

## Heart Disease and Stroke (HDS)

## Lead Agencies

Centers for Disease Control and Prevention
National Institutes of Health

## Contents

Goal ..... 21-2
Status of Objectives ..... 21-2
Figure 21-1. Midcourse Status of the Heart Disease and Stroke Objectives ..... 21-2
Selected Findings ..... 21-2
More Information ..... 21-7
Footnotes ..... 21-7
Suggested Citation ..... 21-8
Table 21-1. Heart Disease and Stroke Objectives ..... 21-9
Table 21-2. Midcourse Progress for Measurable Heart Disease and Stroke Objectives ..... 21-14
Table 21-3. Midcourse Health Disparities for Population-based Heart Disease and Stroke Objectives ..... 21-18
Map 21-1. Coronary Heart Disease Deaths, by County: 2011-2013 ..... 21-24
Map 21-2. Stroke Deaths, by County: 2011-2013 ..... 21-25
Map 21-3. Adults (18+ years) With Self-reported Hypertension, by State: 2013 ..... 21-26

# Goal: Improve cardiovascular health and quality of life through prevention, detection, and treatment of risk factors for heart attack and stroke; early identification and treatment of heart attacks and strokes; prevention of repeat cardiovascular events; and reduction in deaths from cardiovascular disease. 


#### Abstract

This chapter includes objectives that monitor coronary heart disease and stroke mortality, heart failure hospitalizations, risk factors for heart disease and stroke, knowledge of heart attack and stroke symptoms and response, and treatment options. The Reader's Guide provides a step-by-step explanation of the content of this chapter, including criteria for highlighting objectives in the Selected Findings. ${ }^{1}$ In this chapter, cardiovascular events are defined as heart attacks, hospitalizations for heart failure, and strokes.


## Status of Objectives

Figure 21-1. Midcourse Status of the Heart Disease and Stroke Objectives
Measurable Objectives: $\mathbf{3 6}$
Total Objectives: $\mathbf{5 0}$


Of the 50 objectives in the Heart Disease and Stroke Topic Area, 14 objectives were developmental, ${ }^{2}$ and 36 objectives were measurable ${ }^{3}$ (Figure 21-1, Table 21-1). The midcourse status of the measurable objectives was as follows (Table 21-2):

■ 15 objectives had met or exceeded their 2020 targets, ${ }^{4}$
■ 8 objectives were improving, ${ }^{5}$
■ 7 objectives demonstrated little or no detectable change, ${ }^{6}$

- 2 objectives were getting worse, ${ }^{7}$

■ 3 objectives had baseline data only, ${ }^{8}$ and
■ 1 objective was informational. ${ }^{9}$

## Selected Findings

## Heart Disease and Stroke Mortality

- The age-adjusted rate of coronary heart disease deaths (HDS-2) declined from 129.2 per 100,000 population in 2007 to 102.6 in 2013, exceeding the 2020 target (Table 21-2).
» In 2011-2013, age-adjusted coronary heart disease death rates (HDS-2) varied by county. There were 1,315 counties (out of 3,131 total with reliable data) that met or exceeded the national target (Map 21-1).

In 2013, there were statistically significant disparities by sex, race and ethnicity, and geographic location in the age-adjusted rate of coronary heart disease deaths (Table 21-3, HDS-2).

- The age-adjusted rate of stroke deaths (HDS-3) declined from 43.5 per 100,000 population in 2007 to 36.2 in 2013, moving toward the 2020 target (Table 21-2).
» In 2011-2013, age-adjusted stroke death rates (HDS-3) varied by county. There were 731 counties (out of 3,118 total with reliable data) that met or exceeded the national target (Map 21-2).
» In 2013, there were statistically significant disparities by sex, race and ethnicity, and geographic location in the age-adjusted rate of stroke deaths (Table 21-3, HDS-3).


## Identification and Control of Heart Disease and Stroke Risk Factors

## Screening and Prevalence

■ The age-adjusted proportion of adults aged 18 and over who had their blood pressure measured in the past 2 years and knew their blood pressure level (HDS-4) increased from $90.6 \%$ in 2008 to $91.8 \%$ in 2014, moving toward the 2020 target (Table 21-2).
» In 2014, there were statistically significant disparities by sex, race and ethnicity, education, family income, and disability status in the age-adjusted proportion of adults who had their blood pressure measured in the past 2 years and knew their blood pressure level (Table 21-3, HDS-4). The disparity by geographic location was not statistically significant.

- The age-adjusted proportion of adults aged 18 and over with hypertension (HDS-5.1) demonstrated little or no detectable change from 2005-2008 to 20092012 (29.9\% and 29.0\%, respectively) (Table 21-2).
» In 2013, the proportion of adults 18 years and over with self-reported high blood pressure varied by state (Map 21-3). ${ }^{10}$
» In 2009-2012, there were statistically significant disparities by sex, race and ethnicity, education, family income, and disability status in the age-adjusted proportion of adults with hypertension (Table 21-3, HDS-5.1).

■ The proportion of children and adolescents aged 8-17 with hypertension (HDS-5.2) decreased from $3.5 \%$ in 2005-2008 to 2.4\% in 2009-2012, exceeding the 2020 target (Table 21-2).
" In 2009-2012, the disparities by sex, race and ethnicity, and family income in the proportion of children and adolescents aged 8-17 with hypertension (HDS-5.2) were not statistically significant (Table 21-3).

- The age-adjusted proportion of adults aged 18 and over who had received a blood cholesterol screening in the past 5 years (HDS-6) increased from $74.6 \%$ in 2008 to $85.5 \%$ in 2014, exceeding the 2020 target (Table 21-2).
» In 2014, there were statistically significant disparities by sex, education, family income, disability status, and geographic location in the age-adjusted proportion of adults who had received a blood cholesterol screening in the past 5 years (Table 21-3, HDS-6). The disparity by race and ethnicity was not statistically significant.
- The age-adjusted proportion of adults aged 20 and over with high blood cholesterol levels (HDS-7) decreased from 15.0\% in 2005-2008 to 12.9\% in 2009-2012, exceeding the 2020 target (Table 21-2).
» In 2009-2012, there were statistically significant disparities by sex and race and ethnicity in the ageadjusted proportion of adults aged 20 and over with high blood cholesterol levels (Table 21-3, HDS-7). The disparities by education, family income, and disability status were not statistically significant.

■ The age-adjusted mean total blood cholesterol level among adults aged 20 and over (HDS-8) decreased from $197.7 \mathrm{mg} / \mathrm{dL}$ in 2005-2008 to $195.3 \mathrm{mg} / \mathrm{dL}$ in 2009-2012, moving toward the 2020 target (Table 21-2).
» In 2009-2012, there were statistically significant disparities by sex, race and ethnicity, and disability status in the age-adjusted mean total blood cholesterol level among adults aged 20 and over (Table 21-3, HDS-8). The disparities by education and family income were not statistically significant.

## Control of Heart Disease and Stroke Risk

 Factors■ The age-adjusted proportion of adults aged 18 and over with prehypertension who met the recommended guidelines for body mass index (BMI) (HDS-9.1) demonstrated little or no detectable change from 2005-2008 to 2009-2012 (28.7\% and 27.4\%, respectively) (Table 21-2).
» In 2009-2012, there were statistically significant disparities by race and ethnicity and education in the age-adjusted proportion of adults with prehypertension who met the recommended guidelines for BMI (Table 21-3, HDS-9.1). The disparities by sex, family income, and disability status were not statistically significant.

- From 2005-2008 to 2009-2012, the age-adjusted proportion of adults aged 18 and over with prehypertension who met the recommended guidelines for saturated fat consumption (HDS-9.2) increased from 31.4\% to 37.3\%, exceeding the 2020 target (Table 21-2).
" In 2009-2012, there were statistically significant disparities by race and ethnicity and education in the age-adjusted proportion of adults with prehypertension who met the recommended guidelines for saturated fat consumption (Table 21-3, HDS-9.2). The disparities by sex, family income, and disability status were not statistically significant.
- The age-adjusted proportion of adults aged 18 and over with prehypertension who met the recommended guidelines for physical activity (HDS-9.4) was $37.4 \%$ in 2007-2010. Data were not available beyond the baseline, so progress toward the 2020 target could not be assessed (Table 21-2).
" In 2007-2010, there were statistically significant disparities by sex, race and ethnicity, education, family income, and disability status in the age-adjusted proportion of adults with prehypertension who met the recommended guidelines for physical activity (Table 21-3, HDS-9.4).

■ From 2005-2008 to 2009-2012, the age-adjusted proportion of adults aged 18 and over with hypertension who met the recommended guidelines for BMI (HDS-10.1) decreased from $18.0 \%$ in 2005-2008 to $14.4 \%$ in 2009-2012, moving away from the baseline and 2020 target (Table 21-2).
» In 2009-2012, disparities by sex, race and ethnicity, education, family income, and disability status in the age-adjusted proportion of adults with hypertension who met the recommended guidelines for BMI (HDS-10.1) were not statistically significant (Table 21-3).
■ From 2005-2008 to 2009-2012, the age-adjusted proportion of adults aged 18 and over with hypertension who met the recommended guidelines for saturated fat consumption (HDS-10.2) increased from $30.5 \%$ to $38.8 \%$, exceeding the 2020 target (Table 21-2).
» In 2009-2012, there were statistically significant disparities by race and ethnicity, education, and family income in the age-adjusted proportion of adults with hypertension who met the recommended guidelines for saturated fat consumption (Table 21-3, HDS-10.2).

The disparities by sex and disability status were not statistically significant.
■ The age-adjusted proportion of adults aged 18 and over with hypertension who met the recommended guidelines for sodium intake (HDS-10.3) was 0.66\% in 2009-2012 (Table 21-2). Data were not available beyond the baseline, so progress toward the 2020 target could not be assessed.
" In 2009-2012, there was a statistically significant disparity by race and ethnicity in the age-adjusted proportion of adults with hypertension who met the recommended guidelines for sodium intake (Table 21-3, HDS-10.3). The disparities by education, family income, and disability status were not statistically significant.

- The age-adjusted proportion of adults aged 18 and over with hypertension who met the recommended guidelines for physical activity (HDS-10.4) was $28.0 \%$ in 2007-2010. Data were not available beyond the baseline, so progress toward the 2020 target could not be assessed (Table 21-2).
» In 2007-2010, there were statistically significant disparities by sex, education, family income, and disability status in the age-adjusted proportion of adults with hypertension who met the recommended guidelines for physical activity (Table 21-3, HDS-10.4). The disparity by race and ethnicity was not statistically significant.

■ From 2005-2008 to 2009-2012, the age-adjusted proportion of adults aged 18 and over with hypertension who were taking medication to lower their blood pressure (HDS-11) increased from 63.2\% to $68.5 \%$; and the age-adjusted proportion of adults aged 18 and over with hypertension whose blood pressure was under control (HDS-12) increased from $43.7 \%$ to $48.9 \%$, moving toward their respective 2020 targets (Table 21-2).
" In 2009-2012, there were statistically significant disparities by sex and disability status in the age-adjusted proportion of adults with hypertension who were taking medication to control their blood pressure (Table 21-3, HDS-11). The disparities by race and ethnicity, education, and family income were not statistically significant.
" In 2009-2012, there were statistically significant disparities by sex, race and ethnicity, and disability status in the age-adjusted proportion of adults with hypertension whose blood pressure was under control (Table 21-3, HDS-12). The disparities by education and family income were not statistically significant.

■ The proportion of physician office visits by women aged 55-79 with no history of cardiovascular disease that included a prescription of aspirin or other antiplatelet medication (HDS-15.1) demonstrated little or no detectable change from 2006-2007 to 2009-2010 ( $17.9 \%$ and $18.3 \%$, respectively) (Table 21-2).
" In 2009-2010, disparities by race and ethnicity and geographic location in the proportion of physician office visits by women aged 55-79 with no history of cardiovascular disease that included a prescription of aspirin or other antiplatelet medication (HDS-15.1) were not statistically significant (Table 21-3).

- The proportion of physician office visits by men aged 45-79 with no history of cardiovascular disease that included a prescription of aspirin or other antiplatelet medication (HDS-15.2) increased from $15.8 \%$ in 2006-2007 to 20.3\% in 2009-2010, exceeding the 2020 target (Table 21-2).
» In 2009-2010, disparities by race and ethnicity and geographic location in the proportion of physician office visits by men aged 45-79 with no history of cardiovascular disease that included a prescription of aspirin or other antiplatelet medication (HDS-15.2) were not statistically significant (Table 21-3).
- The proportion of physician office visits by adults aged 18 and over with hypertension whose blood pressure was under control (HDS-25) increased from $58.1 \%$ in 2006-2007 to $62.9 \%$ in 2009-2010, moving toward the 2020 target (Table 21-2).
» In 2009-2010, there were statistically significant disparities by sex, race and ethnicity, and geographic location in the proportion of physician office visits by adults with hypertension whose blood pressure was under control (Table 21-3, HDS-25).


## Early Identification and Treatment of Heart Attack and Stroke

## Awareness of Heart Attack and Stroke Symptoms

■ Between 2008 and 2014, the age-adjusted proportion of adults aged 20 and over who were aware of the early warning signs of a heart attack and the importance of seeking emergency care by calling 9-1-1 (HDS-16.1) increased from $37.2 \%$ to $47.1 \%$, while the age-adjusted proportion of adults aged 20 and over who were aware of the early warning signs and symptoms of a heart attack (HDS-16.2) increased from $39.6 \%$ to $49.7 \%$, with both objectives exceeding their respective 2020 targets (Table 21-2).

In 2014, there were statistically significant disparities by sex, education, family income, and geographic location in the age-adjusted proportion of adults aged 20 and over who were aware of the early warning signs of a heart attack and the importance of seeking emergency care by calling 9-1-1 (Table 21-3, HDS-16.1). The disparities by race and ethnicity and disability status were not statistically significant.
» In 2014, there were statistically significant disparities by sex, race and ethnicity, education, family income, and geographic location in the age-adjusted proportion of adults aged 20 and over who were aware of the early warning signs and symptoms of a heart attack (Table 21-3, HDS-16.2). The disparity by disability status was not statistically significant.

- The age-adjusted proportion of adults aged 20 and over who were aware of the importance of calling 9-1-1 for a heart attack (HDS-16.3) increased from $91.8 \%$ in 2008 to $93.3 \%$ in 2014, moving toward the 2020 target (Table 21-2).
» In 2014, there were statistically significant disparities by sex, race and ethnicity, education, family income, and disability status in the age-adjusted proportion of adults aged 20 and over who were aware of the importance of calling 9-1-1 for a heart attack (Table 21-3, HDS-16.3). The disparity by geographic location was not statistically significant.
■ Between 2009 and 2014, the age-adjusted proportion of adults aged 20 and over who were aware of the early warning signs of a stroke and the importance of seeking emergency care by calling 9-1-1 (HDS-17.1) increased from $51.3 \%$ to $66.1 \%$; the age-adjusted proportion of adults aged 20 and over who were aware of the early warning signs and symptoms of a stroke (HDS-17.2) increased from 53.9\% to 68.2\%; and the age-adjusted proportion of adults aged 20 and over who were aware of the importance of seeking emergency care for a stroke by calling 9-1-1 (HDS17.3) increased from $92.7 \%$ to $95.3 \%$, exceeding their respective 2020 targets (Table 21-2).
» In 2014, there were statistically significant disparities by sex, education, family income, disability status, and geographic location in the age-adjusted proportion of adults aged 20 and over who were aware of the early warning signs of a stroke and the importance of seeking emergency care by calling 9-1-1 (Table 21-3, HDS-17.1). The disparity by race and ethnicity was not statistically significant.
» In 2014, there were statistically significant disparities by sex, race and ethnicity, education, family income, disability status, and geographic location in the age-adjusted proportion of adults aged 20 and over who were aware of the early warning signs and symptoms of a stroke (Table 21-3, HDS-17.2).
»
In 2014, there were statistically significant disparities by sex, race and ethnicity, education, family income, disability status, and geographic location in the age-adjusted proportion of adults aged 20 and over who were aware of the importance of seeking emergency care for a stroke by calling 9-1-1 (Table 21-3, HDS-17.3).


## Prompt Treatment of Heart Attack and Stroke

■ The proportion of heart attack patients receiving fibrinolytic therapy within 30 minutes of hospital arrival (HDS-19.1) decreased from $70.0 \%$ in 2009 to $54.3 \%$ in 2014, moving away from the baseline and 2020 target (Table 21-2). ${ }^{11}$
» In 2014, the disparities by sex and race and ethnicity in the proportion of heart attack patients receiving fibrinolytic therapy within 30 minutes of hospital arrival (HDS-19.1) were not statistically significant (Table 21-3).

- Between 2009 and 2014, the proportion of heart attack patients receiving percutaneous intervention within 90 minutes of hospital arrival (HDS-19.2) increased from $90.4 \%$ to $95.9 \%$, moving toward the 2020 target (Table 21-2).
» In 2014, there was a statistically significant disparity by sex in the proportion of heart attack patients receiving percutaneous intervention within 90 minutes of hospital arrival (Table 21-3, HDS-19.2). The disparity by race and ethnicity was not statistically significant.
- The proportion of stroke patients receiving acute reperfusion therapy within 3 hours of symptom onset (HDS-19.3) increased from $74.1 \%$ in 2009 to $88.5 \%$ in 2014, exceeding the 2020 target (Table 21-2).
» In 2014, the disparities by sex and race and ethnicity in the proportion of stroke patients receiving acute reperfusion therapy within 3 hours of symptom onset (HDS-19.3) were not statistically significant (Table 21-3).
- The age-adjusted proportion of adults aged 20 and over with coronary heart disease who had their low-density lipoprotein (LDL) cholesterol at or below recommended levels (HDS-20.1) demonstrated little or no detectable change from 2005-2008 to 20092012 ( $52.3 \%$ and $50.5 \%$, respectively) (Table 21-2).
" In 2009-2012, the disparities by sex, education, family income, and disability status in the age-adjusted proportion of adults aged 20 and over with coronary heart disease who had LDL cholesterol at or below recommended levels (HDS20.1) were not statistically significant (Table 21-3).
- The age-adjusted proportion of adults aged 20 and over who have had a stroke and who had their LDL cholesterol at or below recommended levels (HDS-20.2) demonstrated little or no detectable change from 2005-2008 to 2009-2012 (33.4\% and $49.2 \%$, respectively) (Table 21-2).
» In 2009-2012, there were statistically significant disparities by sex and race and ethnicity in the age-adjusted proportion of adults aged 20 and over who have had a stroke and who had LDL cholesterol at or below recommended levels (Table 21-3, HDS-20.2). The disparities by education, family income, and disability status were not statistically significant.


## Prevention of Repeat Cardiovascular Events

- The proportion of physician office visits by adults aged 18 and over with a history of cardiovascular disease that included a prescription for aspirin or other antiplatelet medication to prevent recurrent cardiovascular events (HDS-21) increased from 46.0\% in 2006-2007 to $53.9 \%$ in 2009-2010, exceeding the 2020 target (Table 21-2).
» In 2009-2010, there was a statistically significant disparity by sex in the proportion of office visits by adults with a history of cardiovascular disease that included a prescription for aspirin or other antiplatelet medication to prevent recurrent cardiovascular events (Table 21-3, HDS-21). The disparities by race and ethnicity and geographic location were not statistically significant.
- The proportion of stroke survivors assessed for and/or referred to rehabilitation services (HDS-23) increased from $96.2 \%$ in 2009 to $98.0 \%$ in 2014. A target was not set for this objective (Table 21-2).
» In 2014, there were statistically significant disparities by sex and race and ethnicity in the proportion of stroke survivors assessed for and/ or referred to rehabilitation services (Table 21-3, HDS-23).
- Between 2007 and 2010, the rate of heart failure hospitalizations among persons aged 65-74 (HDS-24.1) declined from 10.4 to 8.7 per 1,000 population, exceeding the 2020 target (Table 21-2).
" In 2010, there were statistically significant disparities by sex and race and ethnicity in the rate of heart failure hospitalizations among persons aged 65-74 (Table 21-3, HDS-24.1).
- The rate of heart failure hospitalizations among persons aged 75-84 (HDS-24.2) demonstrated little or no detectable change from 2007 to 2010 (23.4 and 21.6 per 1,000 population, respectively) (Table 21-2).
" In 2010, there was a statistically significant disparity by race and ethnicity in the rate of heart failure hospitalizations among persons aged 75-84 (Table 21-3, HDS-24.2). The disparity by sex was not statistically significant.
- The rate of heart failure hospitalizations among persons aged 85 and over (HDS-24.3) demonstrated little or no detectable change from 2007 to 2010 ( 38.7 and 43.7 per 1,000 population, respectively) (Table 21-2).
" In 2010, the disparities by sex and race and ethnicity in the rate of heart failure hospitalizations among persons aged 85 and over (HDS-24.3) were not statistically significant (Table 21-3).


## More Information

Readers interested in more detailed information about the objectives in this topic area are invited to visit the HealthyPeople.gov website, where extensive substantive and technical information is available:

- For the background and importance of the topic area, see: https://www.healthypeople.gov/2020/ topics-objectives/topic/heart-disease-and-stroke
- For data details for each objective, including definitions, numerators, denominators, calculations, and data limitations, see: https://www. healthypeople.gov/2020/topics-objectives/topic/ heart-disease-and-stroke/objectives
Select an objective, then click on the "Data Details" icon.
- For objective data by population group (e.g., sex, race and ethnicity, or family income), including rates, percentages, or counts for multiple years, see: https://www.healthypeople.gov/2020/topics-objectives/topic/heart-disease-and-stroke/ objectives
Select an objective, then click on the "Data2020" icon.
Data for the measurable objectives in this chapter were from the following data sources:
- Acute Coronary Treatment and Intervention Outcomes Network Registry-Get With The Guidelines: http://cvquality.acc.org/NCDR-Home/Registries.aspx
■ Get With The Guidelines-Stroke: http://www. heart.org/HEARTORG/HealthcareResearch/ GetWithTheGuidelines/Get-With-The-GuidelinesStroke_UCM_306098_SubHomePage.jsp
- National Ambulatory Medical Care Survey: http://www.cdc.gov/nchs/ahcd.htm
- National Health and Nutrition Examination Survey: http://www.cdc.gov/nchs/nhanes.htm
- National Health Interview Survey: http://www.cdc.gov/nchs/nhis.htm
- National Hospital Discharge Survey: http://www.cdc.gov/nchs/nhds.htm

■ National Vital Statistics System-Mortality: http://www.cdc.gov/nchs/deaths.htm

## Footnotes

${ }^{1}$ The Technical Notes provide more information on Healthy People 2020 statistical methods and issues.
${ }^{2}$ Developmental objectives did not have a national baseline value.
${ }^{3}$ Measurable objectives had a national baseline value.
${ }^{4}$ Target met or exceeded-One of the following, as specified in the Midcourse Progress Table:

At baseline the target was not met or exceeded and the midcourse value was equal to or exceeded the target. (The percentage of targeted change achieved was equal to or greater than 100\%.)
»
The baseline and midcourse values were equal to or exceeded the target. (The percentage of targeted change achieved was not assessed.)
${ }^{5}$ Improving-One of the following, as specified in the Midcourse Progress Table:
» Movement was toward the target, standard errors were available, and the percentage of targeted change achieved was statistically significant.
» Movement was toward the target, standard errors were not available, and the objective had achieved $10 \%$ or more of the targeted change.
${ }^{6}$ Little or no detectable change-One of the following, as specified in the Midcourse Progress Table:
» Movement was toward the target, standard errors were available, and the percentage of targeted change achieved was not statistically significant.
Movement was toward the target, standard errors were not available, and the objective had achieved less than $10 \%$ of the targeted change.
Movement was away from the baseline and target, standard errors were available, and the percentage change relative to the baseline was not statistically significant.
» Movement was away from the baseline and target, standard errors were not available, and the objective had moved less than $10 \%$ relative to the baseline.
» There was no change between the baseline and the midcourse data point.
${ }^{7}$ Getting worse-One of the following, as specified in the Midcourse Progress Table:
» Movement was away from the baseline and target, standard errors were available, and the percentage change relative to the baseline was statistically significant.
» Movement was away from the baseline and target, standard errors were not available, and the objective had moved $10 \%$ or more relative to the baseline.
${ }^{8}$ Baseline only-The objective only had one data point, so progress toward target attainment could not be assessed.
${ }^{9}$ Informational-A target was not set for this objective, so progress toward target attainment could not be assessed.
${ }^{10}$ The state data shown in the map are based on persons who have ever been told by a doctor, nurse, or other health professional that they have high blood pressure from the Behavioral Risk Factor Surveillance System. The national data are based on measured systolic and diastolic blood pressure and self-reported blood pressure medication use from the National Health and Nutrition Examination Survey and are the basis for setting the national target. National and state data may not be directly comparable, and therefore the national target may not be applicable to the state data. Information about the Behavioral Risk Factor Surveillance System is available from: http://www.cdc.gov/brfss/.
${ }^{11}$ The denominator for HDS-19.1 includes all heart attack patients, and does not exclude patients who receive percutaneous intervention instead of fibrinolytic therapy as treatment for their heart attack after hospital arrival. Therefore, this objective can be used to track the use of fibrinolytic therapy, but it does not provide information about whether patients received any guidelinerecommended therapy.

## Suggested Citation

National Center for Health Statistics. Chapter 21: Heart Disease and Stroke. Healthy People 2020 Midcourse Review. Hyattsville, MD. 2016.

## Table 21-1. Heart Disease and Stroke Objectives

LEGEND

8 Data for this objective are available in this chapter's Midcourse Progress Table.


Disparities data for this objective are available, and this chapter includes a Midcourse Health Disparities Table.

A state or county level map for this objective is available at the end of the chapter.
$\square$ Midcourse data availability is not applicable for developmental and archived objectives. Developmental objectives did not have a national baseline value. Archived objectives are no longer being monitored due to lack of data source, changes in science, or replacement with other objectives.

| Objective Number | Objective Statement | Data Sources | Midcourse Data Availability |
| :---: | :---: | :---: | :---: |
| HDS-1 | (Developmental) Increase overall cardiovascular health in the U.S. population | (Potential) National Health and Nutrition Examination Survey (NHANES), CDC/NCHS | Not Applicable |
| HDS-2 | Reduce coronary heart disease deaths | National Vital Statistics System-Mortality (NVSS-M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census | sit |
| HDS-3 | Reduce stroke deaths | National Vital Statistics System-Mortality (NVSS-M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census | $11$ |
| HDS-4 | Increase the proportion of adults who have had their blood pressure measured within the preceding 2 years and can state whether their blood pressure was normal or high | National Health Interview Survey (NHIS), CDC/NCHS | 11 |
| HDS-5.1 | Reduce the proportion of adults with hypertension | National Health and Nutrition Examination Survey (NHANES), CDC/NCHS | $01$ |
| HDS-5.2 | Reduce the proportion of children and adolescents with hypertension | National Health and Nutrition Examination Survey (NHANES), CDC/NCHS | (1) |
| HDS-6 | Increase the proportion of adults who have had their blood cholesterol checked within the preceding 5 years | National Health Interview Survey (NHIS), CDC/NCHS | $11$ |
| HDS-7 | Reduce the proportion of adults with high total blood cholesterol levels | National Health and Nutrition Examination Survey (NHANES), CDC/NCHS | $0$ |
| HDS-8 | Reduce the mean total blood cholesterol levels among adults | National Health and Nutrition Examination Survey (NHANES), CDC/NCHS | 41 |
| HDS-9.1 | Increase the proportion of adults with prehypertension who meet the recommended guidelines for body mass index (BMI) | National Health and Nutrition Examination Survey (NHANES), CDC/NCHS | 41 |
| HDS-9.2 | Increase the proportion of adults with prehypertension who meet the recommended guidelines for saturated fat consumption | National Health and Nutrition Examination Survey (NHANES), CDC/NCHS | (1) |
| HDS-9.3 | (Developmental) Increase the proportion of adults with prehypertension who meet the recommended guidelines for sodium intake | (Potential) National Health and Nutrition Examination Survey (NHANES), CDC/NCHS | Not Applicable |

## Table 21-1. Heart Disease and Stroke Objectives—Continued

LEGEND

8 Data for this objective are available in this
8 chapter's Midcourse Progress Table.


Disparities data for this objective are available, and this chapter includes a Midcourse Health Disparities Table.

A state or county level map for this objective is available at the end of the chapter.
$\square$ Midcourse data availability is not applicable for developmental and archived objectives. Developmental objectives did not have a national baseline value. Archived objectives are no longer being monitored due to lack of data source, changes in science, or replacement with other objectives.

| Objective Number | Objective Statement | Data Sources | Midcourse Data Availability |
| :---: | :---: | :---: | :---: |
| HDS-9.4 | Increase the proportion of adults with prehypertension who meet the recommended guidelines for physical activity | National Health and Nutrition Examination Survey (NHANES), CDC/NCHS | (11) |
| HDS-9.5 | (Developmental) Increase the proportion of adults with prehypertension who meet the recommended guidelines for moderate alcohol consumption | (Potential) National Health and Nutrition Examination Survey (NHANES), CDC/NCHS | Not Applicable |
| HDS-10.1 | Increase the proportion of adults with hypertension who meet the recommended guidelines for body mass index (BMI) | National Health and Nutrition Examination Survey (NHANES), CDC/NCHS |  |
| HDS-10.2 | Increase the proportion of adults with hypertension who meet the recommended guidelines for saturated fat consumption | National Health and Nutrition Examination Survey (NHANES), CDC/NCHS |  |
| HDS-10.3 | Increase the proportion of adults with hypertension who meet the recommended guidelines for sodium intake | National Health and Nutrition Examination Survey (NHANES), CDC/NCHS |  |
| HDS-10.4 | Increase the proportion of adults with hypertension who meet the recommended guidelines for physical activity | National Health and Nutrition Examination Survey (NHANES), CDC/NCHS | $8 \text { H }$ |
| HDS-10.5 | (Developmental) Increase the proportion of adults with hypertension who meet the recommended guidelines for moderate alcohol consumption | (Potential) National Health and Nutrition Examination Survey (NHANES), CDC/NCHS | Not Applicable |
| HDS-11 | Increase the proportion of adults with hypertension who are taking the prescribed medications to lower their blood pressure | National Health and Nutrition Examination Survey (NHANES), CDC/NCHS | $8 \text { 11 }$ |
| HDS-12 | Increase the proportion of adults with hypertension whose blood pressure is under control | National Health and Nutrition Examination Survey (NHANES), CDC/NCHS |  |
| HDS-13.1 | (Developmental) Increase the proportion of adults with elevated LDL cholesterol who have been advised by a health care provider regarding a cholesterol-lowering diet | (Potential) National Health and Nutrition Examination Survey (NHANES), CDC/NCHS | Not Applicable |

## Table 21-1. Heart Disease and Stroke Objectives—Continued

LEGEND

8 Data for this objective are available in this
8 chapter's Midcourse Progress Table.


Disparities data for this objective are available, and this chapter includes a Midcourse Health Disparities Table.

A state or county level map for this objective is available at the end of the chapter.
$\qquad$ Midcourse data availability is not applicable for developmental and archived objectives. Developmental objectives did not have a national baseline value. Archived objectives are no longer being monitored due to lack of data source, changes in science, or replacement with other objectives.

| Objective Number | Objective Statement | Data Sources | Midcourse Data Availability |
| :---: | :---: | :---: | :---: |
| HDS-13.2 | (Developmental) Increase the proportion of adults with elevated LDL cholesterol who have been advised by a health care provider regarding cholesterol-lowering physical activity | (Potential) National Health and Nutrition Examination Survey (NHANES), CDC/NCHS | Not Applicable |
| HDS-13.3 | (Developmental) Increase the proportion of adults with elevated LDL cholesterol who have been advised by a health care provider regarding cholesterol-lowering weight control | (Potential) National Health and Nutrition Examination Survey (NHANES), CDC/NCHS | Not Applicable |
| HDS-13.4 | (Developmental) Increase the proportion of adults with elevated LDL cholesterol who have been advised by a health care provider regarding cholesterol-lowering prescribed drug therapy | (Potential) National Health and Nutrition Examination Survey (NHANES), CDC/NCHS | Not Applicable |
| HDS-14.1 | (Developmental) Increase the proportion of adults with elevated LDL cholesterol who adhere to the prescribed cholesterol-lowering diet | (Potential) National Health and Nutrition Examination Survey (NHANES), CDC/NCHS | Not Applicable |
| HDS-14.2 | (Developmental) Increase the proportion of adults with elevated LDL cholesterol who adhere to the prescribed cholesterol-lowering physical activity | (Potential) National Health and Nutrition Examination Survey (NHANES), CDC/NCHS | Not Applicable |
| HDS-14.3 | (Developmental) Increase the proportion of adults with elevated LDL cholesterol who adhere to the prescribed cholesterol-lowering weight control | (Potential) National Health and Nutrition Examination Survey (NHANES), CDC/NCHS | Not Applicable |
| HDS-14.4 | (Developmental) Increase the proportion of adults with elevated LDL cholesterol who adhere to the prescribed cholesterol-lowering drug therapy | (Potential) National Health and Nutrition Examination Survey (NHANES), CDC/NCHS | Not Applicable |
| HDS-15.1 | Increase aspirin use as recommended among women aged 55 to 79 years with no history of cardiovascular disease | National Ambulatory Medical Care Survey (NAMCS), CDC/NCHS | $10$ |
| HDS-15.2 | Increase aspirin use as recommended among men aged 45 to 79 years with no history of cardiovascular disease | National Ambulatory Medical Care Survey (NAMCS), CDC/NCHS | n |

## Table 21-1. Heart Disease and Stroke Objectives—Continued

LEGEND

8 Data for this objective are available in this chapter's Midcourse Progress Table.


Disparities data for this objective are available, and this chapter includes a Midcourse Health Disparities Table.

A state or county level map for this objective is available at the end of the chapter.
$\square$ Midcourse data availability is not applicable for developmental and archived objectives. Developmental objectives did not have a national baseline value. Archived objectives are no longer being monitored due to lack of data source, changes in science, or replacement with other objectives.

| Objective Number | Objective Statement | Data Sources | Midcourse Data Availability |
| :---: | :---: | :---: | :---: |
| HDS-16.1 | Increase the proportion of adults aged 20 years and older who are aware of the early warning symptoms and signs of a heart attack and the importance of accessing rapid emergency care by calling $9-1-1$ or another emergency number | National Health Interview Survey (NHIS), CDC/NCHS |  |
| HDS-16.2 | Increase the proportion of adults aged 20 years and older who are aware of the early warning symptoms and signs of a heart attack | National Health Interview Survey (NHIS), CDC/NCHS | $8 \text { H11 }$ |
| HDS-16.3 | Increase the proportion of adults aged 20 years and older who are aware of the importance of accessing rapid emergency care for a heart attack by calling 9-1-1 or another emergency number | National Health Interview Survey (NHIS), CDC/NCHS |  |
| HDS-17.1 | Increase the proportion of adults who are aware of the early warning symptoms and signs of a stroke and the importance of accessing rapid emergency care by calling 9-1-1 or another emergency number | National Health Interview Survey (NHIS), CDC/NCHS |  |
| HDS-17.2 | Increase the proportion of adults aged 20 years and older who are aware of the early warning symptoms and signs of a stroke | National Health Interview Survey (NHIS), CDC/NCHS |  |
| HDS-17.3 | Increase the proportion of adults aged 20 years and older who are aware of the importance of accessing rapid emergency care for a stroke by calling 9-1-1 or another emergency number | National Health Interview Survey (NHIS), CDC/NCHS |  |
| HDS-18 | (Developmental) Increase the proportion of out-of-hospital cardiac arrests in which appropriate bystander and emergency medical services (EMS) were administered | To be determined | Not Applicable |
| HDS-19.1 | Increase the proportion of eligible patients with heart attacks who receive fibrinolytic therapy within 30 minutes of hospital arrival | Acute Coronary Treatment and Intervention Outcomes Network Registry-Get With the Guidelines (ACTION-GWTG), American College of Cardiology (ACC) |  |
| HDS-19.2 | Increase the proportion of eligible patients with heart attacks who receive percutaneous intervention (PCI) within 90 minutes of hospital arrival | Acute Coronary Treatment and Intervention Outcomes Network Registry-Get With the Guidelines (ACTION-GWTG), American College of Cardiology (ACC) | $8 \text { 11 }$ |

## Table 21-1. Heart Disease and Stroke Objectives—Continued

LEGEND

8 Data for this objective are available in this chapter's Midcourse Progress Table.


Disparities data for this objective are available, and this chapter includes a Midcourse Health Disparities Table.

A state or county level map for this objective is available at the end of the chapter.
$\square$ Midcourse data availability is not applicable for developmental and archived objectives. Developmental objectives did not have a national baseline value. Archived objectives are no longer being monitored due to lack of data source, changes in science, or replacement with other objectives.

| Objective <br> Number | Objective Statement |
| :--- | :--- | :--- |

## Table 21-2. Midcourse Progress for Measurable ${ }^{1}$ Heart Disease and Stroke Objectives

| LEGEND |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{array}{ll}\begin{array}{l}\text { Target met or } \\ \text { exceeded } 2,3\end{array} & \\ \\ & \text { Improving } 4,5 \\ & \text { Objective Description }\end{array}$ | $\text { ange }{ }^{6-10}$ | Getting wors | Baseline only ${ }^{13}$ |  | Informational ${ }^{14}$ |  |
|  |  | Baseline Value (Year) | Midcourse Value (Year) | Target | Movement Toward Target ${ }^{15}$ | Movement Away From Baseline ${ }^{16}$ | Movement Statistically Significant ${ }^{17}$ |
|  | HDS-2 Coronary heart disease deaths (age-adjusted, per 100,000 population) | $\begin{gathered} 129.2 \\ (2007) \end{gathered}$ | $\begin{gathered} 102.6 \\ (2013) \end{gathered}$ | 103.4 | 103.1\% |  | Yes |
|  | HDS-3 Stroke deaths (age-adjusted, per 100,000 population) | $\begin{gathered} 43.5 \\ (2007) \end{gathered}$ | $\begin{gathered} 36.2 \\ (2013) \end{gathered}$ | 34.8 | 83.9\% |  | Yes |
| $\square^{4}$ | HDS-4 Adults who had their blood pressure measured in past 2 years and know their blood pressure level (age-adjusted, percent, 18+ years) | $\begin{aligned} & 90.6 \% \\ & (2008) \end{aligned}$ | $\begin{aligned} & 91.8 \% \\ & (2014) \end{aligned}$ | 92.6\% | 60.0\% |  | Yes |
| $0^{6}$ | HDS-5.1 Adults with hypertension (age-adjusted, percent, 18+ years) | $\begin{gathered} 29.9 \% \\ (2005-2008) \end{gathered}$ | $\begin{gathered} 29.0 \% \\ (2009-2012) \end{gathered}$ | 26.9\% | 30.0\% |  | No |
| $v^{2}$ | HDS-5.2 Children and adolescents with hypertension (percent, 8-17 years) | $\begin{gathered} 3.5 \% \\ (2005-2008) \end{gathered}$ | $\begin{gathered} 2.4 \% \\ (2009-2012) \end{gathered}$ | 3.2\% | 366.7\% |  | No |
| $\sqrt{ }^{2}$ | HDS-6 Adults having blood cholesterol screening in past 5 years (age-adjusted, percent, 18+ years) | $\begin{aligned} & 74.6 \% \\ & (2008) \end{aligned}$ | $\begin{aligned} & 85.5 \% \\ & \text { (2014) } \end{aligned}$ | 82.1\% | 145.3\% |  | Yes |
| $\sqrt{ }^{2}$ | HDS-7 Adults with high blood cholesterol levels (age-adjusted, percent, 20+ years) | $\begin{gathered} 15.0 \% \\ (2005-2008) \end{gathered}$ | $\begin{gathered} 12.9 \% \\ (2009-2012) \end{gathered}$ | 13.5\% | 140.0\% |  | Yes |
| $\Psi^{4}$ | HDS-8 Mean total blood cholesterol levels (age-adjusted, mg/dL, 20+ years) | $\begin{gathered} 197.7 \\ (2005-2008) \end{gathered}$ | $\begin{gathered} 195.3 \\ (2009-2012) \end{gathered}$ | 177.9 | 12.1\% |  | Yes |
|  | HDS-9.1 Adults with prehypertension who meet the recommended guidelines for BMI (age-adjusted, percent, $18+$ years) | $\begin{gathered} 28.7 \% \\ (2005-2008) \end{gathered}$ | $\begin{gathered} 27.4 \% \\ (2009-2012) \end{gathered}$ | 33.0\% |  | 4.5\% | No |
| $v^{2}$ | HDS-9.2 Adults with prehypertension who meet the recommended guidelines for saturated fat consumption (age-adjusted, percent, 18+ years) | $\begin{gathered} 31.4 \% \\ (2005-2008) \end{gathered}$ | $\begin{gathered} 37.3 \% \\ (2009-2012) \end{gathered}$ | 35.7\% | 137.2\% |  | Yes |
|  | HDS-9.4 Adults with prehypertension who meet the recommended guidelines for physical activity (age-adjusted, percent, 18+ years) | $\begin{gathered} 37.4 \% \\ (2007-2010) \end{gathered}$ |  | 42.1\% |  |  |  |
| ${ }^{11}$ | HDS-10.1 Adults with hypertension who meet the recommended guidelines for BMI (age-adjusted, percent, $18+$ years) | $\begin{gathered} 18.0 \% \\ (2005-2008) \end{gathered}$ | $\begin{gathered} 14.4 \% \\ (2009-2012) \end{gathered}$ | 21.6\% |  | 20.0\% | Yes |
| $v^{2}$ | HDS-10.2 Adults with hypertension who meet the recommended guidelines for saturated fat consumption (age-adjusted, percent, 18+ years) | $\begin{gathered} 30.5 \% \\ (2005-2008) \end{gathered}$ | $\begin{gathered} 38.8 \% \\ (2009-2012) \end{gathered}$ | 35.7\% | 159.6\% |  | Yes |
|  | HDS-10.3 Adults with hypertension who meet the recommended guidelines for sodium intake (age-adjusted, percent, 18+ years) | $\begin{gathered} 0.66 \% \\ (2009-2012) \end{gathered}$ |  | 1.19\% |  |  |  |

Table 21-2. Midcourse Progress for Measurable ${ }^{1}$ Heart Disease and Stroke Objectives—Continued

| LEGEND |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{array}{ll}\begin{array}{l}\text { Target met or } \\ \text { exceeded } 2,3\end{array} & \\ \\ & \text { Objective Description }\end{array}$ | $\text { nge }{ }^{6-10}$ | Getting wors | Baseline only ${ }^{13}$ |  | Informational ${ }^{14}$ |  |
|  |  | Baseline Value (Year) | Midcourse <br> Value <br> (Year) | Target | Movement Toward Target ${ }^{15}$ | Movement Away From Baseline ${ }^{16}$ | Movement Statistically Significant ${ }^{17}$ |
|  | HDS-10.4 Adults with hypertension who meet the recommended guidelines for physical activity (age-adjusted, percent, 18+ years) | $\begin{gathered} 28.0 \% \\ (2007-2010) \end{gathered}$ |  | 33.7\% |  |  |  |
|  | HDS-11 Adults with hypertension taking medication to lower their blood pressure (age-adjusted, percent, 18+ years) | $\begin{gathered} 63.2 \% \\ (2005-2008) \end{gathered}$ | $\begin{gathered} 68.5 \% \\ (2009-2012) \end{gathered}$ | 69.5\% | 84.1\% |  | Yes |
|  | HDS-12 Adults with hypertension whose blood pressure is under control (age-adjusted, percent, 18+ years) | $\begin{gathered} 43.7 \% \\ (2005-2008) \end{gathered}$ | $\begin{gathered} 48.9 \% \\ (2009-2012) \end{gathered}$ | 61.2\% | 29.7\% |  | Yes |
| $0^{6}$ | HDS-15.1 Physician office visits by women with no history of cardiovascular disease that include prescription of aspirin or other antiplatelet medication (percent, 55-79 years) | $\begin{gathered} 17.9 \% \\ (2006-2007) \end{gathered}$ | $\begin{gathered} 18.3 \% \\ (2009-2010) \end{gathered}$ | 24.8\% | 5.8\% |  | No |
| $v^{2}$ | HDS-15.2 Physician office visits by men with no history of cardiovascular disease that include prescription of aspirin or other antiplatelet medication (percent, 45-79 years) | $\begin{gathered} 15.8 \% \\ (2006-2007) \end{gathered}$ | $\begin{gathered} 20.3 \% \\ (2009-2010) \end{gathered}$ | 19.3\% | 128.6\% |  | Yes |
| $V^{2}$ | HDS-16.1 Adults who are aware of heart attack symptoms and the importance of calling 9-1-1 (ageadjusted, percent, 20+ years) | $\begin{aligned} & 37.2 \% \\ & (2008) \end{aligned}$ | $\begin{aligned} & 47.1 \% \\ & (2014) \end{aligned}$ | 40.9\% | 267.6\% |  | Yes |
|  | HDS-16.2 Adults who are aware of heart attack symptoms (age-adjusted, percent, 20+ years) | $\begin{aligned} & 39.6 \% \\ & (2008) \end{aligned}$ | $\begin{aligned} & 49.7 \% \\ & (2014) \end{aligned}$ | 43.6\% | 252.5\% |  | Yes |
|  | HDS-16.3 Adults who are aware of the importance of calling 9-1-1 for a heart attack (age-adjusted, percent, $20+$ years) | $\begin{aligned} & 91.8 \% \\ & (2008) \end{aligned}$ | $\begin{aligned} & 93.3 \% \\ & (2014) \end{aligned}$ | 93.8\% | 75.0\% |  | Yes |
|  | HDS-17.1 Adults who are aware of stroke symptoms and the importance of calling 9-1-1 (age-adjusted, percent, $20+$ years) | $\begin{aligned} & 51.3 \% \\ & (2009) \end{aligned}$ | $\begin{aligned} & 66.1 \% \\ & (2014) \end{aligned}$ | 56.4\% | 290.2\% |  | Yes |
|  | HDS-17.2 Adults who are aware of stroke symptoms (age-adjusted, percent, 20+ years) | $\begin{aligned} & 53.9 \% \\ & (2009) \end{aligned}$ | $\begin{aligned} & 68.2 \% \\ & (2014) \end{aligned}$ | 59.3\% | 264.8\% |  | Yes |
|  | HDS-17.3 Adults who are aware of the importance of calling 9-1-1 for a stroke (age-adjusted, percent, $20+$ years) | $\begin{aligned} & 92.7 \% \\ & \text { (2009) } \end{aligned}$ | $\begin{aligned} & 95.3 \% \\ & (2014) \end{aligned}$ | 94.7\% | 130.0\% |  | Yes |
| ${ }^{11}$ | HDS-19.1 Heart attack patients receiving fibrinolytic therapy within 30 minutes of hospital arrival (percent) | $\begin{aligned} & 70.0 \% \\ & (2009) \end{aligned}$ | $\begin{aligned} & 54.3 \% \\ & (2014) \end{aligned}$ | 77.0\% |  | 22.4\% | Yes |
|  | HDS-19.2 Heart attack patients receiving percutaneous intervention within 90 minutes of hospital arrival (percent) | $\begin{aligned} & 90.4 \% \\ & (2009) \end{aligned}$ | $\begin{aligned} & 95.9 \% \\ & (2014) \end{aligned}$ | 99.4\% | 61.1\% |  | Yes |

Table 21-2. Midcourse Progress for Measurable ${ }^{1}$ Heart Disease and Stroke Objectives—Continued


## Table 21-2. Midcourse Progress for Measurable ${ }^{1}$ Heart Disease and Stroke Objectives—Continued

## NOTES

See HealthyPeople.gov for all Healthy People 2020 data. The Technical Notes provide more information on the measures of progress.

## FOOTNOTES

${ }^{1}$ Measurable objectives had a national baseline value.
Target met or exceeded:
${ }^{2}$ At baseline the target was not met or exceeded and the midcourse value was equal to or exceeded the target. (The percentage of targeted change achieved was equal to or greater than $100 \%$.)
${ }^{3}$ The baseline and midcourse values were equal to or exceeded the target.
(The percentage of targeted change achieved was not assessed.)

## Improving:

${ }^{4}$ Movement was toward the target, standard errors were available, and the percentage of targeted change achieved was statistically significant.
${ }^{5}$ Movement was toward the target, standard errors were not available, and the objective had achieved $10 \%$ or more of the targeted change.
Little or no detectable change:
${ }^{6}$ Movement was toward the target, standard errors were available, and the percentage of targeted change achieved was not statistically significant.
${ }^{7}$ Movement was toward the target, standard errors were not available, and the objective had achieved less than $10 \%$ of the targeted change.
${ }^{8}$ Movement was away from the baseline and target, standard errors were available, and the percentage change relative to the baseline was not statistically significant.
${ }^{9}$ Movement was away from the baseline and target, standard errors were not available, and the objective had moved less than $10 \%$ relative to the baseline.
${ }^{10}$ There was no change between the baseline and the midcourse data point.

## Getting worse:

${ }^{11}$ Movement was away from the baseline and target, standard errors were available, and the percentage change relative to the baseline was statistically significant.
${ }^{12}$ Movement was away from the baseline and target, standard errors were not available, and the objective had moved $10 \%$ or more relative to the baseline.
${ }^{13}$ Baseline only: The objective only had one data point, so progress toward target attainment could not be assessed.
${ }^{14}$ Informational: A target was not set for this objective, so progress toward target attainment could not be assessed.
${ }^{15}$ For objectives that moved toward their targets, movement toward the target was measured as the percentage of targeted change achieved (unless the target was already met or exceeded at baseline):

$$
\begin{aligned}
& \text { Percentage of targeted } \\
& \text { change achieved }
\end{aligned}=\frac{\text { Midcourse value }- \text { Baseline value }}{\text { HP2020 target }- \text { Baseline value }} \times 100
$$

${ }^{16}$ For objectives that moved away from their baselines and targets, movement away from the baseline was measured as the magnitude of the percentage change from baseline:

$$
\begin{aligned}
& \text { Magnitude of percentage } \\
& \text { change from baseline }
\end{aligned}=\frac{\mid \text { Midcourse value }- \text { Baseline value } \mid}{\text { Baseline value }} \times 100
$$

${ }^{17}$ Statistical significance was tested when the objective had a target and at least two data points, standard errors of the data were available, and a normal distribution could be assumed. Statistical significance of the percentage of targeted change achieved or the magnitude of the percentage change from baseline was assessed at the 0.05 level using a normal one-sided test.

DATA SOURCES
HDS-2 National Vital Statistics System-Mortality (NVSS-M), CDC/NCHS; HDS-3 National Vital Statistics System-Mortality (NVSS-M), CDC/NCHS;

HDS-4 National Health Interview Survey (NHIS), CDC/NCHS
HDS-5.1 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
HDS-5.2 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
HDS-6
HDS-7 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
HDS-8 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
HDS-9. 1 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
HDS-9.2 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
HDS-9.4 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
HDS-10.1 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
HDS-10.2 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
HDS-10.3 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
HDS-10.4 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
HDS-11 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
HDS-12 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
HDS-15.1 National Ambulatory Medical Care Survey (NAMCS), CDC/NCHS
HDS-15.2 National Ambulatory Medical Care Survey (NAMCS), CDC/NCHS
HDS-16.1 National Health Interview Survey (NHIS), CDC/NCHS
HDS-16.2 National Health Interview Survey (NHIS), CDC/NCHS
HDS-16.3 National Health Interview Survey (NHIS), CDC/NCHS
HDS-17.1 National Health Interview Survey (NHIS), CDC/NCHS
HDS-17.2 National Health Interview Survey (NHIS), CDC/NCHS
HDS-17.3 National Health Interview Survey (NHIS), CDC/NCHS
HDS-19.1 Acute Coronary Treatment and Intervention Outcomes Network Registry-Get With the Guidelines (ACTION-GWTG), American College of Cardiology (ACC)
HDS-19.2 Acute Coronary Treatment and Intervention Outcomes Network Registry-Get With the Guidelines (ACTION-GWTG), American College of Cardiology (ACC)
HDS-19.3 Get With the Guidelines-Stroke (GWTG-Stroke), American Heart Association and American Stroke Association (AHA and ASA)
HDS-20.1 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
HDS-20.2 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
HDS-21 National Ambulatory Medical Care Survey (NAMCS), CDC/NCHS
HDS-23 Get With the Guidelines-Stroke (GWTG-Stroke), American Heart Association and American Stroke Association (AHA and ASA)
HDS-24.1 National Hospital Discharge Survey (NHDS), CDC/NCHS; Population Estimates, Census
HDS-24.2 National Hospital Discharge Survey (NHDS), CDC/NCHS; Population Estimates, Census
HDS-24.3 National Hospital Discharge Survey (NHDS), CDC/NCHS; Population Estimates, Census
HDS-25 National Ambulatory Medical Care Survey (NAMCS), CDC/NCHS

Table 21-3. Midcourse Health Disparities ${ }^{1}$ for Population-based Heart Disease and Stroke Objectives
Most favorable (least adverse) and least favorable (most adverse) group rates and summary disparity ratios ${ }^{2,3}$ for selected characteristics at the midcourse data point

| LEGEND |  |  |  |
| :--- | :--- | :--- | :--- |
| At the midcourse data point | Group with the most favorable <br> (least adverse) rate | Group with the least favorable <br> (most adverse) rate | Data are available, but this group did <br> not have the highest or lowest rate. |
| Data are not available for this group because <br> the data were statistically unreliable, not <br> collected, or not analyzed. |  |  |  |



Table 21-3. Midcourse Health Disparities ${ }^{1}$ for Population-based Heart Disease and Stroke Objectives—Continued
Most favorable (least adverse) and least favorable (most adverse) group rates and summary disparity ratios ${ }^{2,3}$ for selected characteristics at the midcourse data point

| LEGEND |  |  |  |
| :--- | :--- | :--- | :--- |
| At the midcourse data point | Group with the most favorable <br> (least adverse) rate | Group with the least favorable <br> (most adverse) rate | $\square$Data are available, but this group did <br> not have the highest or lowest rate. |
| Data are not available for this group because <br> the data were statistically unreliable, not <br> collected, or not analyzed. |  |  |  |



Table 21-3. Midcourse Health Disparities ${ }^{1}$ for Population-based Heart Disease and Stroke Objectives—Continued
Most favorable (least adverse) and least favorable (most adverse) group rates and summary disparity ratios ${ }^{2,3}$ for selected characteristics at the midcourse data point

| LEGEND |  |  |  |
| :--- | :--- | :--- | :--- |
| At the midcourse data point | Group with the most favorable <br> (least adverse) rate | Group with the least favorable <br> (most adverse) rate | Data are available, but this group did <br> not have the highest or lowest rate. |
| Data are not available for this group because <br> the data were statistically unreliable, not <br> collected, or not analyzed. |  |  |  |



Table 21-3. Midcourse Health Disparities ${ }^{1}$ for Population-based Heart Disease and Stroke Objectives—Continued
Most favorable (least adverse) and least favorable (most adverse) group rates and summary disparity ratios ${ }^{2,3}$ for selected characteristics at the midcourse data point

| LEGEND |  |  |  |
| :--- | :--- | :--- | :--- |
| At the midcourse data point | Group with the most favorable <br> (least adverse) rate | Group with the least favorable <br> (most adverse) rate | $\square$Data are available, but this group did <br> not have the highest or lowest rate. |
| Data are not available for this group because <br> the data were statistically unreliable, not <br> collected, or not analyzed. |  |  |  |



Table 21-3. Midcourse Health Disparities ${ }^{1}$ for Population-based Heart Disease and Stroke Objectives—Continued
Most favorable (least adverse) and least favorable (most adverse) group rates and summary disparity ratios ${ }^{2,3}$ for selected characteristics at the midcourse data point

| LEGEND |  |  |  |
| :--- | :--- | :--- | :--- |
| At the midcourse data point | Group with the most favorable <br> (least adverse) rate | Group with the least favorable <br> (most adverse) rate | Data are available, but this group did <br> not have the highest or lowest rate. |
| Data are not available for this group because <br> the data were statistically unreliable, not <br> collected, or not analyzed. |  |  |  |



Table 21-3. Midcourse Health Disparities ${ }^{1}$ for Population-based Heart Disease and Stroke Objectives—Continued

## NOTES

See HealthyPeople.gov for all Healthy People 2020 data. The Technical Notes provide more information on the measures of disparities.

## FOOTNOTES

${ }^{1}$ Health disparities were assessed among population groups within specified demographic characteristics (sex, race and ethnicity, educational attainment, etc.). This assessment did not include objectives that were not population-based, such as those based on states, worksites, or those monitoring the number of events.
${ }^{2}$ When there were only two groups (e.g., male and female), the summary disparity ratio was the ratio of the higher to the lower rate.
${ }^{3}$ When there were three or more groups (e.g., white non-Hispanic, black non-Hispanic, Hispanic) and the most favorable rate ( $R_{b}$ ) was the highest rate, the summary disparity ratio was calculated as $R_{b} / R_{a}$, where $R_{a}=$ the average of the rates for all other groups. When there were three or more groups and the most favorable rate was the lowest rate, the summary disparity ratio was calculated as $R_{a} / R_{b}$. ${ }^{4}$ Unless otherwise footnoted, data do not include persons under age 25 years.
${ }^{5}$ Unless otherwise footnoted, the poor, near-poor, middle, near-high, and high income groups are for persons whose family incomes were less than $100 \%, 100 \%-199 \%, 200 \%-399 \%, 400 \%-599 \%$, and at or above $600 \%$ of the poverty threshold, respectively.
*The summary disparity ratio was significantly greater than 1.000 . Statistical significance was assessed at the 0.05 level using a normal one-sided test on the natural logarithm scale.
${ }^{\text {a D Data }}$ are for Asian or Pacific Islander persons.
${ }^{\text {b }}$ Data are for persons who completed some college or received an associate's degree.
cData are for persons who graduated from college or above.
${ }^{\text {d D D }}$ Data are for persons whose family income was $400 \%$ to $499 \%$ of the poverty threshold.
${ }^{\text {e D D }}$ Data are for persons whose family income was $500 \%$ or more of the poverty threshold.
tData do not include persons under age 20 years.
${ }^{9}$ Data are for persons with activity limitations.
hData are for persons without activity limitations.
iThe rate for this population group has a small denominator and may be statistically unreliable; the summary disparity ratio should be interpreted with caution.
iData include persons of Hispanic origin.

## DATA SOURCES

HDS-2

National Vital Statistics System-Mortality (NVSS-M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census
National Vital Statistics System-Mortality (NVSS-M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census
National Health Interview Survey (NHIS), CDC/NCHS
National Health and Nutrition Examination Survey (NHANES), CDC/NCHS National Health and Nutrition Examination Survey (NHANES), CDC/NCHS National Health Interview Survey (NHIS), CDC/NCHS
National Health and Nutrition Examination Survey (NHANES), CDC/NCHS National Health and Nutrition Examination Survey (NHANES), CDC/NCHS National Health and Nutrition Examination Survey (NHANES), CDC/NCHS National Health and Nutrition Examination Survey (NHANES), CDC/NCHS National Health and Nutrition Examination Survey (NHANES), CDC/NCHS National Health and Nutrition Examination Survey (NHANES), CDC/NCHS National Health and Nutrition Examination Survey (NHANES), CDC/NCHS National Health and Nutrition Examination Survey (NHANES), CDC/NCHS National Health and Nutrition Examination Survey (NHANES), CDC/NCHS National Health and Nutrition Examination Survey (NHANES), CDC/NCHS ational Health and Nutrition Examination Survey (NHANES), CDC/NCHS National Ambulatory Medical Care Survey (NAMCS), CDC/NCHS National Ambulatory Medical Care Survey (NAMCS), CDC/NCHS National Health Interview Survey (NHIS), CDC/NCHS National Health Interview Survey (NHIS), CDC/NCHS National Health Interview Survey (NHIS), CDC/NCHS National Health Interview Survey (NHIS), CDC/NCHS National Health Interview Survey (NHIS), CDC/NCHS National Health Interview Survey (NHIS), CDC/NCHS uidelines (ACTION-GWTG), American College of Cardiology (ACC) Acute Coronary Treatment and Intervention Outcomes Network Registry-Get With the Guidelines (ACTION-GWTG), American College of Cardiology (ACC) Get With the Guidelines-Stroke (GWTG-Stroke), American Heart Association and American Stroke Association (AHA and ASA)
National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
National Ambulatory Medical Care Survey (NAMCS), CDC/NCHS
Get With the Guidelines-Stroke (GWTG-Stroke), American Heart Association and American Stroke Association (AHA and ASA)
National Hospital Discharge Survey (NHDS), CDC/NCHS; Population Estimates, Census National Hospital Discharge Survey (NHDS), CDC/NCHS; Population Estimates, Census National Hospital Discharge Survey (NHDS), CDC/NCHS; Population Estimates, Census National Ambulatory Medical Care Survey (NAMCS), CDC/NCHS

Healthy People 2020 Objective HDS-2 $\bullet$ National Target $=103.4$ per 100,000 population $\bullet$ National Rate $=105.7$ per 100,000 population


NOTES: Data are for ICD-10 codes I20-I25 reported as the underlying cause of death and are age-adjusted to the 2000 standard population. Rates are spatially smoothed to enhance the stability of rates in counties
 and maximize between-group variation. The Technical Notes provide more information on the data and methods.

DATA SOURCES: National Vital Statistics System-Mortality (NVSS-M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census

Healthy People 2020 Objective HDS-3 • National Target $=34.8$ per 100,000 population $\bullet$ National Rate $=37.0$ per 100,000 population


 maximize between-group variation. The Technical Notes provide more information on the data and methods.

DATA SOURCES: National Vital Statistics System-Mortality (NVSS-M), CDC/NCHS; Bridged-race Population Estimates, CDC/NCHS and Census

Healthy People 2020-Related Objective HDS-5.1 • Related State Data


NOTES: Data are for adults aged 18 years and over with hypertension and are age-adjusted to the 2000 standard population. National data for the objective are based on measured systolic and diastolic blood pressure and self-reported blood pressure medication use from the National Health and Nutrition Examination Survey (NHANES) and are the basis for setting the national target of $26.9 \%$. State data from the Behavioral Risk Factor Surveillance System (BRFSS) are based on persons who have ever been told by a doctor, nurse, or other health professional that they have high blood pressure. DATA from NHANES (29.0\% in 2009-2012) may not be directly comparable to the all-states combined data from the BRFSS ( $30.3 \%$ in 2013) , and therefore the national target may not be applicable to individual states. Rates are displayed by a Jenks classification for U.S. states, which creates categories that minimize within-group variation and maximize between-group variation. The Technical Notes provide more information on the data and methods.

