

Heavy Heart

The Economic Burden of Heart Disease in the United States Now and in the Future



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KEYWORDS

• Health care costs • Cardiovascular care • Health economics • Overuse

KEY POINTS

- Cardiovascular disease represents a significant financial burden to the US population.
- Based on current trends, spending on cardiovascular disease will continue to increase significantly in the upcoming years.
- A substantial portion of cardiovascular care that is currently provided confers little clinical efficacy over less expensive alternatives, and some practices may be unnecessary.
- Physicians can limit unnecessary spending by avoiding flat-of-the-curve practices and optimizing the use of tests and procedures.

The United States spends more on health care than any other industrialized nation. In 2016, health care expenditure reached an estimated \$3.35 trillion or \$10,345 per individual.¹

Cardiovascular disease (CVD) represents the leading cause of death and disability as well as the most significant source of health care spending. This article reviews the current economic burden of heart disease in the United States, presents future projections, and explores factors driving cost growth in cardiovascular care.

THE COST OF CARDIOVASCULAR CARE AND FUTURE PROJECTIONS

Approximately 82.6 million American adults (1 of every 3) have some form of CVD.² The most common is hypertension (76.4 million) followed by coronary heart disease (CHD) (16.3 million), stroke (7 million), and congestive heart failure (CHF) (5.7 million).² The prevalence and incidence rates of these conditions vary by age, sex, and race/ethnicity.^{3,4}

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The incidence of symptomatic CHD, defined as having angina or a heart attack, is rare in men before the age of 45, occurring in only 1 out of every 333 but affects 1 out of 14 men older than 85.² Women have similar rates of CHD compared with men, but they occur 10 years later in life. Women also have a higher proportion of CVD events due to stroke.² Men have a 52% risk for developing CVD over a lifetime compared with 39% for women. The overall survival rate following the development of some form of CVD is 30 years for men and 36 years for women.⁵

The costs of cardiovascular care impose a significant burden on the US health care system. The American Heart Association estimated that in 2006, the cost of CVD (including CHD, stroke, hypertensive heart disease, and CHF) was \$457 billion.⁶ The *direct cost* to payers for hospitalizations, physician visits, pharmaceuticals, and rehabilitation services was estimated at \$292 billion with the remainder accounted for by indirect costs due to productivity losses from premature mortality and morbidity.⁶ As a point of comparison, spending on CVD in 2006 was equal to more than half of what the US government (federal, state, and local) spent on education (\$812 billion); more than two-thirds of what it spent on defense (\$622 billion); and more than what was spent on welfare (\$320 billion) and transportation (\$229 billion).⁷

An aging population and increase in chronic disease are expected to further increase the cost of CVD in the United States over the next 20 years.⁸ It is estimated that between 2010 and 2030, the cost of CVD in the United States will increase to more than \$1 trillion (in 2008 dollars).⁸ Total direct and indirect costs will increase from \$273 billion to \$818 billion and \$172 to \$276 billion, respectively.

IMPLICATIONS FOR INDIVIDUALS AND THE HEALTH CARE SYSTEM

Massive increases in health care spending (CVD, in particular) are likely to be favorable for the medical industry in the United States. These increases, however, will likely have negative consequences for individuals and the general population. To accommodate increased spending, health insurance premiums will continue to increase in the private sector and may accelerate disproportionately. To date, premium increases have had a negative impact on workers, contributing to wage stagnation and social unrest.

The primary reason for wage stagnation over the last several decades relates to the rising costs of health insurance benefits. The Kaiser Family Foundation reported that between 1999 and 2011, health insurance premiums increased 168%, whereas (over the same period) total earnings increased by only 50%.⁹ This divergence in health insurance premiums and earnings has been termed the *affordability gap*. According to a report of 487 US employers with at least 1000 employees, the total cost of health insurance per employee (counting both the employer and the employee contribution) increased from \$9748 in 2009 to \$12,041 in 2015.¹⁰

Increased health care spending also threatens government programs like Medicare and Medicaid. Medicare is federally funded. Currently, less than half of its spending derives from payroll taxes. The majority comes from general revenue transfers and another minority from premiums. Medicare spending has far exceeded its originally intended revenue source of payroll taxes, requiring ever-increasing premiums and general revenue transfers to maintain solvency (Fig. 1).¹¹

At the state level, Medicaid faces even greater challenges. Unlike the federal government, state governments cannot run deficits (aided by monetary policy) with the ability to borrow at artificially low interest rates. Thus, states facing economic challenges must limit Medicaid costs by reducing payments. Reduced payments further limits available options for the most vulnerable patients, many of whom suffer from CVD-related conditions.

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