



Colorectal Cancer Screening in New York State: 1996-2002 Behavioral Risk Factor Surveillance System (BRFSS)

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Colorectal cancer is the fourth most common cancer in the United States and New York State and the second leading cause of cancer death (1). A person aged 50 years has about a 6 percent lifetime risk of being diagnosed with colorectal cancer and a 2.5 percent chance of dying from the disease (2).

The results of randomized trials have shown substantial reductions in colorectal cancer mortality among those testing periodically with home fecal occult blood testing (FOBT) (3-5). Well-conducted case-control studies indicate that flexible sigmoidoscopy and colonoscopy may confer an even greater reduction in mortality (6,7). The U.S. Preventive Services Task Force recommends routine colorectal cancer screening for all men and women aged 50 years and older with one of the following screening options: home FOBT, sigmoidoscopy, the combination of home FOBT and flexible sigmoidoscopy, colonoscopy, and double contrast barium enema. The optimal interval depends on the test (8). The American Cancer Society recommends screening adults aged 50 years and older at average risk for colorectal cancer by annual FOBT, flexible sigmoidoscopy every 5 years, annual FOBT plus flexible sigmoidoscopy every 5 years, colonoscopy every 10 years, or double-contrast barium enema every 5 years (9).

This study was conducted to examine the prevalence and trends in colorectal cancer screening among New York State adults aged 50 years and older based on data from the Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS is an annual random-digit-dialing telephone survey of the civilian non-institutionalized adult population designed by the Centers for Disease Control and Prevention (CDC) to monitor trends in the prevalence of behavioral risk factors and utilization

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of preventive services associated with the leading causes of illness, injury, disability, and death in the population (10,11).

The BRFSS questionnaire included colorectal cancer screening questions in 1996, 1997, 1999, 2001, and 2002. Respondents were asked if they had ever used the FOBT at home, if they had ever had a lower endoscopy test (sigmoidoscopy, proctoscopy, or colonoscopy)¹, and when the tests were last performed. (See Appendix for the questionnaire wording.) Analysis was conducted to determine the proportion of those aged 50 years and older who had ever been tested using FOBT and/or lower endoscopy and those tested within the recommended period. Determination of the recommended period was complicated by questionnaire wording changes over time, and because the questions did not differentiate between the types of lower endoscopy test performed. In order to include those undergoing colonoscopy, 2002 BRFSS respondents reporting lower endoscopy (sigmoidoscopy or colonoscopy) within 10 years and/or FOBT within 12 months were considered screened within the recommended time period. Trends over time were assessed based on lower endoscopy testing within 5 years and/or FOBT within 12 months. This approach for reporting BRFSS colorectal cancer screening was used and recently reported by CDC (12).

Analysis was conducted to examine the proportion of adults aged 50 years and older ever tested and tested within the recommended period by socio-demographic characteristic. Colorectal cancer screening trends from 1996 to 2002 were examined using age-adjusted rates standardized to the 2000 United States population.

Results

In 2002, a total of 67.7% aged 50 years and older reported ever having an FOBT, sigmoidoscopy, or colonoscopy, and 58.0% were within the recommended period of 12 months for FOBT and/or 10 years for lower endoscopy (Tables 1 and 2). This compares to 53.1% for this recommended period reported by CDC for the nation in 2001 (11). Similar socio-demographic characteristics were observed for those ever tested and tested within the recommended period; testing increased with age and educational attainment, and was highest for white non-Hispanics. Men had somewhat higher rates compared to women in 2002, but the gender differences have narrowed over time (data not shown).

The proportion ever tested and within the recommended period increased from 1996 to 2002 (Figures 1 and 2). The proportion of the population tested by lower endoscopy increased over time compared to a decrease in those tested by FOBT (Figure 3).

¹ Respondents were asked whether they had a sigmoidoscopy or proctoscopy in 1996 and 1997, and whether they had a sigmoidoscopy or colonoscopy in 1999, 2001, and 2002.

Discussion

The results of this study indicate that colorectal cancer screening among adults aged 50 years and older in New York State is increasing. However, only 7 in 10 reported ever having been tested, and 6 in 10 were within the recommended period according to current guidelines. Those less educated were less likely to be tested compared to others while white, non-Hispanic adults were more likely to be tested.

In 1997, the New York State Department of Health established the Colorectal Cancer Screening and Prostate Cancer Education Program to increase the availability of colorectal and prostate cancer education and routine colorectal screening to underserved and uninsured populations aged 50 years and older. With better prevention and early detection of colorectal cancer, mortality can be reduced. This program is the largest comprehensive public health colorectal cancer screening program in the country. Currently, 31 community-based partnerships in 43 counties provided education and FOBT kit screening for colorectal cancer. From August 20, 1997 through February 20, 2003 the program has provided almost 28,000 screening encounters. During that time, 41 individuals were diagnosed with colorectal cancer and 150 had adenomatous polyps (a precursor to colorectal cancer).

The Colorectal Cancer Screening and Prostate Cancer Education Program is working to coordinate its services with those of the local Healthy Women Partnerships (which screen for breast and cervical cancer) and other cancer and chronic disease programs. Such an integrated approach can result in increased public awareness of how changes in personal behavior can lead to disease prevention, and offers a more efficient delivery of cancer education and early detection services to priority populations.

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Appendix

BRFSS Colorectal Cancer Screening Questions

2001, 2002

1. A blood stool test is a test that may use a special kit at home to determine whether the stool contains blood. Have you ever had this test using a home kit?

Yes (Go to question 2)

No (Go to question 3)

2. How long has it been since you had your last blood stool test using a home kit?

Within the past year (anytime <12 months ago)

Within the past 2 years (1 year but <2 years ago)

Within the past 5 years (2 years but <5 years ago)

5 or more years ago

3. Sigmoidoscopy and colonoscopy are examinations in which a tube is inserted in the rectum to view the bowel for signs of cancer or other health problems. Have you ever had either of these examinations?

Yes (Go to question 4)

No (Skip to next section)

4. How long has it been since you had your last sigmoidoscopy or colonoscopy?

Within the past year (anytime <12 months ago)

Within the past 2 years (1 year but <2 years ago)

Within the past 5 years (2 years but <5 years ago)

Within the past 10 years (5 years but <10 years ago)

10 or more years ago

Refused

1999

4. When did you have your last sigmoidoscopy or colonoscopy?

Within the past year (1 to 12 months ago)

Within the past 2 years (1 to 2 years ago)

Within the past 5 years (2 to 5 years ago)

5 or more years ago

1996, 1997

4. When did you have your last sigmoidoscopy or proctoscopy?

Within the past year (1 to 12 months ago)

Within the past 2 years (1 to 2 years ago)

Within the past 5 years (2 to 5 years ago)

5 or more years ago

Table 1: Prevalence of ever having a colorectal cancer screening test (FOBT and/or lower endoscopy) among New York State adults aged 50 years and older: 2002 BRFSS

	% (95% Confidence Interval)
Total (n=701)	67.7 (65.0, 70.4)
Age	
50-59	61.6 (58.9, 64.3)
60-69	71.2 (66.2, 76.1)
70+	72.5 (68.0, 77.0)
Sex	
Male	69.1 (64.7, 73.4)
Female	66.6 (63.2, 70.0)
Race/Ethnicity	
White, non-Hispanic	71.9 (69.2, 74.5)
Black, non-Hispanic	62.2 (51.8, 72.6)
Hispanic	50.1 (38.5, 61.7)
Other	58.5 (45.7, 71.3)
Educational Attainment	
< High School	50.2 (41.3, 59.0)
High School	68.1 (63.4, 72.8)
> High School	71.2 (67.7, 74.7)

Table 2: Prevalence of colorectal cancer screening within the recommended period (FOBT with 12 months and/or lower endoscopy with 10 years) among New York State adults aged 50 years and older: 2002 BRFSS

	% (95% Confidence Interval)
Total (n=701)	58.0 (55.3, 60.8)
Age	
50-59	50.0 (45.5, 54.5)
60-69	63.7 (58.7, 68.8)
70+	63.4 (58.7, 68.1)
Sex	
Male	60.4 (55.9, 64.8)
Female	56.2 (52.7, 59.7)
Race/Ethnicity	
White, non-Hispanic	60.5 (57.7, 63.4)
Black, non-Hispanic	56.4 (45.9, 67.0)
Hispanic	47.3 (35.8, 58.9)
Other	50.3 (37.7, 62.9)
Educational Attainment	
< High School	45.1 (36.3, 54.0)
High School	58.7 (53.9, 63.5)
> High School	60.3 (56.7, 64.0)

Figure 1. Trends in ever having colorectal cancer screening (either FOBT or lower endoscopy) among New York State adults aged 50 years and older: 1996-2002 BRFSS (Age-standardized to the 2000 U.S. population)

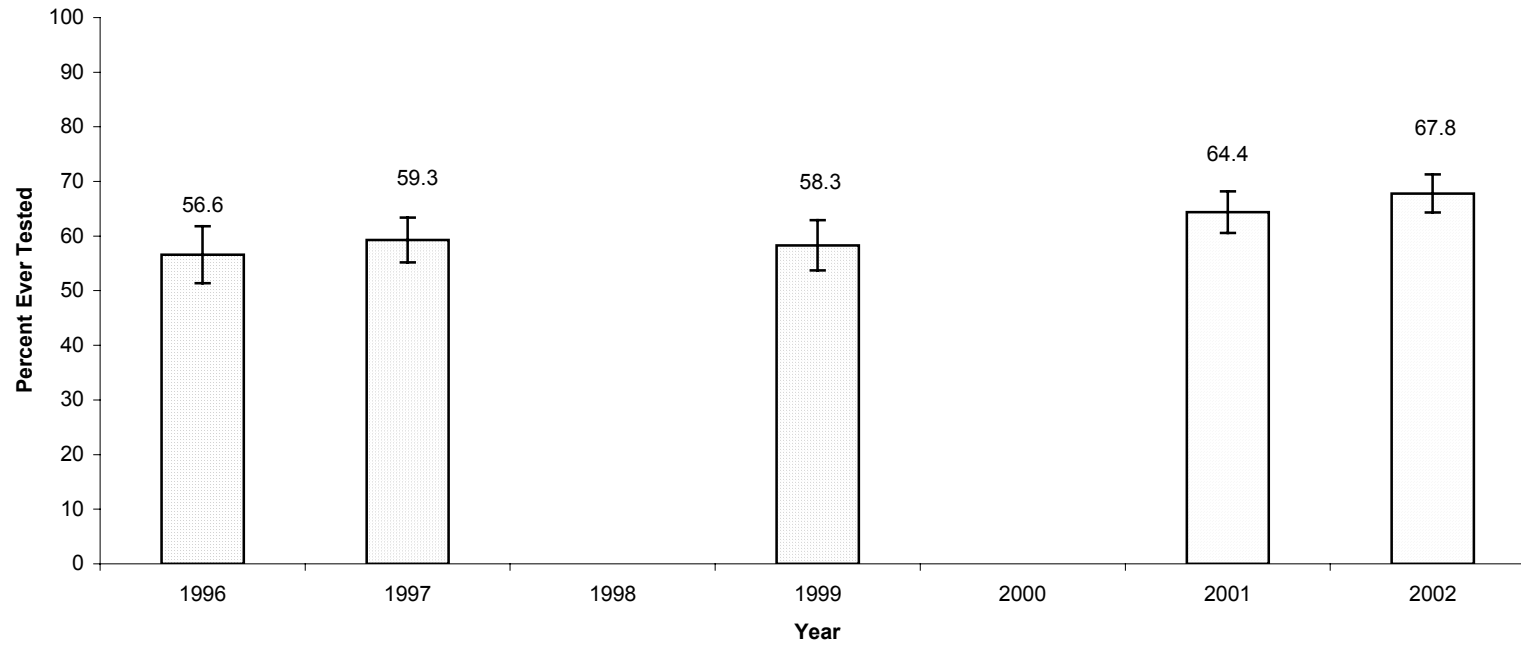


Figure 2. Trends in colorectal cancer screening within the recommended period (FOBT within 12 months and/or lower endoscopy within 10 years) among New York State adults aged 50 years and older: 1996-2002 BRFSS (Age-standardized to the 2000 U.S. population)

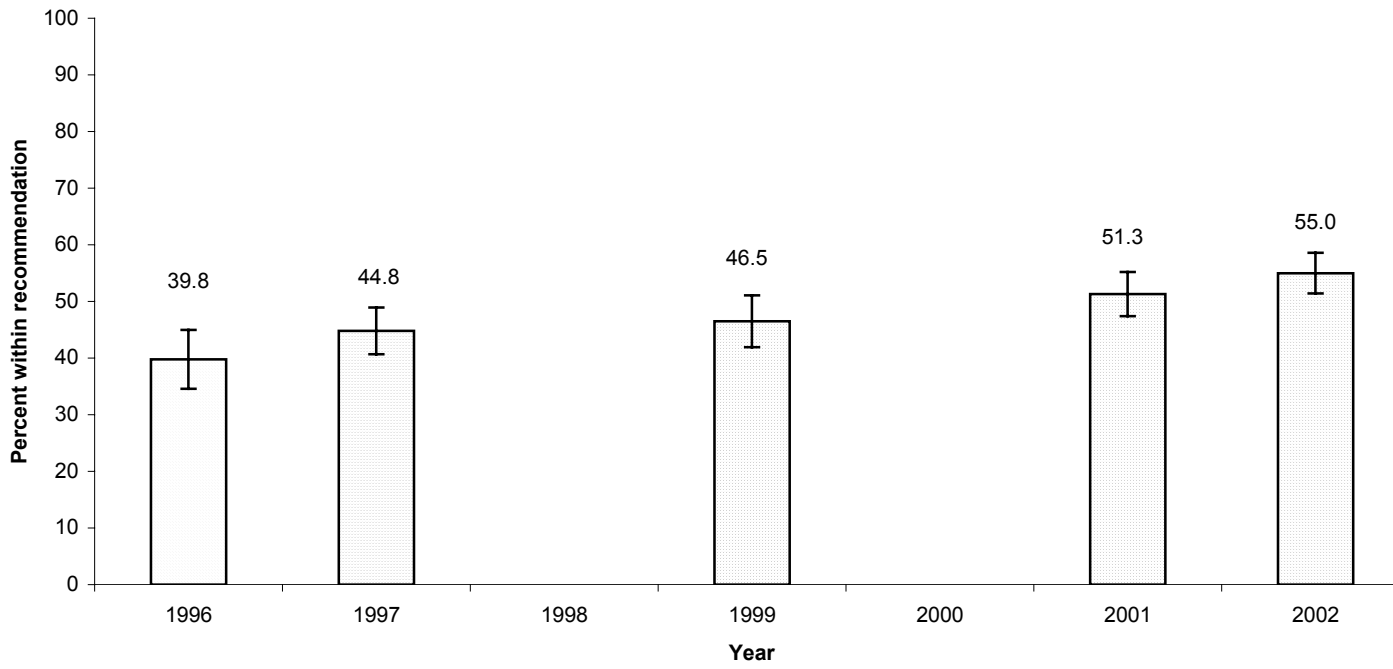


Figure 3. Trends in colorectal cancer screening by type of test among New York State adults aged 50 years and older: 1996-2002 BRFSS

