



Cancer >

CHAPTER 3

Co-Lead Agencies

Centers for Disease Control and Prevention
National Institutes of Health

Contents

| | |
|--|------|
| Goal | 3-3 |
| Highlights | 3-3 |
| Summary of Progress | 3-4 |
| Transition to Healthy People 2020 | 3-5 |
| Data Considerations..... | 3-6 |
| References and Notes..... | 3-7 |
| Comprehensive Summary of Objectives..... | 3-8 |
| Progress Chart..... | 3-10 |
| Health Disparities Table..... | 3-12 |
| Overall Cancer Deaths, 2005–07—Map..... | 3-14 |
| Women who Received a Pap Test Within Past 3 Years, 2008—Map | 3-15 |

GOAL:

Reduce the number of new cancer cases, as well as the illness, disability, and death caused by cancer.



This chapter includes objectives that track cancer death rates, survival after diagnosis, provider counseling for preventive behaviors such as smoking cessation, limiting sun exposure, the use of effective cancer screening tests, and the availability of statewide cancer registries.

All Healthy People tracking data quoted in this chapter, along with technical information and Operational Definitions for each objective, can be found in the Healthy People 2010 database, DATA2010, available from <http://wonder.cdc.gov/data2010/>.

More information about this Focus Area can be found in the following publications:

- › *Healthy People 2010: Understanding and Improving Health*, available from <http://www.healthypeople.gov/2010/Document/tableofcontents.htm#under>.
- › *Healthy People 2010 Midcourse Review*, available from <http://www.healthypeople.gov/2010/data/midcourse/html/default.htm#FocusAreas>.

Highlights

- › Substantial progress was achieved in objectives for this Focus Area during the past decade [1]. Over 70% of the Cancer objectives with data to measure progress moved toward or achieved their Healthy People 2010 targets (Figure 3-1). However, for a number of objectives, statistically significant health disparities of 10% or more were observed among racial and ethnic populations, as well as by sex and education level (Figure 3-2) [2].
- › Cancer deaths (objectives 3-1 through 3-8) declined for all cancer mortality objectives except melanoma deaths (objective 3-8). Prostate cancer deaths

(objective 3-7) declined 24.9% between 1999 and 2007, from 31.1 to 23.5 per 100,000 population (age adjusted), exceeding the 2010 target of 28.2 per 100,000. The overall cancer death rate (objective 3-1) declined 11.2% from 200.8 to 178.4 per 100,000 population (age adjusted) over the same tracking period. The melanoma death rate rose 3.8% from 2.6 to 2.7 per 100,000 population (age adjusted) over the same tracking period, moving away from the 2010 target of 2.3 per 100,000. Disparities were observed for a number of population groups:

- Among racial and ethnic groups, the Asian or Pacific Islander population had the lowest (best) cancer death rates for five of the eight cancer mortality objectives (3-1, 3-3 through 3-5, and 3-7). The Hispanic or Latino population had the best group rate for lung cancer (objective 3-2) and oropharyngeal cancer deaths (objective 3-6). The non-Hispanic black population had the best group rate for melanoma deaths (objective 3-8).
- › With the exception of melanoma deaths (objective 3-8), the non-Hispanic black population had rates that were at least 100% higher than the best rate for all cancer mortality objectives (objectives 3-1 through 3-8) [2].
- › The non-Hispanic white population had rates that were at least 100% higher than the best group rate for four mortality objectives: lung cancer (objective 3-2), female breast cancer (objective 3-3), prostate cancer (objective 3-7), and melanoma (objective 3-8) deaths [2].
- › The American Indian or Alaska Native population had a melanoma death rate (1.0 death per 100,000 population in 2007, age adjusted) that was twice the best group rate (that for the non-Hispanic black population, 0.5 deaths per 100,000, age adjusted) [2].

- Females had lower death rates than males for all five non-sex-specific cancer mortality objectives (objectives 3-1, 3-2, 3-5, 3-6, and 3-8). Male rates for oropharyngeal cancer (objective 3-6) and melanoma (objective 3-8) deaths were at least 100% higher than the female rates.
 - Among education groups, persons with at least some college education had the lowest (best) cancer death rates for six of the eight cancer mortality objectives (3-1, 3-2, and 3-4 through 3-7). Persons with less than a high school education had the best rates for female breast cancer (objective 3-3) and melanoma (objective 3-8) deaths. Persons with less than a high school education and high school graduates had rates of lung cancer (objective 3-2), cervical cancer (objective 3-4), and oropharyngeal cancer (objective 3-6) deaths that were at least 100% higher than the rates for persons with at least some college education.
- › Overall cancer mortality (objective 3-1) varied by geographic region. Death rates for the period 2005–07 were lower in the West than in the Midwest and Eastern U.S. Many of the health service areas with high death rates were in the South and in the Mississippi River Valley (Figure 3-3).
- › The proportion of persons aged 50 and over who had ever received a proctoscopy, colonoscopy, or sigmoidoscopy (objective 3-12b) increased 48.6% between 1998 and 2008, from 37% to 55%, exceeding the Healthy People 2010 target of 50%.
- › The proportion of women aged 18 and over who had ever received a Pap test (objective 3-11a) increased 1.1% between 1998 and 2008, from 92% to 93%, moving toward the Healthy People 2010 target of 97%. However, the proportion who had been tested within the past 3 years (objective 3-11b) declined 3.8%, from 79% to 76%, over the same tracking period, moving away from the 2010 target of 90%. Disparities were observed for a number of population groups, for example:
- Among racial and ethnic groups, the populations of non-Hispanic white women and of women of two or more races both had the highest (best) rate of ever receiving a Pap test, 95% each in 2008, whereas the populations of American Indian or Alaska Native, Hispanic or Latino, and Asian women had rates of 90%, 89%, and 79%, respectively. When expressed as women who had *never received* a Pap test, the rate for American Indian or Alaska Native women was twice the rate for non-Hispanic white women; the rate for Hispanic or Latino women was more than twice that rate; and the rate for Asian women was more than four times that rate [2].
 - Among education groups, women with at least

some college education had the highest (best) rate of ever receiving a Pap test, 97% in 2008, whereas women with less than a high school education had a rate of 91%. When expressed as women who had *never received* a Pap test, women with less than a high school education had a rate that was three times the rate for women with at least some college education [2].

- › The proportion of women who received a Pap test within the past 3 years varied by state. Delaware, Georgia, Massachusetts, and North Carolina had the highest proportions in 2008, whereas Arkansas, Illinois, Louisiana, Oklahoma, and a contiguous group of western states (Idaho, Montana, Nevada, Utah, and Wyoming) had the lowest proportions (Figure 3-4). No state met the Healthy People 2010 target.
- › Mammogram screening (objective 3-13) did not change between 1998 (baseline) and 2008 (most recent data point); in both years, 67% of women aged 40 and over had received a mammogram within the past 2 years, below the Healthy People 2010 target of 70%.

Summary of Progress

- › Figure 3-1 presents a quantitative assessment of progress in achieving the Healthy People 2010 objectives for Cancer [1]. Data to measure progress toward target attainment were available for 18 objectives. Of these:
- Two objectives (3-7 and 3-12b) exceeded their Healthy People 2010 targets.
 - Eleven objectives moved toward their targets. A statistically significant difference between the baseline and the final data points was observed for nine of these objectives (3-1 through 3-6, 3-9b, 3-11, and 3-15). No significant difference was observed for one objective (3-9a), and data to test the significance of the difference were unavailable for one objective (3-14).
 - One objective (3-13) showed no change.
 - Four objectives moved away from their targets. A statistically significant difference between the baseline and final data points was observed for three of these objectives (3-8, 3-11b, and 3-12a). No significant difference was observed for the remaining objective (3-10h).
- › Follow-up data were unavailable to measure progress for seven objectives (3-10a through g).
- › Figure 3-2 displays health disparities in Cancer from the best group rate for each characteristic at the

most recent data point [2]. It also displays changes in disparities from baseline to the most recent data point [3].

- Of the 14 objectives with statistically significant racial and ethnic health disparities of 10% or more, the Asian or Pacific Islander population had the best rate for five objectives (3-1, 3-3 through 3-5, and 3-7), and the non-Hispanic white population for four objectives (3-11a, 3-12b, 3-13, and 3-15). The non-Hispanic black and the Hispanic or Latino populations each had the best rate for three objectives (3-8, 3-11b, and 3-13; and 3-2, 3-6, and 3-9b, respectively).
- Females had better rates than males for six of the seven objectives with statistically significant health disparities of 10% or more by sex (objectives 3-1, 3-2, 3-5, 3-6, 3-8, and 3-9b). Males had a better rate than females for the objective on ever receiving a proctoscopy, colonoscopy, or sigmoidoscopy (objective 3-12b).
- Of the 13 objectives with statistically significant health disparities of 10% or more by education level, persons with at least some college education had the best rate for 11 objectives (3-1, 3-2, 3-4 through 3-7, 3-9b, 3-11a and b, 3-12b, and 3-13). Persons with less than a high school education had the lowest (best) rate for female breast cancer (objective 3-3) and melanoma (objective 3-8) deaths.
- Persons with middle/high incomes had the best rates for all four objectives with statistically significant health disparities of 10% or more by income (objectives 3-11a and b, 3-12b, and 3-13).
- Persons living in urban or metropolitan areas had better rates than those living in rural areas for the two objectives with statistically significant health disparities of 10% or more by geographic location (objectives 3-11b and 3-13).
- Persons without disabilities had better rates than persons with disabilities for two of the three objectives with statistically significant health disparities of 10% or more by disability status (objectives 3-11b and 3-13). Persons with disabilities had a better rate than persons without disabilities for adults who used protective measures to protect against skin cancer (objective 3-9b).
- Health disparities of 100% or more were observed for several objectives among racial and ethnic populations, as well as by sex and education level. These are described in the Highlights, above.

Transition to Healthy People 2020

For Healthy People 2020, the Cancer objectives have been expanded to include a broader range of measures than those presented in Healthy People 2010, reflecting the latest trends in cancer prevention and diagnosis. In addition to objectives on mortality, screening, counseling, survival, and cancer registries, the Healthy People 2020 Cancer Topic Area includes new objectives on cancer incidence, quality of life for cancer survivors, prevalence of sunburn, and use of artificial sources of ultraviolet light for tanning. See [HealthyPeople.gov](https://www.healthypeople.gov) for a complete list of Healthy People 2020 topics and objectives.

The Healthy People 2020 Cancer Topic Area objectives can be grouped into several sections:

- › Mortality
- › Incidence
- › Registries
- › Survivorship
- › Screening and counseling.

The differences between the Healthy People 2010 objectives and those included in Healthy People 2020 are summarized below:

- › The Healthy People 2020 Cancer Topic Area has a total of 27 objectives, five of which are developmental, whereas the Healthy People 2010 Cancer Focus Area had 25 objectives [4].
- › Seven Healthy People 2010 objectives, including six of the eight cancer mortality objectives (3-1, 3-3, 3-4, 3-6 through 3-8) and the objective on adult protection against skin cancer (objective 3-9b), were retained “as is” [5].
- › Thirteen Healthy People 2010 objectives were modified to create 11 Healthy People 2020 objectives [6].
 - The objectives on lung cancer (objective 3-2) and colorectal cancer (objective 3-5) mortality were revised to match Surveillance Epidemiology and End Results (SEER) cause-of-death recodes [7].
 - The objectives on adolescent protection against skin cancer (objective 3-9a), provider counseling on cancer screening (objectives 3-10f and g), cervical cancer screening (objective 3-11b), mammogram screening (objective 3-13), population-based cancer registries (objective

3-14), and cancer survivorship (objective 3-15) were all modified to match the most recent available data or the latest screening guidelines.

- The objectives on fecal occult blood test (FOBT) (objective 3-12a) and sigmoidoscopy, colonoscopy, and proctoscopy (objective 3-12b) were combined into one objective on colorectal cancer screening (FOBT, sigmoidoscopy, and colonoscopy) to match the latest screening guidelines.
 - Similarly, the objectives on provider counseling for FOBT (objective 3-10d) and sigmoidoscopy, colonoscopy, and proctoscopy (objective 3-10e) were combined into one objective on provider counseling for colorectal cancer screening.
- › Five Healthy People 2010 Cancer objectives were either moved to other Healthy People 2020 topic areas or archived [8]. Counseling on smoking cessation (objectives 3-10a through c) and counseling on physical activity (objective 3-10h) were moved to the Healthy People 2020 Tobacco Use and Physical Activity topic areas, respectively. The objective on Pap tests ever received (objective 3-11a) was archived to match the latest screening guidelines.
- › Nine new objectives were added to the Healthy People 2020 Cancer Topic Area:
- One developmental objective addresses the physical health-related quality of life of cancer survivors.
 - Three new objectives track the incidence of certain cancers, namely invasive colorectal cancer, invasive uterine cervical cancer, and late-stage breast cancer.
 - One developmental objective addresses the proportion of men who have discussed with their health care provider whether to have a prostate-specific antigen (PSA) test to screen for prostate cancer.
 - Two new objectives monitor the prevalence of sunburn, one for adolescents and one for adults.
 - Two developmental objectives focus on use of artificial sources of ultraviolet light for tanning, one for adolescents and one for adults.

[Appendix D](#), “A Crosswalk Between Objectives From Healthy People 2010 to Healthy People 2020,” summarizes the changes between the two decades of objectives, reflecting new knowledge and direction for this area.

Data Considerations

Figure 3-4 (Pap test received within past 3 years) presents state-level data from the Behavioral Risk Factor Surveillance System (BRFSS). National data for this objective come from the National Health Interview Survey (NHIS) and are the basis for setting the targets. BRFSS data may not be comparable with the national data from NHIS.

Education and income are the primary measures of socioeconomic status in Healthy People 2010. Most data systems used in Healthy People 2010 define income as a family’s income before taxes. To facilitate comparisons among groups and over time, while adjusting for family size and for inflation, Healthy People 2010 categorizes income using the poverty thresholds developed by the Census Bureau. Thus, the three categories of family income that are primarily used are:

- › Poor—below the Federal poverty level
- › Near poor—100% to 199% of the Federal poverty level
- › Middle/high income—200% or more of the Federal poverty level.

These categories may be overridden by considerations specific to the data system, in which case they are modified as appropriate. See *Healthy People 2010: General Data Issues*, referenced below.

In general, data on educational attainment are presented for persons aged 25 and over, consistent with guidance given by the Census Bureau. However, because of the requirements of the different data systems, the age groups used to calculate educational attainment for any specific objective may differ from the age groups used to report the data for other Healthy People 2010 objectives, as well as from select populations within the same objective. Therefore, the reader is urged to exercise caution in interpreting the data by educational attainment shown in the Health Disparities Table. See *Healthy People 2010: General Data Issues*, referenced below.

Beginning in 2003, education data for mortality objectives 3-1 through 3-8 from the National Vital Statistics System have been suppressed. The educational attainment item was changed in the new U.S. Standard Certificate of Death in 2003 to be consistent with the Census Bureau data and to improve the ability to identify specific types of educational degrees. Many states, however, are still using the 1989 version of the U.S. Standard Certificate of Death, which focuses on highest school grade completed. As a result, educational attainment data collected using the 2003 version are not comparable with data collected using the 1989 version [9].

Additional information on data issues is available from the following sources:

- › All Healthy People 2010 tracking data can be found in the Healthy People 2010 database, DATA2010, available from <http://wonder.cdc.gov/data2010/>.
- › Detailed information about the data and data sources used to support these objectives can be found in the Operational Definitions on the DATA 2010 website, available from <http://wonder.cdc.gov/data2010/focusod.htm>.
- › More information on statistical issues related to Healthy People tracking and measurement can be found in the [Technical Appendix](#) and in *Healthy People 2010: General Data Issues*, which is available in the General Data Issues section of the NCHS Healthy People website under Healthy People 2010; see http://www.cdc.gov/nchs/healthy_people/hp2010/hp2010_data_issues.htm.

References and Notes

1. Displayed in the Progress Chart (Figure 3-1), the percent of targeted change achieved expresses the difference between the baseline and the final value relative to the initial difference between the baseline and the Healthy People 2010 target. As such, it is a relative measure of progress toward attaining the Healthy People 2010 target. See the [Reader's Guide](#) for more information. When standard errors were available, the difference between the baseline and the final value was tested at the 0.05 level of significance. See the Figure 3-1 footnotes, as well as the [Technical Appendix](#), for more detail.
2. Information about disparities among select populations is shown in the Health Disparities Table (Figure 3-2). Disparity from the best group rate is defined as the percent difference between the best group rate and each of the other group rates for a characteristic. For example, racial and ethnic health disparities are measured as the percent difference between the best racial and ethnic group rate and each of the other racial and ethnic group rates. Similarly, disparities by sex are measured as the percent difference between the better group rate (e.g., female) and the rate for the other group (e.g., male). Some objectives are expressed in terms of favorable events or conditions that are to be increased, while others are expressed in terms of adverse events or conditions that are to be reduced. To facilitate comparison of health disparities across different objectives, disparity is measured only in terms of adverse events or conditions. For comparability across objectives, objectives that are expressed in terms of favorable events or conditions are re-expressed using the adverse event or condition for the purpose of computing disparity, but they are not otherwise restated or changed. For example, objective 1-1, to increase the proportion of persons with health insurance (e.g., 72% of the American Indian or Alaska Native population under age 65 had some form of health insurance in 2008), is expressed in terms of the percentage of persons without health insurance (e.g., $100\% - 72\% = 28\%$ of the American Indian or Alaska Native population under age 65 did not have any form of health insurance in 2008) when the disparity from the best group rate is calculated. See the [Reader's Guide](#) for more information. When standard errors were available, the difference between the best group rate and each of the other group rates was tested at the 0.05 level of significance. See the Figure 3-2 footnotes, as well as the [Technical Appendix](#), for more detail.
3. The change in disparity is estimated by subtracting the disparity at baseline from the disparity at the most recent data point and, therefore, is expressed in percentage points. See the [Reader's Guide](#) for more information. When standard errors were available, the change in disparity was tested at the 0.05 level of significance. See the Figure 3-2 footnotes, as well as the [Technical Appendix](#), for more detail.
4. To be included in Healthy People 2010, an objective must have a national data source that provides a baseline and at least one additional data point for tracking progress. Some objectives lacked baseline data at the time of their development but had a potential data source and were considered of sufficient national importance to be included in Healthy People. These are called "developmental" objectives. When data become available, a developmental objective is moved to measurable status and a Healthy People target can be set.
5. As of the Healthy People 2020 launch, Healthy People 2020 objectives that were retained "as is" from Healthy People 2010 had no change in the numerator or denominator definitions, the data source(s), or the data collection methodology. These include objectives that were developmental in Healthy People 2010 and are developmental in Healthy People 2020, and for which no numerator information is available.
6. As of the Healthy People 2020 launch, objectives that were modified from Healthy People 2010 had some change in the numerator or denominator definitions, the data source(s), or the data collection methodology. These include objectives that went from developmental in Healthy People 2010 to measurable in Healthy People 2020, or vice versa.

7. Cancer mortality data in Healthy People 2020 have been recoded for consistency with cancer incidence and mortality data reported by U.S. Cancer Statistics (USCS), CDC and SEER, NIH, NCI, resulting in slight changes to definitions for lung and colorectal cancer between Healthy People 2010 and Healthy People 2020. Specifications for the cancer mortality recodes can be found on the SEER website, available from <http://seer.cancer.gov/codrecode>.
8. Archived objectives had at least one data point in Healthy People 2010 but were not carried forward into Healthy People 2020.
9. Xu JQ, Kochanek KD, Murphy SL, Tejada-Vera B. Deaths: Final data for 2007. National vital statistics reports; vol 58 no 19. Hyattsville, MD: National Center for Health Statistics. 2010. Available from http://www.cdc.gov/nchs/data/nvsr/nvsr58/nvsr58_19.pdf.

Comprehensive Summary of Objectives: Cancer

| Objective | Description | Data Source or Objective Status |
|-----------|---|---|
| 3-1 | Overall cancer deaths (age adjusted, per 100,000 population) | National Vital Statistics System—Mortality (NVSS-M), CDC, NCHS. |
| 3-2 | Lung cancer deaths (age adjusted, per 100,000 population) | National Vital Statistics System—Mortality (NVSS-M), CDC, NCHS. |
| 3-3 | Female breast cancer deaths (age adjusted, per 100,000 population) | National Vital Statistics System—Mortality (NVSS-M), CDC, NCHS. |
| 3-4 | Cervical cancer deaths (age adjusted, per 100,000 population) | National Vital Statistics System—Mortality (NVSS-M), CDC, NCHS. |
| 3-5 | Colorectal cancer deaths (age adjusted, per 100,000 population) | National Vital Statistics System—Mortality (NVSS-M), CDC, NCHS. |
| 3-6 | Oropharyngeal cancer deaths (age adjusted, per 100,000 population) | National Vital Statistics System—Mortality (NVSS-M), CDC, NCHS. |
| 3-7 | Prostate cancer deaths (age adjusted, per 100,000 population) | National Vital Statistics System—Mortality (NVSS-M), CDC, NCHS. |
| 3-8 | Melanoma deaths (age adjusted, per 100,000 population) | National Vital Statistics System—Mortality (NVSS-M), CDC, NCHS. |
| 3-9a | Sun exposure and skin cancer—Students who use protective measures (grades 9–12) | Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPHP. |
| 3-9b | Sun exposure and skin cancer—Adults who use protective measures (age adjusted, 18+ years) | National Health Interview Survey (NHIS), CDC, NCHS. |
| 3-10a | Internist counseling about smoking cessation | Survey of Physicians' Attitudes and Practices in Early Cancer Detection, American Cancer Society. |
| 3-10b | Family physician counseling about smoking cessation | Survey of Physicians' Attitudes and Practices in Early Cancer Detection, American Cancer Society. |
| 3-10c | Dentist counseling about smoking cessation | Survey of Current Issues in Dentistry, American Dental Association. |
| 3-10d | Primary care provider counseling about blood stool tests | National Survey of Primary Care Physicians' Recommendations and Practice for Breast, Cervical, Colorectal, and Lung Cancer Screening, NIH, NCI. |
| 3-10e | Primary care provider counseling about proctoscopic examinations | Survey of Physicians' Attitudes and Practices in Early Cancer Detection, American Cancer Society. |
| 3-10f | Primary care provider counseling about mammograms | National Survey of Primary Care Physicians' Recommendations and Practice for Breast, Cervical, Colorectal, and Lung Cancer Screening, NIH, NCI. |

Comprehensive Summary of Objectives: Cancer (continued)

| Objective | Description | Data Source or Objective Status |
|-----------|--|---|
| 3-10g | Primary care provider counseling about Pap tests | National Survey of Primary Care Physicians' Recommendations and Practice for Breast, Cervical, Colorectal, and Lung Cancer Screening, NIH, NCI. |
| 3-10h | Primary care provider counseling about physical activity | National Ambulatory Medical Care Survey (NAMCS), CDC, NCHS. |
| 3-11a | Women receiving a Pap test—Ever received (age adjusted, 18+ years) | National Health Interview Survey (NHIS), CDC, NCHS. |
| 3-11b | Women receiving a Pap test—Received within past 3 years (age adjusted, 18+ years) | National Health Interview Survey (NHIS), CDC, NCHS. |
| 3-12a | Colorectal cancer screening—Fecal occult blood test (FOBT) within past 2 years (age adjusted, 50+ years) | National Health Interview Survey (NHIS), CDC, NCHS. |
| 3-12b | Colorectal cancer screening—Proctoscopy, colonoscopy, or sigmoidoscopy ever received (age adjusted, 50+ years) | National Health Interview Survey (NHIS), CDC, NCHS. |
| 3-13 | Women receiving a mammogram within past 2 years (age adjusted, 40+ years) | National Health Interview Survey (NHIS), CDC, NCHS. |
| 3-14 | Statewide cancer registries (no. States and D.C.) | National Program of Cancer Registries (NPCR), CDC, NCCDPHP. |
| 3-15 | Persons living 5+ years after a diagnosis of cancer | Surveillance, Epidemiology, and End Results (SEER) Program, NIH, NCI. |

Figure 3-1. Progress Toward Target Attainment for Focus Area 3: Cancer

| LEGEND | |  Moved away from target ¹ |  Moved toward target |  Met or exceeded target | | | | |
|---|--|---|---|--|-------------------------|--|-----------------------------|--|
| Objective | Percent of targeted change achieved ² | 2010 Target | Baseline (Year) | Final (Year) | Baseline vs. Final | | | |
| | | | | | Difference ³ | Statistically Significant ⁴ | Percent Change ⁵ | |
| 3-1. Overall cancer deaths (age adjusted, per 100,000 population) |  53.1% | 158.6 | 200.8 (1999) | 178.4 (2007) | -22.4 | Yes | -11.2% | |
| 3-2. Lung cancer deaths (age adjusted, per 100,000 population) |  40.2% | 43.3 | 55.5 (1999) | 50.6 (2007) | -4.9 | Yes | -8.8% | |
| 3-3. Female breast cancer deaths (age adjusted, per 100,000 population) |  69.8% | 21.3 | 26.6 (1999) | 22.9 (2007) | -3.7 | Yes | -21.1% | |
| 3-4. Cervical cancer deaths (age adjusted, per 100,000 population) |  50.0% | 2.0 | 2.8 (1999) | 2.4 (2007) | -0.4 | Yes | -14.3% | |
| 3-5. Colorectal cancer deaths (age adjusted, per 100,000 population) |  55.6% | 13.7 | 20.9 (1999) | 16.9 (2007) | -4.0 | Yes | -19.1% | |
| 3-6. Oropharyngeal cancer deaths (age adjusted, per 100,000 population) |  66.7% | 2.4 | 2.7 (1999) | 2.5 (2007) | -0.2 | Yes | -7.4% | |
| 3-7. Prostate cancer deaths (age adjusted, per 100,000 population) |  251.6% | 28.2 | 31.1 (1999) | 23.5 (2007) | -7.6 | Yes | -24.9% | |
| 3-8. Melanoma deaths (age adjusted, per 100,000 population) |  | 2.3 | 2.6 (2000) | 2.7 (2007) | 0.1 | Yes | 3.8% | |
| 3-9. Sun exposure and skin cancer | | | | | | | | |
| a. Students who use protective measures (grades 9–12) |  25.0% | 28% | 24% (2005) | 25% (2007) | 1 | No | 4.2% | |
| b. Adults who use protective measures (age adjusted, 18+ years) |  10.0% | 85% | 65% (2005) | 67% (2008) | 2 | Yes | 3.1% | |
| 3-10h. Primary care provider counseling about physical activity |  | 85% | 12% (1998) | 10% (2007) | -2 | No | -16.7% | |
| 3-11. Women receiving a Pap test | | | | | | | | |
| a. Ever received (age adjusted, 18+ years) |  20.0% | 97% | 92% (1998) | 93% (2008) | 1 | Yes | 1.1% | |
| b. Received within past 3 years (age adjusted, 18+ years) |  | 90% | 79% (1998) | 76% (2008) | -3 | Yes | -3.8% | |
| 3-12. Colorectal cancer screening | | | | | | | | |
| a. Fecal occult blood test (FOBT) within past 2 years (age adjusted, 50+ years) |  | 33% | 24% (2000) | 15% (2008) | -9 | Yes | -37.5% | |
| b. Proctoscopy, colonoscopy, or sigmoidoscopy ever received (age adjusted, 50+ years) |  138.5% | 50% | 37% (1998) | 55% (2008) | 18 | Yes | 48.6% | |
| 3-13. Women receiving a mammogram within past 2 years (age adjusted, 40+ years) | 0.0% | 70% | 67% (1998) | 67% (2008) | 0 | No | 0.0% | |
| 3-14. Statewide cancer registries (no. States and D.C.) |  60.0% | 45 | 30 (1999) | 39 (2006) | 9 | Not tested | 30.0% | |
| 3-15. Persons living 5+ years after a diagnosis of cancer |  81.8% | 70% | 59% (1989–95) | 68% (2000–06) | 9 | Yes | 15.3% | |

Figure 3-1. Progress Toward Target Attainment for Focus Area 3: Cancer (continued)

NOTES

See the [Reader's Guide](#) for more information on how to read this figure. See DATA 2010 at <http://wonder.cdc.gov/data2010> for all Healthy People 2010 tracking data. Tracking data are not available for objectives 3-10a through g.

FOOTNOTES

¹ Movement away from target is not quantified using the percent of targeted change achieved. See [Technical Appendix](#) for more information.

² Percent of targeted change achieved = $\frac{\text{Final value} - \text{Baseline value}}{\text{Healthy People 2010 target} - \text{Baseline value}} \times 100$.

³ Difference = Final value - Baseline value. Differences between percents (%) are measured in percentage points.

⁴ When estimates of variability are available, the statistical significance of the difference between the final value and the baseline value is assessed at the 0.05 level. See [Technical Appendix](#) for more information.

⁵ Percent change = $\frac{\text{Final value} - \text{Baseline value}}{\text{Baseline value}} \times 100$.

DATA SOURCES

- 3-1-3-8. National Vital Statistics System—Mortality (NVSS-M), CDC, NCHS.
- 3-9a. Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPHP.
- 3-9b. National Health Interview Survey (NHIS), CDC, NCHS.
- 3-10h. National Ambulatory Medical Care Survey (NAMCS), CDC, NCHS.
- 3-11a-b. National Health Interview Survey (NHIS), CDC, NCHS.
- 3-12a-b. National Health Interview Survey (NHIS), CDC, NCHS.
- 3-13. National Health Interview Survey (NHIS), CDC, NCHS.
- 3-14. National Program of Cancer Registries (NPCR), CDC, NCCDPHP.
- 3-15. Surveillance, Epidemiology, and End Results (SEER) Program, NIH, NCI.

Figure 3-2. Health Disparities Table for Focus Area 3: Cancer

Disparities from the best group rate for each characteristic at the most recent data point and changes in disparity from the baseline to the most recent data point.

| Population-based objective | Race and Ethnicity | | | | | | | Sex | | Education | | | | Income | | | Location | | Disability | | | |
|---|----------------------------------|--------------------|---|-------------------|--------------------|---------------------|---------------------|---------------|--------|-----------------|-----------------------|----------------------|-----------------------|---------------|------|-----------|--------------------|---------------|-----------------------|--------------------------|---------------------------|------------------------------|
| | American Indian or Alaska Native | Asian | Native Hawaiian or Other Pacific Islander | Two or more races | Hispanic or Latino | Black, not Hispanic | White, not Hispanic | Summary index | Female | Male | Less than high school | High school graduate | At least some college | Summary index | Poor | Near poor | Middle/high income | Summary index | Urban or metropolitan | Rural or nonmetropolitan | Persons with disabilities | Persons without disabilities |
| 3-1. Overall cancer deaths (age adjusted, per 100,000 population) (1999, 2007) ¹ | | B ⁱ | | | | | | B | | | | B | | | | | | | | | | |
| 3-2. Lung cancer deaths (age adjusted, per 100,000 population) (1999, 2007) ¹ | | i | | | B | | ↑ | B | ↓ | ↑ | ↑ | B | ↑ | | | | | | | | | |
| 3-3. Female breast cancer deaths (age adjusted, per 100,000 population) (1999, 2007) ¹ | | B ⁱ | | | | | | | | B ⁱⁱ | | | | | | | | | | | | |
| 3-4. Cervical cancer deaths (age adjusted, per 100,000 population) (1999, 2007) ¹ | | B ^{i, ii} | | | | | | | | | | B | | | | | | | | | | |
| 3-5. Colorectal cancer deaths (age adjusted, per 100,000 population) (1999, 2007) ¹ | | B ⁱ | | | | ↓ | ↓ | B | | | | B | | | | | | | | | | |
| 3-6. Oropharyngeal cancer deaths (age adjusted, per 100,000 population) (1999, 2007) ¹ | | i | | | B | | ↑ | B | ↑ | | ↑ | B | | | | | | | | | | |
| 3-7. Prostate cancer deaths (age adjusted, per 100,000 population) (1999, 2007) ¹ | | B ⁱ | | | | | | | | | | B | | | | | | | | | | |
| 3-8. Melanoma deaths (age adjusted, per 100,000 population) (1999, 2007) ¹ | | b ⁱ | | | | B ⁱⁱ | | B | | B | ↑ | | | | | | | | | | | |
| 3-9a. Sun exposure and skin cancer—Students who use protective measures (grades 9–12) (2005, 2007) | | | | | B | | | B | | | | | | | | | | | | | | |
| b. Sun exposure and skin cancer—Adults who use protective measures (age adjusted, 18+ years) (2005, 2008) | b | | | | B ⁱⁱ | | | B | | | | B | | B | | | | B | B ⁱⁱ | B | | |
| 3-11a. Women receiving a Pap test—Ever received (age adjusted, 18+ years) (1998, 2008) ² | | | | B | ↓ | | B | iii | | | | B | | ↓ | | B | | | | iv | B | |
| b. Women receiving a Pap test—Received within past 3 years (age adjusted, 18+ years) (1998, 2008) ² | | ↓ | | | ↓ | | B | iii | | ↓ | | B | | | | B | | B | | ↑ | B | |
| 3-12a. Colorectal cancer screening—Fecal occult blood test (FOBT) within past 2 years (age adjusted, 50+ years) (2000, 2008) | | B ⁱⁱ | | | | | B ⁱⁱ | iii | | ↓ | | B | | | | B | | B | | | B | |
| b. Colorectal cancer screening—Proctoscopy, colonoscopy, or sigmoidoscopy ever received (age adjusted, 50+ years) (1998, 2008) ³ | ↑ | | | | ↑ | | B | iii | | ↑ | ↑ | B | ↑ | ↑ | ↑ | B | ↑ | B | | | B | |
| 3-13. Women receiving a mammogram within past 2 years (age adjusted, 40+ years) (1998, 2008) ² | | ↓ | | | | | B | iii | | | | B | | | | B | | B | ↑ | | | B |
| 3-15. Persons living 5+ years after a diagnosis of cancer (1989–95, 2000–06) | | | | | | v | B ^v | | B | B ⁱⁱ | | | | | | | | | | | | |

Figure 3-2. Health Disparities Table for Focus Area 3: Cancer (continued)

NOTES

See DATA2010 at <http://wonder.cdc.gov/data2010> for all Healthy People 2010 tracking data. Disparity data are either unavailable or not applicable for objectives 3-10a through h, and 3-14.

Years in parentheses represent the baseline and most recent data years (if available).

Disparity from the best group rate is defined as the percent difference between the best group rate and each of the other group rates for a characteristic (e.g., race and ethnicity). The summary index is the average of these percent differences for a characteristic. Change in disparity is estimated by subtracting the disparity at baseline from the disparity at the most recent data point. Change in the summary index is estimated by subtracting the summary index at baseline from the summary index at the most recent data point. See [Technical Appendix](#) for more information.

Measures of variability were available for all objectives in this table. Thus, the variability of best group rates was assessed, and statistical significance was tested. Disparities of 10% or more are displayed when the differences from the best group rate are statistically significant at the 0.05 level. Changes in disparities over time are indicated by arrows when the changes are greater than or equal to 10 percentage points and are statistically significant at the 0.05 level. See [Technical Appendix](#).

| LEGEND | | | |
|---|--|---|---|
| The “best” group rate at the most recent data point. |  | The group with the best rate for specified characteristic. | |
| |  | Most favorable group rate for specified characteristic, but reliability criterion not met. | |
| |  | Reliability criterion for best group rate not met, or data available for only one group. | |
| Percent difference from the best group rate | | | |
| Disparity from the best group rate at the most recent data point. |  | Less than 10%, or difference not statistically significant (when estimates of variability are available). | |
| |  | 10%–49% | |
| |  | 50%–99% | |
| |  | 100% or more | |
| Changes in disparity over time are shown when: (a) disparities data are available at both baseline and most recent time points; (b) data are not for the group(s) indicated by “B” or “b” at either time point; and (c) the change is greater than or equal to 10 percentage points and statistically significant, or when the change is greater than or equal to 10 percentage points and estimates of variability were not available. See Technical Appendix . | Increase in disparity (percentage points) | | |
| |  | 10–49 points | |
| |  | 50–99 points | |
| |  | 100 points or more | |
| | Decrease in disparity (percentage points) | | |
| |  | 10–49 points | |
|  | 50–99 points | | |
|  | 100 points or more | | |
| Availability of Data | |  | Data not available. |
| | |  | Characteristic not selected for this objective. |

FOOTNOTES

¹ Most recent data by education level are for 2002.

² Baseline data by race and ethnicity are for 1999.

³ Baseline data by race and ethnicity are for 2000.

ⁱ Data are for Asian or Pacific Islander.

ⁱⁱ The group with the best rate at the most recent data point is different from the group with the best rate at baseline. Both rates met the reliability criterion. See [Technical Appendix](#).

ⁱⁱⁱ Change in the summary index cannot be assessed. See [Technical Appendix](#).

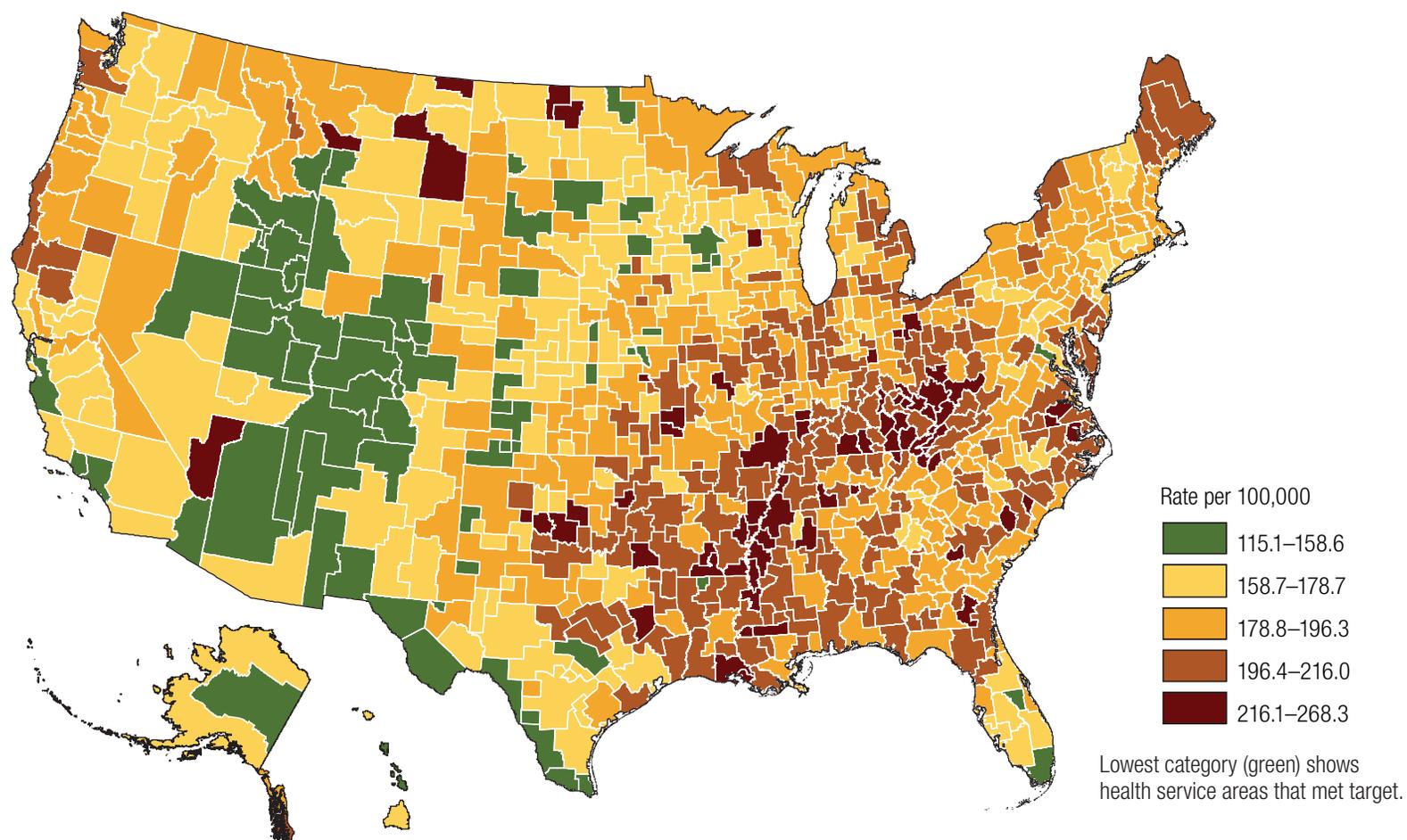
^{iv} Reliability criterion for best group rate not met, or data available for only one group, at baseline. Change in disparity cannot be assessed. See [Technical Appendix](#).

^v Data include persons of Hispanic origin.

DATA SOURCES

- 3-1–3-8. National Vital Statistics System—Mortality (NVSS-M), CDC, NCHS.
- 3-9a. Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPHP.
- 3-9b. National Health Interview Survey (NHIS), CDC, NCHS.
- 3-11a–b. National Health Interview Survey (NHIS), CDC, NCHS.
- 3-12a–b. National Health Interview Survey (NHIS), CDC, NCHS.
- 3-13. National Health Interview Survey (NHIS), CDC, NCHS.
- 3-15. Surveillance, Epidemiology, and End Results (SEER) Program, NIH, NCI.

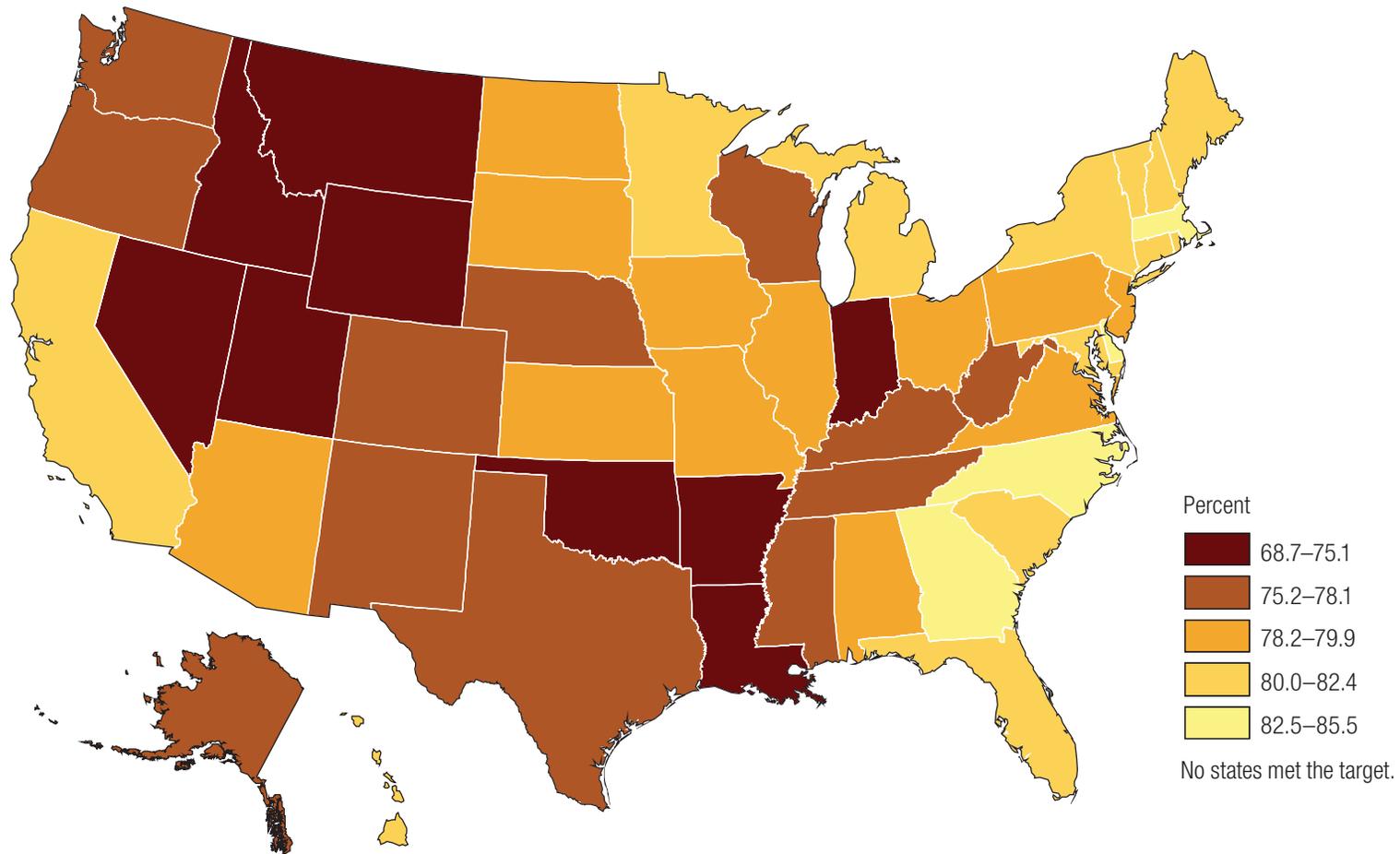
Figure 3-3. Overall Cancer Deaths, 2005–07
 Healthy People 2010 objective 3-1 • Target = 158.6 per 100,000



NOTES: Data are for ICD-10 codes C00–C97 reported as underlying cause. Data are age adjusted to the 2000 standard population. Rates are displayed by a modified Jenks classification for U.S. health service areas.

SOURCE: National Vital Statistics System—Mortality (NVSS-M), CDC, NCHS.

Figure 3-4. Women who Received a Pap Test Within Past 3 Years (Age 18+), 2008
Healthy People 2010 objective 3-11b • Target = 90 percent



NOTES: Data are age adjusted to the 2000 standard population. Rates are displayed by a modified Jenks classification for U.S. states. National data for the objective come from the National Health Interview Survey (NHIS) and are the basis for setting the target. State data from BRFSS may not be comparable with national data from NHIS. The U.S. rate in 2008 from NHIS was 75.6%. The rate for all states combined from BRFSS in 2008 was 79.2%.

SOURCE: Behavioral Risk Factor Surveillance System (BRFSS), CDC, NCCDPHP.

