



Hawaii Colorectal Cancer Fact Sheet (Revised January 2009)

Early diagnosis and treatment of colorectal cancer results in a survival rate of 90%, yet less than 40% are diagnosed at this early stage. The CDC estimates that as many as 60% of colorectal cancer deaths could be prevented if all men and women aged 50 years or older were screened routinely.

Incidence and Deaths:

For men and women (combined), colorectal cancer is the second leading cause of cancer deaths in Hawaii. Overall, colorectal cancer incidence and mortality rates have dropped for both sexes over the last 25 years.

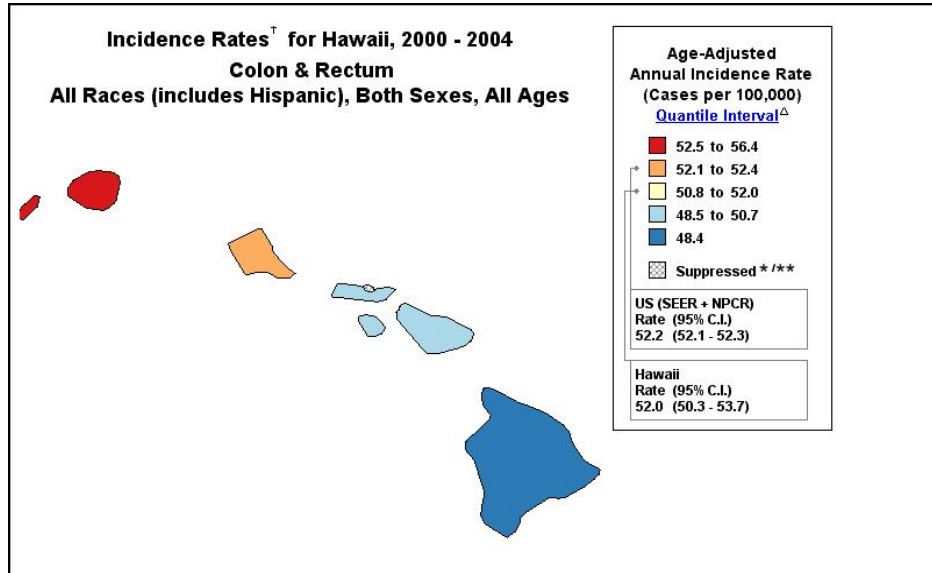
Hawaii's annual incidence rates for both genders combined is slightly less than the US rate (HI=52.0, US=52.2). The HI incidence trend is falling with a (.07) annual percentage drop in incidence rates. Hawaii's annual mortality rate for both genders combined is less than the US rate (HI=16.0, US=19.4) The HI mortality trend is falling with a (1.7) annual percentage drop in incidence rates, although not as steeply as the drop in the US trend (4.6). However, if these trends continue both the US and Hawaii will meet the Healthy People 2010 goal of (13.9). Kauai's incidence and mortality rates for men may be unusually high.

(Source: State Cancer Profiles 2000-2004)

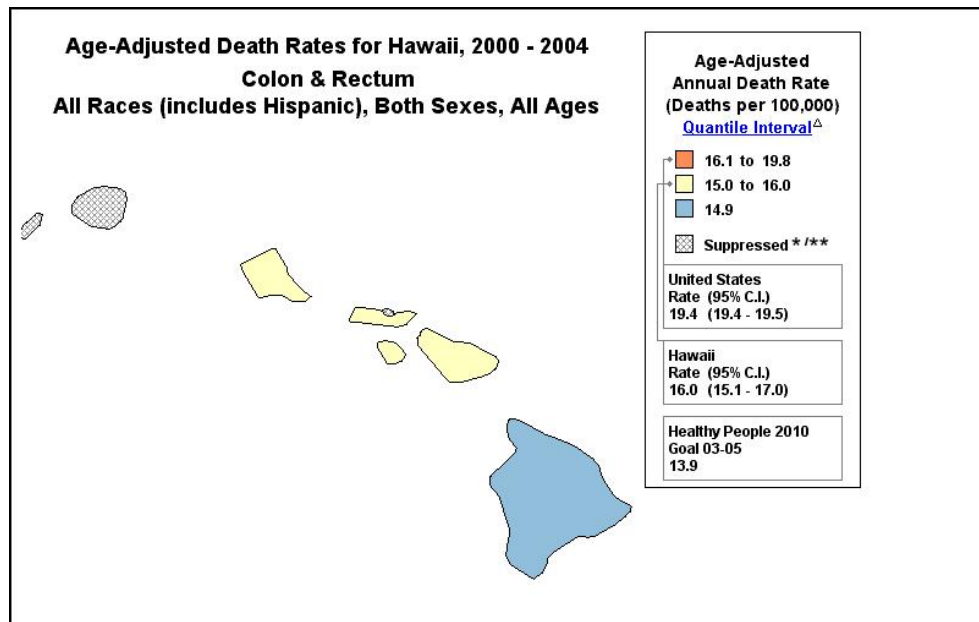
Table 1: Incidence and Mortality Rates for Hawaii & Counties vs. US Healthy Hawaii 2010
Target Mortality Rate = 13.9

| | Male | | Female | | Combined | |
|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | Incidence | Mortality | Incidence | Mortality | Incidence | Mortality |
| U.S. | 61.6 | 23.5 | 45.0 | 16.4 | 52.2 | 19.4 |
| HI State | 64.7 | 21.0 | 41.6 | 12.0 | 52.0 | 16.0 |
| Kauai | 80.9 | 28.5 | 36.2 | 12.5 | | |
| Mau | 65.8 | 21.7 | 37.4 | 11.4 | | |
| Honolulu | 65.0 | 20.9 | 42.2 | 12.0 | | |
| Hawaii | 55.0 | 17.7 | 42.7 | 12.4 | | |

Maps 1: Incidence Map for Hawaii (Source: State Cancer Profiles 2000-2004)



Maps 2: Mortality Map for Hawaii (Source: State Cancer Profiles 2000-2004)

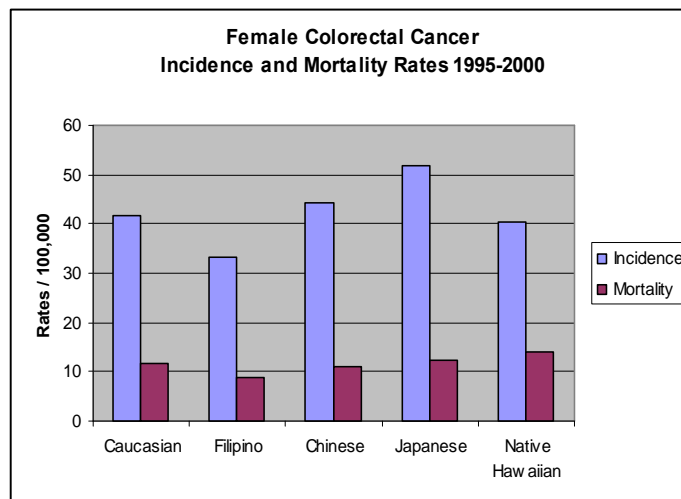
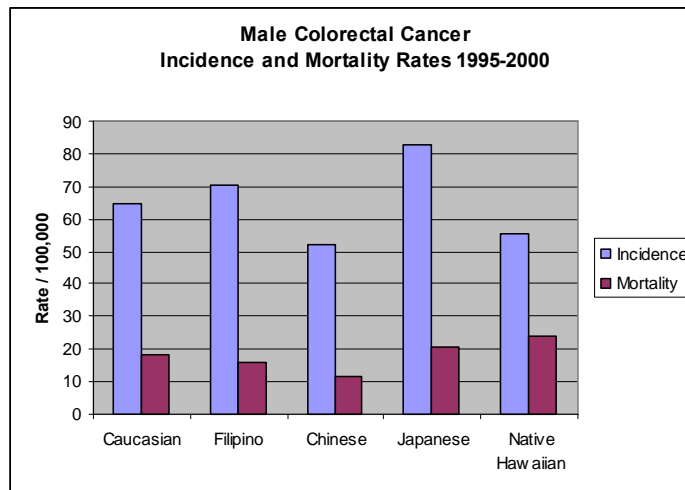


Colon cancer incidence per 100,000 population (age-adjusted) among men during 1995-2000 was highest among Japanese (52.0), followed by Caucasians (47.5), and Filipinos (43.2); while Native Hawaiians (35.6) and Chinese (33.4) had lower incidence. Overall colorectal cancer rates are lower among women.

ancer mortality. While the incidence of colon cancer is highest among Caucasians, others and Filipinos, mortality is highest among Native Hawaiian and Japanese males, followed by Caucasians. Among women, colon cancer incidence is highest among Japanese and Chinese, followed by Caucasians, yet mortality is highest among Native Hawaiian and Japanese females.

For rectal cancer among men, incidence per 100,000, population (age-adjusted) during 1995-2000 was highest among Japanese (30.7) and Filipinos (27.3), and mortality is highest among Japanese. Both rectal cancer incidence and mortality among women was higher among Japanese. (Source: Hawaii Cancer Facts and Figures 2003-2004)

Table 2 and 3: Incidence and Mortality Rates by Ethnicity (Source: Hawaii Cancer Facts and Figure 2003-2004)



Survivorship:

The prognosis for colorectal cancers depends on:

- The stage of the cancer
- Whether the cancer has blocked or created a hole in the colon.

...yonic antigen.

(Source: NCI –s Physicians Data Query)

Standard treatment for colorectal cancer includes surgery, chemotherapy, and radiation therapy. There are clinical trials for colorectal cancers available in Hawaii. Relative survival rates at diagnosis for colorectal cancer in Hawaii ranges from 87% at 12 months, to 58% at 60 months.

Table 3: Colorectal Cancer Survivors Alive in 2005 by Island

(Source: HI Tumor Registry)

| ISLAND | Female | Male | Total |
|---------------------------|--------------|--------------|--------------|
| Oahu, Honolulu | 1,275 | 1,341 | 2,616 |
| Oahu, other than Honolulu | 943 | 1,259 | 2,202 |
| Hawaii (Big Island) | 331 | 384 | 715 |
| Maui | 221 | 286 | 507 |
| Kauai | 131 | 184 | 315 |
| Molokai | 10 | 27 | 37 |
| Lanai | 11 | 3 | 14 |
| Grand Total | 2,922 | 3,484 | 6,406 |

Prevention / Risk Factors:

The following risk factors may increase the risk of colorectal cancer:

- Age - risk begins to increase after age 40.
- Obesity - including a lifestyle that does not include regular exercise.
- Smoking
- Alcohol

The following protective factors may decrease the risk of colorectal cancer:

- Hormone replacement therapy - that includes both estrogen and progesterone.
- Polyp removal - may lower the risk of colorectal cancer.

The effect of these factors on the risk of colorectal cancer is not known:

- Non steroidal, anti-inflammatory drugs
- Vitamin - not known if taking vitamin D or folic acid lowers the risk.
- Diet - not known if a diet low in fat, high in fiber, fruits, & vegetables lowers risk.
- Statins - not known that taking statins (cholesterol -lowering drugs) affects risk.

(Source: NCI –s Physicians Data Query)

Early Detection:

Overall since 2001, among adults 50 years and older, the percentage having a blood stool test in the preceding 2 years has declined significantly, while the percentage having a sigmoidoscopy or a colonoscopy has increased (Figure 3i).

(Source Hawaii Healthy People 2010, 2001-2006)

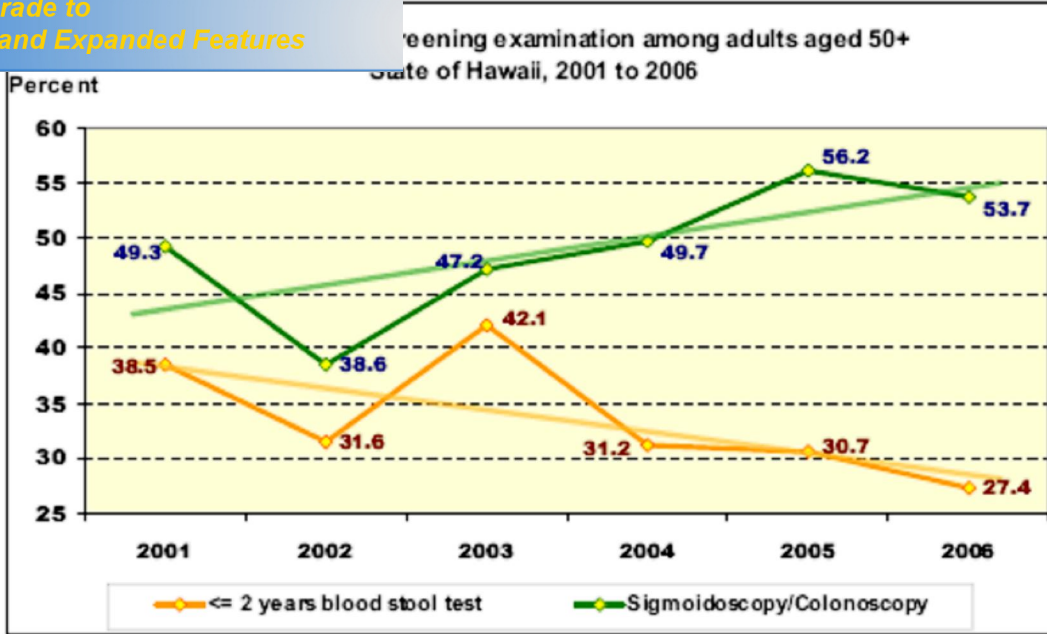


Fig. 3i

In 2006 53.7% of adults in Hawaii aged 50 years old or older reported they had either a sigmoidoscopy or colonoscopy, which exceeds the HP2010 goal of 50%. However, the proportions reporting such screening are significantly higher for Japanese and European-Americans than for Filipinos or Native Hawaiians (Figure 3k)(Source Hawaii Healthy People 2010, 2001-2006).

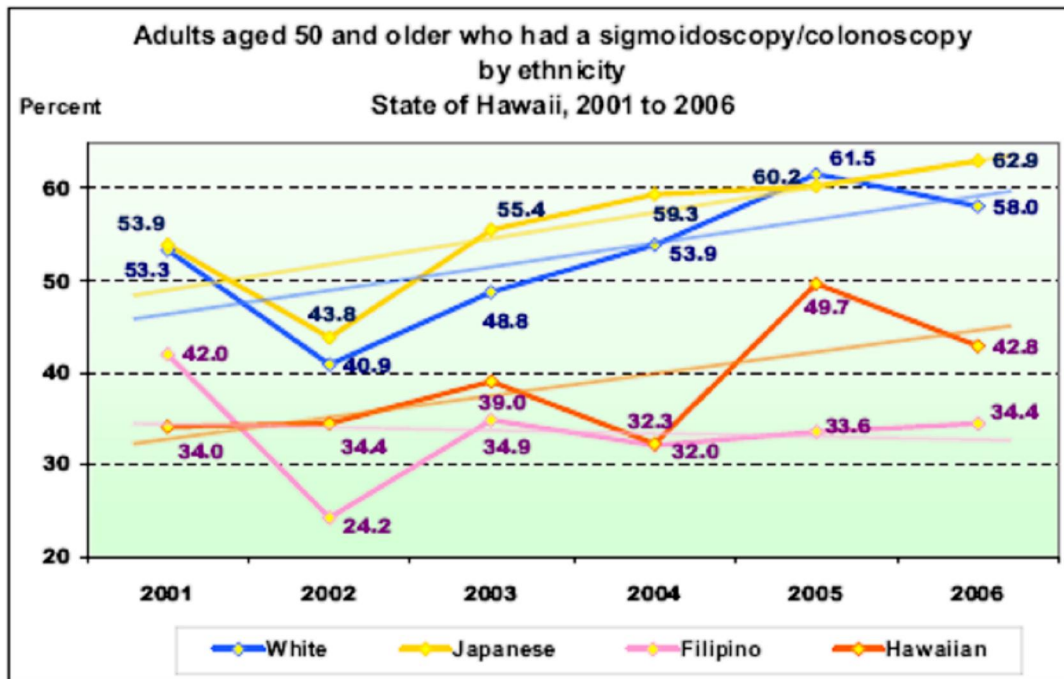


Fig. 3k

likely to report getting such screenings. (Source Hawaii Healthy People 2010, 2001-2006)

ing gaps in such screening examinations, with those in those with less education (Figure 3m) being less and

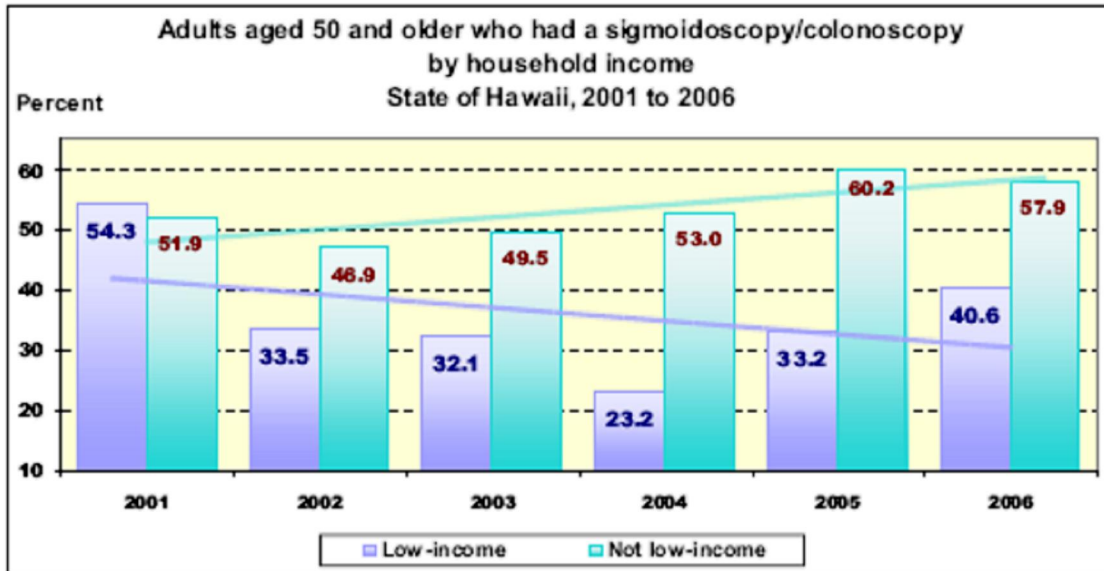


Fig. 3l

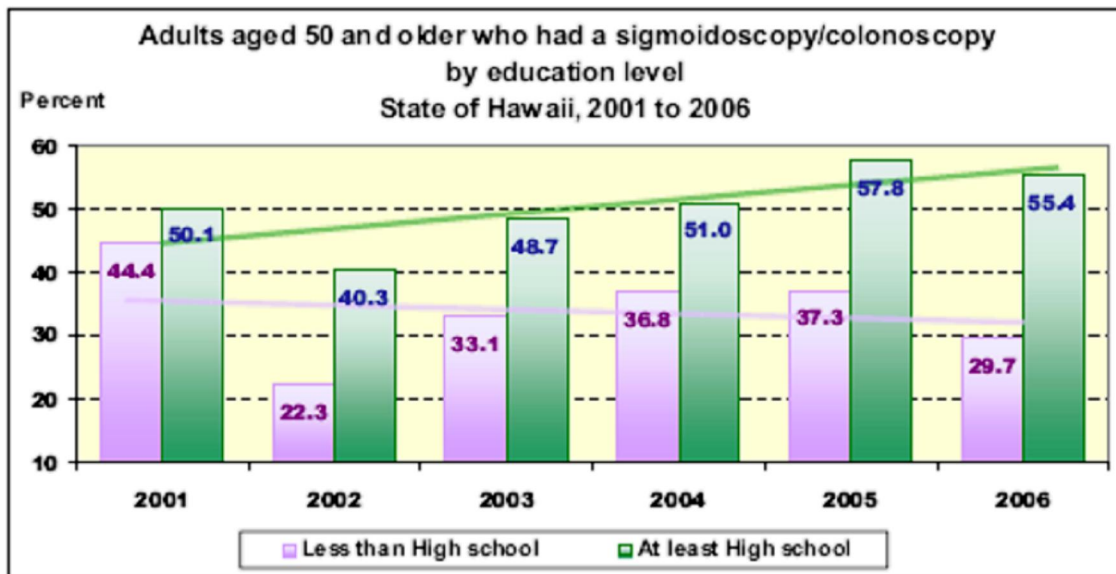


Fig. 3m

Survival from colorectal cancer is more than 90% when it is diagnosed before it has extended beyond the intestinal wall. Therefore, low screening rates are risk factors for colorectal cancer and are more apparent among Hawaii's marginalized populations. These data may illustrate that colorectal cancer screening issues are apparent throughout Hawaii's diverse population; more information is needed to know why some groups do not get initial screenings while others may not be getting follow-ups. It is also likely that health insurance issues may be a barrier, and language issues/health literacy as well in Hawaii.

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Cancer is highly preventable, yet fewer states* have passed preventative screening legislation when compared to cancers with lower death rates.

STATE GRADES

A Arkansas
Alaska
Connecticut
Georgia
Illinois
Indiana
Louisiana
Maryland
Missouri
Nevada
New Jersey
North Carolina
Oregon
Rhode Island
Virginia
Washington D.C.

B Delaware
Texas
West Virginia

C California
Wyoming

D Alabama
Oklahoma
Tennessee

F Arizona
Colorado
Florida
Hawaii
Idaho
Iowa
Kansas
Kentucky
Maine
Massachusetts
Michigan
Minnesota
Mississippi
Montana
Nebraska
New Hampshire
New Mexico
New York
North Dakota
Ohio
Pennsylvania
South Carolina
South Dakota
Utah
Vermont

| TYPE OF CANCER | REQUIRE COVERAGE | INSUFFICIENT COVERAGE | NO COVERAGE | DEATHS PER YEAR |
|----------------|------------------|-----------------------|-------------|-----------------|
| Colorectal | 21 | 3 | 27 | 52,180 |
| Breast | 47 | 3 | 1 | 40,910 |
| Prostate | 26 | 1 | 24 | 27,050 |
| Cervical | 23 | 1 | 27 | 3,670 |

US figures estimated for 2007, American Cancer Society
* Including Washington D.C.

Policy / Insurance Issues:

The following table and graphs (page 8) compare US states that have mandated colorectal cancer screening coverage.

Summary of Key Data Points

In summary, these data illustrate that:

- o Overall, Hawaii's colorectal cancer incidence is lower than the US rate.
- o Kauai's colorectal incidence and mortality may be unusually high.
- o There are clear ethnic and gender disparities in colorectal cancer mortality.
- o There has been a significant decline in fecal occult blood testing.
- o During the past 5 years, there are definitive and increasing disparities in screening based upon ethnicity, income, and education.
- o There are no Hawaii state laws mandating screening coverage by insurers.

Prepared by the Hawaii Comprehensive Cancer Control Data and Surveillance Action Team
(March 2008, revised January 2009)

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Third-Party Coverage for Colorectal Cancer Screening

(as of June 30, 2007)

| State | Tests Covered | | | | Age and Frequency Requirements | |
|-------------------------|-------------------------|------------------------------|-------------|------------------------------|--------------------------------|--|
| | Fecal Occult Blood Test | Sigmoidoscopy | Colonoscopy | Double Contrast Barium Esema | Age 50 and Older | Younger if High Risk, History, and/or Physician Recommendation |
| Alaska | ● | ● ¹ | ● | ● | ● | ● |
| Arizona | ● | ● ¹ | ● | ● | ● | ● |
| Arkansas | ● | ● ¹ | ● | ● | ● | ● |
| California ⁵ | ● | | | | | |
| Colorado | | | | | | |
| Connecticut | ● | ● ^{1,2} | ● | ● | ● | ● |
| Delaware | ● | ● | ● | ● | ● | ● |
| District of Columbia | ● | ● ¹ | ● | ● | ● | ● |
| Florida | | | | | | |
| Georgia ⁶ | ● | ● ^{1,2} | ● | ● | ● | ● |
| Hawaii | | | | | | |
| Idaho | | | | | | |
| Illinois | ● | ● ^{1,2,4 (and NCI)} | ● | ● | ● | ● |
| Indiana ⁷ | ● ■ | ● ¹ | ● | ● | ● | ● |
| Iowa | | | | | | |
| Kansas | | | | | | |
| Kentucky | | | | | | |
| Louisiana | ● | ● ^{1,2} | ● | ● | ● | ● |
| Maine | | | | | | |
| Maryland | ● | ● ¹ | ● | ● | ● | ● |
| Massachusetts | | | | | | |
| Michigan | | | | | | |
| Minnesota | ● | | | | | ● |
| Mississippi | | | | | | |
| Missouri | ● | ● ¹ | ● | ● | ● | ● |
| Montana | | | | | | |
| Nebraska | ● | ● ¹ | ● | ● | ● | ● |
| Nevada | ● | ● ¹ | ● | ● | ● | ● |
| New Hampshire | | | | | | |
| New Jersey | ● | ● ¹ | ● | ● | ● | ● |
| New Mexico | ● | ● ³ | | | | ● |
| New York | | | | | | |
| North Carolina | ● | ● ¹ | ● | ● | ● | ● |
| North Dakota | | | | | | |
| Ohio | | | | | | |
| Oklahoma | ■ | | | | ■ | ■ |
| Oregon | ● | | ● | ● | ● | ● |
| Pennsylvania | | | | | | |
| Rhode Island | ● | ● ¹ | ● | ● | ● | ● |
| South Carolina | | | | | | |
| South Dakota | | | | | | |
| Tennessee | ■ | ■ ^{1,3} | ■ | ■ | ■ | ■ |
| Texas | ● | | ● | ● | ● | |
| Utah | | | | | | |
| Vermont | | | | | | |
| Virginia | ● | ● ^{1,2} | ● | ● | ● | ● |
| Washington | ● | ● ^{3,4} | ● | ● | ● | ● |
| West Virginia | ● | | ● | ● | ● | ● |
| Wisconsin | | | | | | |
| Wyoming ⁸ | ● | | | | | |
| Totals | 28 | 19 | 24 | 23 | 23 | 22 |

Adults who had a fecal occult blood test in the past 2 years

| Years | Caucasian | Chinese | Filipino | Hawaiian/Part Hawaiian | Japanese | Other | Mixed Not Hawaiian | BASE Population 18+ |
|-------|-----------|---------|----------|------------------------|----------|-------|--------------------|---------------------|
| 2000 | | | | | | | | 915,770 |
| 2001 | 39.1% | 43.5% | 32.5% | 29.9% | 46.0% | 23.6% | | 929,401 |
| 2002 | 32.8% | 39.6% | 22.8% | 29.5% | 34.8% | 38.0% | | 942,830 |
| 2003 | 41.7% | 42.7% | 30.9% | 37.5% | 50.8% | 44.8% | | 954,381 |
| 2004 | 33.3% | 43.1% | 18.1% | 23.1% | 36.3% | 25.7% | | 967,186 |
| 2005 | 32.3% | 34.5% | 26.8% | 34.5% | 35.6% | 13.9% | | 983,060 |
| 2006 | 29.1% | 32.3% | 17.9% | 26.7% | 30.4% | 26.2% | | 995,059 |
| 2007 | 30.5% | 23.3% | 29.2% | 30.3% | 30.8% | 24.3% | | 997,694 |
| 2008 | | | | | | | | |

| STATE | Adults age 50+ who have had a sigmoidoscopy | | | | | | | |
|--------------------------|---|---------|----------|------------------------|----------|-------|--------------------|---------------------|
| adults 50+ sigmoidoscopy | Caucasian | Chinese | Filipino | Hawaiian/Part Hawaiian | Japanese | Other | Mixed Not Hawaiian | BASE Population 18+ |
| 2000 | | | | | | | | 348,137 |
| 2001 | 52.4% | 62.6% | 41.5% | 33.4% | 54.7% | 36.0% | | 359,612 |
| 2002 | 40.2% | 48.3% | 24.3% | 34.1% | 45.6% | 31.5% | | 370,438 |
| 2003 | 48.4% | 51.2% | 36.3% | 38.2% | 56.7% | 41.2% | | 381,666 |
| 2004 | 51.9% | 63.3% | 31.6% | 28.4% | 59.5% | 44.1% | | 390,511 |
| 2005 | 62.0% | 70.7% | 37.7% | 51.1% | 62.5% | 42.6% | | 401,945 |
| 2006 | 57.1% | 57.1% | 31.1% | 42.4% | 64.3% | 42.9% | | 412,172 |
| 2007 | 63.1% | 54.3% | 35.9% | 48.4% | 66.4% | 50.6% | | |
| 2008 | | | | | | | | |

Colorectal screening data compiled by Papa Ola Lokahi from DOH-BRFSS .