

**Midcourse
Review**



Section 1. Health of the Nation

Healthy People 2010 Midcourse Review Executive Summary

Introduction

Healthy People 2010

Healthy People 2010 provides a vision for achieving improved health for all Americans. Developed through a national process, Healthy People 2010 identifies a set of 10-year health objectives to achieve during the first decade of the 21st century. It has two overarching goals—to increase quality and years of healthy life and to eliminate health disparities. These goals are supported by specific objectives in 28 focus areas.

Healthy People 2010 builds on initiatives pursued over the past few decades. Initiated in 1979 with the publication of *Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention*, established in 1980 with the publication of *Healthy People: Objectives for the Nation*, and followed in 1990 by the publication of *Healthy People 2000: National Health Promotion and Disease Prevention Objectives*, Healthy People 2010 continues a management-by-objective planning process.

Through Healthy People 2010, the U.S. Department of Health and Human Services (HHS) sets out objectives addressing improvements in health status, risk reduction, public and professional awareness of prevention, delivery of health services, protective measures, surveillance, and evaluation, expressed in terms of measurable targets to be achieved by the year 2010. Like its predecessors, Healthy People 2010 was developed through a broad consultative process, makes use of the best scientific knowledge available, and is designed to measure progress over time.

Full achievement of the goals and objectives of Healthy People 2010 depends on a health system reaching all Americans and integrating personal health care and population-based public health. The vision of Healthy People in healthy communities involves broad-based prevention efforts and moves beyond what happens in physicians' offices, clinics, and hospitals—beyond the traditional medical care system—to the neighborhoods, schools, workplaces, and families in which people live their daily lives. These are the environments in which a large portion of prevention occurs.

The 28 focus areas of Healthy People 2010 were developed by the lead Federal agencies with the most relevant scientific expertise. The development process was informed by the Healthy People Consortium—an alliance of more than 350 national membership organizations and 250 State health, mental health, substance abuse, and environmental agencies. In addition, through a series of regional and national meetings and an interactive website, more than 11,000 public comments on the draft objectives were received. The Secretary's Council on National Health Promotion and Disease Prevention Objectives for 2010 also provided leadership and advice in the development of national health objectives. More information is available at www.healthypeople.gov.

Healthy People 2010 Midcourse Review

Midway through the decade, the midcourse review assessed the status of the national objectives. The midcourse review is the process through which HHS, Federal agencies, and other experts across the Nation assessed the data trends during the first half of the decade, considered new science and available data, and made changes to ensure that Healthy People 2010 remains current, accurate, and relevant, while concurrently considering emerging public health priorities. The midcourse review uses data made available by January 2005. Public comments on the changes at the midcourse to the Healthy People 2010 objectives and subobjectives were solicited in August and September 2005.

Changes to Healthy People 2010 Objectives at the Midcourse Review

The changes to the Healthy People 2010 objectives and subobjectives included establishing baselines and targets for developmental objectives, changing the wording of objectives and subobjectives, deleting objectives and subobjectives, adding new subobjectives, and revising baselines and targets. At the beginning of the decade, baseline data were not available for a number of Healthy People 2010 objectives. These developmental objectives provided a vision for a desired outcome or health status. As stated in *Healthy People 2010*: “Most developmental objectives have a potential data source with a reasonable expectation of data points by the year 2004 to facilitate setting 2010 targets in the mid-decade review.” Many developmental objectives and subobjectives (that is, objectives and subobjectives without baselines) became measurable at the midcourse based on the identification of baseline data since the beginning of the decade. Where the objective or subobjective became measurable, the “developmental” designation was removed. Developmental objectives and subobjectives with no national baseline data source were deleted as part of the midcourse review assessment. Those developmental objectives and subobjectives that remained developmental through the midcourse review and were not deleted have had a data source identified for them, with baseline data anticipated before the end of the decade. Other objectives and subobjectives were revised to reflect the most current science, more accurately reflect the data, or provide a more logical or understandable presentation.

Measuring Healthy People 2010 Progress Throughout the Decade

Progress Reviews

In addition to the midcourse review, progress reviews on the individual focus areas are conducted, 1 each month, until the full cycle of 28 is completed. Two cycles of these reviews are held during the decade. The progress reviews are formal meetings, chaired by the Assistant Secretary for Health, where the National Center for Health Statistics (NCHS) within HHS provides data updates for the focus area under review, and Federal lead agencies for the focus area report on their progress and initiatives. More information is available at www.healthypeople.gov/data/progrvw.

DATA2010

A critical part of Healthy People 2010 is measuring progress toward the targets for the year 2010. The compilation and management of current health data sources are central to assessing and implementing the national disease prevention and health promotion goals and objectives. DATA2010, developed by the Health Promotion Statistics Branch at NCHS, is an interactive database system and contains the

most recent monitoring data for tracking Healthy People 2010. Data are included for all the measurable objectives and subobjectives. DATA2010 contains primarily national data. State-based data are provided when available. The data on which the midcourse review is based are available on DATA2010. More information is available at <http://wonder.cdc.gov/data2010>.

Initiatives Related to Healthy People 2010

HealthierUS

HealthierUS and Healthy People 2010 share the overarching goal of helping people live longer and healthier lives. *HealthierUS* aims to achieve this goal through four basic components called pillars. The pillars are “physical fitness,” “nutrition,” “prevention,” and “make healthy choices.” Healthy People 2010 directly addresses physical fitness and nutrition in Physical Activity and Fitness (Focus Area 22) and in Nutrition and Overweight (Focus Area 19), respectively. While Healthy People 2010 broadly addresses the *HealthierUS* prevention pillar, it is explicitly addressed by a number of objectives within the Healthy People 2010 focus areas that highlight preventive screenings, such as those identified in Cancer (Focus Area 3). The make healthy choices pillar is also addressed in several Healthy People 2010 focus areas, including Tobacco Use (Focus Area 27), Injury and Violence Prevention (Focus Area 15), and Substance Abuse (Focus Area 26). More information is available at www.healthierus.gov.

Steps to a HealthierUS

Steps to a HealthierUS supports evidence-based community programs and interventions focused on reducing the burden of chronic diseases, including diabetes, obesity, and asthma, and related risk behaviors throughout the Nation. Like Healthy People 2010, this initiative aims to help people live longer and healthier lives. It also links to Healthy People 2010 directly through DATA2010 by explicitly using Healthy People objectives to assess progress. Programs under *Steps to a HealthierUS* work together to guide States and communities throughout the Nation toward improving health status. More information is available at www.healthierus.gov/steps.

Secretary's Top Priorities

HHS Secretary Mike Leavitt's *500-Day Plan* and *Priority Activities* are management tools for HHS on areas of primary focus. One of the areas is prevention. The prevention priority recognizes that the risk of many diseases and health conditions is reduced through preventive actions and that a culture of wellness deters or diminishes debilitating and costly health events. The prevention priority will, therefore, build on HHS prevention policy and programs that are based on the best available evidence on how to prevent or mitigate chronic disease through promotion of healthy lifestyle choices, medical screenings, and avoidance of risky behaviors. Healthy People 2010 objectives and subobjectives can serve as a means of measuring progress in achieving the Secretary's prevention priority. The *500-Day Plan*, *Priority Activities*, and *250-Day Update* are located at www.hhs.gov/secretaryspace.html.

Guide to Clinical Preventive Services

The *Guide to Clinical Preventive Services* includes U.S. Preventive Services Task Force (USPSTF) recommendations on screening, counseling, and preventive medication topics, as well as clinical considerations for each topic. Sponsored since 1998 by the Agency for Healthcare Research and Quality, the USPSTF is an independent panel of experts in primary care and prevention that systematically reviews the evidence of effectiveness and develops recommendations for clinical preventive services.

The task force rigorously evaluates clinical research to assess the merits of preventive measures. The clinical categories are cancer; heart and vascular disease; injury and violence; infectious diseases; mental health conditions and substance abuse; metabolic, nutrition, and endocrine conditions; musculoskeletal conditions; obstetrics and gynecologic conditions; pediatric disorders; and vision and hearing disorders. More information is available at www.ahrq.gov/clinic/cps3dix.htm.

Guide to Community Preventive Services

The *Guide to Community Preventive Services* serves as a filter for scientific literature on specific health problems that can have a large-scale impact on groups of people who share a common community setting. This guide summarizes what is known about the effectiveness, economic efficiency, and feasibility of interventions to promote community health and prevent disease. The Task Force on Community Preventive Services, an independent decisionmaking body convened by HHS, makes recommendations for the use of various interventions based on the evidence gathered in rigorous and systematic scientific reviews of published studies conducted by review teams for the guide. The findings from the reviews are published in peer-reviewed journals and also are made available online. The task force has published over 100 findings across 16 topic areas, including tobacco use, physical activity, cancer, oral health, diabetes, motor vehicle occupant injury, vaccine-preventable diseases, prevention of injuries due to violence, and social environment. More information is available at www.thecommunityguide.org.

Summary of Progress

Healthy People 2010 is a comprehensive, national health promotion and disease prevention agenda.¹ It is a roadmap for improving the health of all people in the United States during the first decade of the 21st century. This midcourse review provides an opportunity to assess the progress that has been made during the first half of the decade. This assessment is based on 467 objectives and 2 overarching goals:

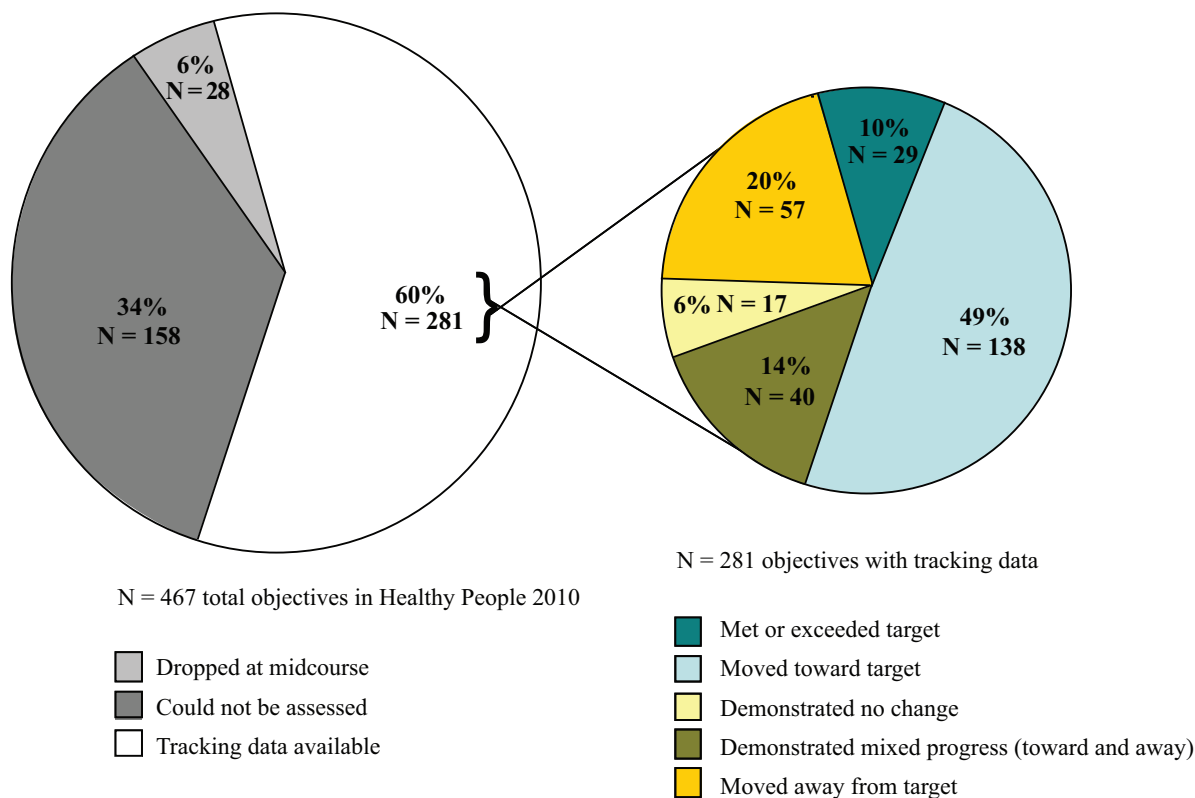
- Goal 1: Increase quality and years of healthy life
- Goal 2: Eliminate health disparities

Healthy People Objectives

Through the midcourse review, the status of 467 specific objectives in 28 focus areas was assessed. One hundred forty-two of these objectives consist of two or more subobjectives that identify specific aspects of an objective (such as types of vaccines and types of air pollutants). Altogether, there are 955 objectives and subobjectives. Baseline values were established for each objective and subobjective with data at the beginning of the decade, and specific targets were set to be achieved by the year 2010. Progress was assessed for objectives and subobjectives with tracking data (that is, with baseline data and data more recent than the baseline) as of January 2005. More recent data are monitored as they become available. The DATA2010 database has been updated since January 2005; these data are not reflected in this midcourse review.

The status of the 467 objectives as of January 2005 is shown on the left side of Figure 1. Based on an evaluation of each objective and comments received from the public as part of the midcourse review process, 28 objectives were deleted because data were not available or because of a change in science.

Figure 1. Healthy People 2010 Objectives: Status at the Midcourse and Summary of Progress Toward Target Attainment



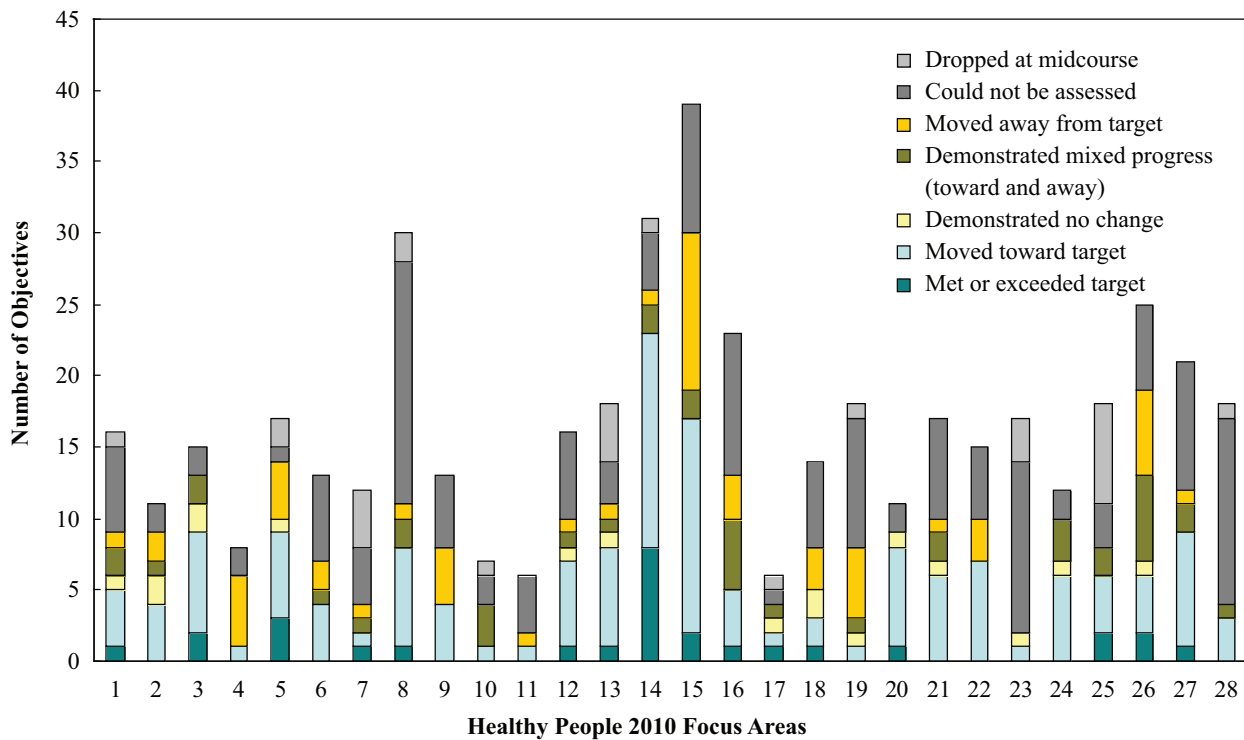
As of January 2005, tracking data were not available to assess progress for 158 objectives (34 percent of the total). Baseline data were not available, but are anticipated by the end of the decade, for 87 of these objectives. Timely availability of data continues to be an issue in monitoring the health of the Nation.

Progress can be assessed for the 281 objectives with tracking data available (right side of Figure 1):

- Twenty-nine objectives (10 percent) met the target.
- One hundred thirty-eight objectives (49 percent) moved toward the target.
- Forty objectives (14 percent) demonstrated mixed progress because they included subobjectives that moved toward and away from the target.
- Seventeen objectives (6 percent) demonstrated no change from the baseline.
- Fifty-seven objectives (20 percent) moved away from the target.

In Figure 2 and Table 1, similar assessments are shown for each of the 28 focus areas. In all focus areas, there are some objectives that met, exceeded, or moved toward the target. In Cancer (Focus Area 3), Diabetes (Focus Area 5), Immunization and Infectious Diseases (Focus Area 14), and Occupational Safety and Health (Focus Area 20), more than half of the objectives met or moved toward their targets. The proportion of objectives that could not be assessed is relatively large in Environmental Health (Focus Area 8), Health Communication (Focus Area 11), Public Health Infrastructure (Focus Area 23), and Vision and Hearing (Focus Area 28). Progress for objectives in each focus area is discussed further in the focus area chapters of this report.

Figure 2. Healthy People 2010 Objectives: Status at the Midcourse by Focus Area



Objectives and Subobjectives

Of the 955 objectives and subobjectives, a total of 67 objectives and subobjectives were dropped at the midcourse, and 381 objectives and subobjectives lacked tracking data. On the right side of Figure 3, progress is assessed for the 507 objectives and subobjectives with data at the baseline and data for the most recent data point available in the Healthy People data system as of January 2005:

- Three hundred fifty-six objectives and subobjectives (70 percent) met, exceeded, or moved toward the target.
- Seventy objectives and subobjectives (14 percent) met the target.
- Two hundred eighty-six objectives and subobjectives (56 percent) moved toward the target.
- Thirty-eight objectives and subobjectives (8 percent) demonstrated no change.
- One hundred thirteen objectives and subobjectives (22 percent) moved away from the target.

In Figure 4 and Table 2, similar assessments are shown for objectives and subobjectives combined for each of the 28 focus areas.

Population Groups

In Figure 5, progress is assessed for specific populations. This assessment is limited to population-based objectives and subobjectives with tracking data for populations. It does not include nonpopulation-based objectives and subobjectives, such as those based on States, worksites, or a number of events as the target. The number of objectives and subobjectives with tracking data varies according to the characteristic. For Healthy People 2010, all population-based objectives are monitored by race and ethnicity, but

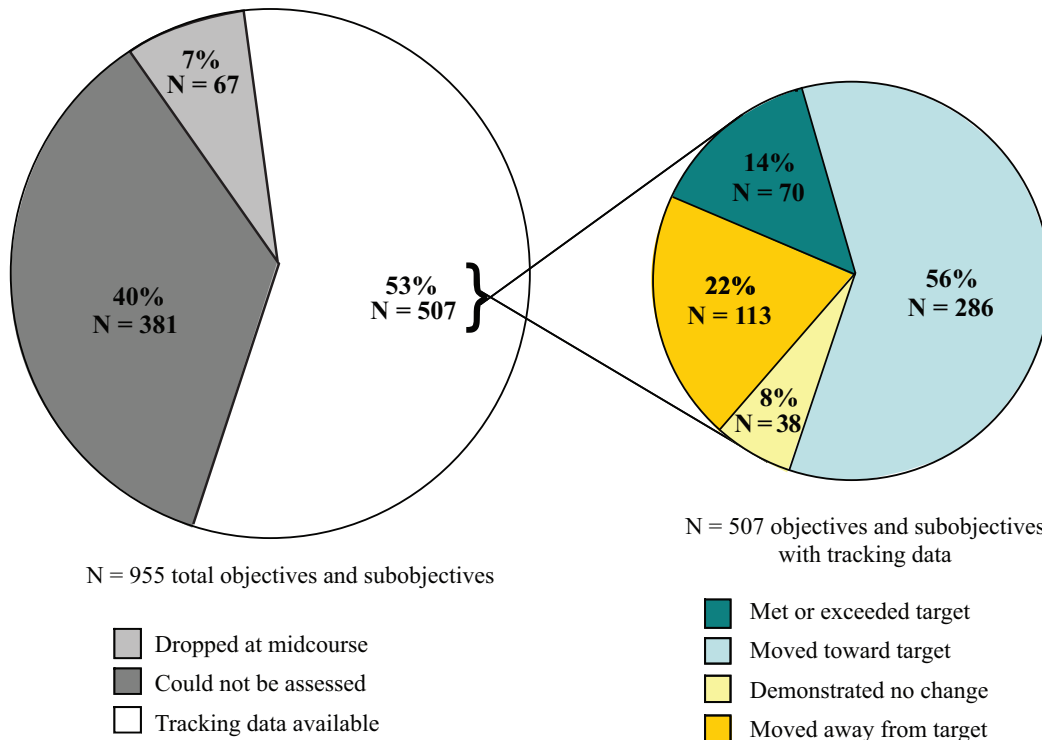
Table 1. Healthy People 2010 Objectives: Summary of Progress for Each Focus Area

Focus area	Met or exceeded target	Moved toward target	Demonstrated no change	Demonstrated mixed progress	Moved away from target	Could not be assessed	Dropped at midcourse	Total
1. Access to quality health services	1	4	1	2	1	6	1	16
2. Arthritis, osteoporosis, and chronic back conditions	0	4	2	1	2	2	0	11
3. Cancer	2	7	2	2	0	2	0	15
4. Chronic kidney disease	0	1	0	0	5	2	0	8
5. Diabetes	3	6	1	0	4	1	2	17
6. Disability and secondary conditions	0	4	0	1	2	6	0	13
7. Educational and community-based programs	1	1	0	1	1	4	4	12
8. Environmental health	1	7	0	2	1	17	2	30
9. Family planning	0	4	0	0	4	5	0	13
10. Food safety	0	1	0	3	0	2	1	7
11. Health communication	0	1	0	0	1	4	0	6
12. Heart disease and stroke	1	6	1	1	1	6	0	16
13. HIV	1	7	1	1	1	3	4	18
14. Immunization and infectious diseases	8	15	0	2	1	4	1	31
15. Injury and violence prevention	2	15	0	2	11	9	0	39
16. Maternal, infant, and child health	1	4	0	5	3	10	0	23
17. Medical product safety	1	1	1	1	0	1	1	6
18. Mental health and mental disorders	1	2	2	0	3	6	0	14
19. Nutrition and overweight	0	1	1	1	5	9	1	18
20. Occupational safety and health	1	7	1	0	0	2	0	11
21. Oral health	0	6	1	2	1	7	0	17
22. Physical activity and fitness	0	7	0	0	3	5	0	15
23. Public health infrastructure	0	1	1	0	0	12	3	17
24. Respiratory diseases	0	6	1	3	0	2	0	12
25. Sexually transmitted diseases	2	4	0	2	0	3	7	18
26. Substance abuse	2	4	1	6	6	6	0	25
27. Tobacco use	1	9	0	1	1	9	0	21
28. Vision and hearing	0	3	0	1	0	13	1	18
Total	29	138	17	40	57	158	28	467

the availability of data for specific racial and ethnic populations varies. Gender comparisons are not applicable to all population-based objectives and subobjectives because some apply only to females or males. When possible, population-based objectives are also monitored either by education or by income as a measure of socioeconomic status. Geographic location and disability status are optional characteristics included for monitoring selected objectives and subobjectives (see *Tracking Healthy People 2010*, Part A-4, at www.healthypeople.gov/document/html/tracking/thp_parta.htm#population%20template). For each population, the number of objectives and subobjectives is shown for each of the following: moved away from the target, demonstrated no change, moved toward the target, and met or exceeded the target. Because a single target was set for all populations, there are some instances where a population met the Healthy People 2010 target at the baseline. The numbers of these objectives and subobjectives are shown separately in Table 3.

In general, the number of population-based objectives and subobjectives that moved toward the target or for which the target was met at baseline exceeds the number that moved away from the target. For the American Indian or Alaska Native population, for example, 87 objectives and subobjectives moved toward their respective targets, while 41 moved away. This population demonstrated no change between

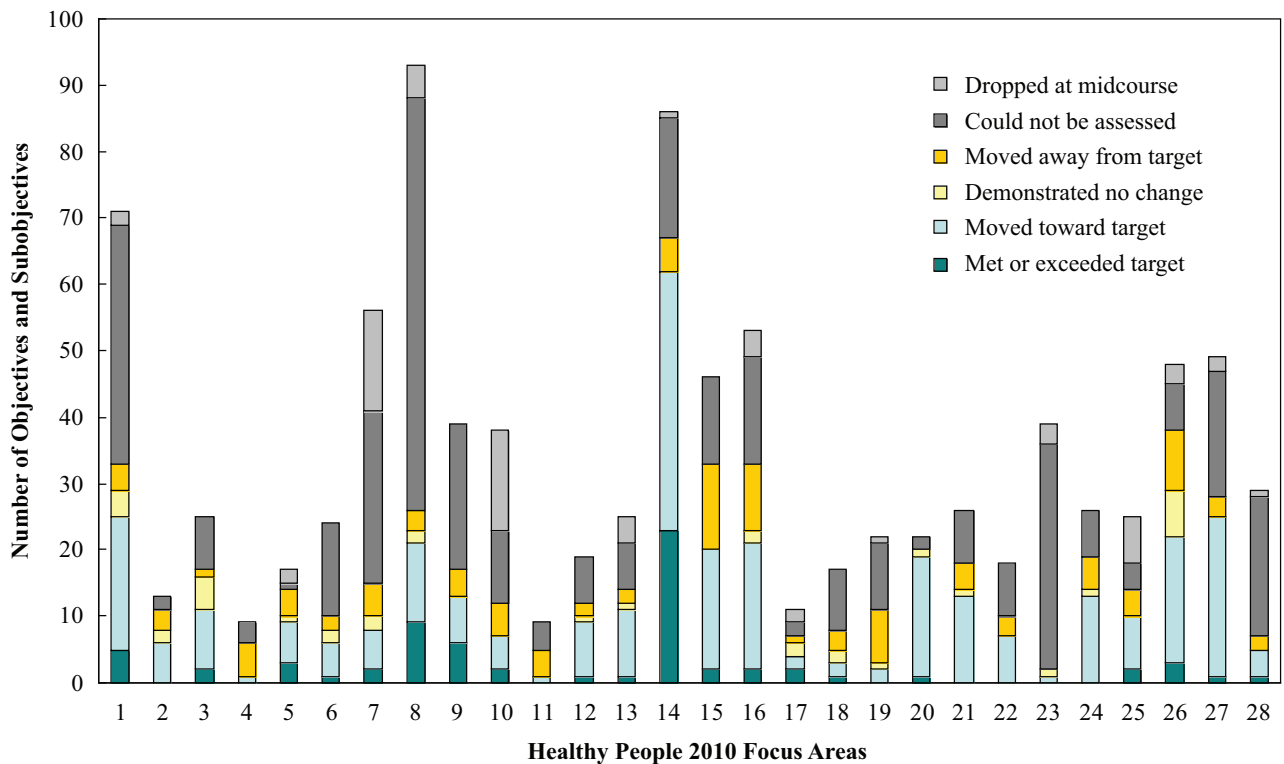
Figure 3. Healthy People 2010 Objectives and Subobjectives: Status at the Midcourse and Summary of Progress Toward Attainment



the baseline and the most recent data point for 10 objectives and subobjectives (Table 3). The number of objectives and subobjectives that moved toward the target or met the target at baseline exceeds the number that moved away from the target by a ratio of at least 2-to-1 for all but the following: the Asian or Pacific Islander population, the Asian population, the Native Hawaiian or other Pacific Islander population, persons identifying with two or more races, persons with less than a high school education, high school graduates, and persons in both the poor and near-poor income groups. For the Native Hawaiian or other Pacific Islander population, there were more objectives and subobjectives that moved away from the target (19) than moved toward the target (15).

In Table 3, a progress quotient is used to quantify the degree of progress toward or away from the target for those population-based objectives and subobjectives with tracking data. The progress quotient measures the percent of targeted change that has been achieved. The baseline value, the most recent value, and the target are used to compute the progress quotient. (See the Technical Appendix for a detailed discussion of the progress quotient.) A progress quotient of 50 percent, for example, indicates that the difference between the baseline and the target has been reduced by 50 percent or by one-half. A progress quotient greater than 100 percent indicates that the target has been exceeded. Negative progress quotients indicate that the change from the baseline is away from the target. The progress quotient for each objective and subobjective with data more recent than the baseline is shown in the focus area chapters of this report. Differences between populations and changes in differences between the baseline and the most recent data point are examined in the section discussing Goal 2, the elimination of disparities among populations.

Figure 4. Healthy People 2010 Objectives and Subobjectives: Status at the Midcourse by Focus Area



Goal 1: Increase Quality and Years of Healthy Life

*Healthy People 2010: Understanding and Improving Health*¹ highlighted the importance of increasing and maximizing both quality and years of healthy life. Progress toward this goal is currently assessed by measuring life expectancy and healthy life expectancies. These assessments result in the following conclusions:

- Life expectancy continues to improve for the populations that could be assessed in the midcourse review.
- Women continue to have a longer life expectancy than men, and the white population has a longer life expectancy than the black population.
- Three different measures of healthy life expectancy demonstrate gender and racial differences: expected years in good or better health, expected years free of activity limitations, and expected years free of selected chronic diseases.
- Expected years in good or better health and expected years free of activity limitations increased slightly, and expected years free of selected chronic conditions decreased.

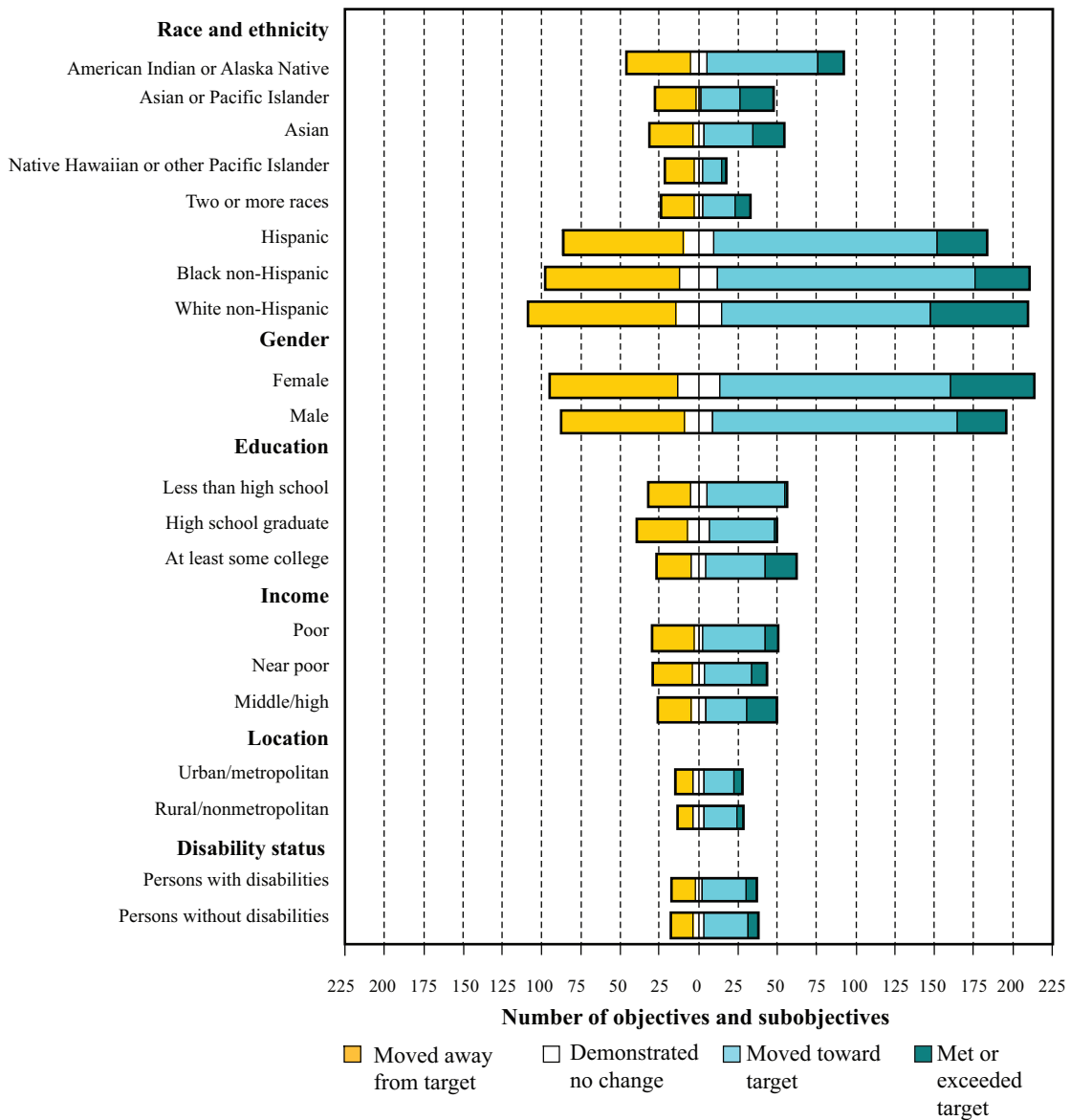
**Table 2. Healthy People 2010 Objectives and Subobjectives:
Summary of Progress for Each Focus Area**

Focus area	Met or exceeded target	Moved toward target	Demonstrated no change	Moved away from target	Could not be assessed	Dropped at midcourse	Total
1. Access to quality health services	5	20	4	4	36	2	71
2. Arthritis, osteoporosis, and chronic back conditions	0	6	2	3	2	0	13
3. Cancer	2	9	5	1	8	0	25
4. Chronic kidney disease	0	1	0	5	3	0	9
5. Diabetes	3	6	1	4	1	2	17
6. Disability and secondary conditions	1	5	2	2	14	0	24
7. Educational and community-based programs	2	6	2	5	26	15	56
8. Environmental health	9	12	2	3	62	5	93
9. Family planning	6	7	0	4	22	0	39
10. Food safety	2	5	0	5	11	15	38
11. Health communication	0	1	0	4	4	0	9
12. Heart disease and stroke	1	8	1	2	7	0	19
13. HIV	1	10	1	2	7	4	25
14. Immunization and infectious diseases	23	39	0	5	18	1	86
15. Injury and violence prevention	2	18	0	13	13	0	46
16. Maternal, infant, and child health	2	19	2	10	16	4	53
17. Medical product safety	2	2	2	1	2	2	11
18. Mental health and mental disorders	1	2	2	3	9	0	17
19. Nutrition and overweight	0	2	1	8	10	1	22
20. Occupational safety and health	1	18	1	0	2	0	22
21. Oral health	0	13	1	4	8	0	26
22. Physical activity and fitness	0	7	0	3	8	0	18
23. Public health infrastructure	0	1	1	0	34	3	39
24. Respiratory diseases	0	13	1	5	7	0	26
25. Sexually transmitted diseases	2	8	0	4	4	7	25
26. Substance abuse	3	19	7	9	7	3	48
27. Tobacco use	1	25	0	2	19	2	49
28. Vision and hearing	1	4	0	2	21	1	29
Total	70	286	38	113	381	67	955

Life Expectancy

Life expectancy is the average number of years persons born in a given year could be expected to live based on the age-specific death rates in that year. Since the launch of Healthy People 2010, life expectancy at birth and at age 65 has increased for all groups discussed here (Table 4 and Figure 6). In 2001–02, life expectancy for the total population was 77.2 years, an increase from 76.8 years in 1999–2000. Improvements in overall life expectancy are likely related to improvements in disease-specific death rate objectives within the Healthy People 2010 focus areas. Death rates have declined for many causes of death, including female breast cancer (3-3), cervical cancer (3-4), prostate cancer (3-7), coronary heart disease (12-1), stroke (12-7), and HIV infection (13-14). Compared with the rest of the world, the United States has room for further improvement. In 2001, male life expectancy ranked 26, and female life expectancy ranked 25 out of 37 selected countries.²

Figure 5. Summary of Progress for Objectives and Subobjectives With Tracking Data for Each Population Group



Between 1999–2000 and 2001–02, the percent increase in life expectancy was greater for persons aged 65 years and older (2.2 percent) than for the total population (0.5 percent). Men (74.5 years) had a lower life expectancy than women (79.8 years), and the black population (72.2 years) had a lower life expectancy than the white population (77.7 years) in 2001–02. However, between 1999–2000 and 2001–02, the black population had a greater relative increase in life expectancy at birth (1.0 percent) than the white population (0.4 percent). Life expectancy for both men and women increased by about 0.5 percent.

Table 3. Number of Objectives and Subobjectives With Tracking Data According to the Progress Quotient for Population Groups

Characteristics and groups	Moved away from target			Demonstrated no change			Moved toward target			Target met at baseline	Total
	Total	Target met at baseline ¹	Percent of targeted change achieved			1 to 49	50 to 99	100+			
			-100+	-50 to -99	-1 to -49				0		
(Number of objectives)											
Race and ethnicity											
American Indian or Alaska Native	41	1	5	3	32	10	54	17	7	9	87
Asian or Pacific Islander	26	1	12	3	10	3	15	10	11	10	46
Asian	28	0	12	4	12	7	23	8	15	5	51
Native Hawaiian or other Pacific Islander	19	3	2	5	9	5	9	3	2	1	15
Two or more races	21	2	4	4	11	6	18	2	7	3	30
Hispanic	77	0	10	8	59	19	104	38	19	13	174
Black non-Hispanic ²	86	2	18	17	49	24	126	38	33	2	199
White non-Hispanic ²	94	3	26	22	43	29	90	43	50	12	195
Gender											
Female	81	5	16	16	44	27	103	44	31	22	200
Male	78	7	13	5	53	18	116	40	21	10	187
Education											
Less than high school	27	0	2	2	23	10	44	6	1	0	51
High school graduate	32	0	3	8	21	14	34	7	1	1	43
At least some college	22	2	5	2	13	9	28	10	9	11	58
Income											
Poor	27	2	1	3	21	5	31	9	5	3	48
Near poor	25	0	3	4	18	8	22	8	3	6	39
Middle/high	21	3	5	4	9	9	20	6	11	8	45
Location											
Urban/metropolitan	11	0	0	2	9	7	13	6	3	2	24
Rural/nonmetropolitan	10	0	5	3	2	7	14	7	1	3	25
Disability status											
Persons with disabilities	15	0	1	1	13	4	23	5	5	2	35
Persons without disabilities	14	0	2	5	7	7	21	7	5	1	34

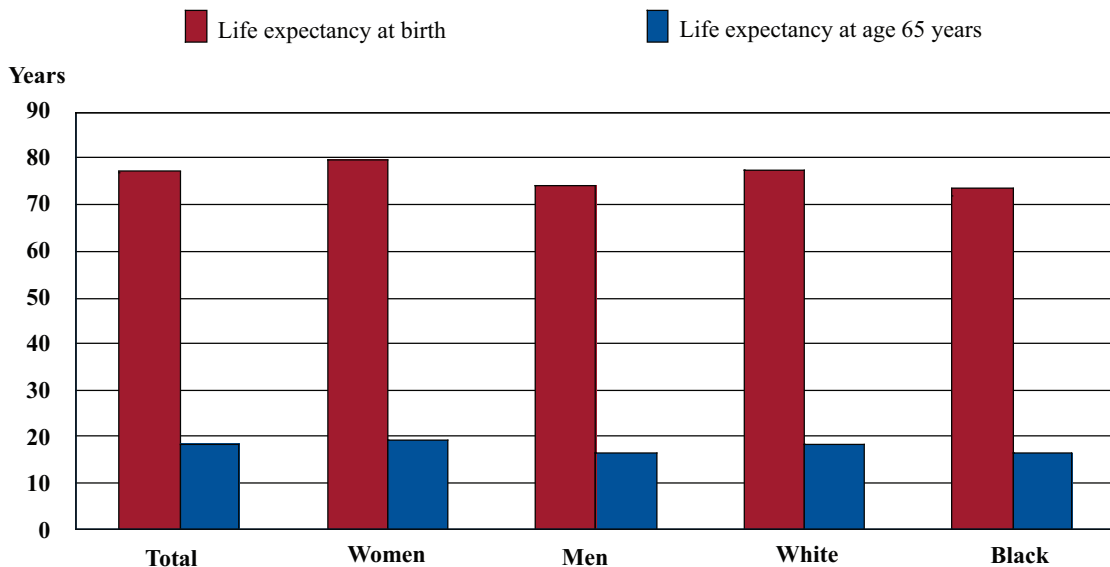
¹ Among population groups, the target for some objectives and subobjectives was met at the baseline, but more recent data indicate that the target was no longer achieved. The percent of target achieved could not be calculated.

² For some objectives and subobjectives, data include persons of Hispanic origin.

Table 4. Life Expectancy at Birth and at Age 65, in Years

		Total	Black	White	Women	Men
Life expectancy at birth	1999–2000	76.8	71.5	77.4	79.4	74.1
	2001–02	77.2	72.2	77.7	79.8	74.5
	Difference	0.4	0.7	0.3	0.4	0.4
Life expectancy at age 65 years	1999–2000	17.8	16.1	17.9	19.2	16.2
	2001–02	18.2	16.5	18.2	19.5	16.5
	Difference	0.4	0.4	0.3	0.3	0.3

Figure 6. Expected Years of Life by Gender and Race, 2001–02



Source: National Vital Statistics System (NVSS), NCHS, CDC.

Life expectancy usually is not calculated for racial and ethnic populations other than for the white population and the black population due to the inconsistencies in the method of reporting racial and ethnic origins on the death certificate in comparison with the U.S. Census, surveys, and birth certificates.³

Major gains in life expectancy since the early 1900s are largely attributable to the control of infectious diseases through improved sanitation, vaccines, antimicrobials, and nutrition, and advances in medical research and treatment. Much of the recent gain in life expectancy has been concentrated in the older population. The increase in life expectancy has been accompanied by chronic diseases and injury becoming major causes of death, and a rise in the number of persons with functional limitations. As a result, measuring longevity is no longer sufficient to describe the health of a population. Preventing

disabling conditions, improving function, relieving physical pain and emotional distress, and maximizing health across the life span have become as important public health goals as increasing life expectancy.⁴

Measuring Quality and Years of Healthy Life

Quality of life is affected by changes in physical health, psychological health, social relationships, level of independence, the environment, and personal beliefs.⁵ Healthy People 2010 focuses on how changes in health status and activity limitations affect Americans at the population level. Given the multidimensional nature of health, assessing quality and years of healthy life is a much more complex process than measuring life expectancy, and the field is evolving. Various measures are used nationally and internationally to measure healthy life. These measures fall into three general categories:

- Self-assessments of overall health status by individuals or their proxies.
- Composite measures that include multiple dimensions of health. Scores on the various dimensions are combined into a single measure using a predetermined algorithm (for example, SF-36, Healthy Days).^{6,7}
- Measures that combine death rates and health (where the health measure can be either of the types described above or a measure of a single dimension of health). These measures use years to quantify healthy life (for example, healthy life expectancies, Years of Healthy Life [YHL]).

The original *Healthy People 2010* publication mentioned several possible measures of population health: “self-perceived” health status; healthy days; and the measure used in Healthy People 2000, YHL.⁸ In response to the need to measure Goal 1 of Healthy People 2010, NCHS convened a workshop to select measures that best capture the complexity of assessing years of healthy life within the context of Healthy People 2010.⁹ As a result, three measures of healthy life expectancies that combine death rates with different measures of health were selected to track progress toward Goal 1. The measures are expected years in good or better health, expected years free of activity limitation, and expected years free of selected chronic diseases. The current set of healthy life expectancies has evolved from the YHL measure used to track the years and quality of life in Healthy People 2000. YHL combined information about death rates, self-rated health, and activity limitation into a single measure. The current set of healthy life expectancies separates the self-rated health component from the limitation of activities component to better track and understand change over time. For more details on these measures, see the Technical Appendix.

Data for these three healthy life expectancies have been analyzed for the period 1999–2002. This short time period limits interpretation of true trends. Previous research on healthy life expectancies indicated a dramatic increase in years of healthy life during the 1980s and 1990s; however, results of the current analysis are mixed. More certain conclusions about the trends in healthy life expectancy cannot be made until data for future years are analyzed.

Description of Healthy Life Expectancies for Healthy People 2010

The healthy life expectancies are calculated using a life-table technique. This technique combines information about average health states and death rates to produce age-specific estimates of expected years of healthy life (see the Technical Appendix for details on the methodology).

Expected years in good or better health is defined as the average number of years a person can expect to live in good or better health. This measure assesses healthy life using a single global assessment question that asks a person to rate his or her health as “excellent,” “very good,” “good,” “fair,” or “poor.”

Expected years free of activity limitation is defined as the average number of years a person can expect to live free from limitation in activities, the need for assistance in personal or routine care needs, or the need to use special equipment because of health problems.

Expected years free of selected chronic diseases is defined as the average number of years a person can expect to live without developing one or more of the following selected conditions for which nationally representative data are available annually: arthritis, asthma, cancer, diabetes, heart disease, high blood pressure, kidney disease, or stroke.

Healthy Life Expectancy at Birth

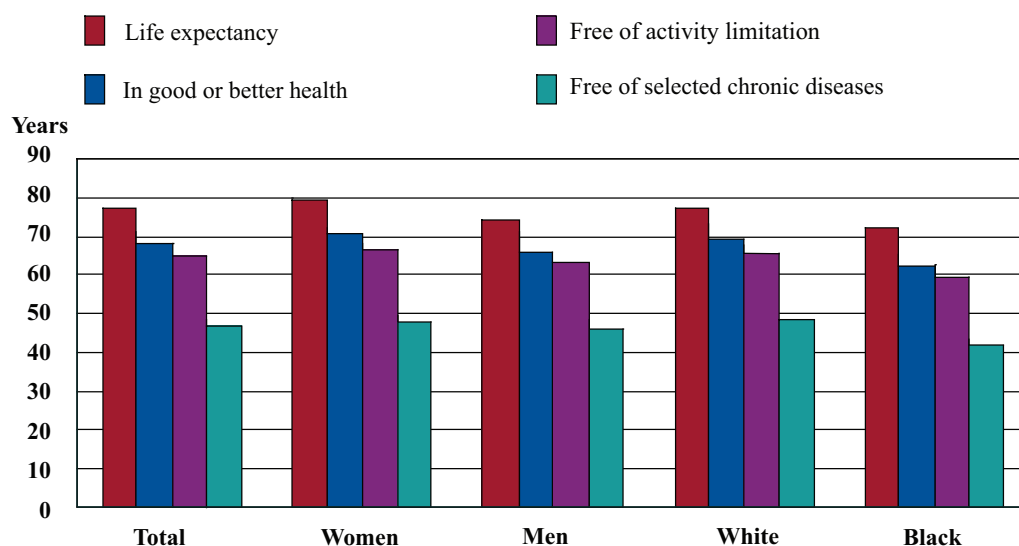
Table 5 and Figure 7 present healthy life expectancies at birth for each of the three measures. Life expectancy is included in the figures for comparison purposes. Based on data from 2001–02, individuals in the United States can expect to live 68.6 years in good or better health, 65.5 years without activity limitation, and 47.5 years without selected chronic diseases. Expected years in good or better health and expected years free of activity limitations increased by 0.1 years between 1999–2000 and 2001–02. Expected years free of selected chronic diseases declined by 1.2 years.

Women have higher values for all three healthy life expectancies, but they can also expect to spend a greater proportion of their lives in fair or poor health. Based on data from 2001–02, women can expect to live 79.8 years, of which 70.4 years will be in good or better health. Women can, therefore, expect

Table 5. Healthy Life Expectancies at Birth, in Years

		Total	Black	White	Women	Men
Life expectancy	1999–2000	76.8	71.5	77.4	79.4	74.1
	2001–02	77.2	72.2	77.7	79.8	74.5
	Difference	0.4	0.7	0.3	0.4	0.4
Expected years in good or better health	1999–2000	68.5	59.9	69.8	70.3	66.7
	2001–02	68.6	61.2	69.7	70.4	66.8
	Difference	0.1	1.3	-0.1	0.1	0.1
Expected years free of activity limitations	1999–2000	65.4	58.7	65.7	66.5	63.4
	2001–02	65.5	59.4	66.0	66.9	63.6
	Difference	0.1	0.7	0.3	0.4	0.2
Expected years free of selected chronic diseases	1999–2000	48.7	43.2	49.4	49.5	47.9
	2001–02	47.5	41.7	48.0	48.3	46.6
	Difference	-1.2	-1.5	-1.4	-1.2	-1.3

Figure 7. Life Expectancy and Healthy Life Expectancies at Birth, 2001–02



Source: National Health Interview Survey (NHIS), NCHS, CDC; National Vital Statistics System (NVSS), NCHS, CDC.

to spend 12 percent ($79.8 - 70.4 = 9.4 / 79.8 \times 100$) of their lives in fair or poor health, 16 percent with activity limitation, and 39 percent with one or more selected chronic diseases. Men can expect to spend 10 percent of their lives in fair or poor health, 15 percent with activity limitation, and 37 percent with one or more selected chronic diseases.

Compared with the white population, it is expected that the black population will spend a greater proportion of life in unhealthy life states. Based on data for 2001–02, it is expected that the black population at birth will spend 15 percent of life in fair or poor health, 18 percent of life with activity limitation, and 42 percent of life with one or more selected chronic diseases.

Table 6 and Figure 8 present healthy life expectancies at age 65 years and older. Based on 2001–02 data, it is expected that individuals aged 65 years and older will live an additional 13.2 years in good or better health, 11.6 years without activity limitation, and 4.4 years without one or more selected chronic diseases. Between 1999–2000 and 2001–02, for those aged 65 years and older, expected years in good or better health and expected years free of activity limitations increased, and expected years free of selected chronic diseases declined.

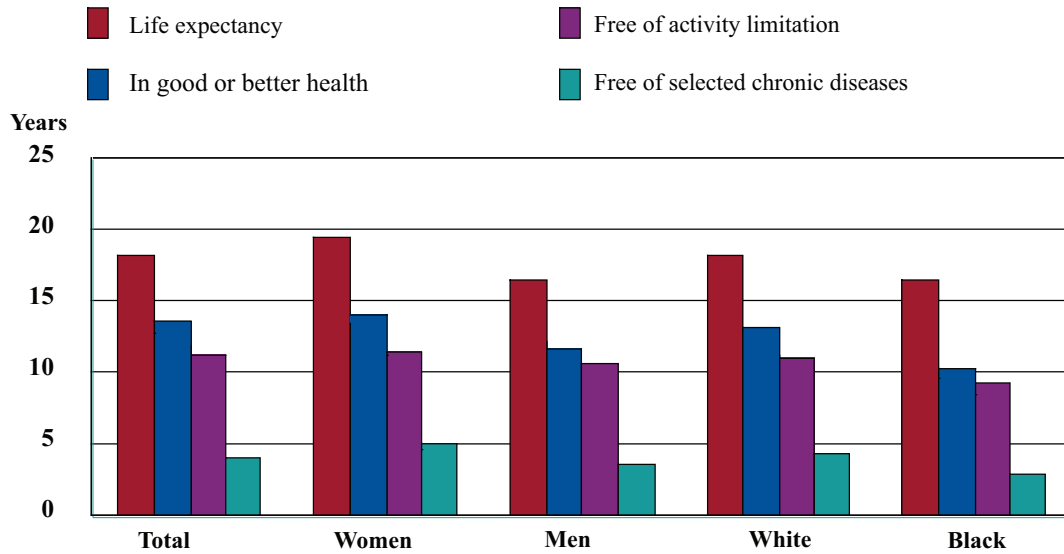
Similar to the patterns at birth, it is expected that women aged 65 years and older will live a greater number of years in a healthy life status, but they will spend a greater proportion of their lives with activity limitation. Based on data from 2001–02, it is expected that older women will spend 40 percent of their remaining lives with activity limitation. It is expected that men will spend 35 percent of their remaining lives with activity limitation.

However, it is expected that older men will spend a slightly greater proportion of their remaining lives with selected chronic diseases (78 percent) than older women (74 percent). Expected years in good or better health increased 0.4 years for women, and there was no change for men. Between 1999–2000 and

Table 6. Healthy Life Expectancies at Age 65, in Years

		Total	Black	White	Women	Men
Life expectancy	1999–2000	17.8	16.1	17.9	19.2	16.2
	2001–02	18.2	16.5	18.2	19.5	16.5
	Difference	0.4	0.4	0.3	0.3	0.3
Expected years in good or better health	1999–2000	13.0	9.4	13.4	13.9	11.9
	2001–02	13.2	10.2	13.3	14.3	11.9
	Difference	0.2	0.8	-0.1	0.4	0.0
Expected years free of activity limitations	1999–2000	11.3	8.1	11.1	11.2	10.4
	2001–02	11.6	8.9	11.5	11.7	10.8
	Difference	0.3	0.8	0.4	0.5	0.4
Expected years free of selected chronic diseases	1999–2000	4.7	3.3	5.1	5.1	4.2
	2001–02	4.4	3.2	4.4	5.0	3.6
	Difference	-0.3	-0.1	-0.7	-0.1	-0.6

Figure 8. Life Expectancy and Healthy Life Expectancies at Age 65, 2001–02



Source: National Health Interview Survey (NHIS), NCHS, CDC; National Vital Statistics System (NVSS), NCHS, CDC.

2001–02, expected years free of activity limitations increased 0.4 years for men and 0.5 years for women aged 65 years and older. Expected years free of selected chronic diseases declined 0.6 years for older men and 0.1 years for older women.

Similar to the patterns found at birth, the older black population can be expected to spend a greater proportion of its remaining life in unhealthy states than the older white population. Based on data for 2001–02, persons in the black population at age 65 can be expected to live 38 percent of their life in fair or poor health, 46 percent with activity limitation, and 81 percent with selected chronic diseases. The older black population experienced a greater absolute increase in expected years in good or better health and expected years free of activity limitation than the older white population. Expected years free of activity limitation increased 0.8 years for the older black population and 0.4 years for the older white population.

Goal 2: Eliminate Health Disparities

The second goal of Healthy People 2010 stems from the observation that there are substantial disparities among populations in specific measures of health, life expectancy, and quality of life. The second goal is to eliminate health disparities that occur by race and ethnicity, gender, education, income, geographic location, disability status, or sexual orientation.¹ As discussed in the section on Healthy People objectives and as shown in Figure 5 and Table 3, there has been widespread improvement in objectives for nearly all of the populations associated with these characteristics. However, progress toward the target for individual populations and progress toward the goal to eliminate disparities are independent of each other.¹⁰ Improvements for individual populations—even improvements for all of the populations for a characteristic—do not necessarily ensure the elimination of disparities. This section focuses specifically on relative disparities between populations and changes in these relative disparities over time, regardless of whether the rates for specific populations are moving toward or away from the targets for each objective (see the Technical Appendix for further discussion of the measurement of disparities and changes in disparities).

Disparities between populations and the persistence of disparities over time have been well documented.^{1, 11, 12, 13, 14, 15, 16, 17, 18} Unlike previous Healthy People initiatives, Healthy People 2010 calls for monitoring objectives for an extensive array of specific population characteristics. All population-based objectives and subobjectives were monitored by race and ethnicity, by income or education, and by gender (if applicable). Monitoring for other characteristics (that is, geographic location and disability status) was optional. Healthy People 2010, therefore, provides the basis for a broad examination of disparities among populations and changes in disparities over time. Findings for specific objectives and populations are presented in 27 of the 28 focus area chapters. None of the objectives in Public Health Infrastructure (Focus Area 23) call for data according to population characteristics. The findings concerning disparities among populations are summarized below. The following conclusions are based on this summary:

- Substantial disparities between populations were evident for many Healthy People 2010 objectives.
- Both increases and decreases in relative disparities were evident for individual populations for specific objectives and subobjectives; however, there was no change in disparity for most of the objectives and subobjectives with data for any available population.

For specific population characteristics:

- Among 195 objectives and subobjectives with trend data for racial and ethnic groups, disparities decreased for 24 and increased for 14.
- Among 238 objectives and subobjectives with trend data for males and females, disparities decreased for 25 and increased for 15. Females more often had the better group rate, and reductions in disparity were more frequent among males.
- Among education groups, disparities decreased for 3 objectives and subobjectives and increased for 14.
- Among income groups, among geographic groups, and between persons with disabilities and persons without disabilities, there were few changes in disparities.

Measuring Disparities

There are 498 population-based objectives and subobjectives for which disparities among populations could be measured. The second figure in each focus area chapter provides detailed information about disparities among populations for the objectives and subobjectives in that focus area. These figures provide information about the availability of data for each population, the size of relative disparities between populations for each characteristic, and the size of changes in these disparities between the Healthy People 2010 baseline and the most recent data point for each objective and subobjective. Data are not available for all populations for each objective and subobjective, and tracking data are not always available to assess changes in disparity from the baseline. Data are not available by sexual orientation for any of the Healthy People 2010 objectives.

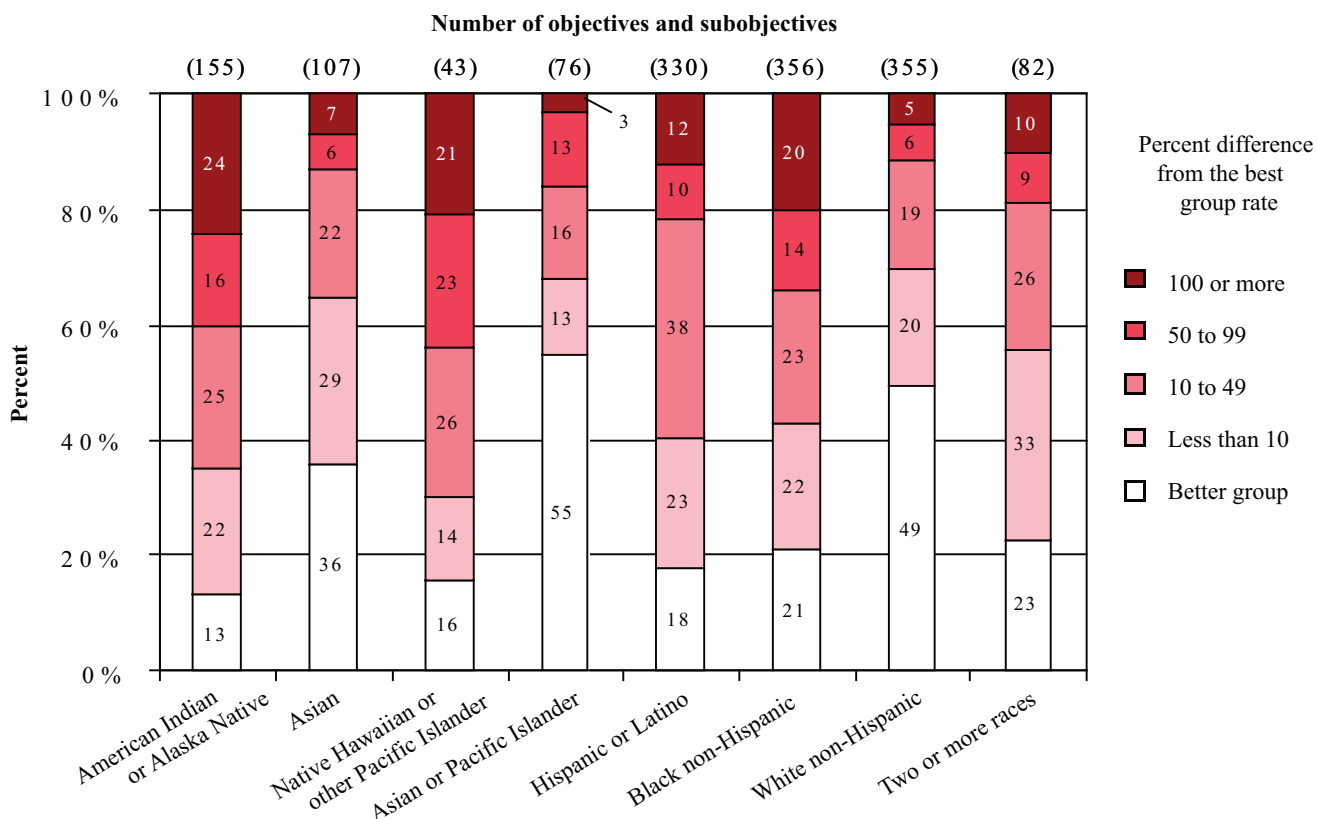
In this midcourse review, disparities are measured using the “best” or most favorable group rate as the reference point.¹⁰ Best is used to identify the group with the most favorable rate among the groups associated with a particular characteristic. Best does not imply that no further improvement is called for. Disparities by race and ethnicity, for example, are measured using the rate for the racial and ethnic population with the best rate as the reference point. Disparities are measured in relative terms as the percent difference between the rate for each of the other populations and the rate for the best group for each characteristic. In the measurement of disparities, objectives are generally expressed in terms of adverse events, such as death rates, to facilitate comparisons among them (except for a small number of objectives that cannot be expressed in adverse terms). Changes in disparity are measured by subtracting the percent difference from the best group rate at the baseline from the percent difference from the best group rate at the most recent data point. As a result, changes in disparity are measured in percentage points. In addition, when more than two groups are associated with a characteristic (race and ethnicity, education, or income), a summary index is used to describe the average percent difference from the best group rate for all of the other group rates.^{10,18} The summary index provides a basis for conclusions about changes in the size of the disparities associated with these characteristics. A detailed description of the methods used to measure and evaluate disparities is provided in the Technical Appendix.

Findings Concerning Disparities

Race and Ethnicity

Information about disparities among racial and ethnic populations at the most recent data point based on the disparity tables for each focus area is summarized in Figure 9. The measurement of disparities

Figure 9. Percent Distribution of Healthy People 2010 Objectives and Subobjectives by Size of Disparity for Racial and Ethnic Groups at the Most Recent Data Point



depends on the availability of data for each population. The number of objectives and subobjectives with the data needed to measure disparities varies from 43 for the Native Hawaiian or other Pacific Islander population to 356 for the black non-Hispanic population.

American Indian or Alaska Native Population

The data needed to assess disparities for the American Indian or Alaska Native population are available for 155 objectives and subobjectives (Figure 9). This group had the best rate for 13 percent of these objectives and subobjectives, including the least exposure to ozone (8-1a), the lowest stroke death rate (12-7), and the lowest case rate for hepatitis A (14-6). The American Indian or Alaska Native population had a larger proportion of disparities in the greater than or equal to 100 percent category than any of the other racial and ethnic populations. The American Indian or Alaska Native population had rates at least 100 percent worse than (or at least twice as high as) the best group rate for 24 percent of these objectives and subobjectives, including health insurance coverage among persons under age 65 (1-1), new AIDS cases (13-1), infant deaths (16-1c), and deaths of persons aged 15 to 24 years (16-3b and c). Disparities increased for the American Indian or Alaska Native population for 13 objectives and subobjectives, including increases of 100 percentage points or more for hepatitis B among persons aged 40 years and older (14-3c) and women smoking during pregnancy (16-17c). Disparities from the best group rate decreased for 12 objectives and subobjectives, including reductions of 100 percentage points or more for end-stage renal disease due to diabetes (4-7), HIV testing of tuberculosis patients aged 25 to 44 years (13-11), new cases of hepatitis A (14-6), physical assault (15-37), gonorrhea among females aged 15 to

24 years (25-2b), and primary and secondary syphilis (25-3). Reductions of 100 percentage points do not mean that the disparity has been eliminated. For example, the percent difference from the best group rate for the American Indian or Alaska Native population for the physical assault objective (15-37) declined by 254 percentage points, from 626 percent at baseline in 1998 to 372 percent in 2001.

Asian and Native Hawaiian or Other Pacific Islander Populations

The data needed to assess disparities for the Asian population (excluding the Native Hawaiian or other Pacific Islander population) are available for 107 objectives and subobjectives (Figure 9). The Asian population had the best group rate for 36 percent of these objectives and subobjectives, including preterm birth (16-11a, b, and c) and fetal and infant mortality (16-1a through f). This population had rates at least 100 percent worse than the best group rate for 7 percent of the objectives and subobjectives with data for this population, including source of ongoing care for persons aged 18 years and under (1-4b), Pap test ever received (3-11a), and tuberculosis cases (14-11). For the Asian population, disparities increased for four objectives and subobjectives, and there were none for which disparities decreased.

Data for the Native Hawaiian or other Pacific Islander population are available for 43 objectives and subobjectives (Figure 9). This population had a smaller percentage of best group rates (16 percent) and a greater percentage of large disparities (21 percent) than the Asian population. Disparities increased for this population for five objectives and subobjectives, including increases of 100 percentage points or more for cigarette smoking during pregnancy (16-17c), and disparities decreased for three objectives and subobjectives.

Data are available for the combined Asian or Pacific Islander population for 76 objectives and subobjectives (Figure 9). This combined population had the best group rate for 55 percent of these objectives and subobjectives, including many causes of death in Cancer (Focus Area 3); Injury and Violence Prevention (Focus Area 15); and Maternal, Infant, and Child Health (Focus Area 16). The Asian or Pacific Islander population had rates at least 100 percent worse than the best group rate for two objectives—HIV testing among tuberculosis patients aged 25 to 44 years (13-11) and congenital syphilis (25-9). Disparities increased for the Asian or Pacific Islander population for six objectives, including an increase of 100 percentage points or more for congenital syphilis (25-9). Disparities decreased for this population for six objectives and subobjectives, including decreases of 100 percentage points or more for cases of hepatitis B (14-3a, b, and c).

Hispanic Population

The data needed to assess disparities for the Hispanic population are available for 330 objectives and subobjectives (Figure 9). The Hispanic population had the best group rate for 18 percent of these objectives and subobjectives, including objectives and subobjectives related to injury and violence (Focus Area 15), nutrition (Focus Area 19), and tobacco use (Focus Area 27). This population had rates at least 100 percent worse than (or at least twice as high as) the best group rate for 12 percent of these objectives and subobjectives, including health insurance coverage among persons under age 65 years (1-1), source of ongoing care (1-4a, b, and c), new AIDS cases and HIV infection deaths (13-1 and 13-14), and objectives related to violence (Focus Area 15). Between the baseline and the most recent data point, disparities increased for 22 objectives and subobjectives, including increases of 100 percentage points or more for exposure to particulate matter (8-1b), new cases of tuberculosis (14-11), physical assault (15-37), and congenital syphilis (25-9), and decreased for 25 objectives and subobjectives, including decreases of 100 percentage points or more for new AIDS cases (13-1), hepatitis A and B (14-6 and 14-3c), nonfatal firearm-related injuries (15-5), and primary and secondary syphilis (25-3).

Black Non-Hispanic Population

Data needed to assess disparities for the black non-Hispanic population (or, in some cases, for blacks, including persons of Hispanic origin) are available for 356 objectives and subobjectives (Figure 9). This population had the best rate for 21 percent of these objectives and subobjectives, including counseling about health risks (Focus Areas 1 and 2) and quality of their health providers' communication skills (Focus Area 11). This population had rates at least 100 percent worse than the best group for 20 percent of these objectives and subobjectives, including most causes of death in many focus areas. Between the baseline and the most recent data point, disparities increased for 32 objectives and subobjectives, including increases of 100 percentage points or more for prostate cancer deaths (3-7), invasive early onset group B streptococcal disease (14-16), firearm-related deaths (15-3), smoking during pregnancy (16-17c), and genital herpes in persons aged 20 to 29 years (25-4). Disparities decreased for 26 objectives and subobjectives, including decreases of 100 percentage points or more for new AIDS cases (13-1), invasive pneumococcal infections in persons aged 5 years and under (14-5a), residential fire deaths (15-25), asthma deaths among persons aged 15 to 34 years (24-1c), new cases of gonorrhea (25-2a), total cases of gonorrhea in women aged 15 to 44 years (25-2b), total cases of primary and secondary syphilis (25-3), and cases of congenital syphilis (25-9). To reiterate, reductions of 100 percentage points do not mean that the disparity has been eliminated.

White Non-Hispanic Population

Data needed to assess disparities for the white non-Hispanic population (or, in some cases, for whites, including persons of Hispanic origin) are available for 355 objectives and subobjectives (Figure 9). This population had the best rate for 49 percent of these objectives and subobjectives and disparities greater than or equal to 100 percent for 5 percent. The large disparities included deaths from lung cancer (3-2), female breast cancer (3-3), prostate cancer (3-7), melanoma (3-8), firearms (15-3), poisoning (15-8), unintentional injury (15-13), suicide (18-1), and chronic obstructive pulmonary disease (24-10). Between the baseline and the most recent data point, disparities increased for 25 objectives and subobjectives, including increases of 100 percentage points or more for poisoning deaths (15-8), smoking during pregnancy (16-17c), and drug-induced deaths (26-3). Between the baseline and the most recent data point, disparities declined for 16 objectives and subobjectives. All decreases in disparity were less than 50 percentage points.

Two or More Races

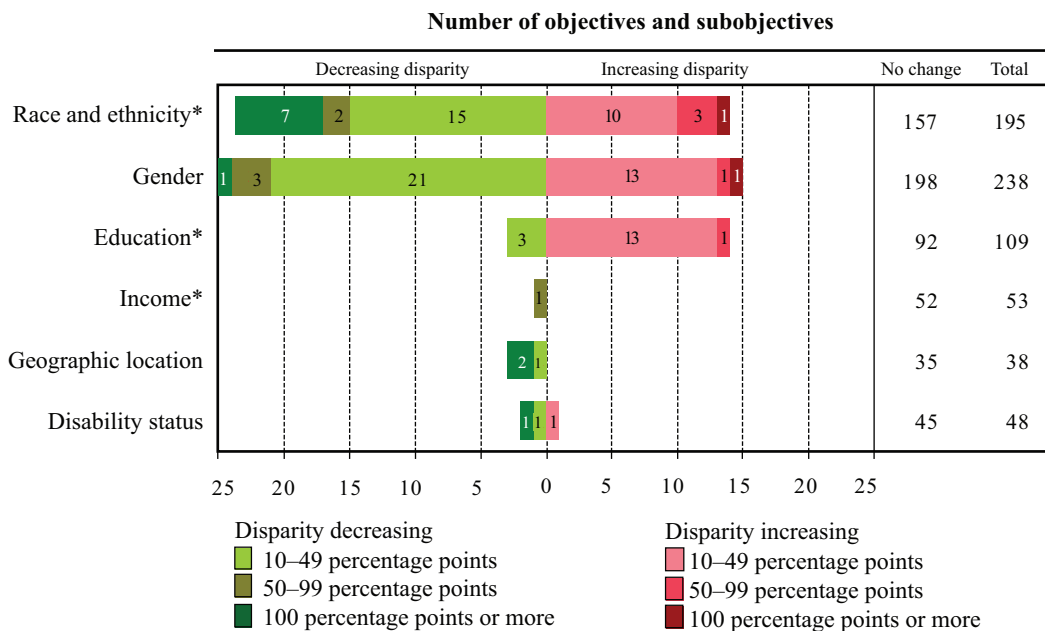
Data for individuals who identified with more than one race are available for 82 objectives and subobjectives (Figure 9). This population had the best rate for 23 percent of these objectives and subobjectives, including physical activities that enhance muscular strength (22-4) and flexibility (22-5). This population had rates 100 percent worse than the best group rate for 10 percent of these objectives and subobjectives, including activity limitations due to chronic lung disease (24-9), activity limitations due to chronic back conditions (2-11), and delay or difficulty in getting emergency care (1-10). Disparities increased for this group for two air pollution subobjectives: exposure to particulate matter and carbon monoxide (8-1b and c, respectively).

Changes in Disparity Among Racial and Ethnic Groups

In addition to the findings for individual racial and ethnic groups, a summary index allows the evaluation of changes in disparity over time among all racial and ethnic populations. There was no change in disparities among racial and ethnic populations for 157 objectives and subobjectives or 81 percent of the 195 objectives and subobjectives with the data needed to calculate the index and assess change over time. The average percent difference from the best group rate decreased for 24 objectives and subobjectives and

increased for 14 objectives and subobjectives (Figure 10). Disparity increased by at least 100 percentage points for smoking during pregnancy (16-17c). Disparities decreased by at least 100 percentage points for new AIDS cases (13-1), hepatitis A (14-6), nonfatal firearm-related injuries (15-5), gonorrhea (25-2a and b), primary and secondary syphilis (25-3), and congenital syphilis (25-9).

Figure 10. Number of Objectives and Subobjectives With Changes in Disparity From the Healthy People 2010 Baseline to the Most Recent Data Point for Each Population Characteristic



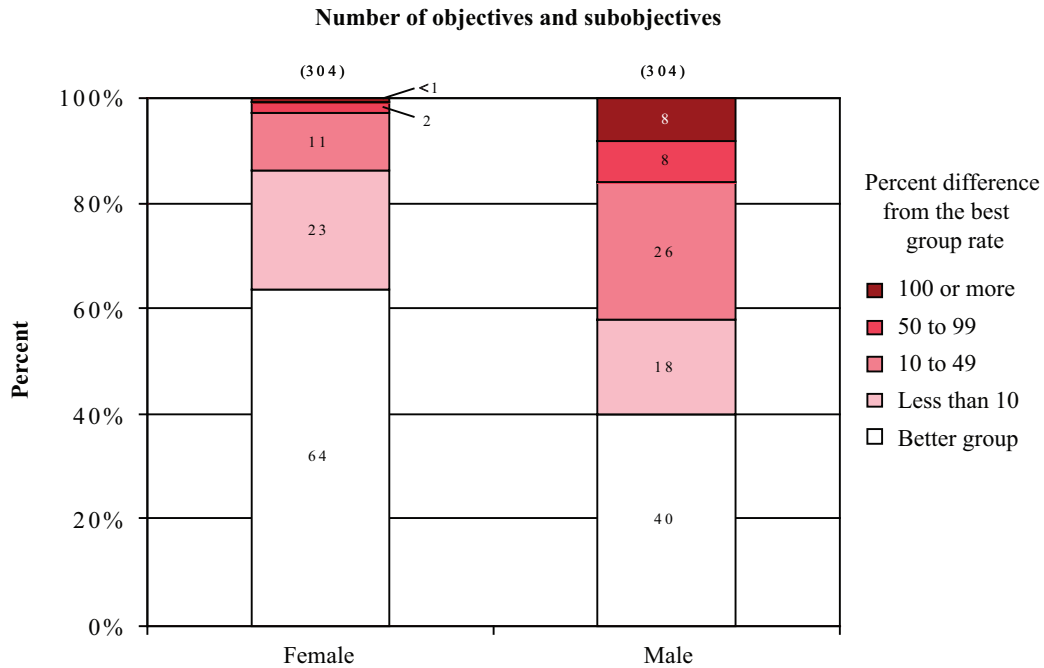
Gender

Data by gender are available for 304 objectives and subobjectives (Figure 11). For some objectives and subobjectives only baseline data are available. As noted below, trends in disparity can only be measured for 238 objectives and subobjectives. Disparities by gender are not relevant to objectives and subobjectives that apply only to females or males, including those in Family Planning (Focus Area 9), and a number of objectives and subobjectives in other focus areas. Results by gender are summarized in Figure 11.

Females had the better group rate for 64 percent of these objectives and subobjectives, compared with 40 percent for males. There were a number of cases in which males and females had the same rate; therefore, both were counted as the better rate. Females had a smaller percentage of objectives and subobjectives that were greater than or equal to 100 percent worse than males. Cases of genital herpes (25-4) and physical assault by an intimate partner (15-34) were more than twice as common among females.

Males had the better group rate for 40 percent of these objectives and subobjectives. Males had a larger percentage of objectives that were greater than or equal to 100 percent worse than females, including less favorable rates for oropharyngeal cancer deaths (3-6), melanoma deaths (3-8), and lower

Figure 11. Percent Distribution of Healthy People 2010 Objectives and Subobjectives by Size of Disparity for Females and Males at the Most Recent Data Point



extremity amputations in persons with diabetes (5-10) and nine objectives related to injury and violence (Focus Area 15).

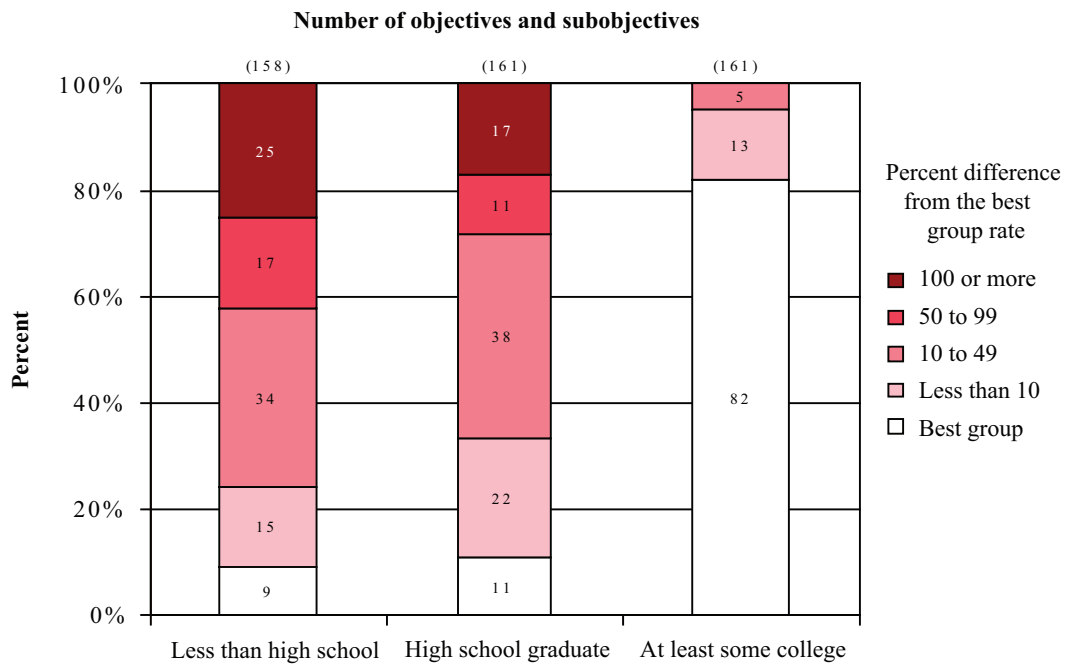
Changes in Disparity Between Gender Groups

The data needed to evaluate changes in gender disparities over time are available for 238 objectives and subobjectives. There was no change in disparity for 198 objectives and subobjectives, or 83 percent of the total with data. Disparity decreased for 25 objectives and subobjectives and increased for 15 (Figure 10). The number of objectives and subobjectives with decreases in disparity, therefore, outnumbered those with increases. Changes in disparity were more common among males, in part because females more often had the better group rate. Among males, disparities decreased for 21 objectives and subobjectives and increased for 13. In a few instances, reductions in the difference between males and females were associated with increases in death rates—deaths from poisoning (15-8), falls (15-27), and drugs (26-3) (data not shown)—of both males and females.

Education Level

The data needed to assess disparities among populations by education level are available for 158 to 161 objectives and subobjectives in 23 focus areas (Figure 12). Education level was not included as a characteristic in all focus areas. The population with at least some college education had the best rate for 82 percent of the objectives and subobjectives with data by education. The population with less than a high school education and high school graduates had the best group rate for 9 percent and 11 percent of the objectives and subobjectives with data by education, respectively. For example, the least educated population had the best or most favorable rates for three subobjectives concerning communication

Figure 12. Percent Distribution of Healthy People 2010 Objectives and Subobjectives by Size of Disparity for Education Groups at the Most Recent Data Point



with health care providers (11-6a, c, and d). There were no objectives or subobjectives for which the difference between the population with at least some college education and the best group differed by at least 100 percent. The population that completed high school had rates at least 100 percent higher than the best group rate for 17 percent of these objectives and subobjectives, and the population with less than a high school education had rates at least 100 percent higher than the best group rate for 25 percent of these objectives. Among persons with less than a high school education, disparity increased for nine objectives and subobjectives and decreased for nine. Among persons with a high school education, disparity increased for 24 objectives and subobjectives and decreased for 2. Among persons with at least some college, there was one objective with an increase in disparity. There were no increases or decreases in disparity of 100 percentage points or more for any of the three populations by education level.

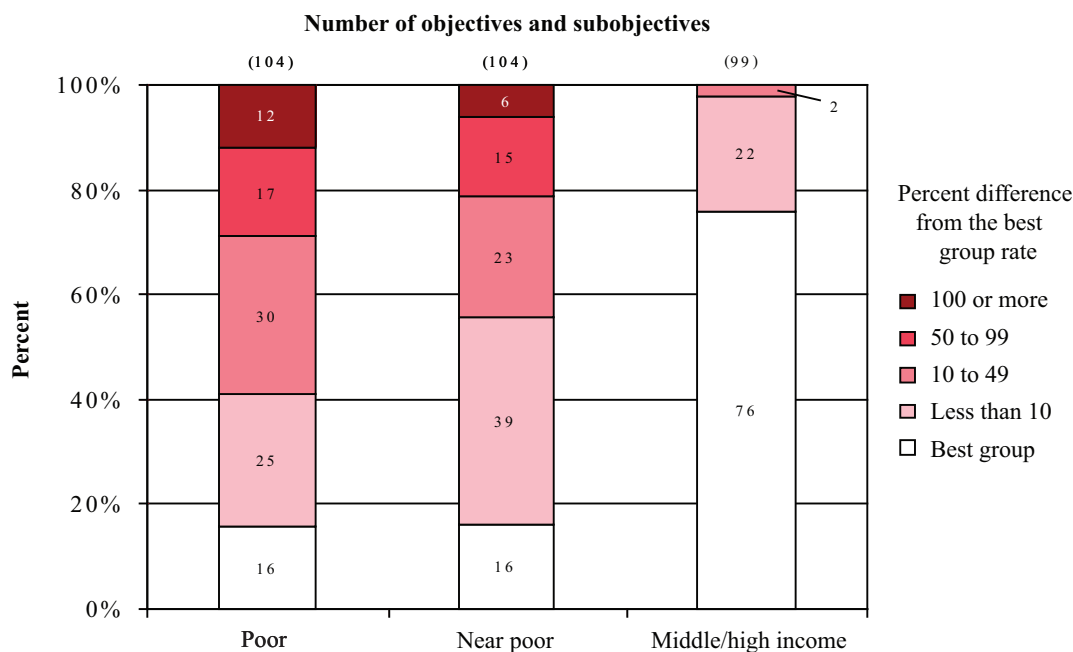
Changes in Disparity Among Education Groups

In addition to the findings for individual populations by education level, the summary index permits the evaluation of changes in disparities over time among all three populations by level of education. There was no change in disparity among populations by education level for 92 objectives and subobjectives or 84 percent of the 109 objectives and subobjectives with the data needed to calculate the index and assess change over time. The average percent difference from the best group rate decreased for 3 objectives and subobjectives and increased for 14; therefore, increases in disparity by level of education outnumbered decreases in disparity (Figure 10). There were no increases or decreases of 100 percentage points or more.

Income Level

Income level was not included as a characteristic in all focus areas. All of the objectives and subobjectives in Nutrition and Overweight (Focus Area 19) and six subobjectives in Immunization and Infectious Diseases (Focus Area 14) are excluded from this summary because data by income were available for only two populations. This summary is based on 99 to 104 objectives and subobjectives with data for populations by income level (Figure 13). The population with middle/high income had the best rate for 76 percent of the objectives and subobjectives with data by income level. The poor and near-poor income populations each had the best rate for 16 percent of their objectives and subobjectives. The poor population had the most favorable rates for counseling about diet and nutrition (1-3b) and counseling about reduced alcohol consumption (1-3d) and for eight objectives and subobjectives in Substance Abuse (Focus Area 26). In almost all cases, disparities for the other populations by income level were less than 10 percent.

Figure 13. Percent Distribution of Healthy People 2010 Objectives and Subobjectives by Size of Disparity for Income Groups at the Most Recent Data Point



There were no objectives or subobjectives for which the difference between persons with middle/high income and the best group differed by 100 percent or more. The near-poor income population had rates at least 100 percent higher than the best group rate for 6 percent of the objectives and subobjectives with data for this population. The poor or lowest income population had rates at least 100 percent higher than the best group rate for 12 percent of the objectives and subobjectives with data.

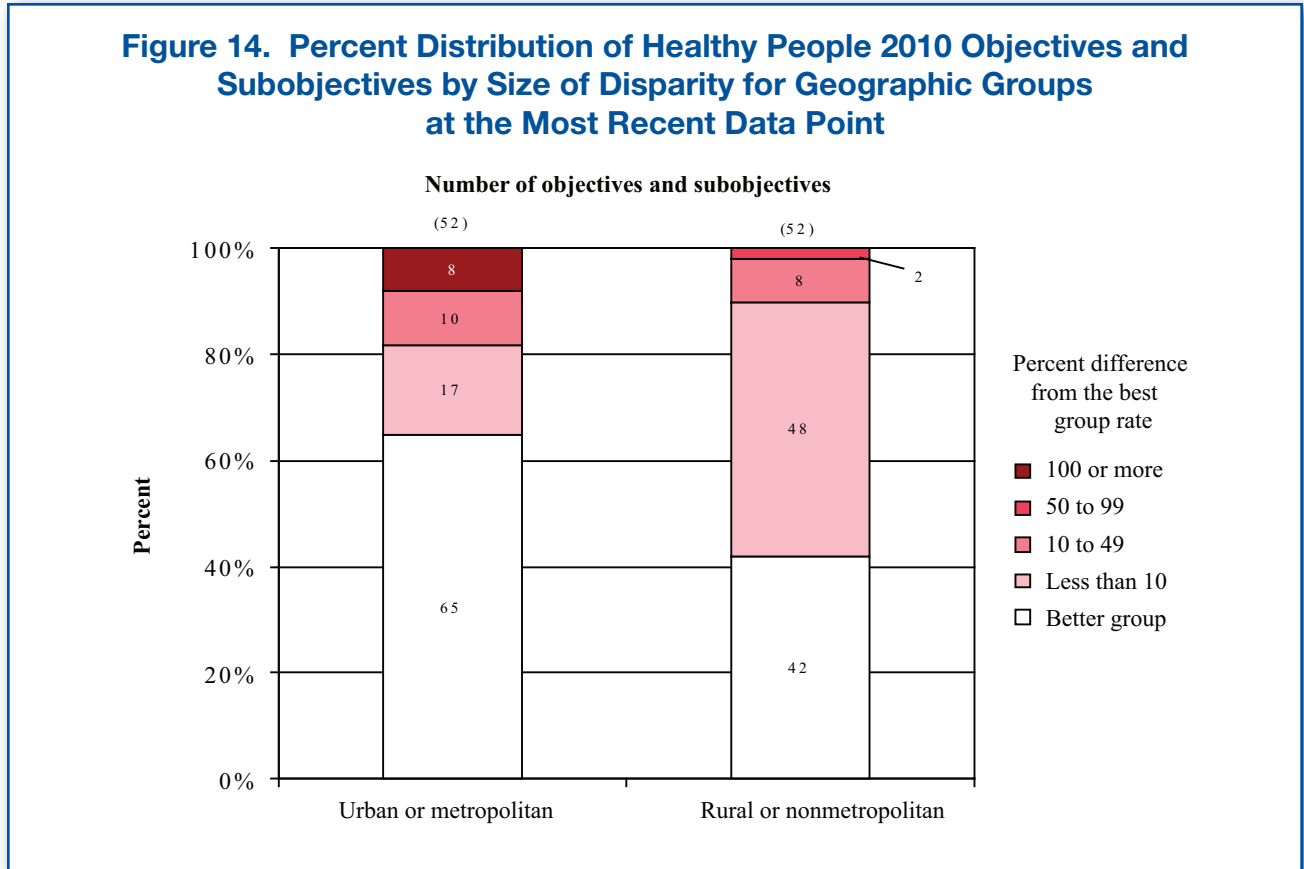
Changes in Disparity Among Income Groups

The summary index enables the evaluation of changes in disparity over time among populations by income level. The data needed to evaluate changes in disparity among the populations by income level are available for 53 objectives and subobjectives (Figure 10). There was little evidence of any change in

disparity among populations by income level. The average percent difference from the best group rate did not increase for any objectives or subobjectives and decreased for one objective related to births within 24 months of a previous birth (9-2).

Geographic Location

Geographic location is defined in different ways in Healthy People 2010. For some objectives, the distinction is between urban and rural areas, while for others, the distinction is between metropolitan and nonmetropolitan areas. Findings for disparities by geographic location for 52 objectives and subobjectives in 13 focus areas are summarized in Figure 14.



Urban or metropolitan areas had the better rate for 65 percent of the objectives and subobjectives with data. Urban or metropolitan areas also had more objectives and subobjectives with larger disparities than rural or nonmetropolitan areas. There was at least a 100 percent difference from nonmetropolitan areas for four of the six air pollution subobjectives (8-1a, b, c, and e).

Rural or nonmetropolitan areas had the better rate for 42 percent of these objectives and subobjectives. Urban and rural areas had the same rate—therefore also the better rate—for four objectives. There were no objectives or subobjectives for which rural or nonmetropolitan areas had rates at least twice as high as rates in urban or metropolitan areas.

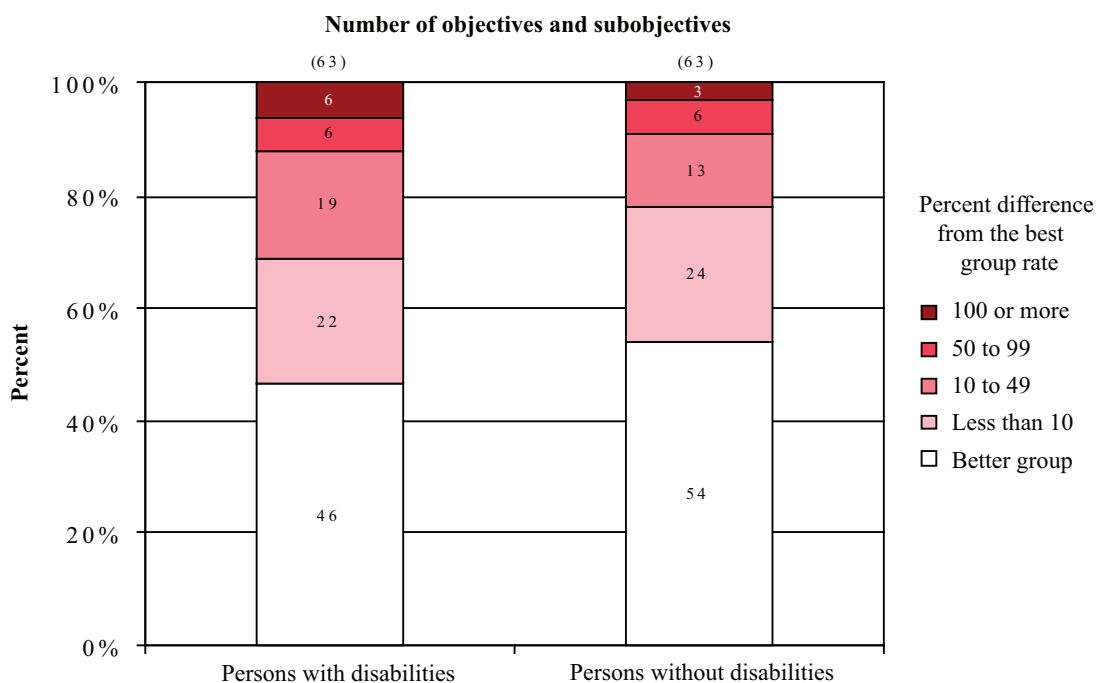
Changes in Disparity Among Geographic Groups

The data needed to evaluate changes in disparities between geographic areas are available for 38 objectives and subobjectives. Disparities from the better geographic group rate declined for three subobjectives, and there were no increases (Figure 10). Between the baseline in 1997 and the data point in 2001, disparities declined by at least 100 percentage points for two air pollution subobjectives—exposure to particulate matter and carbon monoxide (8-1b and 8-1c)—and declined by a smaller margin for exposure to ozone (8-1a). Reductions of 100 percentage points do not mean that the disparity has been eliminated.

Disability Status

Data for persons with disabilities and persons without disabilities for 63 objectives and subobjectives in 17 focus areas are summarized in Figure 15. Persons with disabilities had the better group rate for 46 percent of these objectives and subobjectives, and persons without disabilities had the better group rate for 54 percent. The similarity in the percentage with the better group rate between persons with disabilities and persons without disabilities may be a reflection of more frequent contacts with health care providers among persons with disabilities. Persons with disabilities had rates at least 100 percent higher than persons without disabilities for 6 percent of these objectives and subobjectives, including delay or difficulty getting emergency care (1-10), new cases of diabetes (5-2), overall cases of diabetes (5-3), and blindness and visual impairment (28-4).

Figure 15. Percent Distribution of Healthy People 2010 Objectives and Subobjectives by Size of Disparity for Persons With Disabilities and Persons Without Disabilities at the Most Recent Data Point



Changes in Disparity Between Persons With Disabilities and Persons Without Disabilities

The data needed to evaluate changes in disparities between disability groups are available for 48 objectives and subobjectives (Figure 10). There were few changes in disparity by disability status. Disparities between these populations declined for one objective and one subobjective. Between the baseline in 1997 and the data point in 2003, disparity declined by at least 100 percentage points for blindness and visual impairment (28-4). Between 2000 and 2003, the disparity declined by a smaller margin for sun exposure (3-9b). Disparity from the population with the better rate (persons with disabilities) increased for persons without disabilities for source of ongoing care (1-4a).

Data Limitations

Several factors limit the number of objectives for which changes in disparity can be assessed. First, the number of years on which this assessment is based varies greatly. Among 328 population-based objectives with trend data, 16 percent are based on an interval of 2 years or less between the baseline and the most recent data point. Second, this assessment is limited by a lack of data for select populations. There are no racial and ethnic data for about 15 percent of the population-based objectives, with larger proportions without data among American Indian or Alaska Native, Asian, Hispanic, and Native Hawaiian or other Pacific Islander populations. Data by gender are not available for about 15 percent of the relevant population-based objectives. Data by education level and income level are not available for about 30 percent and 55 percent, respectively, of the population-based objectives and subobjectives for which education level and income level were selected as characteristics to be tracked.

These findings are also subject to the limitations of the data on which they are based. This assessment is based only on data at the baseline and at the most recent data point; intervening data values are not considered. The findings presented here are also limited by the reliability and validity of information about the persons on which the data are based. The reporting of race and income from some data systems is particularly problematic.^{2, 19} Assessments of the probability that disparities or changes in disparity are due to random fluctuations in the data are limited by the lack of estimates of variability (that is, standard errors) for some of the data on which Healthy People 2010 objectives are based (see the Technical Appendix).

Summary and Future Directions

Healthy People 2010 can be assessed in terms of its specific objectives and its overarching goals. Progress toward the target is evident for 70 percent of the 507 objectives and subobjectives with tracking data in Healthy People 2010. Greater numbers of objectives and subobjectives are moving toward the target than are moving away for all population groups, except the Native Hawaiian or other Pacific Islander group.

The first goal of Healthy People 2010 is to help individuals of all ages increase quality and years of healthy life. A review of the data reveals that years of life—measured in terms of life expectancy—continue to increase. However, significant gender and racial and ethnic differences remain. Women continue to live longer than men. Black men and women still lag behind white men and women in overall life expectancy even though black men and women have seen an increase in the average number of years lived. While life expectancy has continued to increase, the United States continues to have lower life

expectancy than many other developed nations. Data for two measures of healthy life expectancy—expected years in good or better health and expected years free of activity limitations—showed slight improvements between 1999–2000 and 2001–02. On the other hand, a third measure of healthy life expectancy—expected years free of selected chronic diseases—declined slightly. Identifying the best approaches for measuring years of healthy life is an evolving field. The three healthy life expectancies selected for use in Healthy People 2010 will provide tracking data for an assessment of progress at the end of the decade. Future research will build on these initial measures of healthy life expectancy.

The second goal of Healthy People 2010 calls for eliminating disparities among segments of the population. While there have been widespread improvements in rates for most of the populations associated with the social and demographic characteristics included in Goal 2, there is little evidence of systematic reductions in disparity. There were very few reductions in disparity among populations by education level, income level, geographic location, and disability status. While there were reductions in disparity among racial and ethnic populations for 24 objectives and subobjectives and reductions in disparity between gender groups for 25 objectives and subobjectives, these reductions were offset by increases in disparity between racial and ethnic populations for 14 objectives and subobjectives and between men and women for 15 objectives and subobjectives. The lack of data for American Indian or Alaska Native, Asian, and Native Hawaiian or other Pacific Islander populations limits the assessment of disparity. This report is based on a large quantity of information that is useful for planning programs to eliminate racial, ethnic, and gender disparities. However, the lack of data on education, income, or other socioeconomic factors for many Healthy People 2010 objectives limits the ability to plan programs to eliminate disparities.

Another challenge in measuring the quality and years of healthy life is the collection of data on the institutionalized populations, such as those in prisons and nursing homes. Household-based surveys, the source of data used to measure the health components of healthy life expectancy, do not collect information on these populations or on homeless persons. Many of these individuals are likely to experience poor health, and estimates of healthy life that do not include these populations may be biased.

Focusing on Disease Prevention and Health Promotion

Healthy People 2010's first overarching goal of increasing quality and years of healthy life challenges the Nation to assess and measure the complex interactions of health, disease, disability, and early death. Continued commitment to implementing effective disease prevention and health promotion interventions will facilitate progress toward this goal by the end of the decade.

Healthy People 2010's second overarching goal of eliminating health disparities represents a further challenge. The data presented here indicate that rates are improving for most populations. However, disparities—measured in terms of relative differences from the best group rate—are generally not declining. It may be more difficult or more costly to implement effective disease prevention and health promotion programs for some populations. However, unless greater reductions occur for the populations with the highest rates, disparities will not be eliminated. Tracking progress toward the goals and objectives of Healthy People 2010 remains one of the most important contributions of this national initiative to improve the quality and length of life in this Nation.

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