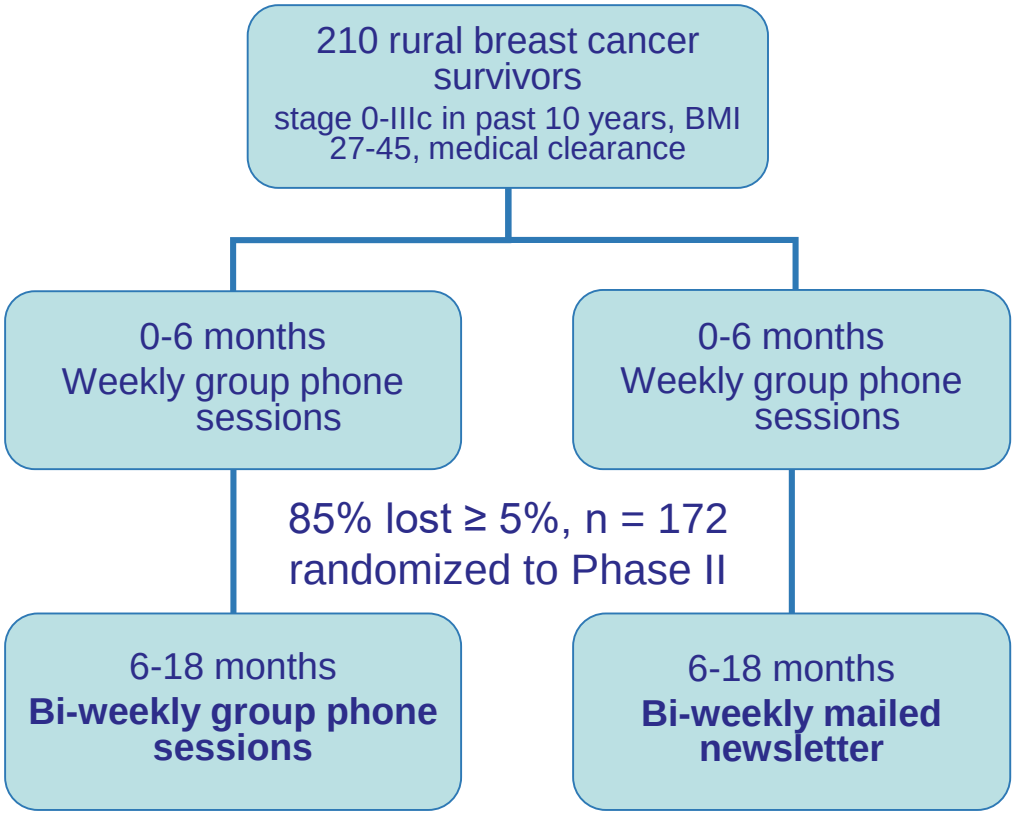
N = 34
White
age 48 ± 11



- Match to treatment preference did not influence weight loss
- Group arm rated support, accountability, and information sharing as most helpful

Befort et al., *Eating Behaviors*, 2010

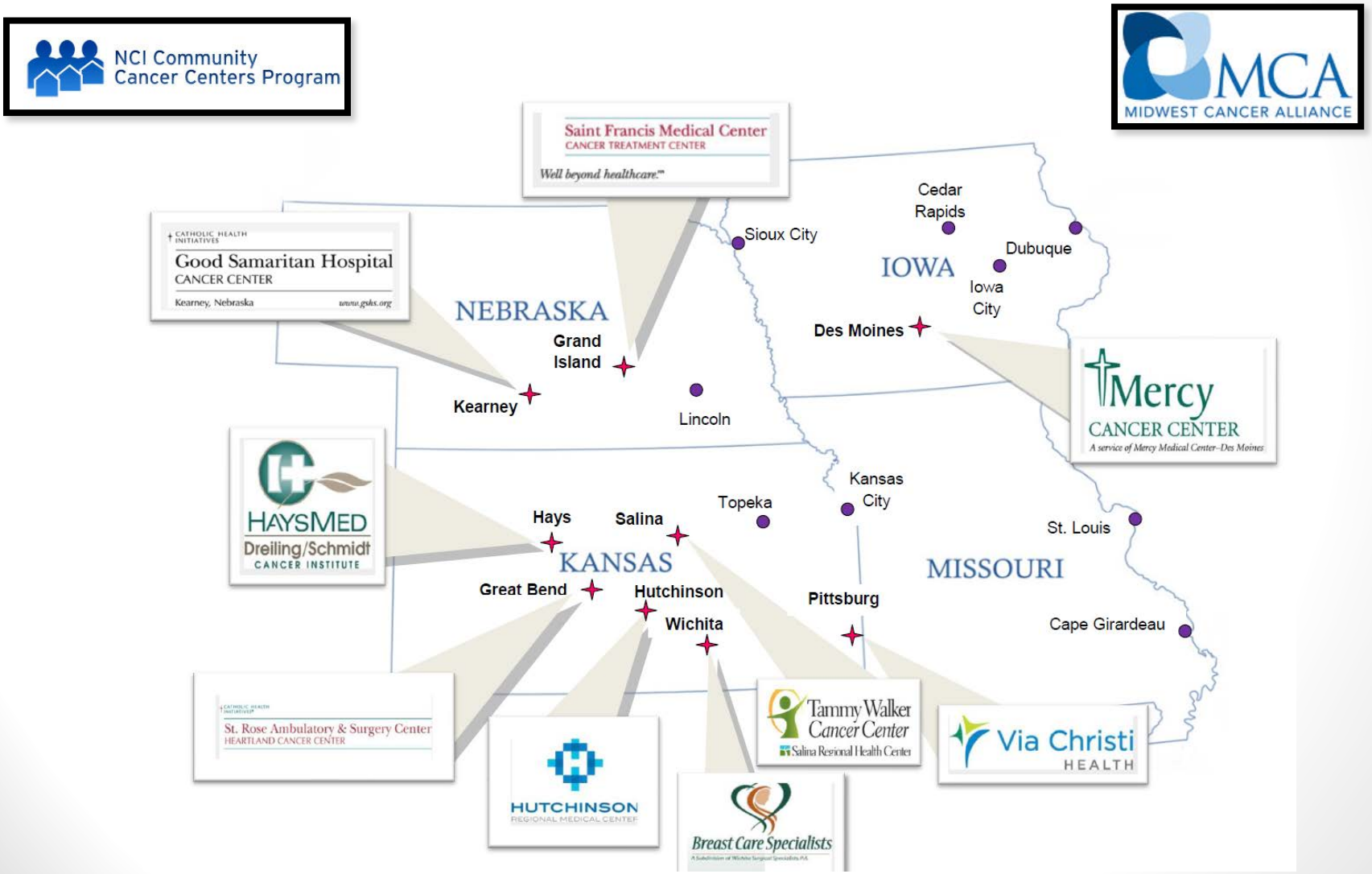
Weight loss maintenance among rural breast cancer survivors



R01 CA155014

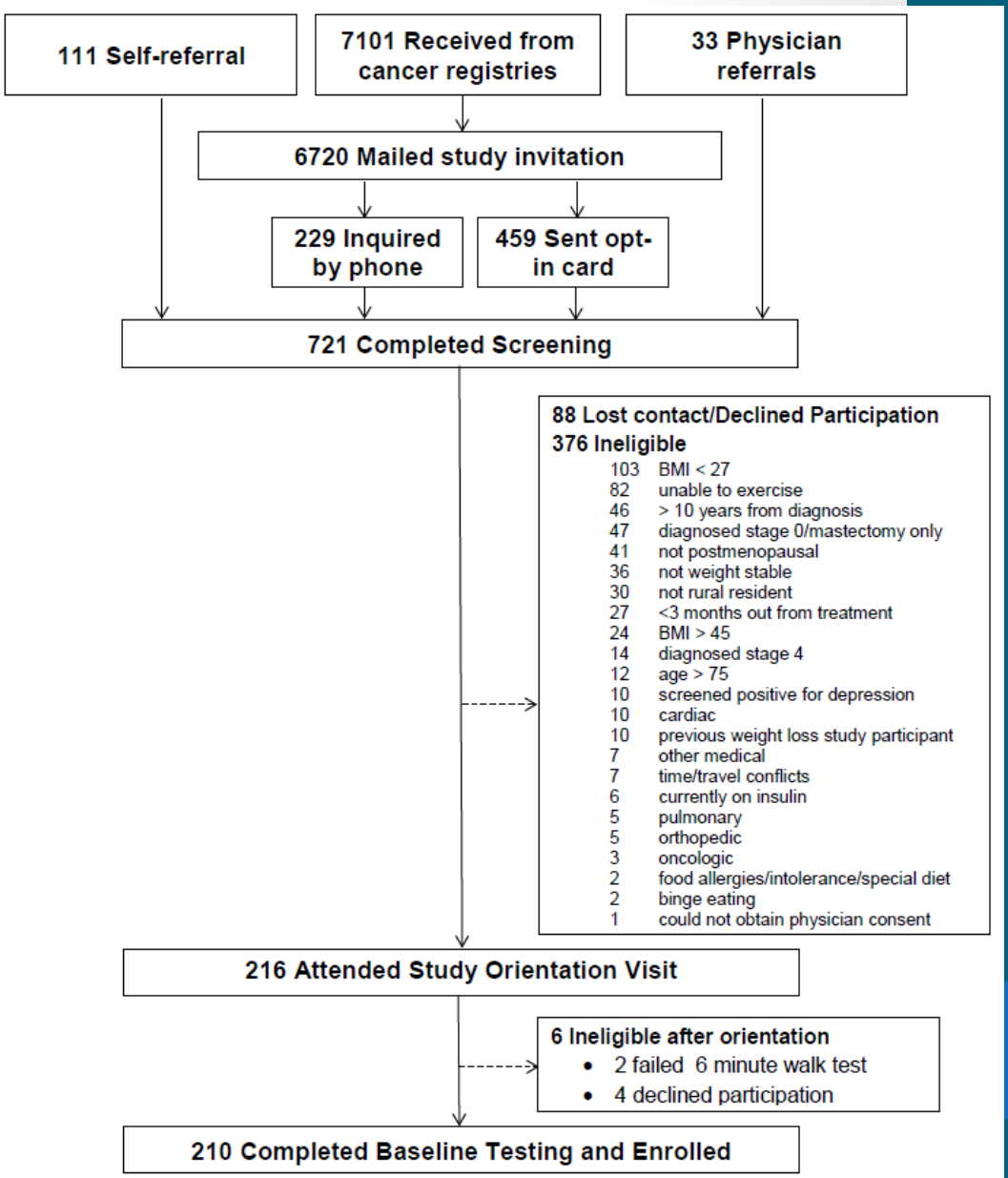
Befort et al. (2012). *Breast Cancer Res Treat*.
Befort et al., (2015). *Psycho-oncology*.

Community Cancer Centers



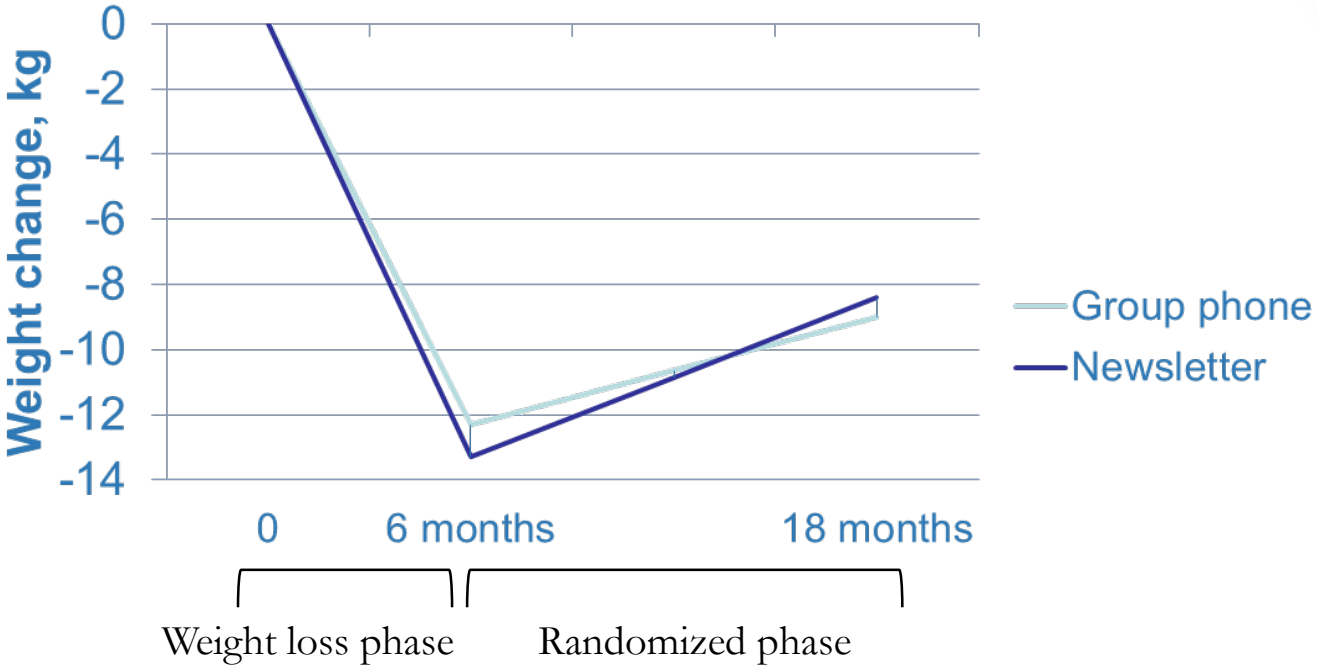
Recruitment

- Oncology referrals and mailings
- 721 cases screened
  - 84% from mailed brochure
  - 11% advertisements, friend referrals, outreach
  - **5% physician referral**
- **29% enrollment rate** of those screened



Befort et al., *Contemp Clinical Trials,* 2014

Weight changes by treatment group



	Group Phone Counseling (n = 85)	Newsletter Comparison (n = 83)	*P*
Weight change 6 to 18 months	3.3 (4.8)	4.9 (4.9)	0.03
Within 3% of 6 month weight	42.4%	20.5%	0.003
≥ 5% below baseline weight	75.3%	57.8%	0.02

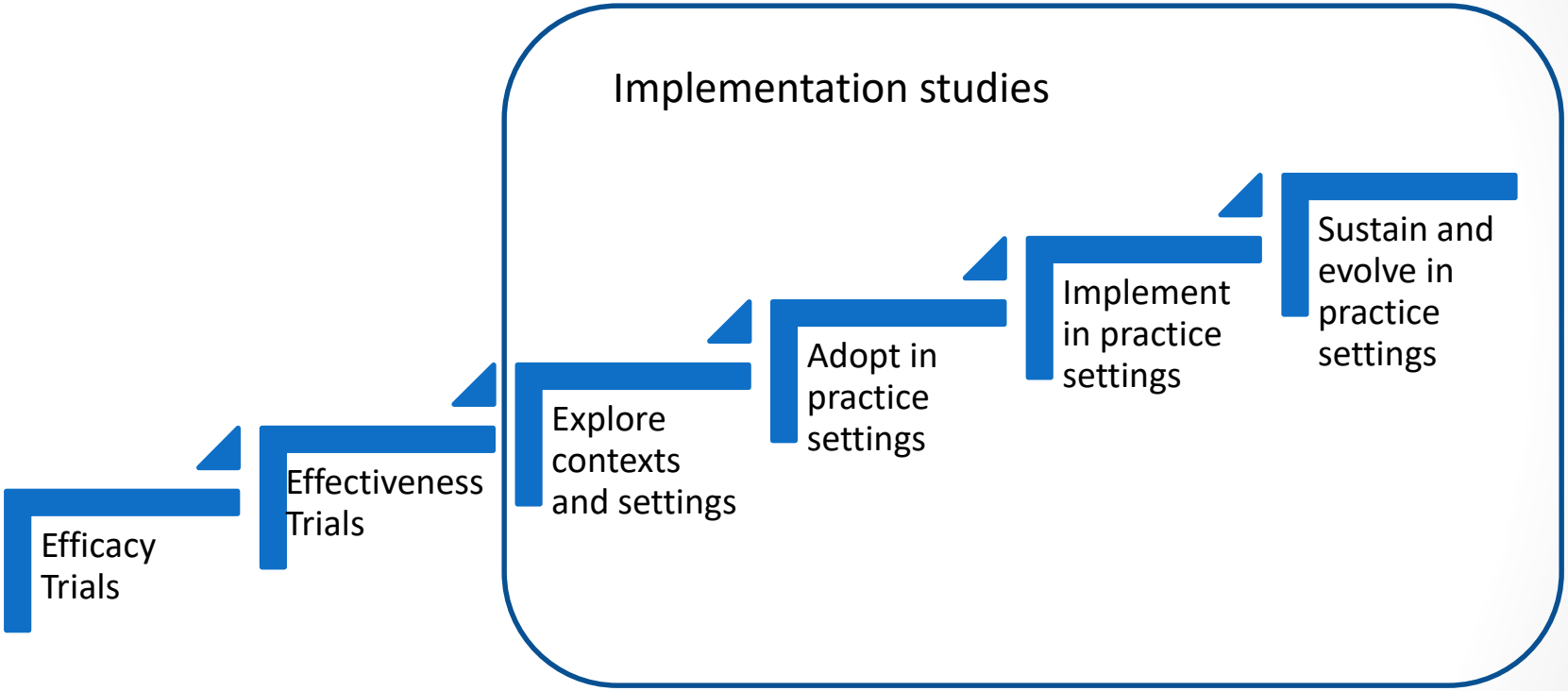
Befort, C. A., et al. (2016). *Obesity* ***24****(10):* 2070-2077.

Lessons learned

- Group-based phone interventions can engage rural breast cancer survivors and may address unmet support needs
  - 90% attendance in phase 1; 60% attendance in phase 2
  - 6 month process interviews (n = 186):
    - Accountability to group seen as one of most helpful components
    - Group cohesion and enjoyment of calls varied substantially
- Strategies needed to enhance referrals and participation rates from local oncology settings

Fazzino, Befort et al. (2016). *Support Care Cancer, 24.*

What is best setting for reach and sustainability?



Landsverk et al. In Brownson, Colditz, and Proctor, 2012. *Dissemination and Implementation in Health: Translation Science to Practice*

Obesity treatment falls short in primary care practice

- Only 20-40% of patients get diagnosed and counseled
- Wide variation in counseling methods
- Training gap for health professionals
- Variable insurance coverage for guideline-based care based on BMI diagnosis

Fitzpatrick 2017 *Prev Med.*

Intensive Behavior Therapy for Obesity Medicare Claims

- Intensive Behavior Therapy (IBT) for Obesity authorized by Medicare in 2011
  - Face-to-face, 15 minutes, ~$27/session
  - 14 sessions in 6 months
  - If > 3 kg loss, continue with monthly sessions
- <1% of eligible beneficiaries received IBT for Obesity

USA TODAY — THE DES MOINES REGISTER - METRO EDITION
SUNDAY, NOVEMBER 16, 2014

ING

bursed under the regulations.
Medicare officials say they did that so weight-loss counseling could be coordinated with the rest of a patient's health care. Yet,

"Many doctors tend to view obesity as a matter of ... self-control, instead of health."
Scott Kahan, obesity medicine specialist

critics say, the policy cuts out providers with deeper expertise in weight loss, most notably, registered dietitians, diabetes nurse educators, psychologists and obesity medicine specialists. Bills have been introduced in Congress to expand the list of those eligible to participate, but they have gone nowhere.
Another challenge is the requirement that counseling be provided during a separate appointment.
That's a problem for Reid Blackwelder, board chairman of the American Academy of Family Physicians, who has many obese seniors in his practice in Kingsport, Tenn. But he has yet to offer obesity counseling because of the burden of bringing patients in for a separate visit.

Medicare perk for obesity counseling goes largely unused

Phil Galewitz
Kaiser Health News

OBESITY TRENDS AMONG OLDER AMERICANS

Source: Kaiser Health News, USA Today, 2013

Models to Address Obesity in Primary Care

Fee-for-service

- In-clinic individual visits
- Medicare Intensive Behavioral Therapy
  - 15 minutes
  - Weekly for 1 month
  - Bi-weekly for 5 months
  - Monthly for 18 months

Patient-Centered Medical Home

- Team-based care, with clinic-employed lifestyle coach
- Enhanced access (after hours)
- In-clinic group visits
- 60 minutes
  - Weekly for 3 months
  - Bi-weekly for 3 months
  - Monthly for 18 months

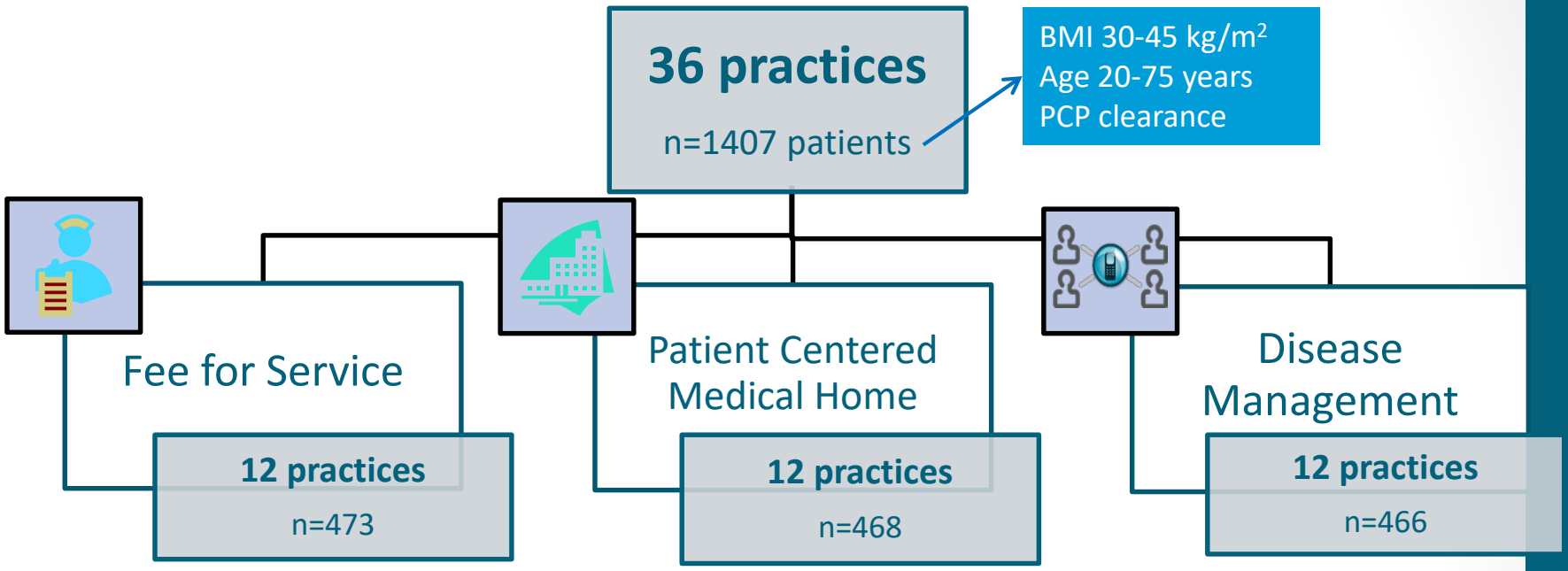
Disease Management

- Referral to centralized phone-based care
- Integration with PCP through quarterly progress reports
- Phone group visits
- 60 minutes
  - Weekly for 3 months
  - Bi-weekly for 3 months
  - Monthly for 18 months

All models include behavioral lifestyle intervention tailored to rural setting

RE-POWER

Rural Engagement in Primary Care for Optimizing Weight Reduction



Primary Outcome: Weight change at 2 years

Secondary Outcomes: Quality of life, sleep, stress, metabolic syndrome, implementation process measures

Pragmatic elements

- Few patient exclusions: 87% eligibility rate, 86% participation rate
- Clinic-employed staff in FFS and PCMH arms: identified locally, range of backgrounds
- Pragmatic training model: CME session, manuals and hand-outs, one day interactive workshop for group counselors + optional telementoring

Recruitment and Retention

Clinic referrals and targeted mailings

- Median 40 patients per clinic (range 34-44)
- Referral source
  - 66% mailing (range 26-99%)
  - 22% in clinic referrals (range 0-98%)
  - 11% media, family/friends (range 0-53%)
- Retention
  - 92% at 6 months
  - 87% at 2 years

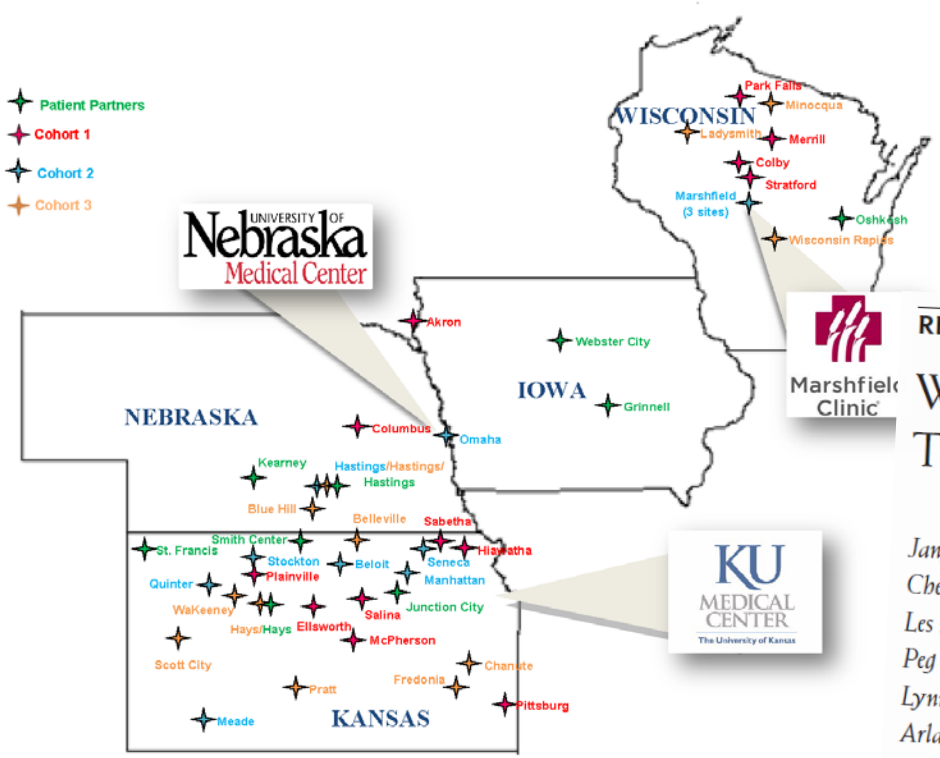
Participant characteristics (n = 1407)

- Age: 55 ± 12 years
- BMI: 37 ± 4 kg/m^2
- 77% female, 96% White non-Hispanic
- 46% isolated rural; 18% small rural; 35% large rural
- Medical conditions
  - 46% hypertension
  - 39% depression/other mental health
  - 34% arthritis
  - 24% diabetes
  - 10% cancer
- Travel time to clinic = 17 ± 19 min
- 34% reported no prior assistance

Patients enrolled vs mailed to:
- Women (77% vs 56%)
- Older (54.1 vs 51.3 years-old)
- Higher BMI (36.5 vs. 35.6)

Befort et al., *BMC Fam Pract* 2020

Clinic Stakeholders and Patient Advisory Board



REFLECTION

What I Wish My Doctor Really Knew: The Voices of Patients With Obesity

Janyce Johnstone[1]
Cherie Herredsberg[2]
Les Lacy[3]
Peg Bayles[4]
Lynn Dierking[5]
Arla Houck[6]
Margaret Kilpatrick[7]
Luanne Kramer[8]
Karen Mason[9]
Carla Mendez[10]
Frank Schrotberger[11]
Christie Befort[12]

ABSTRACT

Few health care professionals receive comprehensive training in how to
tively help their patients with obesity. Yet patients are often wanting, ne
and looking for help when they go to the doctor. We, as a group of pat
obesity, share our common experiences and needs when going to the d
from a place of honesty and hope, with the assumption that clinicians w
know what their patients really think and feel. Our "wish list" for a treatn
may represent an ideal, but our hope is that our language will speak to
about how they can help their patients manage their obesity.

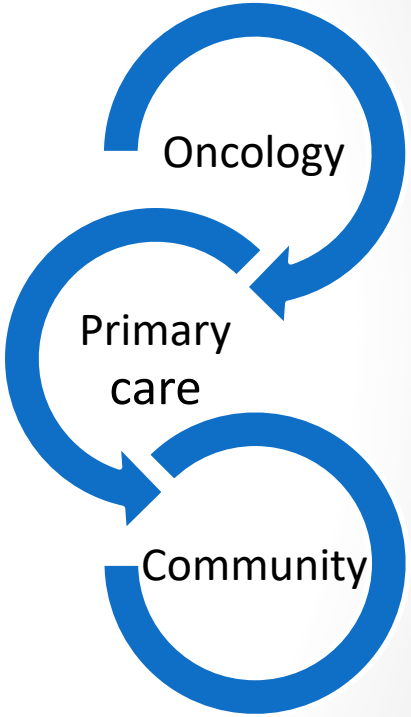
Ann Fam Med 2020;18:169-171. https://doi.org/10.1370/afm.2494.

Obese—what a cruel word. "O-be-si-ty"—the condition of
grossly fat. A medical diagnosis to describe us. We know
medical term, but it can still feel like a cruel word. It's the
the sense that it's a character defect.

Johnstone et al., *Ann Fam Med* 2020

Opportunities and challenges

- Use of multiple referral approaches leads to adequate patient uptake, but strategies are needed for increasing uptake among men
- Perceived travel burden to in-clinic visits among rural residents may be lower than assumed
- Innovative and uniform payment models needed
- Novel telemedicine approaches may address gaps in staffing and care coordination



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Patient Advisory Board