

## Proportion of the Decline in Cardiovascular Mortality Disease due to Prevention Versus Treatment: Public Health Versus Clinical Care

The following is a synopsis of “Proportion of the Decline in Cardiovascular Mortality Disease due to Prevention Versus Treatment: Public Health Versus Clinical Care,” published in the April 2011 issue of *Annual Review of Public Health*.



### What is already known on this topic?

Although diseases of the heart remain the leading cause of death for American adults, the mortality rate for coronary heart disease (CHD) has declined since the 1960s. Advances in medical treatments, a rising emphasis on secondary prevention, and changes in behavioral risk factors, such as a decline in smoking rates, have contributed to this decline. This article seeks to understand to what extent the decline in CHD mortality can be attributed to behavioral risk factors versus advances in medical treatment.

### What is added by this article?

This article examines findings from several studies that explored how improvements in risk factors and in medical treatment for CHD contributed to a decline in CHD mortality. The authors found that three modifiable lifestyle factors—smoking, diet, and physical activity—were principal contributors to the decline in CHD deaths. In addition, improved control of high blood pressure, creation of coronary care units, advances in cardiovascular surgery and rehabilitation, and treatment

with medications and agents (e.g., statins) also were likely contributors to the decline in CHD mortality rates. However, the balance between these contributors varied in different countries, indicating that both primary prevention and improved treatment are essential to reducing CHD incidence and mortality.

### What are the implications for public health practice?

The reduction in CHD mortality began before modern medical treatments entered mainstream clinical practice, indicating that improvements in risk factors—primarily smoking, total cholesterol, and hypertension—were key achievements in initiating this decline. Evidence suggests that promising changes in risk factors coupled with innovative medical treatments have contributed to even greater reductions in CHD mortality. Policy-modeling efforts suggest that increased compliance with evidence-based treatments and achieved targets for improving risk factor distribution across the population can lead to further reductions in CHD mortality.

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## What are the suggestions for policy change?

The most effective policy interventions to reduce CHD mortality identified by the authors include implementing policies that:

- ▶ Discourage smoking, such as imposing excise taxes on all tobacco products, adding warning labels to cigarette packages, and implementing smoking bans in public areas.
- ▶ Encourage the consumption of fruits, vegetables, lean meats and whole grains by increasing the availability, affordability, and acceptability of healthy foods. Policies to encourage healthy eating include establishing grocery stores and farmers

markets in underserved areas, increasing availability of heart-healthy foods at schools and worksites, and encouraging the production and purchase of heart-healthy foods. To reduce population-wide sodium and trans fat intake, agencies can work with the food industry to implement voluntary targets or legal mandates.

- ▶ Increase physical activity through land use planning and design, mass transit systems, and recreational developments such as parks and trails. Physical activity also can be promoted through worksite policies that provide gym membership incentives, onsite workout facilities, and protected time for physical activity.

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## Resources

U.S. Department of Health and Human Services  
*Communities Putting Prevention to Work Initiative*  
[www.hhs.gov/recovery/programs/cppw/factsheet.html](http://www.hhs.gov/recovery/programs/cppw/factsheet.html)

The Guide to Community Preventive Services  
*Obesity Prevention and Control*  
[www.thecommunityguide.org/obesity](http://www.thecommunityguide.org/obesity)

*Promoting Good Nutrition*  
[www.thecommunityguide.org/nutrition](http://www.thecommunityguide.org/nutrition)

Environmental Protection Agency  
*Smoke-Free Homes and Cars Program*  
[www.epa.gov/smokefree](http://www.epa.gov/smokefree)

## Citation

Ford EF, Capewell S. Proportion of the decline in cardiovascular mortality disease due to prevention versus treatment: Public health versus clinical care. *Annu Rev Public Health.* 2011;32:5–22.

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

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