



Diabetes >

CHAPTER 5

Co-Lead Agencies

Centers for Disease Control and Prevention
National Institutes of Health, National Institute of Diabetes and
Digestive and Kidney Diseases

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GOAL:

Through prevention programs, reduce the disease and economic burden of diabetes, and improve the quality of life for all persons who have or are at risk for diabetes.



This chapter includes objectives that track new cases of diabetes, diabetes-related deaths, the diagnosis and treatment of diabetes and related conditions, and diabetes education.

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 for the objectives in this Focus Area during the past decade [1]. Seventy-one percent of the Diabetes objectives with data to measure progress moved toward or achieved their Healthy People 2010 targets (Figure 5-1). Most of the health disparities observed by race and ethnicity, sex, education level, and disability status ranged from 10% to 99% in magnitude; larger disparities are discussed below (Figure 5-2) [2].
- › The rate of new cases of diabetes (objective 5-2) increased 45.5% from 1997–99 to 2006–08, from 5.5 to 8.0 per 1,000 population aged 18–84 (age adjusted), moving away from the Healthy People 2010 target of 3.8 per 1,000. Disparities were observed for a number of population groups, for example:
 - Among education groups, persons with at least some college education had the lowest (best) rate of new cases of diabetes, 6.9 per 1,000 population aged 25–84 (age adjusted) in 2006–08. Persons with less than a high school education had a rate of 14.0 per 1,000 population aged 25–84 (age adjusted). The rate for persons with less than a high school education was about twice the best group rate [2].
 - Among disability status groups, persons without disabilities had the lowest (best) rate of new cases of diabetes, 6.3 per 1,000 population aged 18–84 (age adjusted) in 2006–08. Persons with disabilities had a rate of 18.5 per 1,000 population aged 18–84 (age adjusted), nearly three times the best group rate [2].
- › The prevalence of diabetes (objective 5-3) increased 47.5% between 1997 and 2008, from 40 to 59 per 1,000 population (age adjusted), moving away from the 2010 target of 25 per 1,000. Disparities were observed for a number of population groups, for example:
 - Among racial and ethnic groups, the non-Hispanic white population had the lowest (best) diabetes prevalence rate, 52 per 1,000 population (age adjusted) in 2008, whereas the American Indian or Alaska Native population had a rate of 109 per 1,000 population (age adjusted). The rate for the American Indian or Alaska Native population was more than twice the best group rate [2].

- Among disability status groups, persons without disabilities had the lowest (best) diabetes prevalence rate, 43 per 1,000 population (age adjusted) in 2008. Persons with disabilities had a rate of 120 per 1,000 population (age adjusted), almost three times the best group rate [2].
- › The prevalence of diabetes varied by geographic region. West Virginia and several southern states (Alabama, Georgia, Louisiana, Mississippi Tennessee, and Texas) had the highest rates of diabetes (Figure 5-3).
- › The proportion of persons aged 20 and over with diabetes whose condition had been diagnosed (objective 5-4) increased 20.3% from 1988–94 to 2005–08, from 64% to 77% (age adjusted), moving toward the 2010 target of 78%.
- › The diabetes-related death rate among the total population (objective 5-5) declined 5.2% between 1999 and 2007, from 77 to 73 per 100,000 population (age adjusted), moving toward the 2010 target of 46 per 100,000. Disparities were observed for a number of population groups, for example:
 - Among racial and ethnic groups, the combined Asian or Pacific Islander population had the lowest (best) rate of diabetes-related deaths, 54 per 100,000 population (age adjusted) in 2007. The non-Hispanic black population had a rate of 127 per 100,000 population (age adjusted), nearly two and a half times the best group rate [2].
- › The rate of lower extremity amputation in persons with diabetes (objective 5-10) declined 47.0% from 1997–99 to 2005–07, from 6.6 to 3.5 per 1,000 population (age adjusted), moving toward the 2010 target of 2.9 per 1,000.
 - Females had a lower (better) rate of lower extremity amputations than males. The rate for females was 2.2 per 1,000 population (age adjusted) in 2005–07. The rate for males was 4.8 per 1,000 population (age adjusted), more than twice the rate for females [2].
- › No change was observed in the percentage of persons with diabetes who received annual foot examinations (objective 5-14) or annual dental examinations (objective 5-15). The percentage of persons with diabetes aged 18 and over who received an annual foot examination was 68% (age adjusted) in both 1998 and 2008. The percentage of persons with diabetes aged 2 years and over who had annual dental examinations was 56% (age adjusted) in both 1997 and 2008.

Summary of Progress

- › Figure 5-1 presents a quantitative assessment of progress in achieving the Healthy People 2010 objectives for Diabetes [1]. Data to measure progress toward target attainment were available for 14 objectives. Of these:
 - Five objectives (5-6, 5-7, 5-11, 5-12, and 5-17) met or exceeded the Healthy People 2010 targets.
 - Five objectives moved toward their targets. A statistically significant difference between the baseline and the final data points was observed for four of these objectives (5-1, 5-4, 5-5, and 5-10); no significant difference was observed for the remaining objective (5-13).
 - Two objectives (5-14 and 5-15) showed no change.
 - Two objectives (5-2 and 5-3) moved away from their targets. A statistically significant difference between the baseline and final data point was observed for both of these objectives.
- › Follow-up data were unavailable to measure progress for one objective (5-16). Two objectives (5-8 and 5-9) were deleted at the Midcourse Review.
- › Figure 5-2 displays health disparities in Diabetes 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 11 objectives with statistically significant racial and ethnic health disparities of 10% or more, the non-Hispanic white population had the unique best rate for six objectives (5-1 through 5-3, 5-12, 5-13, and 5-16). The combined Asian or Pacific Islander population had the best rate for two objectives (5-5 and 5-11) and the Hispanic or Latino population and non-Hispanic black population each had the unique best rate for one objective (5-7 and 5-14, respectively). In addition, the non-Hispanic black and non-Hispanic white populations were tied for the best rate for one objective (5-17).
 - For all five objectives with statistically significant health disparities of 10% or more by sex, females had better rates than males (objectives 5-5 through 5-7, 5-10, and 5-17).
 - Persons with at least some college education had the best rate for 9 of the 10 objectives with statistically significant health disparities of 10% or more by education level (objectives 5-1 through 5-3, 5-5, 5-7, 5-12, and 5-13 through 5-15). Persons with less than a high school education had the best rate for one objective (5-17).

- Persons without disabilities had better rates than persons with disabilities for the two objectives with statistically significant health disparities of 10% or more by disability status (objectives 5-2 and 5-3; see Highlights).
- Health disparities of 100% or more were observed for four objectives (5-2, 5-3, 5-5, and 5-10; see Highlights).

Transition to Healthy People 2020

For Healthy People 2020, the focus of the Diabetes Topic Area has been expanded to include more objectives on diabetes prevention and control. See [HealthyPeople.gov](https://www.healthypeople.gov) for a complete list of Healthy People 2020 topics and objectives.

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

- › The Healthy People 2020 Diabetes Topic Area includes 20 objectives, three of which are developmental, whereas the Healthy People 2010 Diabetes Focus Area had 17 objectives, including two (objectives 5-8 and 5-9) that were deleted at the Midcourse Review [4].
- › Nine Healthy People 2010 objectives, including diabetes incidence (objective 5-2), diabetes-related deaths (objective 5-5), lower extremity amputations (objective 5-10), annual urinary microalbumin measurement (objective 5-11), A1C test at least two times a year (objective 5-12), annual dilated eye examination (objective 5-13), annual foot examination (objective 5-14), annual dental examination (objective 5-15), and self blood-glucose monitoring (objective 5-17) were retained “as is” [5].
- › Two Healthy People 2010 objectives were modified [6]. The objectives tracking diabetes education (objective 5-1) and persons with diagnosed diabetes (objective 5-4) will be measured differently in Healthy People 2020.
- › Four Healthy People 2010 objectives were archived: the prevalence of diabetes (objective 5-3), two objectives related to deaths among persons with diabetes (objectives 5-6 and 5-7), and aspirin therapy (objective 5-16) [7].
- › Nine new objectives were added to the Healthy People 2020 Diabetes Topic Area:
 - Four new objectives on control of diabetes and its complications include the proportion of the

diabetic population with hemoglobin A1C test values greater than 9%, and A1C less than 7%, as well as blood pressure control and cholesterol control among the population with diabetes.

- Three new objectives on diabetes prevention focus on persons at high risk for diabetes with pre-diabetes who report increasing physical activity, trying to lose weight, and reducing fat or calories in the diet.
- Two new objectives were added to replace the archived mortality objectives: total mortality among the population with diabetes, and cardiovascular disease deaths in persons with diabetes.

[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 5-3 presents state-level data for diabetes prevalence (objective 5-3) 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 targets. BRFSS data may not be comparable with the national data from NHIS. The BRFSS state rates are for the population aged 18 and over. The NHIS national rate includes all ages.

Beginning in 2003, education data for mortality objectives 5-5, 5-6, and 5-7 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 [8].

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.

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 5-1), 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 5-1 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 5-2). 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 5-2 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 5-2 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. Archived objectives had at least one data point in Healthy People 2010 but were not carried forward into Healthy People 2020.
8. 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: Diabetes

Objective	Description	Data Source or Objective Status
5-1	Diabetes education (age adjusted, 18+ years)	National Health Interview Survey (NHIS), CDC, NCHS.
5-2	New cases of diabetes (3-year average, age adjusted, per 1,000 population, 18–84 years)	National Health Interview Survey (NHIS), CDC, NCHS.
5-3	Prevalence of diabetes (age adjusted, per 1,000 population)	National Health Interview Survey (NHIS), CDC, NCHS.
5-4	Proportion of persons with diagnosed diabetes (age adjusted, 20+ years)	National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.
5-5	Diabetes-related deaths (age adjusted, per 100,000 population)	National Vital Statistics System—Mortality (NVSS-M), CDC, NCHS.
5-6	Diabetes-related deaths among persons with diabetes (age adjusted, per 1,000 population)	National Vital Statistics System—Mortality (NVSS-M), CDC, NCHS; National Health Interview Survey (NHIS), CDC, NCHS.
5-7	Cardiovascular disease deaths among persons with diabetes (age adjusted, per 100,000 population)	National Vital Statistics System—Mortality (NVSS-M), CDC, NCHS; National Health Interview Survey (NHIS), CDC, NCHS.
5-8	Gestational diabetes among pregnant women	Deleted at the Midcourse Review.
5-9	Foot ulcers among persons with diabetes	Deleted at the Midcourse Review.
5-10	Lower extremity amputations in persons with diabetes (3-year average, age adjusted, per 1,000 population)	National Hospital Discharge Survey (NHDS), CDC, NCHS; National Health Interview Survey (NHIS), CDC, NCHS.
5-11	Annual urinary microalbumin measurement among Medicare beneficiaries with diabetes	United States Renal Data System (USRDS), NIH, NIDDK.
5-12	A1C Test, at least twice a year among persons with diabetes (age adjusted, 18+ years)	Behavioral Risk Factor Surveillance System (BRFSS), CDC, NCCDPHP.
5-13	Annual dilated eye examinations among persons with diabetes (age adjusted, 18+ years)	National Health Interview Survey (NHIS), CDC, NCHS.
5-14	Annual foot examinations among persons with diabetes (age adjusted, 18+ years)	Behavioral Risk Factor Surveillance System (BRFSS), CDC, NCCDPHP.
5-15	Annual dental examinations among persons with diabetes (age adjusted, 2+ years)	National Health Interview Survey (NHIS), CDC, NCHS.
5-16	Aspirin intake 15+ times per month among persons with diabetes (age adjusted, 40+ years)	National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.
5-17	Self blood-glucose monitoring at least once daily among persons with diabetes (age adjusted, 18+ years)	Behavioral Risk Factor Surveillance System (BRFSS), CDC, NCCDPHP.

Figure 5-1. Progress Toward Target Attainment for Focus Area 5: Diabetes

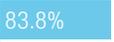
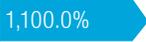
LEGEND		 Moved away from target ¹	 Moved toward target	 Met or exceeded target				
Objective	Percent of targeted change achieved ²	2010 Target	Baseline (Year)	Final (Year)	Baseline vs. Final			
					Difference ³	Statistically Significant ⁴	Percent Change ⁵	
5-1. Diabetes education (age adjusted, 18+ years)	 66.7%	60%	45% (1998)	55% (1999)	10	Yes	22.2%	
5-2. New cases of diabetes (3-year average, age adjusted, per 1,000 population, 18–84 years)		3.8	5.5 (1997–99)	8.0 (2006–08)	2.5	Yes	45.5%	
5-3. Prevalence of diabetes (age adjusted, per 1,000 population)		25	40 (1997)	59 (2008)	19	Yes	47.5%	
5-4. Proportion of persons with diagnosed diabetes (age adjusted, 20+ years)	 92.9%	78%	64% (1988–94)	77% (2005–08)	13	Yes	20.3%	
5-5. Diabetes-related deaths (age adjusted, per 100,000 population)	 12.9%	46	77 (1999)	73 (2007)	-4	Yes	-5.2%	
5-6. Diabetes-related deaths among persons with diabetes (age adjusted, per 1,000 population)	 250.0%	7.8	8.8 (1999)	6.3 (2007)	-2.5	Yes	-28.4%	
5-7. Cardiovascular disease deaths among persons with diabetes (age adjusted, per 100,000 population)	 384.8%	299	332 (1999)	205 (2007)	-127	Yes	-38.3%	
5-10. Lower extremity amputations in persons with diabetes (3-year average, age adjusted, per 1,000 population)	 83.8%	2.9	6.6 (1997–99)	3.5 (2005–07)	-3.1	Yes	-47.0%	
5-11. Annual urinary microalbumin measurement among Medicare beneficiaries with diabetes	 1,100.0%	14%	12% (2000)	34% (2007)	22	Yes	183.3%	
5-12. A1C Test, at least twice a year among persons with diabetes (age adjusted, 18+ years)	 100.0%	65%	59% (2000)	65% (2008)	6	Yes	10.2%	
5-13. Annual dilated eye examinations among persons with diabetes (age adjusted, 18+ years)	 14.8%	76%	49% (1998)	53% (2008)	4	No	8.2%	
5-14. Annual foot examinations among persons with diabetes (age adjusted, 18+ years)	0.0%	91%	68% (1998)	68% (2008)	0	No	0.0%	
5-15. Annual dental examinations among persons with diabetes (age adjusted, 2+ years)	0.0%	71%	56% (1997)	56% (2008)	0	No	0.0%	
5-17. Self blood-glucose monitoring at least once daily among persons with diabetes (age adjusted, 18+ years)	 116.7%	61%	43% (1998)	64% (2008)	21	Yes	48.8%	

Figure 5-1. Progress Toward Target Attainment for Focus Area 5: Diabetes (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 objective 5-16. Objectives 5-8 and 5-9 were deleted at the Midcourse Review.

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

- 5-1–5-3. National Health Interview Survey (NHIS), CDC, NCHS.
- 5-4. National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.
- 5-5. National Vital Statistics System—Mortality (NVSS-M), CDC, NCHS.
- 5-6–5-7. National Vital Statistics System—Mortality (NVSS-M), CDC, NCHS; National Health Interview Survey (NHIS), CDC, NCHS.
- 5-10. National Hospital Discharge Survey (NHDS), CDC, NCHS; National Health Interview Survey (NHIS), CDC, NCHS.
- 5-11. United States Renal Data System (USRDS), NIH, NIDDK.
- 5-12. Behavioral Risk Factor Surveillance System (BRFSS), CDC, NCCDPHP.
- 5-13. National Health Interview Survey (NHIS), CDC, NCHS.
- 5-14. Behavioral Risk Factor Surveillance System (BRFSS), CDC, NCCDPHP.
- 5-15. National Health Interview Survey (NHIS), CDC, NCHS.
- 5-17. Behavioral Risk Factor Surveillance System (BRFSS), CDC, NCCDPHP.

Figure 5-2. Health Disparities Table for Focus Area 5: Diabetes

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							Summary index	Sex		Education				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		Female	Male	Less than high school	High school graduate	At least some college	Summary index	Urban or metropolitan	Rural or nonmetropolitan	Persons with disabilities	Persons without disabilities
5-1. Diabetes education (age adjusted, 18+ years) (1998, 1999) ¹							B		B				B		B		B ⁱ	
5-2. New cases of diabetes (3-year average, age adjusted, per 1,000 population, 18–84 years) (1997–99, 2006–08) ²							B		B				B		B			B
5-3. Prevalence of diabetes (age adjusted, per 1,000 population) (1997, 2008) ¹							B	ii	B ⁱ				B		B ⁱ			B
5-4. Proportion of persons with diagnosed diabetes (age adjusted, 20+ years) (1988–94, 2005–08) ³					iii													
5-5. Diabetes-related deaths (age adjusted, per 100,000 population) (1999, 2007) ⁴									B	↑			B	↑				
5-6. Diabetes-related deaths among persons with diabetes (age adjusted, per 1,000 population) (1999, 2007) ⁴					b		B		B									
5-7. Cardiovascular disease deaths among persons with diabetes (age adjusted, per 100,000 population) (1999, 2007) ⁴					B			↓	B	↑			B	↓				
5-10. Lower extremity amputations in persons with diabetes (3-year average, age adjusted, per 1,000 population) (1997–99, 2005–07)						v	v		B									
5-11. Annual urinary microalbumin measurement among Medicare beneficiaries with diabetes (2000, 2007)	↑									B								
5-12. A1C Test, at least twice a year among persons with diabetes (age adjusted, 18+ years) (2000, 2008) ⁵	b	b	b				B			B			B	↑				
5-13. Annual dilated eye examinations among persons with diabetes (age adjusted, 18+ years) (1998, 2008) ¹							B	ii	B ⁱ				B					
5-14. Annual foot examinations among persons with diabetes (age adjusted, 18+ years) (1998, 2008) ⁵							B ⁱ	ii	B ⁱ	B			B					
5-15. Annual dental examinations among persons with diabetes (age adjusted, 2+ years) (1997, 2008) ¹							B			B ⁱ			B					B
5-16. Aspirin intake 15+ times per month among persons with diabetes (age adjusted, 40+ years) (1999–2002)					iii		B			B			B					
5-17. Self blood-glucose monitoring at least once daily among persons with diabetes (age adjusted, 18+ years) (1998, 2008) ⁵	b						B ⁱ	B	B		B ⁱ	↑	↑	↑				

Figure 5-2. Health Disparities Table for Focus Area 5: Diabetes (continued)

NOTES

See DATA2010 at <http://wonder.cdc.gov/data2010> for all Healthy People 2010 tracking data. Objectives 5-8 and 5-9 were deleted at Midcourse Review.

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.			

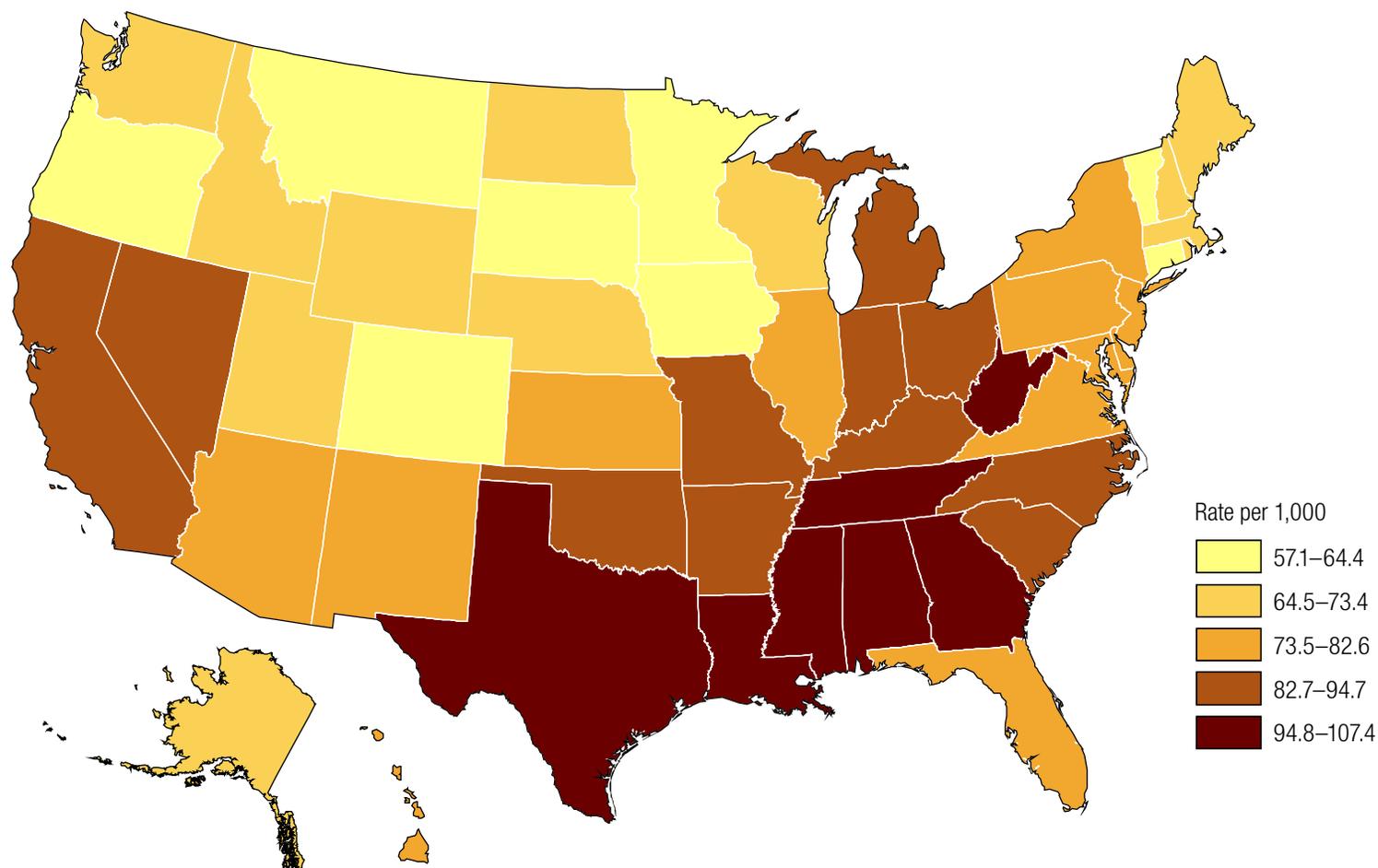
FOOTNOTES

- ¹ Baseline data by race and ethnicity are for 1999.
- ² Baseline data by race and ethnicity are for 1999–2001.
- ³ Baseline data by disability status are for 1991–94.
- ⁴ Most recent data by education level are for 2002.
- ⁵ Baseline data for race and ethnicity are for 2001.
- ⁱ 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](#).
- ⁱⁱ Change in the summary index cannot be assessed. See [Technical Appendix](#).
- ⁱⁱⁱ Data are for Mexican American.
- ^{iv} Data are for Asian or Pacific Islander.
- ^v Data include persons of Hispanic origin.

DATA SOURCES

- 5-1–5-3. National Health Interview Survey (NHIS), CDC, NCHS.
- 5-4. National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.
- 5-5. National Vital Statistics System—Mortality (NVSS-M), CDC, NCHS.
- 5-6–5-7. National Vital Statistics System—Mortality (NVSS-M), CDC, NCHS; National Health Interview Survey (NHIS), CDC, NCHS.
- 5-10. National Hospital Discharge Survey (NHDS), CDC, NCHS; National Health Interview Survey (NHIS), CDC, NCHS.
- 5-11. United States Renal Data System (USRDS), NIH, NIDDK.
- 5-12. Behavioral Risk Factor Surveillance System (BRFSS), CDC, NCCDPHP.
- 5-13. National Health Interview Survey (NHIS), CDC, NCHS.
- 5-14. Behavioral Risk Factor Surveillance System (BRFSS), CDC, NCCDPHP.
- 5-15. National Health Interview Survey (NHIS), CDC, NCHS.
- 5-16. National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.
- 5-17. Behavioral Risk Factor Surveillance System (BRFSS), CDC, NCCDPHP.

Figure 5-3. Prevalence of Diabetes (Age 18+), 2008
Healthy People 2010 objective 5-3 • Target = 25 per 1,000[†]



NOTES: Data are age adjusted to the 2000 standard population. Rates are displayed by a 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 was 59 per 1,000 population of all ages. The rate for all states combined from BRFSS in 2008 was 83.5 per 1,000 population aged 18 and over.

[†] BRFSS state-based rates are for population aged 18 and over; NHIS national rate is for all ages.

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