



## Colorectal Cancer Screening Rates in Wisconsin

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### BACKGROUND

Colorectal cancer is the second most common cancer diagnosed in Wisconsin and the second leading cause of cancer death among both men and women in the state.<sup>1</sup> There are a number of hereditary, behavioral and medical risk factors associated with the development of colorectal cancer. Approximately 90% of all colorectal cancer cases are diagnosed among adults age 50 and older making age a significant risk factor.<sup>1</sup>

Though colorectal cancer incidence and mortality rates are among the highest (compared to all other cancer sites), there has been a decline in these rates over the past decade. The age-adjusted incidence rate for men and women age 50 to 74 was 53.8 (per 100,000 population) in 2002 and declined significantly to 37.0 in 2010. The trend is similar for mortality. The age-adjusted mortality rate for all ages in 2002 was 18.5 (per 100,000 population) and significantly decreased to 14.4 in 2010.<sup>2</sup>

Screening can also detect cancer and catch it at the earliest possible stage, thereby improving the success of treatment and reducing mortality from the disease. From 2002 to 2010, overall screening for colorectal cancer has increased. Based on data from the Behavioral Risk Factor Survey (BRFS), in 2002 approximately 58% of Wisconsin adults ages 50-75 had a Fecal Occult Blood Test (FOBT) in the past year and/or a colonoscopy or sigmoidoscopy in the past 10 years. Although the use of FOBT has been declining in the past decade or so, colonoscopy/sigmoidoscopy use has been on the rise. In 2002, close to 22% of adults 50-75 had used an FOBT (including FOBT, iFOBT, FIT etc.) in the past year compared

to nine percent (9%) in 2010. On the other hand, in 2010, 65% had a sigmoidoscopy or colonoscopy in the past 10 years; an increase from 51% in 2002. Furthermore, the majority of those screened in 2010 received a colonoscopy instead of a sigmoidoscopy. Of those having one of these two tests in the past 10 years, over 94% had a colonoscopy compared with 5% who had a sigmoidoscopy.<sup>3</sup> Colonoscopies can detect polyps which can then be removed in order to prevent the development of cancer.

Though screening rates have been increasing, they are not as high as they are for other cancer screening tests. For instance, based on data from the 2012 BRFS, a comparison of women of the same age group revealed that approximately 84% have had a mammography within the past 2 years (compared with approximately 75% of women aged 50 to 75 defined as up-to-date on colorectal screening in 2012).<sup>4</sup>

This Issue Brief details colorectal cancer screening use in Wisconsin based on data collected from the 2012 Behavioral Risk Factor Survey. Direct comparisons with data from earlier years is not advised as the sampling frame for the BRFS was expanded to include cell phone numbers in 2011 and the weighting methodology changed as well.

### Summary

**Background** — Colorectal cancer is the second most common cancer diagnosed in Wisconsin and the second leading cause of cancer death among both men and women in the state. Screening can detect colorectal cancer and catch it at the earliest possible stage, thereby improving the success of treatment and reducing mortality from the disease. This Issue Brief details colorectal cancer screening use in Wisconsin based on data collected from the 2012 Behavioral Risk Factor Survey.

**Methods** — Wisconsin Behavioral Risk Factor Survey data collected in 2012 were analyzed and colorectal cancer screening status is presented by several demographic variables.

**Results** — The majority of Wisconsin adults ages 50-75 were considered "up-to-date" on their screening (72%); 69% having been screened by colonoscopy in the past 10 years. Insurance status and having a regular healthcare provider were associated with higher rates of being up-to-date on screening. No significant differences were found by rural/urban status, gender, or race.

**Policy Implications** — Though Wisconsin's screening rates are high, there is still much to be done. Increasing public awareness of recommended cancer screenings and helping patients find the screening test most appropriate for them are among the strategies that can be taken. Access to colorectal cancer screening needs to be improved by making sure all Wisconsin residents have health insurance, connection to a regular doctor, and access to culturally appropriate patient navigation systems when needed.

The colorectal cancer screening questions also changed in 2012.

## METHODS

The BRFSS is a representative, statewide telephone survey of Wisconsin household residents aged 18 and older. Wisconsin BRFSS is part of the Behavioral Risk Factor Surveillance System, which is sponsored by the Centers for Disease Control and Prevention (CDC) and is conducted in every state and several U.S. territories. In 2012, landline and cell phone number samples were randomly selected. For the landline sample, one adult per household was interviewed. For the cell phone sample, each adult reached in this manner who indicated that they receive at least 90% of their calls by cell phone was interviewed. Responses were weighted to represent the non-institutionalized population of Wisconsin adults.

In 2012, 2,828 adults aged 50-75 were surveyed, representing a population segment of approximately 1.7 million. Up to 11% (unweighted) were excluded from analysis due to missing values. Missing values varied by measure (from 8% to 11%); these included individuals who terminated the survey before the colorectal screening questions were asked, refused to answer, or responded they “did not know” for one or more questions. The response rate for Wisconsin was 50.4%, combined cell phone and landline samples. All results reported here are weighted estimates.

Based on data from the BRFSS, we determined the percentage of the adult population aged 50-75 who were “up-to-date” on their colorectal cancer screening. For the purposes of this issue brief,

we have used the U.S. Preventive Services Task Force (USPSTF) guidelines as our reference in order to be consistent with the recent MMWR article on colorectal cancer screening use published in November 2013.<sup>5,6</sup> The MMWR article reported data weighted to state populations and estimates were age-standardized.<sup>5</sup> In addition to this, they used an age-standardization for the total US data.<sup>5</sup> Wisconsin data reported here is not age-standardized. Both in the MMWR article and in this WI specific analysis, adults ages 50-75 were considered “up-to-date” if they were screened in one or more of the following ways: 1) an annual high-sensitivity fecal occult blood test (FOBT) or, 2) a colonoscopy in the past 10 years or, 3) a sigmoidoscopy in the past five years in addition to an FOBT in the past three years.<sup>5</sup>

Screening status was analyzed by several demographic variables as well as health insurance status and use of a regular doctor. Estimates for sigmoidoscopy in combination with FOBT are not presented here due to small numbers (less than one percent).

In addition to the weighted estimates reported in the text and tables, confidence intervals (CIs) around the estimates are reported in parentheses. A 95% confidence interval, sometimes referred to as a “margin of error” is commonly discussed when reporting rates and survey estimates. The range between the lower and upper confidence interval contains the true value 95% of the time. It is important to consider confidence intervals before making assumptions about the significance of differences between estimates. We caution against labeling one percentage as higher or lower than another unless the confidence intervals do

not overlap. Where the CIs do not overlap, this has been noted by an asterisk (\*) in the table.

## RESULTS

In 2012, the majority of adults, approximately 72%, ages 50-75 were considered “up-to-date” on their colorectal cancer screening (see [Table 1](#)). Colonoscopy was the most widely used screening tool (69%) while a sigmoidoscopy in combination with FOBT was the least frequently used screening method (less than one percent were up-to-date on these tests; data not shown). An FOBT within the past year was reported by only 6% of the Wisconsin population compared to 10% for the U.S. as a whole.<sup>5</sup> Additionally, approximately one-quarter of Wisconsinites aged 50-75 had never been screened for colorectal cancer and just over 3% had been screened but were not up-to-date.

As was true for the U.S. population, use of FOBT and/or colonoscopy increased significantly with age and having a regular health-care provider (see [Table 1](#)).<sup>5</sup> Those who were 65-75 years old were more than twice as likely to use FOBT compared to their younger counterparts, while those with a regular provider were almost four times more likely to use FOBT than those who did not.

As with the FOBT, age and presence of a regular healthcare provider were significantly associated with use of colonoscopy in the past 10 years. In addition, those with a college degree were more likely to have had a colonoscopy than those with a high school degree or less. Health insurance status was also positively associated with use of colonoscopy (see [Table 1](#)).

**TABLE 1. Colorectal Cancer Screening in Wisconsin**

	Up-to-Date % (CIs)	Colonoscopy % (CIs)	FOBT % (CIs)	Never Screened % (CIs)
<b>Overall</b>	72.6 (69.9-75.3)	68.9 (66.1-71.2)	6.2 (5.0-7.5)	24.3 (21.7-27.0)
<b>Sex</b>				
Men	70.0 (65.7-74.3)	67.6 (63.3-71.9)	4.7 (2.9-6.5)	27.0 (22.8-31.3)
Women	74.9 (71.5-78.3)	70.1 (66.5-73.6)	7.6 (5.9-9.3)	21.9 (18.6-25.2)
<b>Age</b>				
50-64	67.7 (64.2-71.2)	64.2 (60.7-67.8)	4.5 (3.3-5.8)	29.7 (26.2-33.2)
65-75	84.4 (81.3-87.6)*	80.5 (77.0-84.0)*	10.2 (7.3-13.2)*	11.2 (8.6-13.8)*
<b>Education</b>				
<HS	54.1 (41.7-66.6)	53.7 (41.2-66.1)	7.0 (1.9-12.2)	42.7 (30.2-55.3)
HS/GED	69.9 (65.8-74.1)	65.7 (61.4-69.9)	6.7 (4.6-8.8)	27.2 (23.2-31.2)
Some college	75.9 (71.1-80.7)	71.4 (66.4-76.5)	5.9 (3.6-8.3)	21.1 (16.5-25.7)
College grad	80.4 (76.2-84.5)**	77.0 (72.8-81.3)**	5.4 (3.4-7.5)	16.1 (12.2-20.0)**
<b>Urban/Rural</b>				
Urban	73.5 (69.9-77.1)	70.1 (66.4-73.8)	5.6 (4.0-7.2)	23.3 (19.8-26.9)
Rural	70.8 (67.0-74.6)	66.6 (62.7-70.4)	7.4 (5.5-9.3)	26.3 (22.5-30.0)
<b>Health Plan</b>				
Yes	74.7 (71.9-77.4)	71.0 (68.2-73.8)	6.3 (5.0-7.6)	22.4 (19.7-25.1)
No	45.7 (34.4-56.9)*	41.2 (30.3-52.2)*	4.2 (0.3-8.1)	49.4 (37.9-60.8)*
<b>Regular Doctor</b>				
Yes	76.3 (73.6-79.0)	72.3 (69.5-75.1)	6.7 (5.3-8.0)	20.7 (18.0-23.3)
No	35.7 (26.3-45.1)*	34.5 (25.2-43.8)*	1.8 (0.0-3.6)*	60.7 (51.1-70.2)*
<b>Race</b>				
White, non-Hispanic	74.1 (71.4-76.8)	70.2 (67.4-72.9)	6.4 (5.0-7.7)	22.6 (20.0-25.2)
Black, non-Hispanic	68.8 (57.2-80.3)	67.6 (56.1-79.1)	3.8 (1.1-6.4)	29.2 (17.6-40.7)

\*Confidence Intervals (CIs) do NOT overlap

\*\*Some levels of education have non-overlapping CIs

Based on classification of the 72 counties in Wisconsin as either “urban” or “rural,” no significant differences were found by area of residency. No significant differences were noted between men and women or those identifying as White, non-Hispanic and Black, non-Hispanic. Due to the small sample sizes among other race categories, no other racial/ethnic breakdowns are presented here.

## DISCUSSION

Wisconsin ranked among the highest tertile of states, with a significantly higher percentage of adults classified as “up-to-date” on their colorectal screening use compared with the national percentage.<sup>5</sup> Though this is encouraging news, colorectal screening rates are still lower than other cancer screening rates, such as mammography.

As insurance status and having a regular healthcare provider were associated with screening status, the Affordable Care Act

(ACA) may have an impact on improving screening rates. However, prior to implementation of ACA (based on 2012 BRFSS data), less than 10% of this sub-population was without health insurance. Though increased coverage through ACA and designation of a primary or regular provider may help boost screening use, it would appear that additional education and outreach will be needed to improve screening rates to match or exceed those experienced for other cancers, such as mammography for breast cancer.

## PROGRAM/POLICY IMPLICATIONS

One of Wisconsin's Comprehensive Cancer Control Plan 2010-2015 goals is to increase early detection through appropriate screening of cancer. While the state is close to reaching its goal of 75% screened, there is still approximately one-quarter of Wisconsinites aged 50-75 who have never been screened for colorectal cancer. To further reduce mortality, those never screened need to determine which screening test is most appropriate for them and get screened. Increasing the use of all recommended colorectal cancer tests, including colonoscopy and iFOBT, can save more lives. In March 2014, a joint effort between the National Colorectal Cancer Roundtable, the American Cancer Society, the Centers for Disease Control and Prevention and the Office of the Assistant Secretary for Health will be launched to work on a national 80% colorectal cancer screening rates by 2018. For more information on this initiative, please visit the National Colorectal Cancer Roundtable's website: [www.nccrt.org](http://www.nccrt.org).

The WI CCC Program has funded the implementation of healthcare

system-based strategies. From 2010 to 2013, the Program awarded grants to 5 healthcare systems to plan and implement events to increase colorectal cancer screening rates in underserved communities around the state.<sup>7</sup> These awardees chose to offer colorectal screenings at events hosted at urban clinics, hospitals and community health fairs. Through this work, many lessons were learned for future event planning and partnership development between systems and local organizations, including the importance of working with a community partner, offering incentives for iFOBT kit return and having a patient tracking system to assist with outreach and follow up.

There are still many things to be done to increase colorectal screening rates in Wisconsin, including increasing public awareness of recommended cancer screenings and helping patients find the screening test most appropriate for them. Health systems can encourage the use of office-based systems, such as patient reminders, to increase screening rates. Health insurance plans can also help educate their clients and providers on screening recommendations. Finally, access to

screenings needs to be improved by making sure all Wisconsin residents have health insurance, connection to a regular doctor, and access to culturally appropriate patient navigation systems when needed.

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