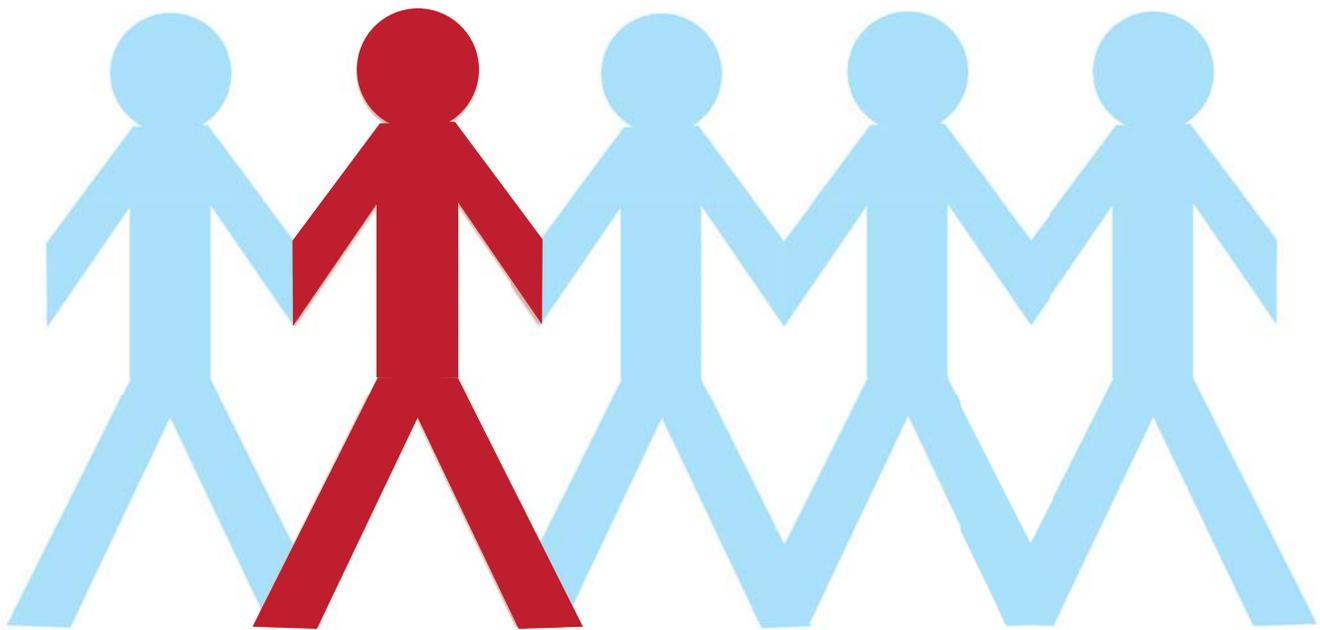




Progress in Cancer Prevention and Control

*Where are we with the
Missouri State Plan?*



December 12, 2013

Acronyms

BEE	Bureau of Environmental Epidemiology
BRFSS	Behavioral Risk Factor Surveillance System
CDC	Centers for Disease Control and Prevention
HPV	Human Papillomavirus
PSA	Prostate Specific Antigen
YRBS	Youth Risk Behavior Survey
YTS	Youth Tobacco Survey

Acknowledgments

Bureau of Cancer and Chronic Disease Control, Missouri Department of Health and Senior Services

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Progress in Cancer Prevention and Control

*Where are we with the
Missouri State Plan?*

- *Prevention*
- *Early Detection/Screening*
- *Treatment*
- *Survivorship*

The Missouri Cancer Consortium and Missouri Department of Health and Senior Services partnered in development of *The Burden of Cancer in Missouri: A comprehensive analysis and plan, 2010-2015* and can be found at <http://health.mo.gov/cancerburdenreport.pdf>.

Progress in Cancer Prevention and Control is divided into four sections: prevention, early detection/screening, treatment and survivorship. The purpose of this report is to assess the current status of the state plan objectives and measures.

Prevention

Objective 1

In collaboration with the Missouri Comprehensive Tobacco Control Program and Tobacco Free Missouri, decrease the percentage of Missourians who smoke cigarettes.

Measure:

- Current smoking by adults: 23.1% in 2009 to 20.0% by 2015 (BRFSS)
Status: **21.1% in 2010** (Figure 1), **25% - New baseline 2011**
- Current smoking by youth in grades 6-8: 5.7% in 2009 to 4.0% by 2015 (YTS)
Status: **5.4% in 2011** (Figure 2)
- Current smoking by youth in grades 9-12: 19.1% in 2009 to 15.0% by 2015 (YTS)
Status: **18.1% in 2011** (Figure 2)
- Number of smoke free polices: Nine in 2009 to 25 in 2015 (Tobacco Free Missouri)
Status: **31 in 2013** (Figure 3)

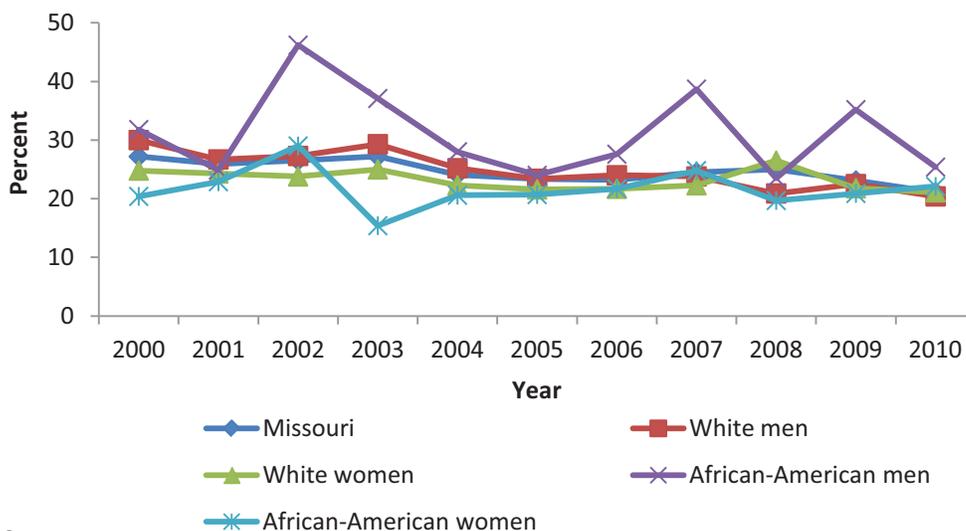
● Target Met ● Improving ● Little or No Change ● Worse ○ Baseline

Revisions:

Adults: 25% in 2011 to 20.0% by 2015
Number of smoke free policies: 31 in 2013 to 35 by 2015

Trends:

Figure 1. Prevalence of adult current smokers, Missouri, 2000-2010



There has been a significant downward trend in current smoking among all and adult white men. However, the trend is not significant among white women, African-American men or African-American women.

Figure 2. Prevalence of current cigarette smoking among youth, Missouri, 2003-2011

There has been a significant downward trend in current cigarette smoking among middle and high school students.

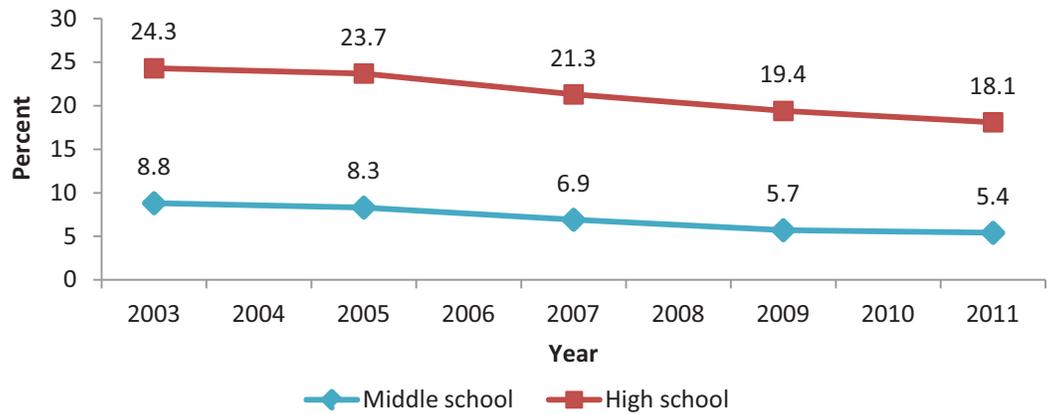
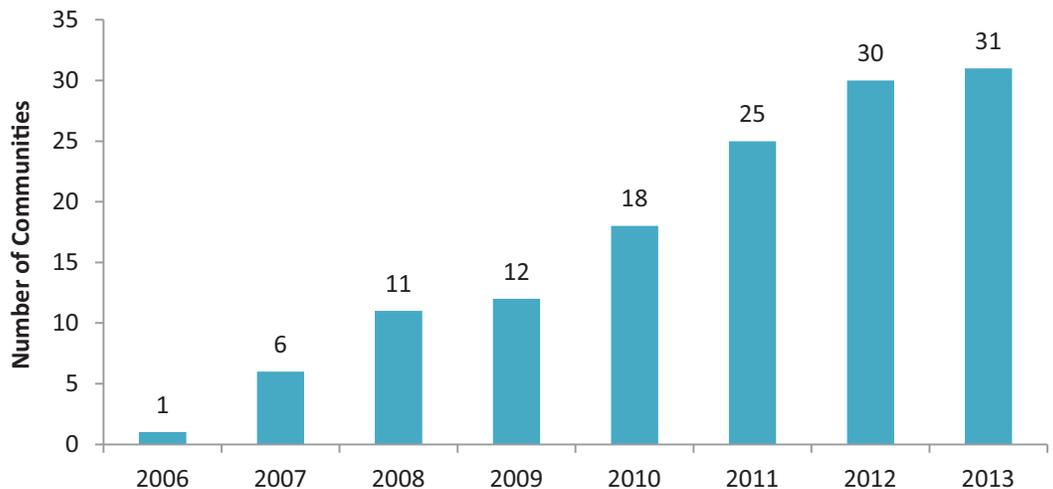


Figure 3. Number of communities becoming partially or completely smoke-free, Missouri, 2006-2013*

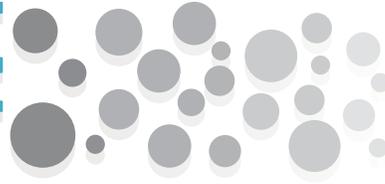
Number of communities becoming partially or completely smoke-free has increased from one in 2006 to 31 in 2013.



*As of April 15, 2013



Objective 2



In collaboration with the Missouri Comprehensive Tobacco Control Program and Tobacco Free Missouri, decrease the number of Missourians who are exposed to secondhand smoke.

Measure:

- A comprehensive statewide smoke-free law covering all workplaces, including restaurants and bars by 2015

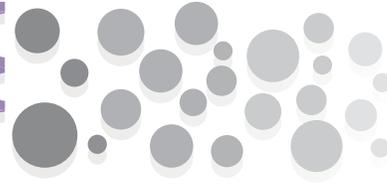
Status: No statewide smoke-free law covering all workplaces, including restaurants and bars; however, 21 communities had 100% smoke free policies in 2012

Add:

- Increase the number of communities with 100% smoke free policies: 21 in 2011 to 26 by 2015
Status: 21 - Baseline 2011
- The percentage of those who would support a local law that make all indoor workplaces smoke-free by prohibiting smoking in all indoor workplaces including restaurants, bars and casinos: 69.4% in 2011 to 72.4% in 2015 (BRFSS)
Status: 69.4% - Baseline 2011
- The percentage of those who would support a change in Missouri law to make all workplaces smoke free by prohibiting smoke in all indoor workplaces, including restaurants, bars and casinos: 64.4% in 2011 to 68.0% in 2015 (BRFSS)
Status: 64.4% - Baseline 2011

● Target Met ● Improving ● Little or No Change ● Worse ○ Baseline

Objective 3



In collaboration with the Missouri Council for Activity and Nutrition, decrease obesity in Missourians.

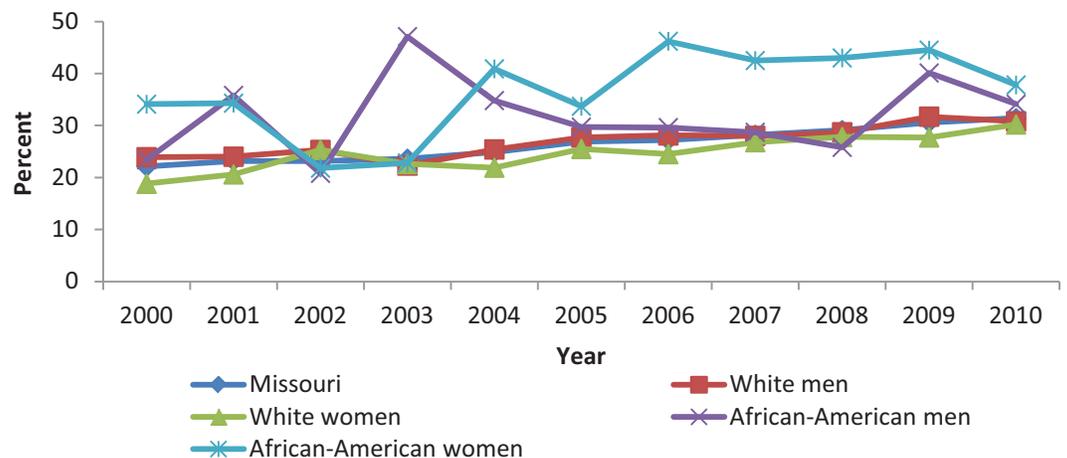
Measure:

- Obesity prevalence among adults: 30.6% in 2009 to 25% in 2015 (BRFSS)
Status: 31.4% in 2010 (Figure 4)
 Obesity prevalence among high school youth: 14.4% in 2009 to 10% in 2015 (YRBS) (Figure 5)
Status: Variable changed, see revisions
 Number of Missourians who report eating five or more fruits and vegetables per day: 19.9% in 2009 to 25% in 2015 (BRFSS) (Figure 6)
Status: Question changed, see revisions

Revisions:

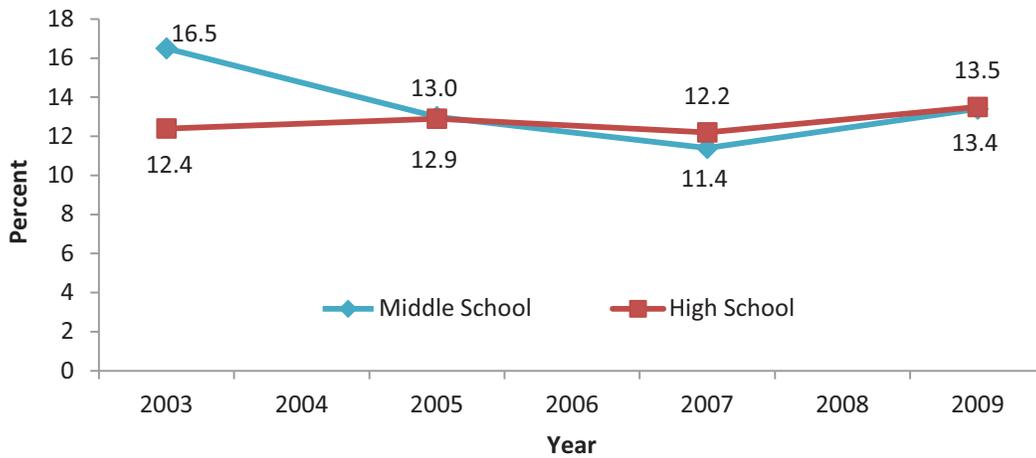
- Obesity prevalence among adults
Status: 30.3% in 2011 - New baseline to 25% in 2015
- High school youth who were obese (>= 95th percentile): 14.2% in 2011 to 10% in 2015 (YRBS)
Status: 14.2% in 2011 - New baseline
- Number of Missourians who report eating vegetables three or more times per day during the past 30 days: 14.4% in 2011 to 25% in 2015 (BRFSS)
Status: 14.4% in 2011 - New baseline to 25% in 2015

Figure 4. Prevalence of obesity among adults, Missouri, 2000-2010



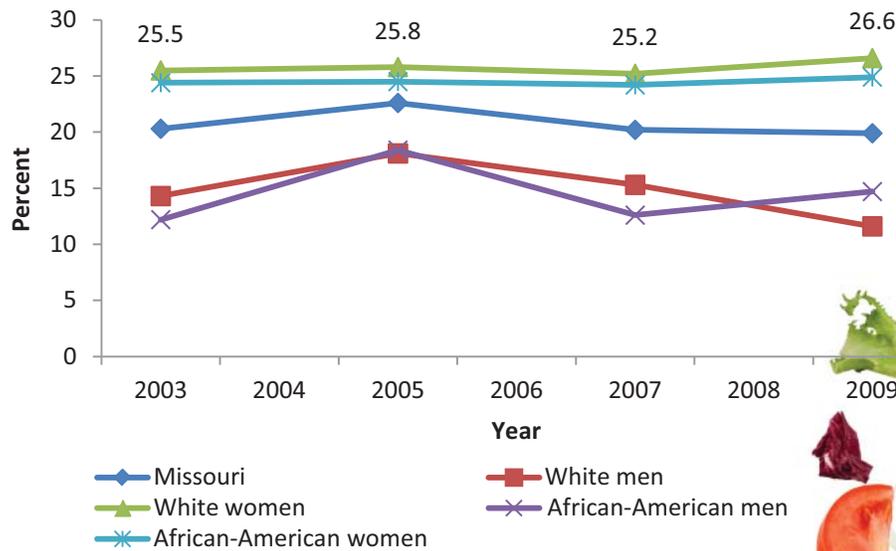
Among all adults, white men, white women and African-American women, the prevalence of obesity has increased significantly from 2000 to 2010. The trend among African-American men was not statistically significant.

Figure 5. Prevalence of obesity among middle and high school youth, Missouri, 2003-2009



No significant trend in obesity among middle and high school students.

Figure 6. Prevalence of eating five or more servings of fruits and vegetables per day, Missouri, 2003-2009



There were no significant trends in the prevalence of eating five or more servings of fruits and vegetables daily.



Objective 4



In collaboration with the Missouri Council on Activity and Nutrition, increase the number of students who report participating in physical activity.

Measure:

Middle school students who report being active at least 60 minutes per day: 29.8% in 2009 to 32% in 2015 (YTS)

Status: Question changed, see revisions

High School students who report being active for at least 60 minutes per day for at least five of the past seven days: 11.6% in 2009 to 15% in 2015 (YTS)

Status: Revised data, see revisions

- Adults who respond that they have participated in no leisure time physical activity during past month: 26.7% in 2009 to 23% in 2015 (BRFSS) (Figure 7)

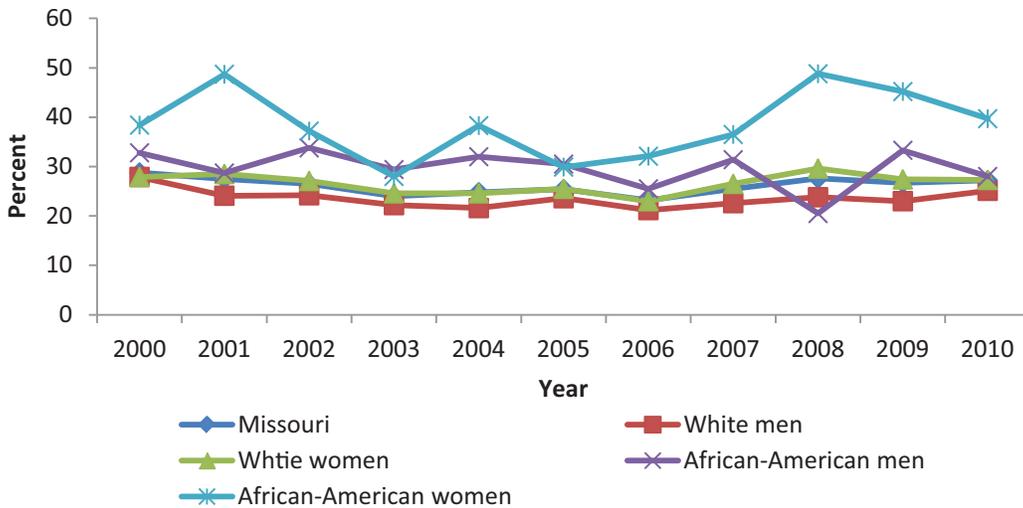
Status: 27.2 in 2010 - New baseline 2011, see revisions

Revisions:

- Middle school students who were physically active for a total of at least 60 minutes on five or more of the past seven days: 51.6% in 2009 to 55.0% in 2015
Status: 51.6% - New baseline 2009 (YTS, Figure 8)
- High school students who were physically active for a total of at least 60 minutes on five or more of the past seven days: 48.4% in 2009 to 53.0% in 2015
Status: 48.4% - New baseline 2009 (YTS, Figure 8)
- Adults
Status: 28.4% - New baseline 2011 to 23% in 2015

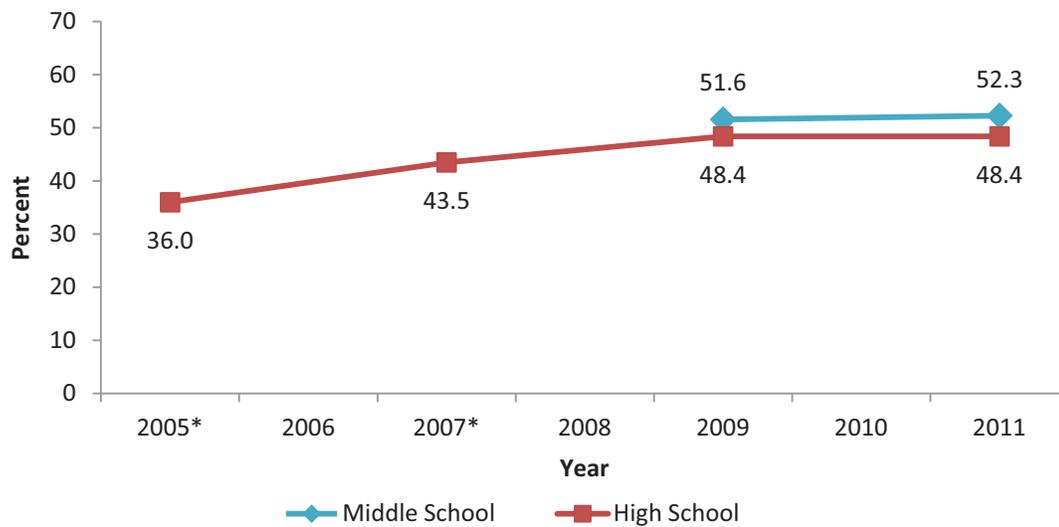
● Target Met ● Improving ● Little or No Change ● Worse ○ Baseline

Figure 7. Prevalence of no leisure time physical activity, Missouri, 2000-2010

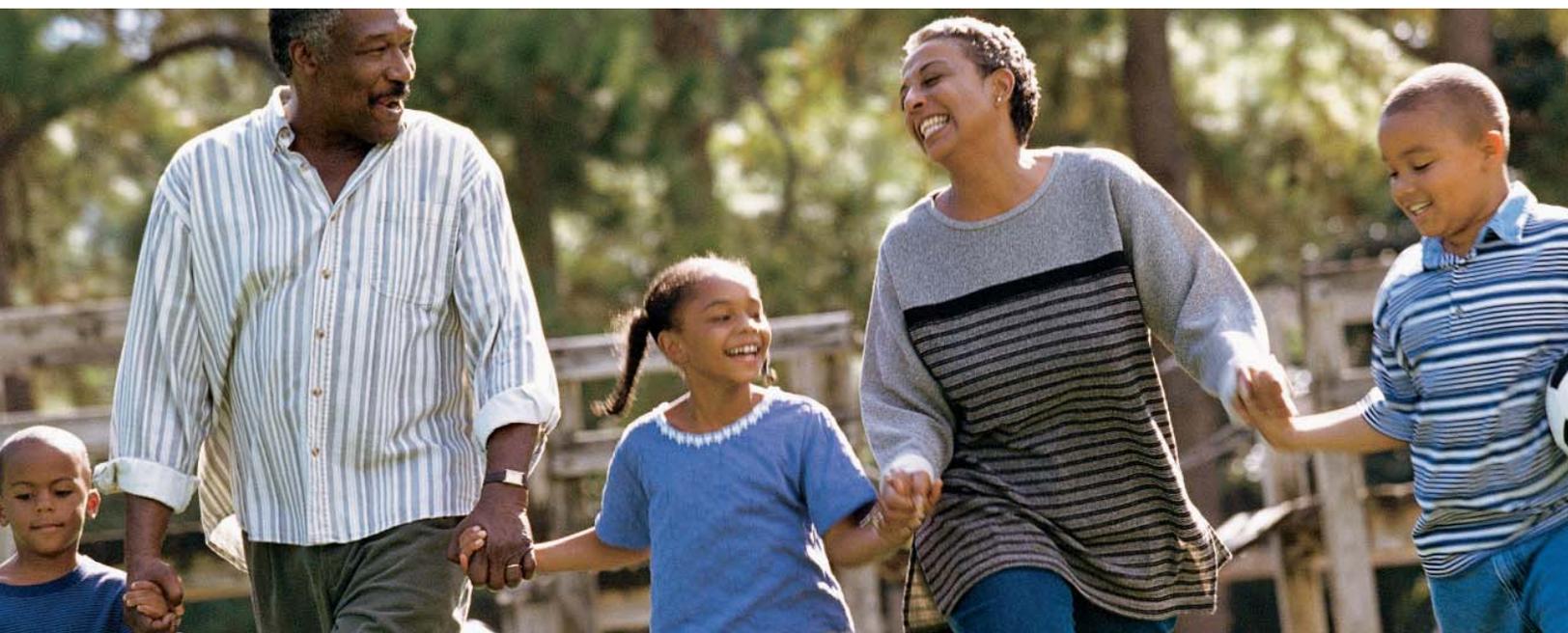


There were no significant trends in the prevalence of “no leisure time physical activity” among any of the four race-gender groups from 2000-2010.

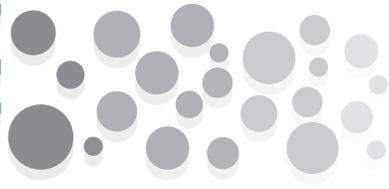
Figure 8. Prevalence of middle and high school students reporting being physically active at least 60 minutes per day on five or more of the past seven days, Missouri, 2005-2011



This question was not asked on the Missouri Youth Tobacco Survey prior to 2009 due to different physical activity recommendations for youth. No significant trend in being physically active for high school students.



Objective 5



Increase the percentage of people who practice protective sun safety behaviors.

Measure:

- Baseline to be established
Status: Baseline to be established in 2014 (BRFSS)

Objective 6

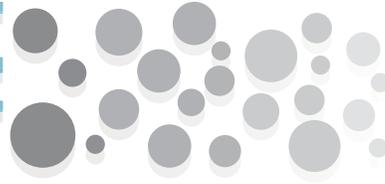


Increase awareness of cancer causing chemicals such as radon in air, soil and water.

Measure:

- Number of radon detectors sent to the public in 2009: 5,433 test kits
Status: 4,361 test kits requested from 1-1-2012 to 12-31-2012 and 35.7% of the kits were returned with elevated results (>4.0 pCi/L) - Baseline 2012 (BEE)
- Number of radon mitigation systems installed in 2009: 1,452 systems
Status: 3,003 mitigation system installed from 1-1-2012 to 12-31-2012 by Certified Radon Mitigators - Baseline 2012 (BEE)
- Number of schools tested for radon in 2009: 125 schools
Status: 183 schools tested for radon from 1-1-2012 to 12-31-2012 using 5,317 detectors to test the schools of 6,867 teachers and 73,514 students - Baseline 2012 (BEE)

Objective 7



Increase public education regarding the newest prevention methods that are proven effective at reducing cancer rates.

Measure:

- Number who receive at least one dose of the human papillomavirus (HPV) vaccine: 31.6% in 2008 to 35% in 2015 (CDC's National Immunization Survey)

Status: 49.5% in 2011 (females 13-17 years of age)

Revision:

Number who receive at least one dose of the HPV vaccine: 49.5% - New baseline in 2011 to 55% in 2015 (CDC's National Immunization Survey)

● Target Met ● Improving ● Little or No Change ● Worse ○ Baseline

**55%
in
2015**



Early Detection/Screening

Objective 1

Increase the percentage of women who receive regular breast cancer screenings.

Measure:

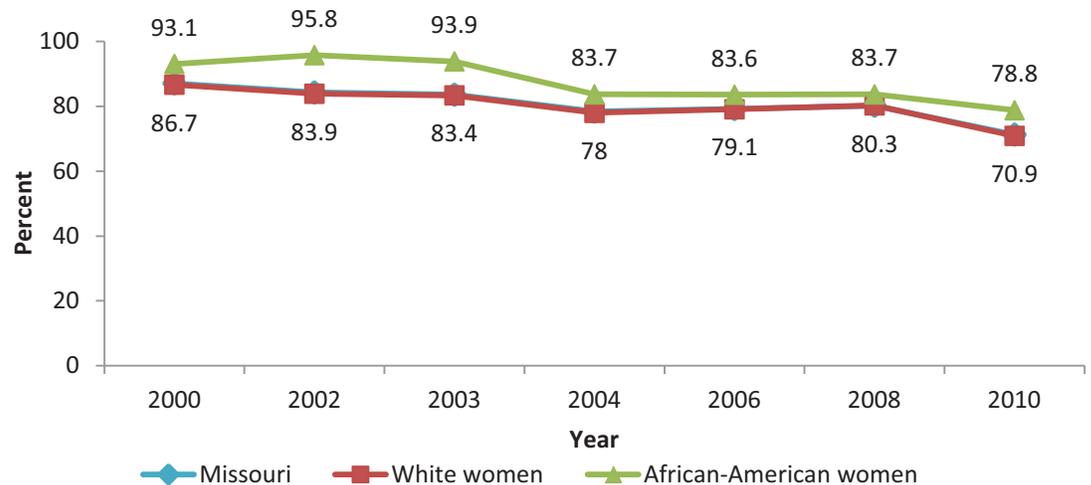
- Women 50 and older who receive a screening mammogram in the past two years: 83.9% in 2008 to 90% in 2015 (BRFSS)
Status: 78.1% in 2010 (BRFSS)

Revision:

- Women 40 and older who receive a screening mammogram in the past two years: 80.2% in 2008 to 90% in 2015 (BRFSS) (Figure 9)
Status: 71.3% in 2010 (CDC BRFSS)

Figure 9. Prevalence of breast cancer screening among women age 40 and older, Missouri, 2000-2010

There were no significant trends in the prevalence of screening mammography for breast cancer among women aged 40 and older in any of the sub groups.



The Cancer Plan's target audience for this objective was women 40 and older. In addition, the American Cancer Society (ACS) recommends yearly mammograms starting at age 40 and continuing for as long as a woman is in good health. So based on the plan's target audience and the ACS screening guidelines it is recommended this measure be revised to women age 40 and older.

Objective 2



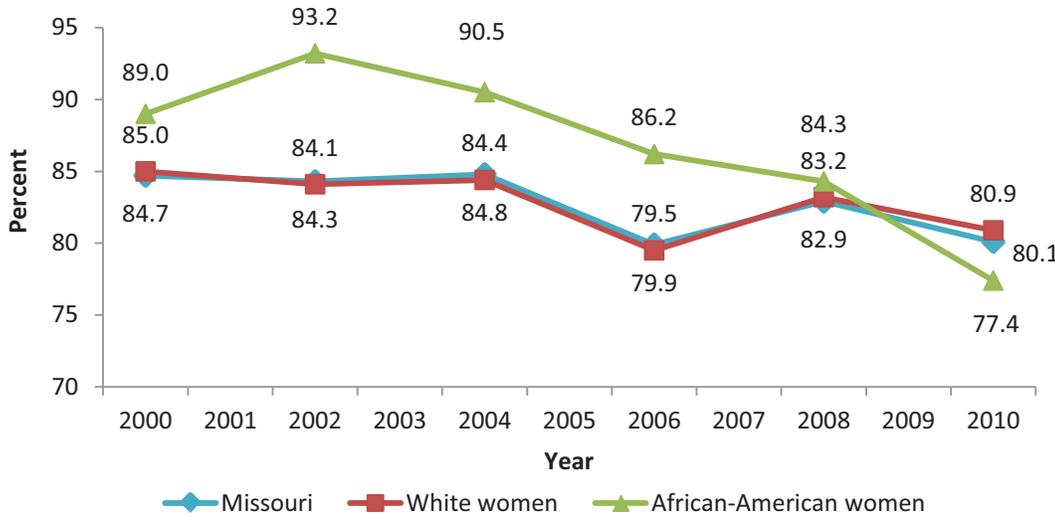
Increase the percentage of women who receive cervical cancer screenings.

Measure:

- Women 18 and over who received a pap test within the last three years: 82.9% in 2008 to 85% in 2015 (BRFSS) (Figure 10)
Status: 80.1% in 2010

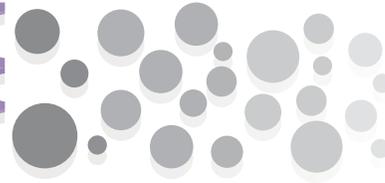
● Target Met
● Improving
● Little or No Change
● Worse
○ Baseline

Figure 10. Prevalence of Pap test within the past three years among women age 18 and older, Missouri, 2000-2010



There has been no significant change in the prevalence of women having had a Pap smear test within the last three years.

Objective 3



Increase the percentage of Missourians who receive colorectal cancer screening.

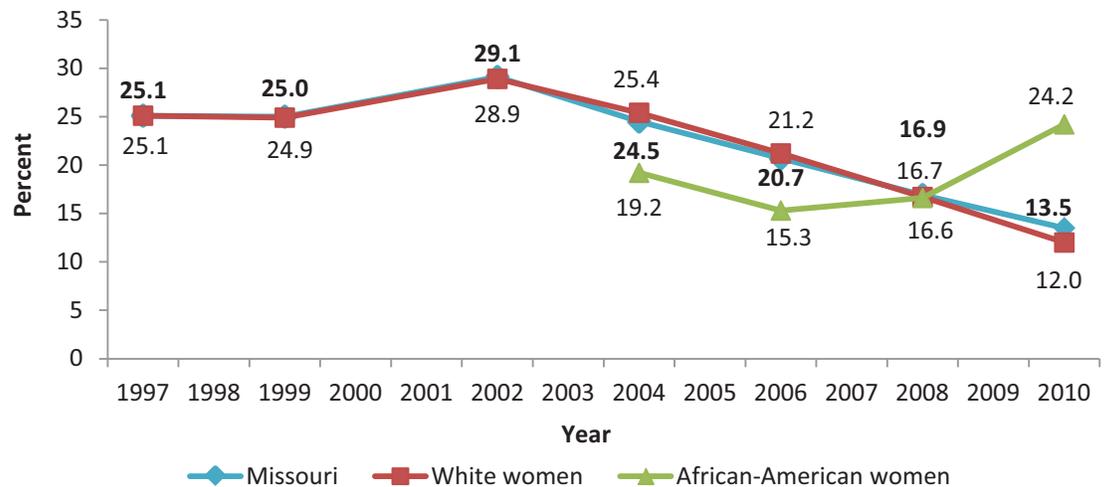
Measure:

- Missourians 50 and older who ever had a blood stool test: 39.7% in 2008 to 43% in 2015 (BRFSS)
Status: 38.0% in 2010; see revisions (Figure 11)
- Missourians 50 and older who ever had a flexible sigmoidoscopy or colonoscopy: 61.4% in 2008 to 65% in 2015 (BRFSS)
Status: 65.2% in 2010 (Figure 12)

Revisions:

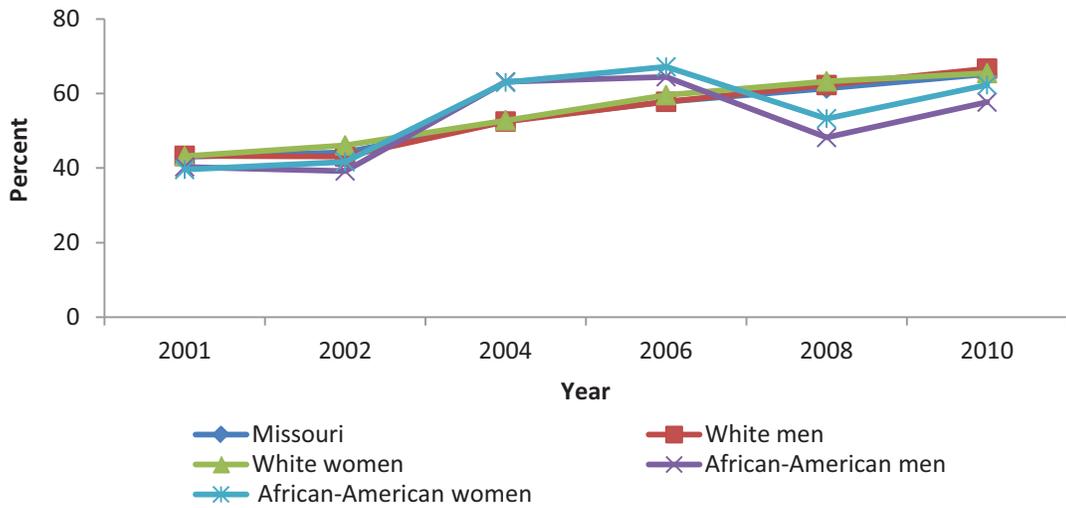
- Missourians 50 and older who had a blood stool test within the past two years: 25.1% in 2002 to 27.0% in 2010
Status: 13.5% in 2010 (Figure 11) - New baseline 2012 (BRFSS)

Figure 11. Prevalence of blood stool test among adults age 50 and older within the past two years by race, Missouri, 1997-2010



The prevalence of blood stool test within the past two years for all Missouri adults declined significantly between 2002 and 2010. There was an annual decline of 9 percent. This decline may be in part due to the significant increase in Missouri adults being screened with sigmoidoscopy or colonoscopy.

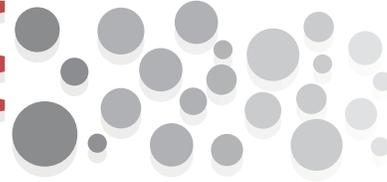
Figure 12. Prevalence of adults age 50 and older who have ever had a sigmoidoscopy or colonoscopy, Missouri, 2001-2010



Among adults age 50 and older who have ever had a sigmoidoscopy or colonoscopy, there is a significant upward trend in all Missourians, white men and white women. However, there is no significant trend for African-American men or women.



Objective 4



Increase the number of high risk men who receive prostate cancer screening.

Measure:

- Missouri men (40 and older) who receive a PSA test: 65.4% in 2008 to 70% in 2015 (BRFSS)
Status: 54.9% - New baseline in 2010 (Figure 13)
- Missouri men (40 and older) who receive a digital rectal exam: 73.7% in 2008 to 80% in 2015 (BRFSS)
Status: 74.2% - New baseline in 2010 (Figure 14)

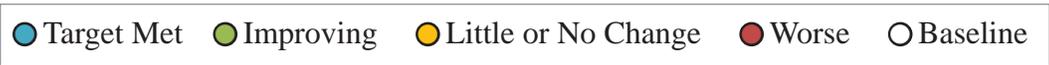
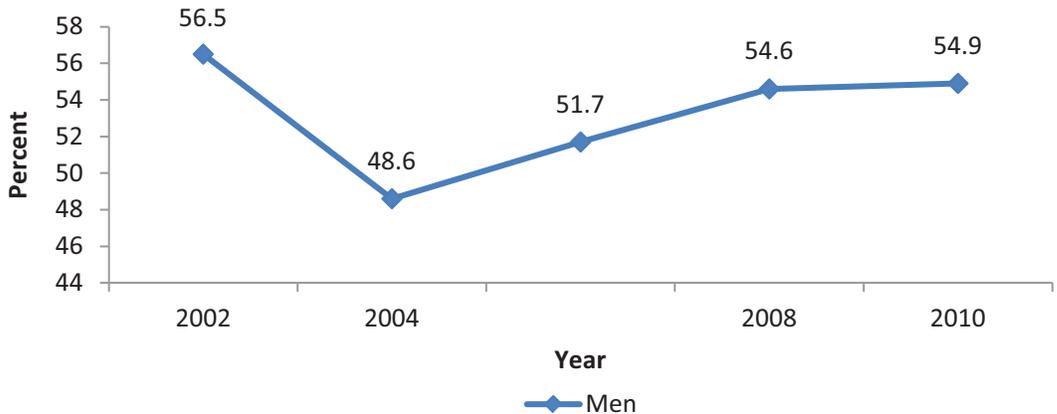


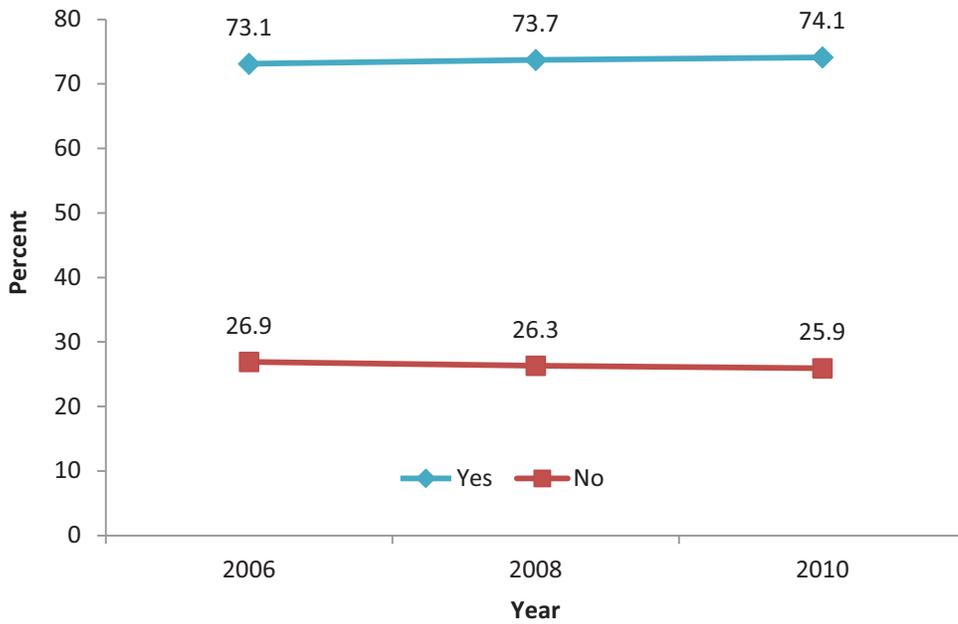
Figure 13. Prevalence of PSA test among men age 40 and older who have had the test within the past two years, Missouri, 2002-2010

Although there has been some fluctuation, the overall trend is not significant.



In May 2012, the U.S. Preventive Services Task Force (USPSTF) published a grade D Recommendation Statement against PSA-based screening for prostate cancer, regardless of age. The USPSTF concluded that current evidence indicates there is moderate or high certainty that PSA screening has no net benefit or that the harms outweigh the benefits. The Task Force cited potential harms of treatment that include: erectile dysfunction, urinary incontinence, bowel dysfunction and a small risk of premature death. A substantial percentage of men who have asymptomatic cancer detected by PSA screening would never have developed cancer symptoms during their lifetime. However, the Task Force also recognizes the value of informed choice and shared decision making between patients and physicians.

Figure 14. Prevalence of men who ever had digital rectal examination, Missouri, 2006-2010



Missouri data on digital rectal examination (DRE) began collection in 2006 and are collected every two years. There are insufficient years of data to determine the trend. However, each year more than 70 percent of men age 40 and older reported having a DRE.



Treatment

Objective 1

Eliminate barriers and increase access to evidence based treatment services and appropriate follow-up.

Measure:

- Reduce the number of Missourians (age 18 to 64) who are uninsured: 16.4% in 2009 to 10% in 2015 (BRFSS)
Status: 18.2% in 2010 (Figure 15)
- Decrease the percentage of survivors who report that they did not have health insurance that paid for all or part of their cancer treatment - Baseline to be established (BRFSS)
Status: 9.2% - Baseline 2010

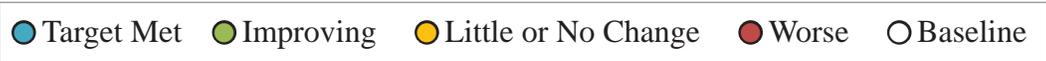
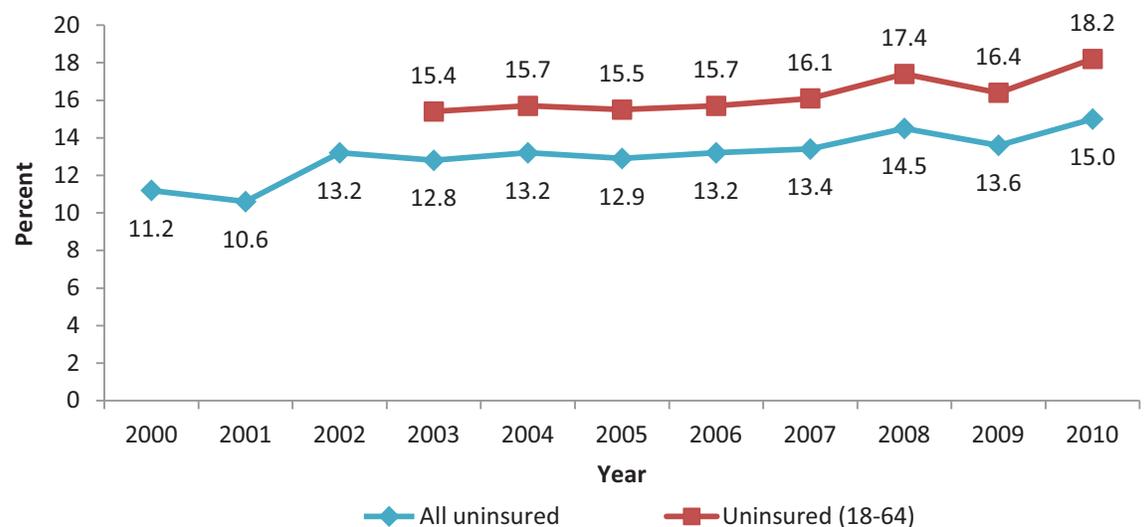


Figure 15. Prevalence of all uninsured and uninsured ages 18-64 years, Missouri, 2000-2010

There has been a significant upward trend in the prevalence of all uninsured and uninsured of ages 18 to 64. Most of the increase occurred starting in 2007 with the greatest increase from 2009-2010.



Objective 2

Increase participation in clinical trials.

Measure:

- Increase number of Missourians (with a previous diagnosis of cancer) that participate in clinical trials
Baseline to be established (BRFSS)
Status: 3.8% - Baseline 2010

Objective 3

Increase the percentage of patients with cancer who receive evidence-based treatment and follow-up based on acceptable standards of care.

Measure:

- Decrease the length of time between cancer diagnosis and treatment.
Establish a baseline with Missouri Cancer Registry.
Status: 90% of patients receive treatment within that many days
(see adjacent table)

Site	90th Percentile of Treatment Delays (days)
Colon	36
Colon, <i>In Situ</i>	34
Lung and Bronchus	69
Melanoma of the Skin (Whites only)	30
Female Breast	50
Female Breast, <i>In Situ</i>	55
Cervix Uteri	59
Urinary Bladder (includes <i>In Situ</i>)	24.5

- The number of facilities that are certified cancer centers through the Commission on Cancer: 32 in 2009 to 38 in 2015
Status: 33 certified cancer treatment programs in Missouri (Commission on Cancer, American College of Surgeons)

● Target Met ● Improving ● Little or No Change ● Worse ○ Baseline

Survivorship

Objective 1

Increase education and awareness of survivorship issues and resource.

Measure:

Survey of cancer survivor's resource agencies - Baseline to be established
Calls to survivorship resources agencies: 14,193 in 2008
Status: 26,218 in 2012

Objective 2

Increase the availability of effective services, programs and policies addressing cancer survivorship.

Measure:

- Decrease the number of people who report having physical pain caused by cancer or cancer treatment - Baseline to be established (BRFSS)
Status: 53 (10.9%) - Baseline 2010



Objective 3

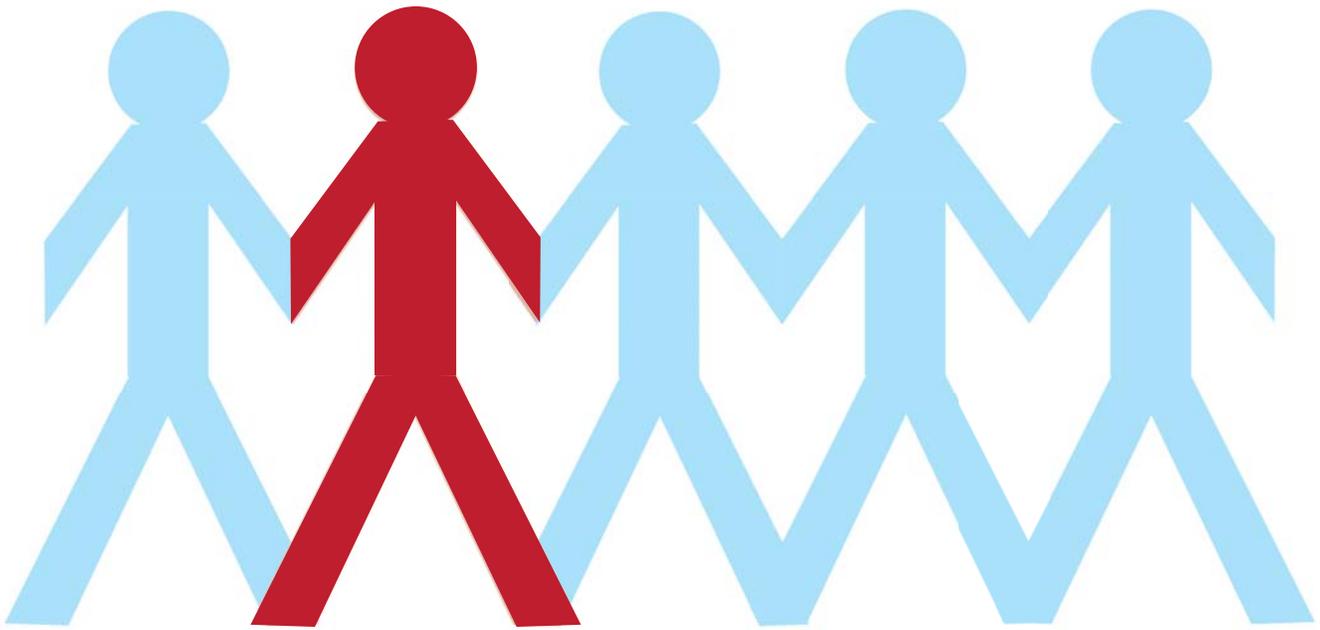


Increase access to quality care and services for cancer survivors in Missouri.

Measure:

- Decrease the percentage of survivors who report that they did not have health insurance that paid for all or part of their cancer treatment - Baseline to be established (BRFSS)
Status: 9.2% - Baseline 2010
- Decrease the percentage of survivors who report that they were ever denied health insurance or life insurance coverage because of cancer - Baseline to be established (BRFSS)
Status: 9.0% - Baseline 2010





Missouri Department of Health and Senior Services
Bureau of Cancer and Chronic Disease Control

AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER
Services provided on a nondiscriminatory basis.

