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Rural Health
INFORMATION



Rural Mortality and Preventable Deaths – Insights
from the CDC MMWR Rural Health Series



- Q & A to follow – Submit questions using Q&A area
- Slides are available at <https://www.ruralhealthinfo.org/webinars/rural-mortality-and-preventable-deaths>
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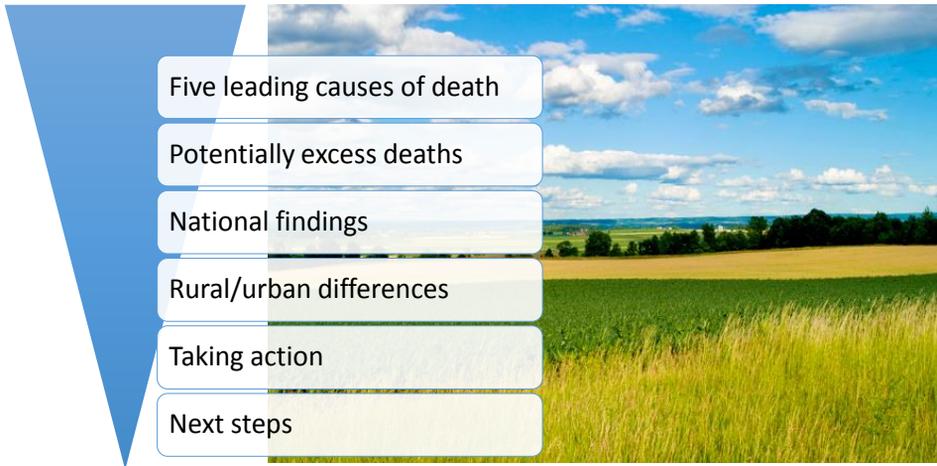


Reducing Potentially Excess Deaths from the Five Leading Causes of Death in the Rural United States

Centers for Disease Control and Prevention
Office of Public Health Scientific Services
March 1, 2017

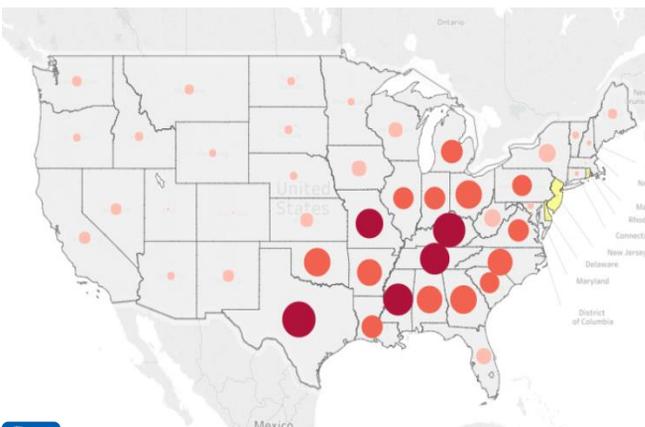


Presentation Outline



Leading Causes of Death in the United States

Number of potentially excess deaths from heart disease in rural areas, 2014



1 Deaths from heart disease, cancer, chronic lower respiratory disease (CLRD), cerebrovascular diseases (stroke), and unintentional injuries account for the **five leading causes of death** in the United States.

2 Death rates for these diseases vary widely across states, related to variation in the distribution of **social determinants of health**, access and use of health services, and public health efforts.



Potentially excess deaths defined

Potentially excess death (or premature death) is defined as a death that occurred in a person aged <80 years, based on the average life expectancy for the total U.S. population, which was nearly 79 years in 2010.



Potentially excess deaths

There was a significant **decrease** in the number of potentially excess deaths among **three of the five leading causes of death** during 2010–2014



Diseases of the heart



Cancer



Stroke

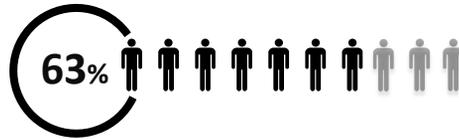
In the same time period, the number of potentially excess deaths from **unintentional injuries** increased significantly.

This is mostly attributed to an increase in **drug poisoning** (overdose from prescription and illicit drugs) and **falls**.



Leading causes of death

The five leading causes of death for persons aged <80 years in 2014 represent 63% of deaths from all causes.



The estimated number of potentially excess deaths and the proportion preventable among the five leading causes of death in persons aged <80 years were

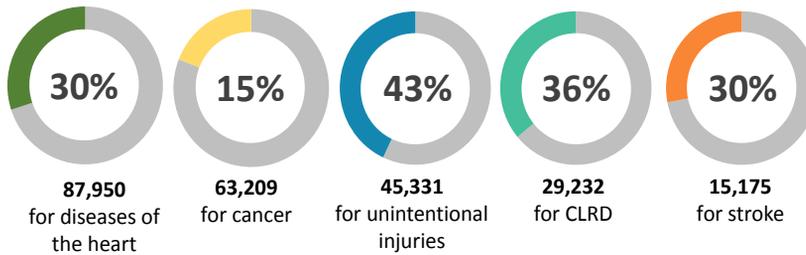


Figure https://www.cdc.gov/mmwr/volumes/65/wr/mm6545a1.htm#F1_down

Change in potentially excess deaths

Potentially preventable deaths from **cancer** declined **25%** from 2010 to 2014.

This decline appears to be driven by a **12% decrease** in the age-adjusted death rate from **lung cancer** from 2010 and 2014.

Decreases in age-adjusted death rates from cancer were observed across all U.S. states, **except the District of Columbia.**



In both 2010 and 2014 the **Southeast** (Region 4) had the **highest** number of potentially preventable deaths for each of the five leading causes of death

In 2014, the **Northwest** (Region 10) had the **lowest** number of potentially preventable deaths for each of the five leading causes of death except deaths from **CLRD and unintentional injuries**, where the lowest number occurred in New York and New Jersey (Region 3)



Significant decrease in deaths from Cancer

The decrease in cancer deaths can be attributed, in part, to progress in prevention, early detection, and treatment.

Tobacco use is a risk factor for some of the deaths included in this report, such as heart disease, cancer, CLRD, and cerebrovascular diseases.

Mortality from tobacco-related causes has decreased in conjunction with national **decreases in tobacco use** across the United States, but an estimated 40 million adults (16.8%) smoked in 2014



The role of tobacco control interventions

Implementation of evidence-based tobacco control interventions, including increased tobacco product prices, implementation and enforcement of comprehensive smoke-free laws, media campaigns, and access to proven resources (e.g., quit lines) to help persons quit tobacco use varies among states



In addition to tobacco use, other health behaviors contribute to premature deaths and create opportunities for prevention. For example, obesity increases the risk for CLRD, diseases of the heart, and stroke, in addition to some cancers.

http://www.cdc.gov/tobacco/stateandcommunity/best_practices/index.htm





Deaths from unintentional injuries on the rise

Both observed and potentially preventable deaths from unintentional injuries increased during 2010–2014.

Examples of state actions to reduce drug overdose include developing or enhancing prescription drug monitoring programs, adopting clinical prescribing guidelines, and increasing access to medication-assisted treatment for opioid use disorder and naloxone to reverse opioid-related poisoning.

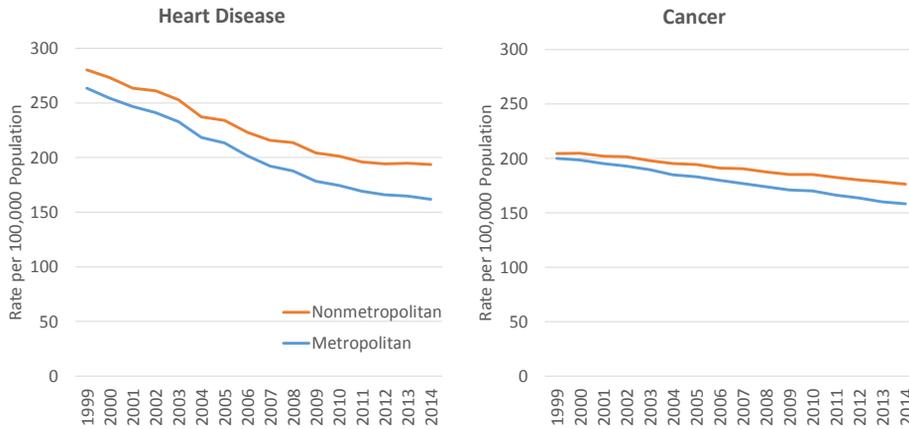


Potentially excess deaths higher in rural areas

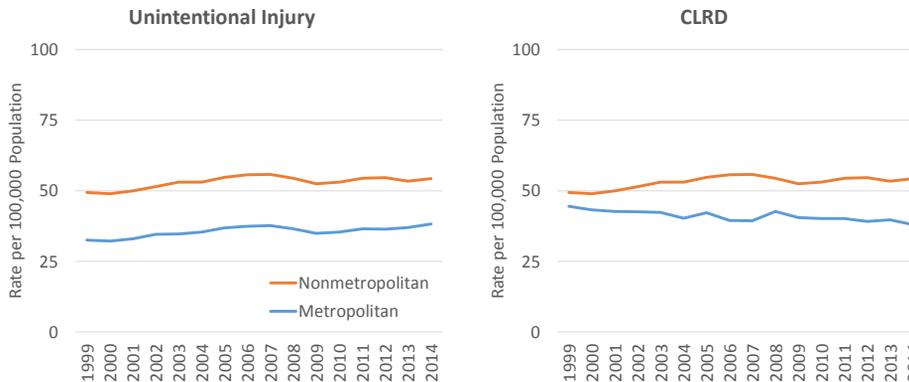
In 2014, a higher rate of potentially excess deaths occurred among rural Americans than urban Americans from:

- **Heart disease**
 - More than 25,000 excess deaths
 - 42.6% in rural areas; 27.8% in urban areas
 - Approx. **50% higher** in rural areas than urban
- **Cancer**
 - More than 19,000 excess deaths
 - Overall cancer deaths declined 1.5%/year between (2003-2012);
 - declined less in rural vs. urban areas
- **Unintentional injuries**
 - More than 12,000 excess deaths
 - 57.5% in rural areas; 39.2% in urban areas
 - Approx. **50% higher** in rural areas than urban (age-adjusted between 1999-2014)
- **Chronic lower respiratory disease**
 - More than 11,000 excess deaths
 - 54.3% in rural areas; 30.9% in urban areas
 - Approx. **50% higher** in rural areas than urban

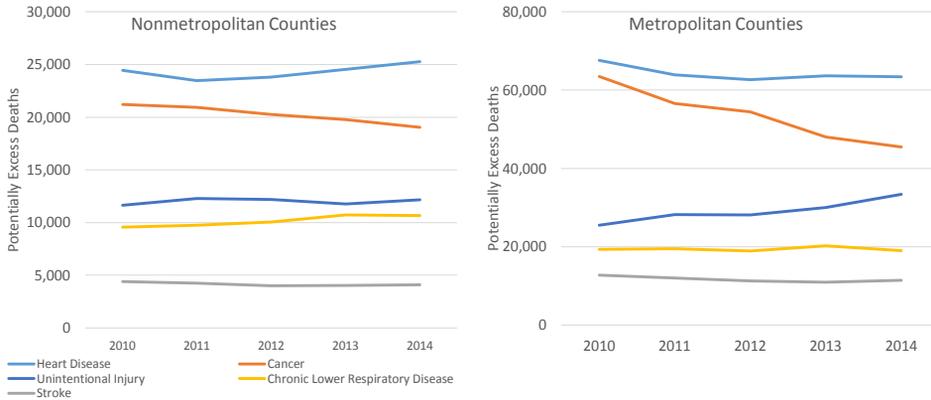
As age-adjusted mortality from heart disease and cancer have fallen, rural-urban disparities have grown larger



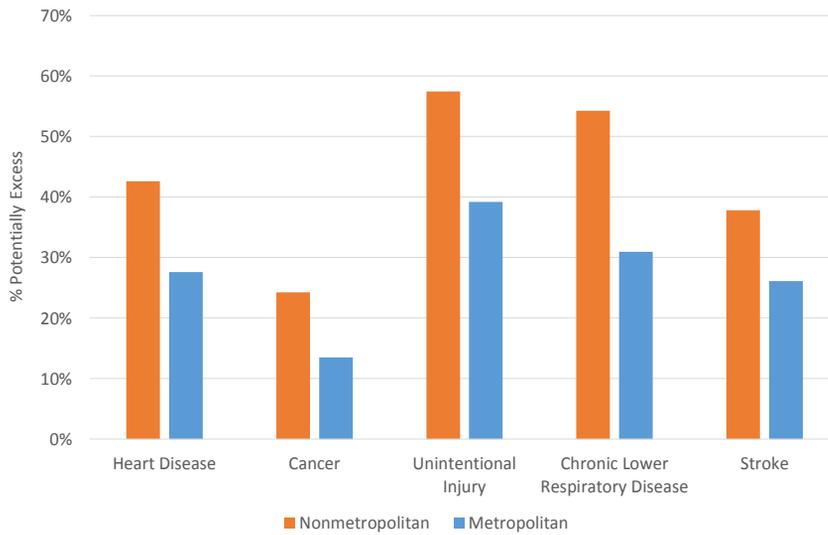
Unintentional injury death rates have increased in parallel, but chronic lower respiratory disease rates have diverged



Declines in potentially excess deaths have been slower in rural than urban areas for several causes



Percentages of observed deaths that are potentially excess are *higher* in rural than urban areas



Rural Americans at higher risk

46 million Americans — 15 percent of the U.S. population — currently live in rural areas



- Although urban residents far outnumber rural ones, rural Americans are at a **higher risk of dying** from a potentially preventable death from the leading causes of death in the U.S.
- Not all deaths can be prevented, however
 - Some areas might have characteristics that put residents at higher risk of death, such as long travel distances to specialty and emergency care or exposures to specific environmental hazards.

Reasons for disparities

Several demographic, environmental, economic, and social factors might put rural residents at higher risk of death

- Higher rates of cigarette smoking, high blood pressure, and obesity
- Less leisure-time physical activity and lower seatbelt use than their urban counterparts
- Higher rates of poverty and less access to healthcare

Cigarette smoking is the leading cause of preventable disease and death in the U.S. Prevalence is higher in rural counties than in urban counties.

Obesity is linked to a variety of serious chronic illnesses: diabetes, cancer, and arthritis. From 1960—2010, the proportion of U.S. adults who were overweight increased (45% to 69%). Higher in rural areas.

Unintentional injury deaths were approximately 50% higher in rural areas than in urban areas, partly due to greater risk of death from **motor vehicle crashes** and **opioid overdoses**.

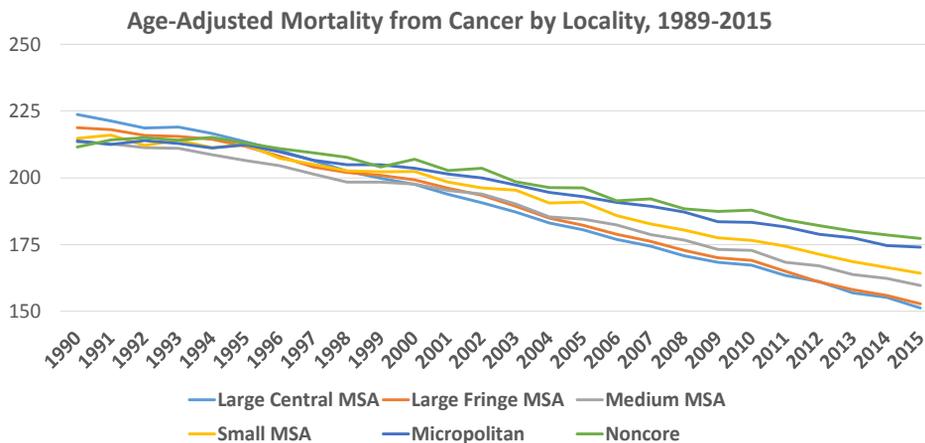
Taking action

Healthcare providers in rural areas can

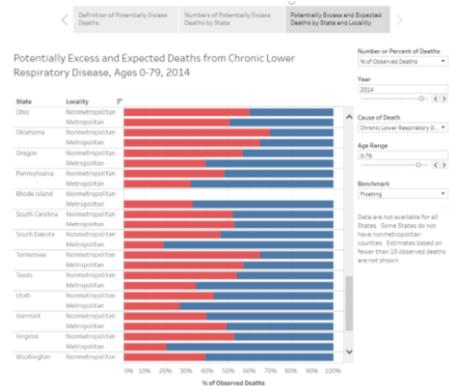
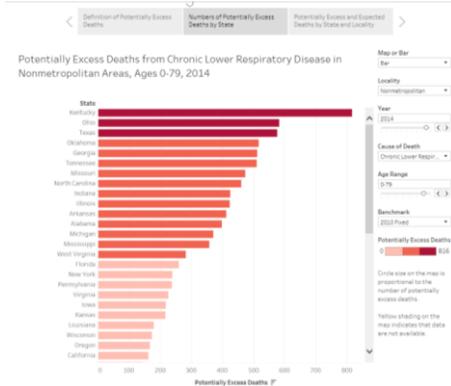
- Screen patients for high blood pressure and make control a quality improvement goal.
- Increase cancer prevention and early detection.
- Encourage physical activity and healthy eating to reduce obesity.
- Promote smoking cessation.
- Promote motor vehicle safety.
- Engage in safer prescribing of opioids for pain.



Next Steps: Longer Trends and Finer Locality



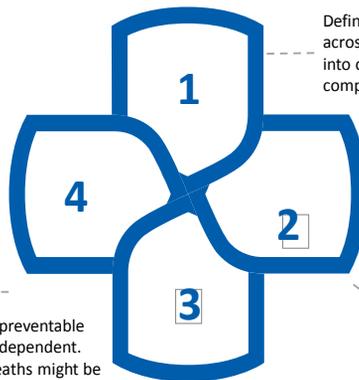
Next Steps: Drilling Down to the State Level



Study limitations

Not all deaths are equivalently preventable across the leading causes or within each leading cause. For example, certain types of cancer might be considered more or less preventable than other types, and some specific mechanisms of injury deaths (e.g., drug poisoning) might be considered completely preventable and other mechanisms less preventable.

Changes in the number of potentially preventable deaths by cause are not necessarily independent. For example, whereas some cancer deaths might be prevented entirely, some might be shifted into another cause grouping, such as heart disease.



Defining potentially preventable deaths across the five leading causes does not take into consideration the fact that these are complex and diverse causes of death.

The majority of risk factors do not occur randomly in populations; they are closely related to the social, demographic, environmental, economic, and geographic attributes of the neighborhoods in which persons live and work.



Findings presented were extracted from the following MMWR Reports:

- [Leading Causes of Death in Nonmetropolitan and Metropolitan Areas — United States, 1999–2014](#), *MMWR Surveillance Summaries* / January 13, 2017 / 66(1);1–8
- [Reducing Potentially Excess Deaths from the Five Leading Causes of Death in the Rural United States](#), *MMWR Surveillance Summaries* / January 13, 2017 / 66(2);1–7
- [Potentially Preventable Deaths Among the Five Leading Causes of Death — United States, 2010 and 2014](#), *MMWR Weekly Report* / November 18, 2016 / 65(45);1245–1255



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- Debra Houry, MD, National Center for Injury Prevention and Control, CDC
- Mary G. George, MD, National Center for Chronic Disease Prevention and Health Promotion, CDC





Thank you for participating

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.



Fit For Life

Rural Health Services Outreach Grant
Department of Health & Human Services
HEALTH RESOURCES & SERVICES ADMINISTRATION

March 1, 2017

Tim McKnight, MD

28

A large blue rectangular area containing the 'Fit For Life' title in large yellow font. Below the title is the text 'Rural Health Services Outreach Grant', 'Department of Health & Human Services', and 'HEALTH RESOURCES & SERVICES ADMINISTRATION' in red. The date 'March 1, 2017' and the name 'Tim McKnight, MD' are in white. A small 'Fit For Life' logo is in the top right corner, and the number '28' is in the bottom right corner.



Program History



- 2003 – First Series of “Fit for Life” Classes
 - Cost prohibitive (\$450/person), no funding
- 2006 – Healthy Community Outreach Program (7)
- 2009 – Worksite Wellness (9) + Community Classes (4)
- 2012 – “Train the Trainer” – Duplication by MDs, 3 sites
- 2015 – Diabetes Prevention

Our Team



- Trinity Hospital Twin City
 - Grant Director
 - Grant Coordinator
 - Grant Writer
- Tuscarawas County YMCA
- Tuscarawas County Health Department
- New Philadelphia City Health Department
- Chrysalis Counseling Center

Area, County, State & National Statistics from October 2015

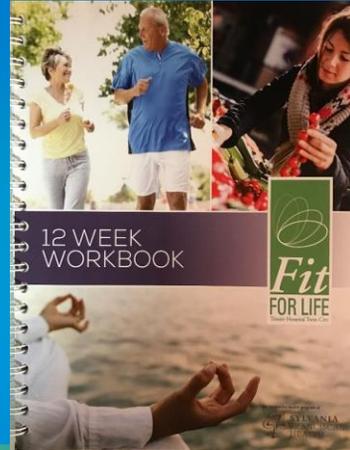


	Twin Cities	Tuscarawas County	Ohio	U.S. 2013
Obesity	37%	36%	30%	29%
Dx Diabetes	14%	9%	11%	11%
Hyperlipidemia	45%	36%	38%	38%
Hypertension	46%	40%	34%	31%

Fit For Life Classes



- The Wellness Crisis
- Mindfulness
- Intentional Healing
- Nutrition & Disease
- Nutrition & Health
- Eat to Live
- Supermarket Savvy
- Flexibility Fitness
- Cardiovascular Fitness
- Strength Fitness
- Disease Prevention & Healthy Aging
- Conclusions



Small Weekly Behavior Changes Week 8 Assignments



Nutrition	Fitness	Wellness
Reduce Caffeine & Prepare meals in advance	Continue walking & Stretch 10 min/day	Read Step 9 "Overcoming Habits & Addictions"

Fit For Life Measurements



- Pre
 - Lipids, CMP, fT3, HbA1C, hsCRP, Blood Pressure
 - BMI, % body fat, Weight, Waist & Hip Circumference
- Post
 - Lipids, Blood Pressure, BMI, % body fat, Weight, Waist & Hip Circumference
 - hsCRP*, HbA1C*, fT3* (optional)
- Weekly weigh in

37

Weekly Presentations



38

Week 1

The Wellness Crisis



- Magnitude of our current health crisis
- Are you a victim?



39

Week 2

Mindfulness



- Are you aware of:
 - Your behaviors and their origin?
 - Perception vs Reality?
 - Your self-deceptions?
- Ready to change?



Week 3

Intentional Healing



- The mind-body connection
- How to break free from self-defeating behaviors
- How thoughts and emotions drive behaviors



41

Week 4

Nutrition & Disease



- A review of the changing American diet and how these changes have compromised our health.
- This lecture will help you translate your diet into your blood results.



42

S.A.D. → lab abnormalities →
Atherosclerosis & Inflammation



Heart Disease
Up Close & Personal



Week 5

Nutrition & Health



- Learn the key principles of healthy eating
- Understand how to reverse many of the most common diseases with:
 - proper nutrition = “Food is Medicine”
 - high quality supplements
 - pure water



.5



Week 6

Eat to Live



- A hands on lecture that will show you proper serving sizes as well as the amounts of fats and sugar in commonly consumed foods.
- You will be surprised!



47



Week 7 Supermarket Savvy



- Understand the legal and practical aspect of food labeling.
- After this lecture you will be a well-informed consumer of the foods you and your family eat.

Benecol
Proven to Significantly Reduce Cholesterol

No Trans Fatty Acids

Nutrition Facts		Amount/Serving	%DV*	Amount/Serving	%DV*
Total Fat	12g	24%	Cholesterol	3mg	6%
Sat. Fat	6g	12%	Sodium	110mg	5%
Calories	70		Total Carb.	0g	0%
			Monounsat. Fat	4g	8%
			Protein	0g	0%
			Vitamin A	10%	
			Vitamin E	20%	

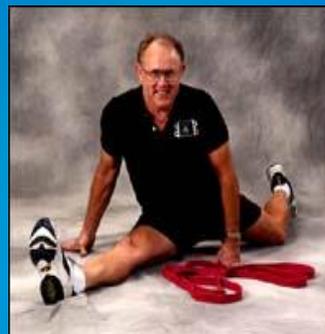
Ingredients: Soybean Oil, Water, Plant Sterol Ester, Partially Hydrogenated Soybean Oil, Salt, Emulsifiers (Vegetable Monoglycerides, Soybean Oil, Potassium Sorbate, Citric Acid and Calcium Disodium EDTA to Preserve Freshness, Artificial Flavor, Di-*n*-Tocopheryl Acetate, Vitamin A Sterols, Colored with Beta Carotene.

49

Week 8 Flexibility Fitness



- Learn the necessity and benefits of flexibility.



50

Week 9

Cardiovascular Fitness



- Understand the frequency/intensity/duration of exercise recommended for safe weight loss, cardiovascular health and overall fitness.
- It is not strenuous.



Week 10

Strength Fitness & Back Pain



- Review the key benefits of strong muscles.
- Important principles such as muscle balance and core strength will be emphasized.
- Effective Back Pain Management

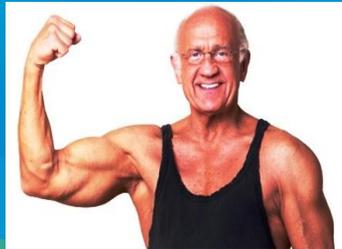


Week 11

Disease Prevention & Healthy Aging



- Recommended Screening Tests & Vaccinations
- Healthy Aging with bio-identical hormones for optimal health and energy.



53

Week 12

Conclusions



- A review of the key points from the previous 11 lectures.
- Class awards



Overall Results



- 18 lb. weight loss over 6 months
- 62% increased days/week of exercise
- 74% increased weekly Fr/Veg consumption
- 29% exceeded 150 min/week of Exercise

Results: Change in Weight



The weight of the average participant drops 18 pounds from the beginning to the end of the program.



Results: Exercise



The average number of days per week of exercise increases from baseline but drops slightly at the final survey.



Results: increase to 4+ F/V a day



Participants who report eating four or more servings of fruits and vegetables daily increase at each survey point.



Results: Change in HbA1c levels



Change in A1c Levels

	Pre to Mid (N=30)	Mid to Post (N=26)	Overall (N=26)
A1C reduced	73.3%	73.1%	92.3%
No change	10.0%	23.1%	3.8%
A1C increased	16.7%	3.8%	3.8%

18 individuals started with A1c levels above 5.7,
11 of those moved to 5.7 or below (61 percent)

Results: Change in Total Cholesterol



Change in Total Cholesterol

	Pre to Mid (N=30)	Mid to Post (N=27)	Overall (N=27)
↓ cholesterol	60.0%	40.7%	63.0%
No change	0.0%	0.0%	0.0%
↑ cholesterol	40.0%	59.3%	37.0%

Results: The Power of Collaboration

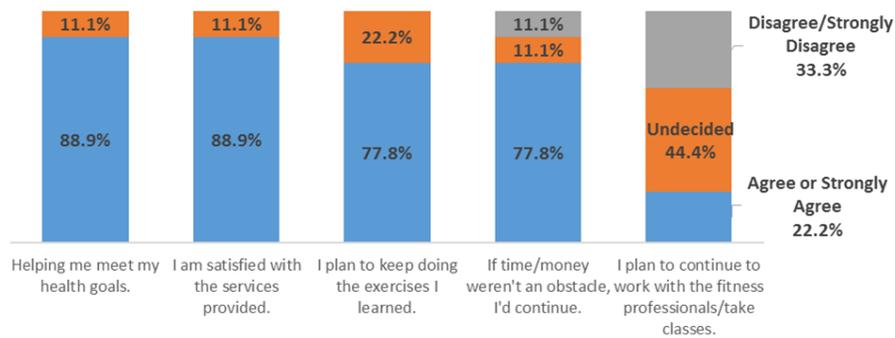


	Year 1 (Fall & Winter)	Year 2 (Fall series only)
Those taking advantage of fitness trainings	34%	77%
Those taking advantage of motivational coaching	33%	60%

Results: Fitness Classes



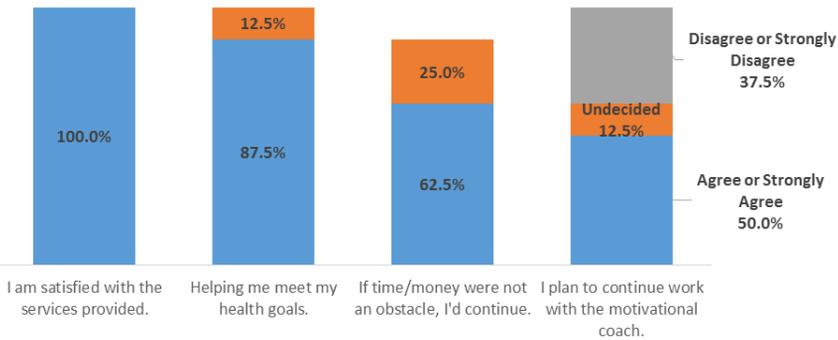
Eight of nine respondents are satisfied with the services of the fitness professionals.



Results: Motivational “Coaching”



All eight respondents are satisfied with motivational coaching.



“What lies behind us
And what lies before us
Are tiny matters
Compared to what lies within us.”

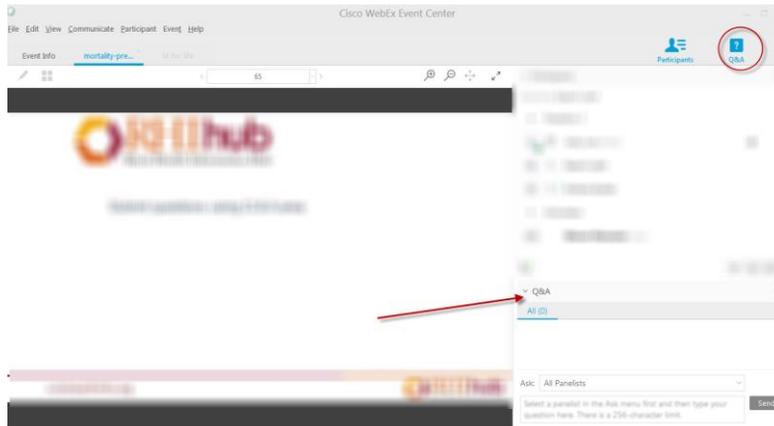


Emerson





Questions?



ruralhealthinfo.org



- Contact us at ruralhealthinfo.org with any questions
- Please complete webinar survey
- Recording and transcript will be available on RHIhub website

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