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Executive Summary: Heart Disease and Stroke Statistics—2014 Update

A Report From the American Heart Association

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*The findings and conclusions of this report are those of the authors and do not necessarily represent the views of the Centers for Disease Control and Prevention.

†The Table of Contents reflects the full text of the "Heart Disease and Stroke Statistics—2014 Update."

The 2014 Statistical Update full text is available online at http://circ.ahajournals.org/content/129/3/e00.full.

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Summary

Each year, the American Heart Association (AHA), in conjunction with the Centers for Disease Control and Prevention, the National Institutes of Health, and other government agencies, brings together the most up-to-date statistics on heart disease, stroke, other vascular diseases, and their risk factors and presents them in its Heart Disease and Stroke Statistical Update. The Statistical Update is a critical resource for researchers, clinicians, healthcare policy makers, media professionals, the lay public, and many others who seek the best available national data on heart disease, stroke, and other cardiovascular disease–related morbidity and mortality and the risks, quality of care, use of medical procedures and operations, and costs associated with the management of these diseases in a single document. Indeed, since 1999, the Statistical Update has been cited >10 500 times in the literature, based on citations of all annual versions. In 2012 alone, the various Statistical Updates were cited ≈3500 times (data from Google Scholar). In recent years, the Statistical Update has undergone some major changes with the addition of new chapters and major updates across multiple areas, as well as increasing the number of ways to access and use the information assembled.

For this year's edition, the Statistics Committee, which produces the document for the AHA, updated all of the current chapters with the most recent nationally representative data and inclusion of relevant articles from the literature over the past year. This year's edition includes a new chapter on peripheral artery disease, as well as new data on the monitoring and benefits of cardiovascular health in the population, with additional new focus on evidence-based approaches to changing behaviors, implementation strategies, and implications of the AHA's 2020 Impact Goals. Below are a few highlights from this year's Update.

The 2014 Update Expands Data Coverage of the Epidemic of Poor Cardiovascular Health Behaviors and Their Antecedents and Consequences

- Adjusted estimated population attributable fractions for cardiovascular disease (CVD) mortality were as follows[1]: 40.6% (95% confidence interval [CI], 24.5%–54.6%) for high blood pressure; 13.7% (95% CI, 4.8%–22.3%) for smoking; 13.2% (95% CI, 3.5%–29.2%) for poor diet; 11.9% (95% CI, 1.3%–22.3%) for insufficient physical activity; and 8.8% (95% CI, 2.1%–15.4%) for abnormal blood glucose levels.
- Although significant progress has been made over the past 4 decades, in 2012, among Americans ≥18 years of age, 20.5% of men and 15.9% of women continued to be cigarette smokers. In 2011, 18.1% of students in grades 9 through 12 reported current cigarette use.
- The percentage of the nonsmoking population with exposure to secondhand smoke (as measured by serum cotinine levels ≥0.05 ng/mL) declined from 52.5% in 1999 to 2000 to 40.1% in 2007 to 2008. More than half of children 3 to 11 years of age (53.6%) and almost half of those 12 to 19 years of age (46.5%) had detectable levels, compared with just over a third of adults 20 years of age and older (36.7%).
- The proportion of youth (≤18 years of age) who report engaging in no regular physical activity is high, and the proportion increases with age.
- In 2011, among adolescents in grades 9 through 12, 17.7% of girls and 10.0% of boys reported that they had not engaged in ≥60 minutes of moderate to vigorous physical activity (defined as any activity that increased heart rate or breathing rate) at least once in the previous 7 days, despite recommendations that children engage in such activity 7 days per week.
- In 2012, 29.9% of adults reported engaging in no aerobic leisure-time physical activity.
- In 2009 to 2010, <1% of Americans met at least 4 of 5 healthy dietary goals. Among adults aged ≥20 years, only 12.3% met recommended goals for fruits and vegetables; 18.3% met goals for fish; 0.6% met goals for sodium; 51.9% met goals for sugar-sweetened beverages; and 7.3% met goals for whole grains. These proportions were even lower in children, with only 29.4% of adolescents aged 12 to 19 years meeting goals for low sugar-sweetened beverage intake.
- The estimated prevalence of overweight and obesity in US adults (≥20 years of age) is 154.7 million, which represented 68.2% of this group in 2010. Nearly 35% of US adults are obese (body mass index ≥30 kg/m^2). Men and women of all race/ethnic groups in the population are affected by the epidemic of overweight and obesity.
- Among children 2 to 19 years of age, 31.8% are overweight and obese (which represents 23.9 million children) and 16.9% are obese (12.7 million children). Mexican American boys and girls and African American girls are disproportionately affected. From 1971-1974 to 2007-2010, the prevalence of obesity in children 6 to 11 years of age has increased from 4.0% to 18.8%.
- Obesity (body mass index ≥30 kg/m^2) is associated with marked excess mortality in the US population. Even more notable is the excess morbidity associated with overweight and obesity in terms of risk factor development and incidence of diabetes mellitus, CVD end points (including coronary heart disease, stroke, and heart failure), and numerous other health conditions, including asthma, cancer, end-stage renal disease, degenerative joint disease, and many others.

Prevalence and Control of Cardiovascular Health Factors and Risks Remain an Issue for Many Americans

- An estimated 31.9 million adults ≥20 years of age have total serum cholesterol levels ≥240 mg/dL, with a prevalence of 13.8%.

- Based on 2007 to 2010 data, 33.0% of US adults ≥20 years of age have hypertension. This represents ≈78 million US adults with hypertension. The prevalence of hypertension is similar for men and women. African American adults have among the highest prevalence of hypertension (44%) in the world.
- Among hypertensive Americans, ≈82% are aware of their condition and 75% are using antihypertensive medication, but only 53% of those with documented hypertension have their condition controlled to target levels.
- In 2010, an estimated 19.7 million Americans had diagnosed diabetes mellitus, representing 8.3% of the adult population. An additional 8.2 million had undiagnosed diabetes mellitus, and 38.2% had prediabetes, with abnormal fasting glucose levels. African Americans, Mexican Americans, Hispanic/Latino individuals, and other ethnic minorities bear a strikingly disproportionate burden of diabetes mellitus in the United States.
- The prevalence of diabetes mellitus is increasing dramatically over time, in parallel with the increases in prevalence of overweight and obesity.

Rates of Death Attributable to CVD Have Declined, but the Burden of Disease Remains High

- The 2010 overall rate of death attributable to CVD was 235.5 per 100 000. The rates were 278.4 per 100 000 for white males, 369.2 per 100 000 for black males, 192.2 per 100 000 for white females, and 260.5 per 100 000 for black females.
- From 2000 to 2010, death rates attributable to CVD declined 31.0%. In the same 10-year period, the actual number of CVD deaths per year declined by 16.7%. Yet in 2010, CVD (I00–I99; Q20–Q28) still accounted for 31.9% (787 650) of all 2 468 435 deaths, or ≈1 of every 3 deaths in the United States.
- On the basis of 2010 death rate data, >2150 Americans die of CVD each day, an average of 1 death every 40 seconds. About 150 000 Americans who died of CVD in 2010 were <65 years of age. In 2010, 34% of deaths attributable to CVD occurred before the age of 75 years, which is before the current average life expectancy of 78.7 years.
- Coronary heart disease alone caused ≈1 of every 6 deaths in the United States in 2010. In 2010, 379 559 Americans died of CHD. Each year, an estimated ≈620 000 Americans have a new coronary attack (defined as first hospitalized myocardial infarction or coronary heart disease death) and ≈295 000 have a recurrent attack. It is estimated that an additional 150 000 silent first myocardial infarctions occur each year. Approximately every 34 seconds, 1 American has a coronary event, and approximately every 1 minute 23 seconds, an American will die of one.
- From 2000 to 2010, the relative rate of stroke death fell by 35.8% and the actual number of stroke deaths declined by 22.8%. Yet each year, ≈795 000 people continue to experience a new or recurrent stroke (ischemic or hemorrhagic). Approximately 610 000 of these are first events and 185 000 are recurrent stroke events. In 2010, stroke caused ≈1 of every 19 deaths in the United States. On average, every 40 seconds, someone in the United States has a stroke, and someone dies of one approximately every 4 minutes.
- The decline in stroke mortality over the past decades, a major improvement in population health observed for both sexes and all race and age groups, has resulted from reduced stroke incidence and lower case fatality rates. The significant improvements in stroke outcomes are concurrent with cardiovascular risk factor control interventions. The hypertension control efforts initiated in the 1970s appear to have had the most substantial influence on the accelerated decline in stroke mortality, with lower blood pressure distributions in the population. Control of diabetes mellitus and high cholesterol and smoking cessation programs, particularly in combination with hypertension treatment, also appear to have contributed to the decline in stroke mortality.[2]
- In 2010, 1 in 9 death certificates (279 098 deaths) in the United States mentioned heart failure. Heart failure was the underlying cause in 57 757 of those deaths in 2010. The number of any-mention deaths attributable to heart failure was approximately as high in 1995 (287 000) as it was in 2010 (279 000). Additionally, hospital discharges for heart failure remained stable from 2000 to 2010, with first-listed discharges of 1 008 000 and 1 023 000, respectively.

The 2014 Update Provides Critical Data About Cardiovascular Quality of Care, Procedure Utilization, and Costs

In light of the current national focus on healthcare utilization, costs, and quality, it is critical to monitor and understand the magnitude of healthcare delivery and costs, as well as the quality of healthcare delivery, related to CVD risk factors and conditions. The Statistical Update provides these critical data in several sections.

Quality-of-Care Metrics for CVDs

Quality data are available from the AHA's Get With The Guidelines programs for coronary heart disease, heart failure, and resuscitation and from the American Stroke Association/AHA's Get With The Guidelines program for acute stroke. Similar data from the Veterans Healthcare Administration, national Medicare and Medicaid data, and Acute Coronary Treatment and Intervention Outcomes Network (ACTION)–Get With The Guidelines Registry data are also reviewed. These data show impressive adherence to guideline recommendations for many, but not all, metrics of quality of care for these hospitalized patients. Data are also reviewed on screening for CVD risk factor levels and control.

Cardiovascular Procedure Use and Costs

- The total number of inpatient cardiovascular operations and procedures increased 28%, from 5 939 000 in 2000 to 7 588 000 in 2010 (National Heart, Lung, and Blood Institute computation based on National Center for Health Statistics annual data).
- The total direct and indirect cost of CVD and stroke in the United States for 2010 is estimated to be $315.4 billion. This figure includes health expenditures (direct costs, which include the cost of physicians and other professionals, hospital services, prescribed medications, home health

care, and other medical durables) and lost productivity that results from premature mortality (indirect costs).
- By comparison, in 2008, the estimated cost of all cancer and benign neoplasms was $201.5 billion ($77.4 billion in direct costs, and $124 billion in mortality indirect costs). CVD costs more than any other diagnostic group.

The AHA, through its Statistics Committee, continuously monitors and evaluates sources of data on heart disease and stroke in the United States to provide the most current information available in the Statistics Update.

This annual Statistical Update is the product of an entire year's worth of effort by dedicated professionals, volunteer physicians and scientists, and outstanding AHA staff members, without whom publication of this valuable resource would be impossible. Their contributions are gratefully acknowledged.

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On behalf of the American Heart Association Statistics Committee and Stroke Statistics Subcommittee

Note: Population data used in the compilation of National Health and Nutrition Examination Survey (NHANES) prevalence estimates are for the latest year of the NHANES survey being used. Extrapolations for NHANES prevalence estimates are based on the census resident population for 2010 because this is the most recent year of NHANES data used in the Statistical Update.

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References

1. Yang Q, Cogswell ME, Flanders WD, Hong Y, Zhang Z, Loustalot F, Gillespie C, Merritt R, Hu FB. Trends in cardiovascular health metrics and associations with all-cause and CVD mortality among US adults. *JAMA*. 2012;307:1273–1283.
2. Lackland DT, Roccella EJ, Deutsch A, Fornage M, George MG, Howard G, Kissela B, Kittner SJ, Lichtman JH, Lisabeth L, Schwamm LH, Smith EE, Towfighi A; on behalf of the American Heart Association Stroke Council, Council on Cardiovascular and Stroke Nursing, Council on Quality of Care and Outcomes and Research, and Council on Functional Genomics and Translational Biology. Factors influencing the decline in stroke mortality: a statement from the American Heart Association/American Stroke Association. *Stroke. December 5, 2013. DOI: 10.1161/01.str.0000437068.30550.cf. http://stroke.ahajournals.org/lookup/doi/10.1161/01.str.0000437068.30550.cf. Accessed December 5, 2013.*

Key Words: AHA Scientific Statements ■ cardiovascular diseases ■ epidemiology ■ risk factors ■ statistics ■ stroke

Table 1. Males and CVD: At-a-Glance Table

Diseases and Risk Factors	Both Sexes	Total Males	White Males	Black Males	Mexican American Males
Smoking					
Prevalence, 2012*	42.1 M (18.1%)	23.0 M (20.5%)	22.0%	21.6%	16.6%†
PA‡					
Prevalence, 2012*	20.7%	24.6%	26.0%	23.7%	19.3%†
Overweight and obesity					
Prevalence, 2010					
Overweight and obesity, BMI >25.0 kg/m^2§	154.7 M (68.2%)	79.9 M (72.9%)	73.1%	68.7%	81.3%
Obesity, BMI >30.0 kg/m^2§	78.4 M (34.6%)	36.8 M (33.6%)	33.8%	37.9%	36.0%
Blood cholesterol					
Prevalence, 2010					
Total cholesterol >200 mg/dL§	98.9 M (43.4%)	45.3 M (41.3%)	40.5%	38.6%	48.1%
Total cholesterol >240 mg/dL§	31.9 M (13.8%)	14.0 M (12.7%)	12.3%	10.8%	15.2%
LDL cholesterol >130 mg/dL§	71.0 M (31.1%)	35.2 M (31.9%)	30.1%	33.1%	39.9%
HDL cholesterol <40 mg/dL§	48.7 M (21.8%)	34.6 M (31.8%)	33.1%	20.3%	34.2%
HBP					
Prevalence, 2010§	77.9 M (33.0%)	37.2 M (33.6%)	33.4%	42.6%	30.1%
Mortality, 2010‖	63 119	28 373	20 819	6670	N/A
DM					
Prevalence, 2010					
Physician-diagnosed DM§	19.7 M (8.3%)	9.6 M (8.7%)	7.7%	13.5%	11.4%
Undiagnosed DM§	8.2 M (3.5%)	5.3 M (4.7%)	4.5%	4.8%	6.6%
Prediabetes§	87.3 M (38.2%)	50.7 M (46.0%)	47.7%	35.7%	47.0%
Incidence, diagnosed DM§	1.9 M	N/A	N/A	N/A	N/A
Mortality, 2010‖	69 071	35 490	28 486	5640	N/A
Total CVD					
Prevalence, 2010§	83.6 M (35.3%)	40.7 M (36.7%)	36.6%	44.4%	33.4%
Mortality, 2010‖¶	787 650	387 318	330 330	46 266	N/A
Stroke					
Prevalence, 2010§	6.8 M (2.8%)	3.0 M (2.6%)	2.4%	4.3%	2.3%
New and recurrent strokes‖	795.0 K	370.0 K	325.0 K	45.0 K	N/A
Mortality, 2010‖	129 476	52 367	43 424	6938	N/A
CHD					
Prevalence, CHD, 2010§	15.4 M (6.4%)	8.8 M (7.9%)	8.2%	6.8%	6.7%
Prevalence, MI, 2010§	7.6 M (2.9%)	5.0 M (4.2%)	4.4%	3.9%	3.6%
Prevalence, AP, 2010§	7.8 M (3.2%)	3.7 M (3.3%)	3.3%	2.4%	3.4%
New and recurrent CHD#**	915.0 K	530.0 K	465.0 K	65.0 K	N/A
New and recurrent MI**	720.0 K	420.0 K	N/A	N/A	N/A
Incidence, AP (stable angina)‡‡	565.0 K	370.0 K	N/A	N/A	N/A
Mortality, 2010, CHD‖	379 559	207 580	181 386	20 615	N/A
Mortality, 2010, MI‖	122 071	67 435	59 181	6445	N/A
HF					
Prevalence, 2010§	5.1 M (2.1%)	2.7 M (2.5%)	2.5%	4.1%	1.9%
Incidence, 2010‡‡	825 000	395 000	350 000	45 000	N/A
Mortality, 2010‖	57 757	24 385	21 540	2444	N/A

AP indicates angina pectoris (chest pain); BMI, body mass index; CHD, coronary heart disease (includes heart attack, angina pectoris chest pain, or both); CVD, cardiovascular disease; DM, diabetes mellitus; HBP, high blood pressure; HDL, high-density lipoprotein; HF, heart failure; K, thousands; LDL, low-density lipoprotein; M, millions; MI, myocardial infarction (heart attack); N/A, data not available; and PA, physical activity.

*Age ≥18 y (National Health Interview Survey).

†All Hispanic (National Health Interview Survey).

‡Met 2008 full Federal PA guidelines for adults.

§Age ≥20 y.

‖All ages.

¶Total CVD mortality includes deaths from congenital heart disease.

#New and recurrent MI and fatal CHD.

**Age ≥35 y.

‡‡Age ≥45 y.

Table 2. Females and CVD: At-a-Glance Table

Diseases and Risk Factors	Both Sexes	Total Females	White Females	Black Females	Mexican American Females
Smoking					
Prevalence, 2012*	42.1 M (18.1%)	19.1 M (15.9%)	19.2%	14.2%	7.5%†
PA‡					
Prevalence, 2012*	20.7%	17.1%	19.9%	10.8%	12.2%†
Overweight and obesity					
Prevalence, 2010					
Overweight and obesity, BMI >25.0 kg/m^2§	154.7 M (68.2%)	74.8 M (63.7%)	60.2%	79.9%	78.2%
Obesity, BMI >30.0 kg/m^2§	78.4 M (34.6%)	41.6 M (35.6%)	32.5%	53.9%	44.8%
Blood cholesterol					
Prevalence, 2010					
Total cholesterol >200 mg/dL§	98.9 M (43.4%)	53.6 M (44.9%)	45.8%	40.7%	44.7%
Total cholesterol >240 mg/dL§	31.9 M (13.8%)	17.9 M (14.7%)	15.6%	11.7%	13.5%
LDL cholesterol >130 mg/dL§	71.0 M (31.1%)	35.8 M (30.0%)	29.3%	31.2%	30.4%
HDL cholesterol <40 mg/dL§	48.7 M (21.8%)	14.1 M (12.3%)	12.4%	10.2%	15.1%
HBP					
Prevalence, 2010§	77.9 M (33.0%)	40.7 M (32.2%)	30.7%	47.0%	28.8%
Mortality, 2010‖	63 119	34 746	26 798	6923	N/A
DM					
Prevalence, 2010					
Physician-diagnosed DM§	19.7 M (8.3%)	10.1 M (7.9%)	6.2%	15.4%	12.0%
Undiagnosed DM§	8.2 M (3.5%)	2.9 M (2.3%)	1.8%	2.9%	4.7%
Prediabetes§	87.3 M (38.2%)	33.6 M (30.5%)	30.0%	29.0%	31.9%
Incidence, diagnosed DM§	1.9 M	N/A	N/A	N/A	N/A
Mortality, 2010‖	69 071	33 581	25 764	6486	N/A
Total CVD					
Prevalence, 2010§	83.6 M (35.3%)	42.9 M (34.0%)	32.4%	48.9%	30.7%
Mortality, 2010‖¶	787 650	400 332	342 581	49 977	N/A
Stroke					
Prevalence, 2010§	6.8 M (2.8%)	3.8 M (3.0%)	2.9%	4.7%	1.4%
New and recurrent strokes‖	795.0 K	425.0 K	365.0 K	60.0 K	N/A
Mortality, 2010‖	129 476	77 109	65 695	9027	N/A
CHD					
Prevalence, CHD, 2010§	15.4 M (6.4%)	6.6 M (5.1%)	4.6%	7.1%	5.3%
Prevalence, MI, 2010§	7.6 M (2.9%)	2.6 M (1.7%)	1.5%	2.3%	1.7%
Prevalence, AP, 2010§	7.8 M (3.2%)	4.1 M (3.2%)	2.8%	5.4%	3.3%
New and recurrent CHD#**	915.0 K	385.0 K	330.0 K	55.0 K	N/A
New and recurrent MI**	720.0 K	300.0 K	N/A	N/A	N/A
Incidence, AP (stable angina) ‡‡	565.0 K	195.0 K	N/A	N/A	N/A
Mortality, 2010, CHD‖	379 559	171 979	148 891	19 015	N/A
Mortality, 2010, MI‖	122 071	54 636	47 023	6298	N/A
HF					
Prevalence, 2010§	5.1 M (2.1%)	2.4 M (1.8%)	1.8%	3.0%	1.1%
Incidence, 2010‡‡	825 000	430 000	375 000	55 000	N/A
Mortality, 2010‖	57 757	33 372	29 750	3084	N/A

AP indicates angina pectoris (chest pain); BMI, body mass index; CHD, coronary heart disease (includes heart attack, angina pectoris chest pain, or both); CVD, cardiovascular disease; DM, diabetes mellitus; HBP, high blood pressure; HDL, high-density lipoprotein; HF, heart failure; K, thousands; LDL, low-density lipoprotein; M, millions; MI, myocardial infarction (heart attack); N/A, data not available; and PA, physical activity.

*Age ≥18 y (National Health Interview Survey).

†All Hispanic (National Health Interview Survey).

‡Met 2008 full Federal PA guidelines for adults.

§Age ≥20 y.

‖All ages.

¶Total CVD mortality includes deaths from congenital heart disease.

#New and recurrent MI and fatal CHD.

**Age ≥35 y.

‡‡Age ≥45 y.

Table 3. Race/Ethnicity and CVD: At-a-Glance Table

Diseases and Risk Factors	Both Sexes	Whites		Blacks		Mexican Americans		Hispanics/ Latinos		Asians: Both Sexes	American Indian/Alaska Native: Both Sexes
		Males	Females	Males	Females	Males	Females	Males	Females		
Smoking											
Prevalence, 2012*	42.1 M (18.1%)	22.0%	19.2%	21.6%	14.2%	11.3%		16.6%	7.5%	10.4%	18.8%
PA†											
Prevalence, 2012*	20.7%	20.6%		21.4%		14.9%		15.7%		18.7%	16.8%
Overweight and obesity											
Prevalence, 2010											
Overweight and obesity, BMI >25.0 kg/m^2‡	154.7 M (68.2%)	73.1%	60.2%	68.7%	79.9%	81.3%	78.2%	N/A	N/A	N/A	N/A
Overweight and obesity, BMI >30.0 kg/m^2‡	78.4 M (34.6%)	33.8%	32.5%	37.9%	53.9%	36.0%	44.8%	N/A	N/A	N/A	N/A
Blood cholesterol											
Prevalence, 2010											
Total cholesterol >200 mg/dL‡	98.9 M (43.4%)	40.5%	45.8%	38.6%	40.7%	48.1%	44.7%	N/A	N/A	N/A	N/A
Total cholesterol >240 mg/dL‡	31.9 M (13.8%)	12.3%	15.6%	10.8%	11.7%	15.2%	13.5%	N/A	N/A	N/A	N/A
LDL cholesterol >130 mg/dL‡	71.0 M (31.1%)	30.1%	29.3%	33.1%	31.2%	39.9%	30.4%	N/A	N/A	N/A	N/A
HDL cholesterol <40 mg/dL‡	48.7 M (21.8%)	33.1%	12.4%	20.3%	10.2%	34.2%	15.1%	N/A	N/A	N/A	N/A
HBP											
Prevalence, 2010‡	77.9 M (33.0%)	33.4%	30.7%	42.6%	47.0%	30.1%	28.8%	20.9%*		21.27%*	24.8%*
Mortality, 2010§	63 119	20 819	26 798	6670	6923	N/A	N/A	N/A	N/A	1578	331
DM											
Prevalence, 2010											
Physician-diagnosed DM‡	19.7 M (8.3%)	7.7%	6.2%	13.5%	15.4%	11.4%	12.0%	N/A	N/A	N/A	N/A
Undiagnosed DM‡	8.2 M (3.5%)	4.5%	1.8%	4.8%	2.9%	6.6%	4.7%	N/A	N/A	N/A	N/A
Prediabetes‡	87.3 M (38.2%)	47.7%	30.0%	35.7%	29.0%	47.0%	31.9%	N/A	N/A	N/A	N/A
Incidence, diagnosed DM‡	1.9 M	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mortality, 2010§	69 071	28 486	25 764	5640	6486	N/A	N/A	N/A	N/A	1838	857
Total CVD											
Prevalence, 2010‡	83.6 M (35.3%)	36.6%	32.4%	44.4%	48.9%	33.4%	30.7%	N/A	N/A	N/A	N/A
Mortality, 2010§‖	787 650	330 330	342 581	46 266	49 977	N/A	N/A	N/A	N/A	16 829	3667
Stroke											
Prevalence, 2010‡	6.8 M (2.8%)	2.4%	2.9%	4.3%	4.7%	2.3%	1.4%	2.7%*		1.8%*	4.3%*¶
New and recurrent strokes§	795.0 K	325.0 K	365.0 K	45.0 K	60.0 K	N/A	N/A	N/A	N/A	N/A	N/A
Mortality, 2010§	129 476	43 424	65 695	6938	9027	N/A	N/A	N/A	N/A	3833	559
CHD											
Prevalence, CHD, 2010‡	15.4 M (6.4%)	8.2%	4.6%	6.8%	7.1%	6.7%	5.3%	N/A	N/A	N/A	N/A
Prevalence, MI, 2010‡	7.6 M (2.9%)	4.4%	1.5%	3.9%	2.3%	3.6%	1.7%	N/A	N/A	N/A	N/A
Prevalence, AP, 2010‡	7.8 M (3.2%)	3.3%	2.8%	2.4%	5.4%	3.4%	3.3%	N/A	N/A	N/A	N/A
New and recurrent CHD#**	915.0 K	465.0 K	330.0 K	65.0 K	55.0 K	N/A	N/A	N/A	N/A	N/A	N/A
Mortality, CHD, 2010§	379 559	181 386	148 891	20 615	19 015	N/A	N/A	N/A	N/A	7821	1831
Mortality, MI, 2010§	122 071	59 181	47 023	6445	6298	N/A	N/A	N/A	N/A	2530	594
HF											
Prevalence, 2010‡	5.1 M (2.1%)	2.5%	1.8%	4.1%	3.0%	1.9%	1.1%	N/A	N/A	N/A	N/A
Incidence, 2010‡‡	825 000	350 000	375 000	45 000	55 000	N/A	N/A	N/A	N/A	N/A	N/A
Mortality, 2010§	57 757	21 540	29 750	2444	3084	N/A	N/A	N/A	N/A	714	225

AP, angina pectoris (chest pain); BMI, body mass index; CHD, coronary heart disease (includes heart attack, angina pectoris chest pain, or both); CVD, cardiovascular disease; DM, diabetes mellitus; HBP, high blood pressure; HDL, high-density lipoprotein; HF, heart failure; K, thousands; LDL, low-density lipoprotein; M, millions; MI, myocardial infarction (heart attack); N/A, data not available; and PA, physical activity;.

*Age ≥18 y (National Health Interview Survey, 2012).

†Met 2008 full Federal PA guidelines for adults.

‡Age ≥20 y.

§All ages.

‖Total CVD mortality includes deaths from congenital heart disease.

¶Figure not considered reliable.

#New and recurrent MI and fatal CHD.

**Age ≥35 y.

‡‡Age ≥45 y.

Table 4. Children, Youth, and CVD: At-a-Glance Table

				NH Whites		NH Blacks		Mexican Americans	
Diseases and Risk Factors	Both Sexes	Total Males	Total Females	Males	Females	Males	Females	Males	Females
Smoking, %									
High school students, grades 9–12									
Current cigarette smoking, 2011	18.1	19.9	16.1	21.5	18.9	13.7	7.4	19.5*	15.2*
Current cigar smoking, 2011	13.1	17.8	8.0	19.0	7.5	15.1	8.5	17.2*	9.1*
PA†									
Prevalence, grades 9–12, 2011‡									
Met currently recommended levels of PA, %	49.5	59.9	38.5	62.1	42.6	57.1	31.9	57.1*	33.0*
Overweight and obesity									
Prevalence, 2010									
Children and adolescents, ages 2–19 y, overweight or obese	23.9 M (31.8%)	12.7 M (33.0%)	11.2 M (30.4%)	30.1%	25.6%	36.9%	41.3%	40.5%	38.2%
Children and adolescents, age 2–19 y, obese‡	12.7 M (16.9%)	7.2 M (18.6%)	5.5 M (15.0%)	16.1%	11.7%	24.3%	24.3%	24.0%	18.2%
Blood cholesterol, mg/dL, 2010									
Mean total cholesterol									
Ages 4–11 y	161.9	162.3	161.5	160.9	161.6	165.2	157.9	159.6	160.7
Ages 12–19 y	158.2	156.1	160.3	156.8	161.1	154.1	160.6	157.8	158.0
Mean HDL cholesterol									
Ages 4–11 y	53.6	55.1	51.9	53.9	51.4	59.9	55.3	53.5	50.5
Ages 12–19 y	51.4	49.2	53.6	48.4	53.0	53.9	55.4	47.5	53.3
Mean LDL cholesterol									
Ages 12–19 y	89.5	88.6	90.5	90.4	90.9	85.8	91.8	90.6	87.1
Congenital cardiovascular defects									
Mortality, 2010§	3196	1718	1478	1333	1120	311	271	N/A	N/A

Overweight indicates a body mass index in the 95th percentile of the Centers for Disease Control and Prevention 2000 growth chart.

CVD indicates cardiovascular disease; HDL, high-density lipoprotein; LDL, low-density lipoprotein; M, millions; N/A, data not available; NH, non-Hispanic; and PA, physical activity.

*All Hispanic subgroups.

†Regular leisure-time PA.

‡Eaton DK, Kann L, Kinchen S, Shanklin S, Flint KH, Hawkins J, Harris WA, Lowry R, McManus T, Chyen D, Whittle L, Lim C, Wechsler H; Centers for Disease Control and Prevention. Youth risk behavior surveillance: United States, 2011. *MMWR Surveill Summ.* 2012;61:1–162.

§All ages.

Disclosures

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(*Continued*)

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This table represents the relationships of writing group members that may be perceived as actual or reasonably perceived conflicts of interest as reported on the Disclosure Questionnaire, which all members of the writing group are required to complete and submit. A relationship is considered to be "significant" if (1) the person receives $10 000 or more during any 12-month period, or 5% or more of the person's gross income; or (2) the person owns 5% or more of the voting stock or share of the entity, or owns $10 000 or more of the fair market value of the entity. A relationship is considered to be "modest" if it is less than "significant" under the preceding definition.

*Modest.

†Significant.