

Public Health Overview

Definitions and Quotes

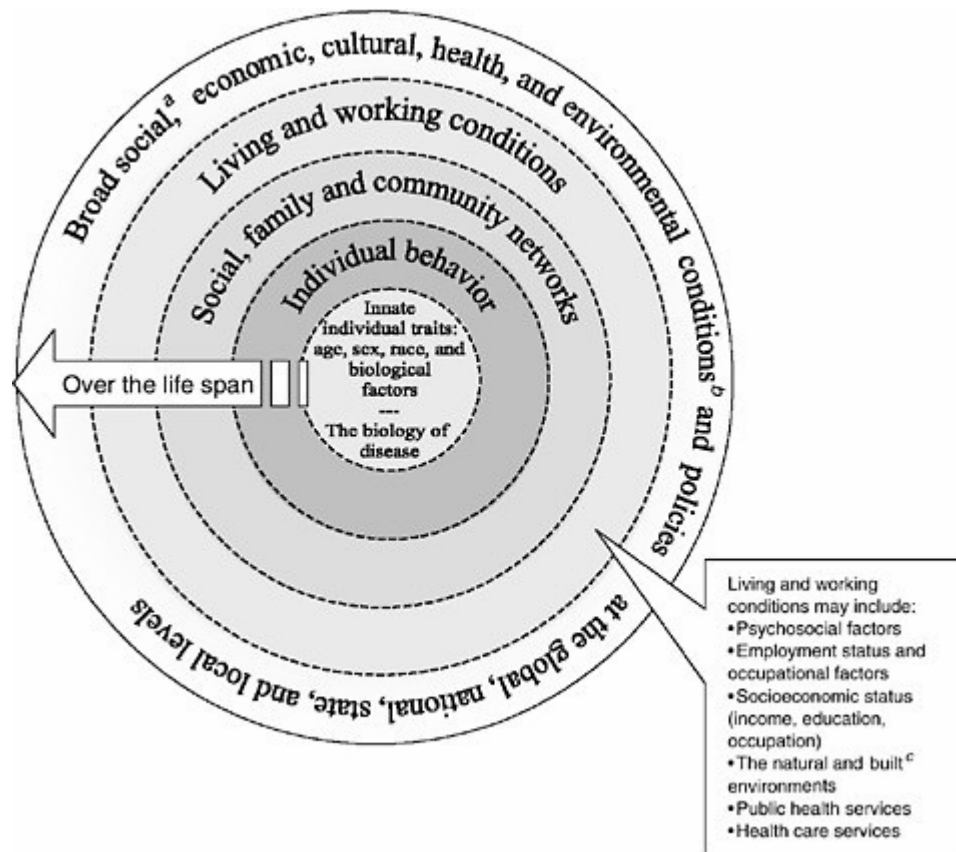
- **Public health** is what we, as a society, do collectively to assure the conditions in which people can be healthy.

Institute of Medicine, The Future of Public Health, 1988

- **Health** is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

World Health Organization Constitution, 1947

- Health is the result of many interacting factors.



Institute of Medicine, The Future of the Public's Health in the 21st Century, 2002

- A **healthy city** is one that is continually creating and improving those physical and social environments and strengthening those community resources which enable people to mutually support each other in performing all the functions of life and achieving their maximum potential.

T. Hancock and L. Duhl, "Healthy Cities: Promoting Health in the Urban Context," 1988

- Never doubt that a small group of thoughtful citizens can change the world. Indeed, it is the only thing that ever has.

Margaret Mead, American Anthropologist

Medicine vs. Public Health

Although public health and medicine have some common characteristics and overlap at times, the table below illustrates differences between the two.

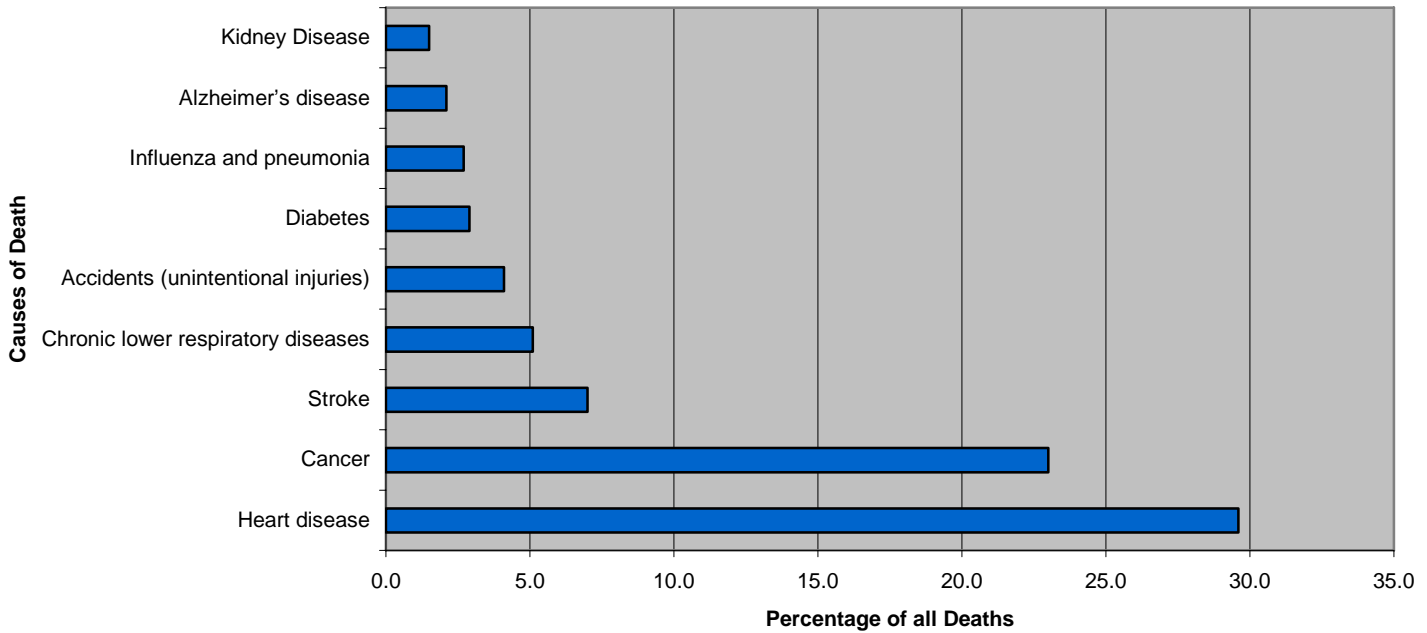
| <u>Medicine</u> | <u>Public Health</u> |
|---|--|
| Primary focus on individual | Primary focus on population |
| Treat individual patients one-on-one | Monitor and diagnose the health concerns of entire communities |
| Emphasis on diagnosis and treatment | Emphasis on prevention & health promotion for the whole community |
| Emphasis on providing medical care | Emphasis on the environment, human behavior and lifestyle, as well as medical care |
| Lines of specialization organized, for example, by: <ul style="list-style-type: none">• Organ system (cardiology)• Patient group (pediatrics)• Etiology, pathophysiology (oncology, infectious disease)• Technical skill (radiology) | Lines of specialization organized, for example, by: <ul style="list-style-type: none">• Analytical method (epidemiology)• Setting and population (occupational health)• Substantive health problem (nutrition)• Skills in assessment, policy development, and assurance |

The Population Approach to Public Health, 1990 (<http://www.asph.org/document.cfm?page=724>)

Leading and Actual Causes of Death

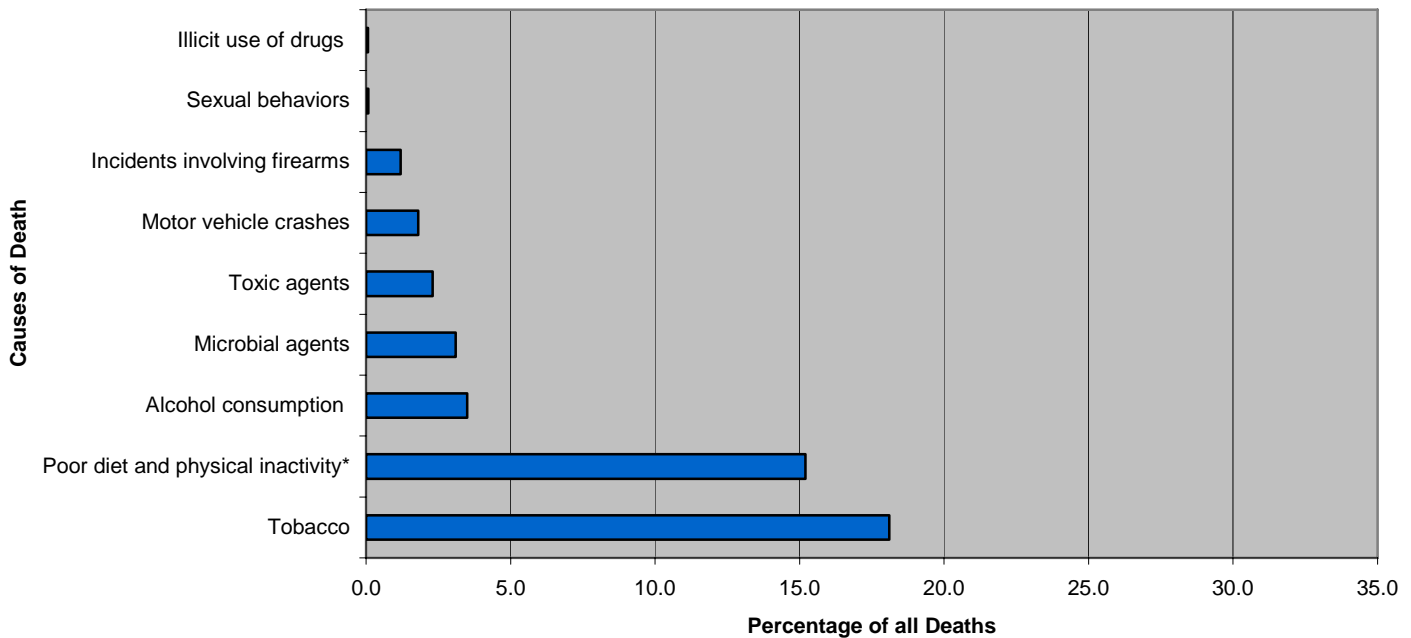
Below are graphs illustrating the *leading* causes of death and the *actual* causes of death in the United States, by percentage, in 2000. The leading causes of death are typically the medical conditions that cause death (accidents are the exception). The actual causes of death account for those risk factors that can be modified (are non-genetic). (The actual causes of death are the types of factors that public health and our community health partnership could address.)

Leading Causes of Death in the United States, 2000



Miniño, AM, Arias, E, Kochanek, KD, Murphy, SL, Smith, BL. *National Vital Statistics Reports*. 2002; 50 (15):1-120.

Actual Causes of Death in the United States, 2000

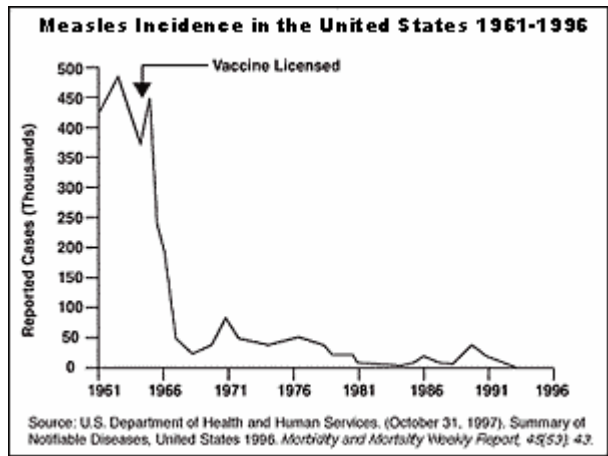


Mokdad, AH, Marks, JS, Stroup, DF, Gerberding, JL. *JAMA*. 2004;291:1238-1245.

*revised in *JAMA* 2005 Jan 19;293(3):293-4

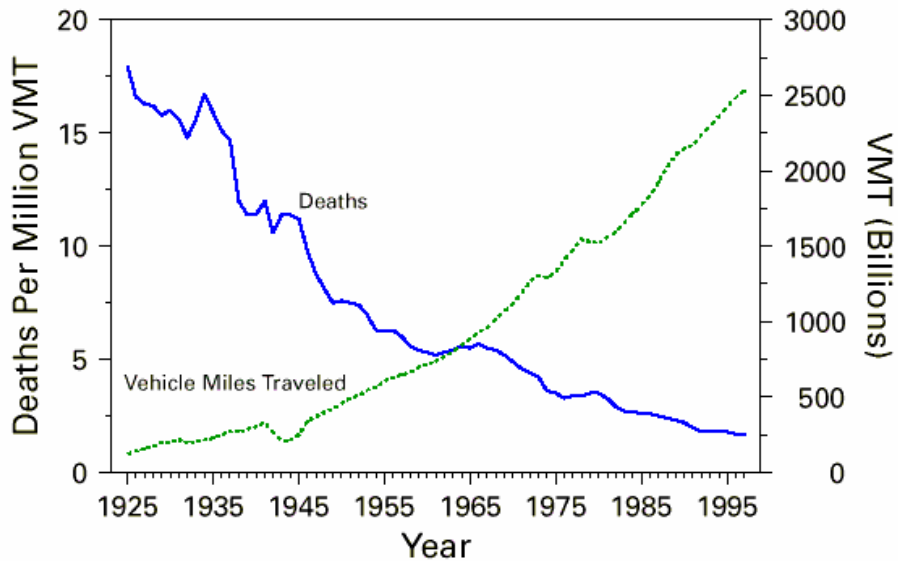
Ten Great Public Health Achievements and Examples -- United States, 1900-1999

- 1. Vaccinations – The introduction the vaccines eradicated of many diseases such as the measles (see graph below)



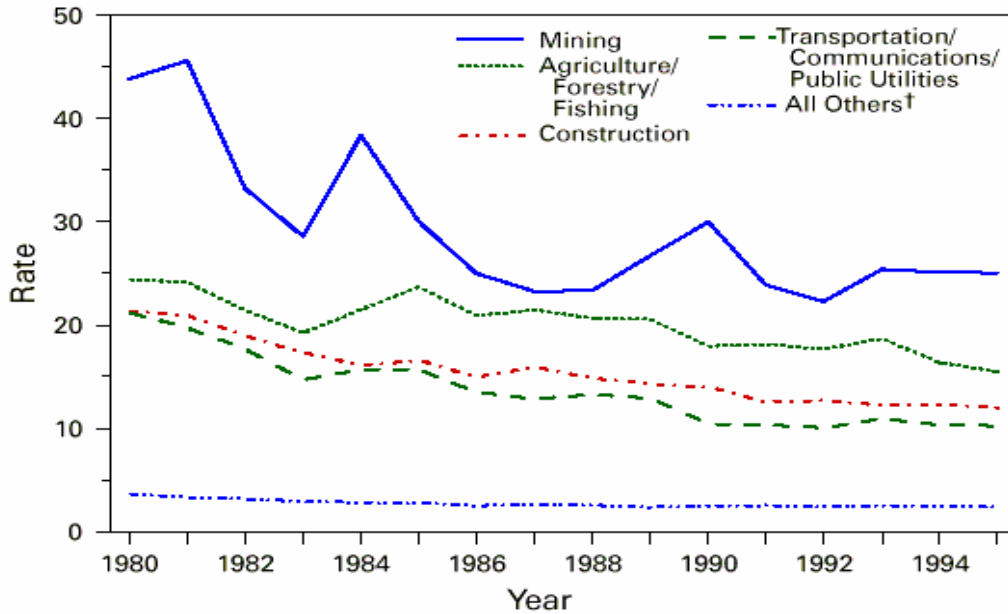
- 2. Motor-vehicle safety – Improvements in vehicle and highway design, increased use of safety belts/child safety seats, & enactment and enforcement of traffic safety laws have decreased motor-vehicle deaths, even while people are driving more.

FIGURE 1. Motor-vehicle-related deaths per million vehicle miles traveled (VMT) and annual VMT, by year — United States, 1925–1997



3. Safer workplaces – Safer equipment, improved technology, development and introduction of safer work practices, & better health and safety training have reduced occupational death rates.

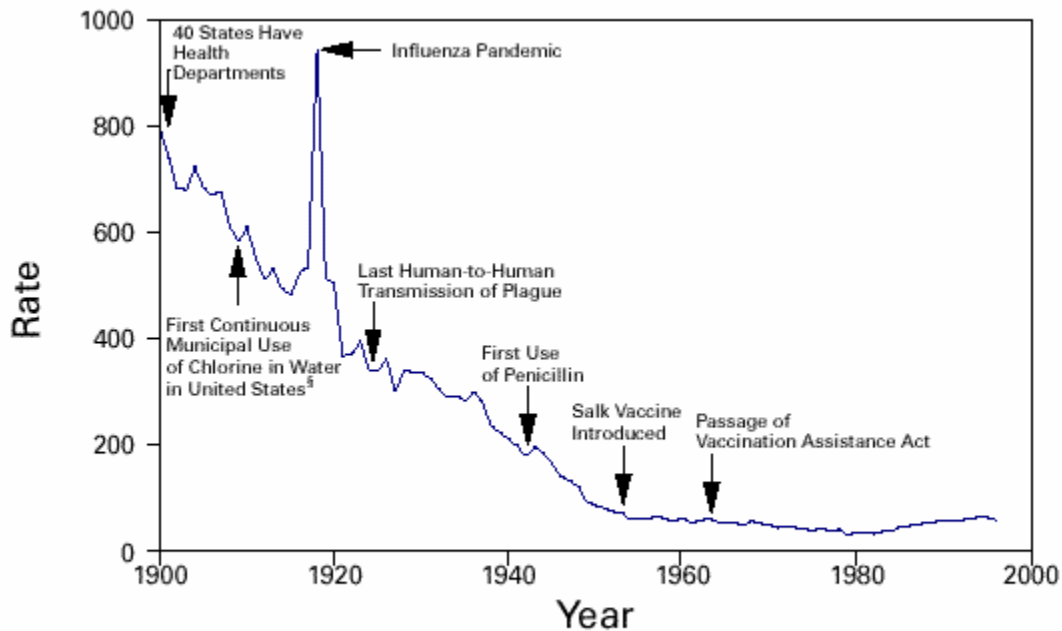
FIGURE 2. Occupational injury death rates*, by industry division and year — United States, 1980–1995



* Per 100,000 workers.

4. Control of infectious diseases – Chlorination of water, public education about hygienic practices such as hand washing, animal & pest control operations, etc. have reduced deaths from infectious disease.

FIGURE 1. Crude death rate* for infectious diseases — United States, 1900–1996†

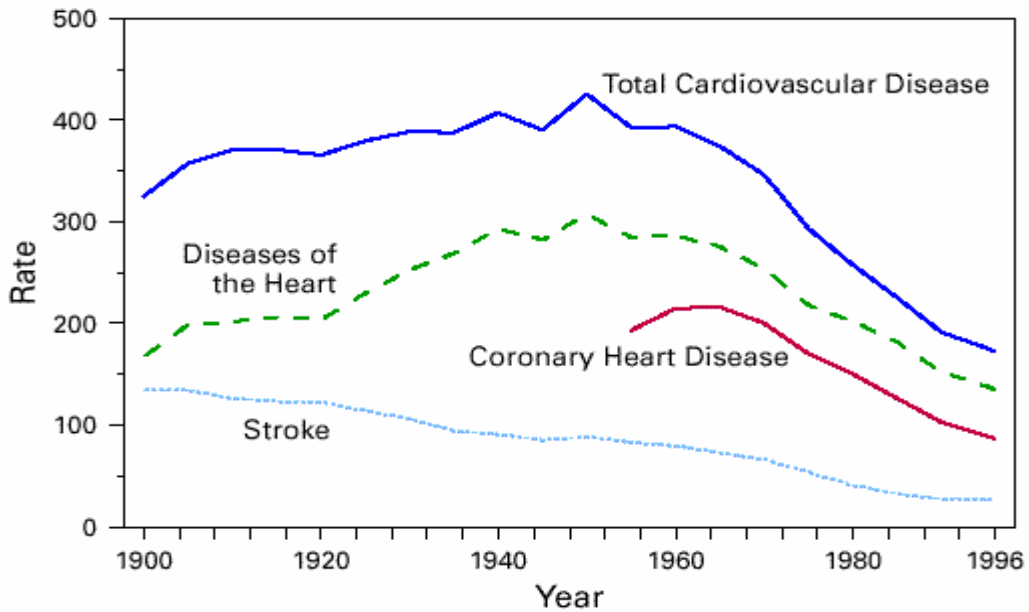


*Per 100,000 population per year.

†Adapted from Armstrong GL, Conn LA, Pinner RW. Trends in infectious disease mortality in the United States during the 20th century. JAMA 1999;281:61–6.

- 5. Decline in deaths from coronary heart disease and stroke – Prevention interventions to reduce risks of cardiovascular disease (CVD) & improvements in therapy for persons who develop CVD have reduced death rates.

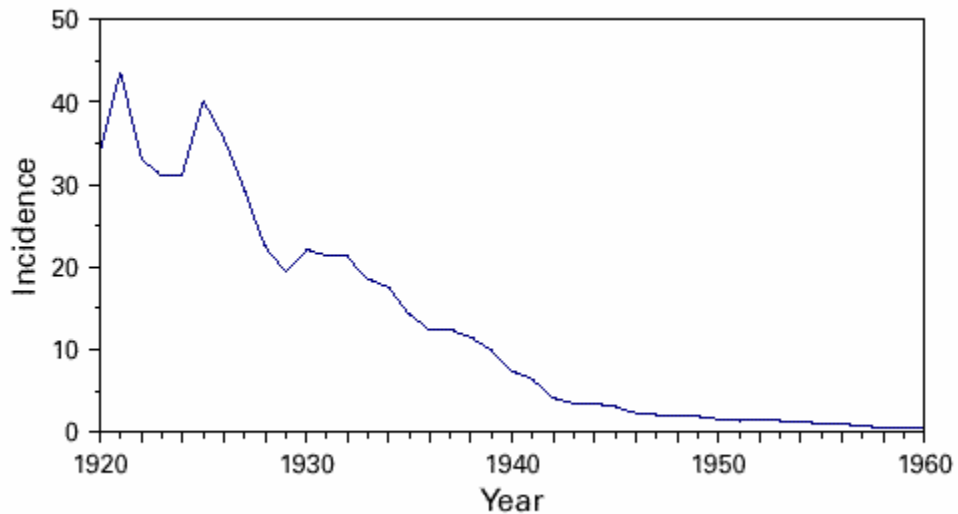
FIGURE 1. Age-adjusted death rates* for total cardiovascular disease, diseases of the heart, coronary heart disease, and stroke,† by year — United States, 1900–1996



*Per 100,000 population, standardized to the 1940 U.S. population.

- 6. Safer and healthier foods – Improved handwashing, sanitation, refrigeration, pasteurization, pesticide application, and food fortification programs have made food safer and healthier.

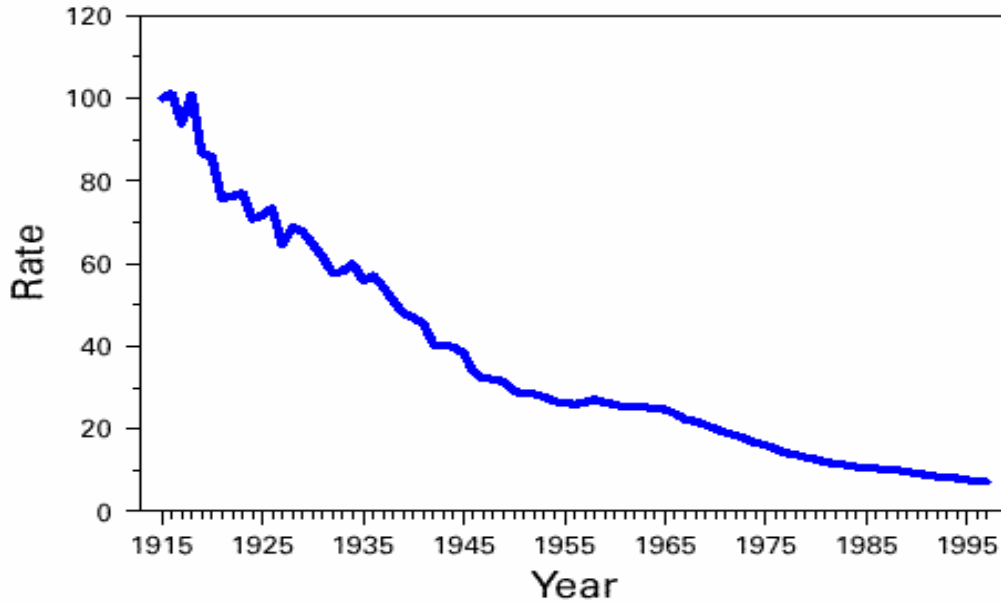
FIGURE 1. Incidence* of typhoid fever, by year — United States, 1920–1960



*Per 100,000 population.

7. Healthier mothers and babies – Environmental interventions, improvements in nutrition, advances in clinical medicine, improvements in access to health care, improvements in surveillance and monitoring of disease, increases in education levels, & improvements in standards of living have contributed to a decline in both infant and maternal deaths.

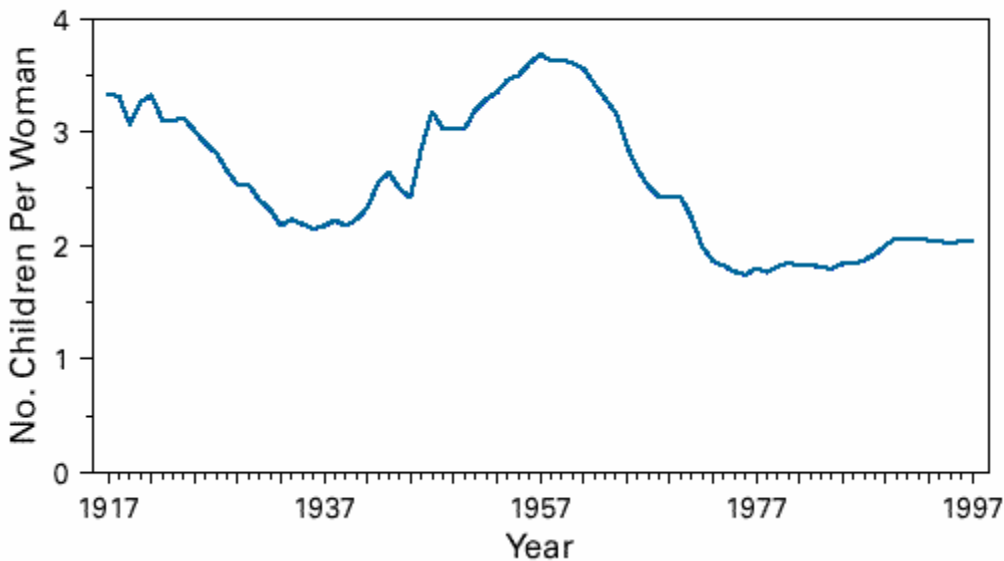
FIGURE 1. Infant mortality rate,* by year — United States, 1915–1997



*Per 1000 live births.

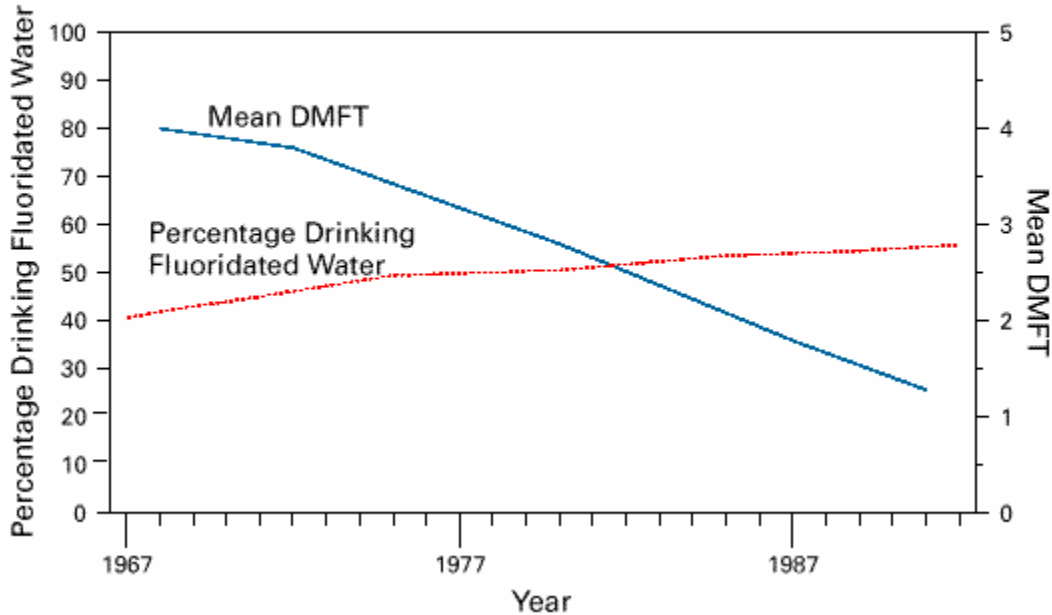
8. Family planning – Smaller families and greater intervals between births have contributed to better health of infants, children, & women and have improved the social and economic role of women.

FIGURE 1. Fertility rates* — United States, 1917–1997



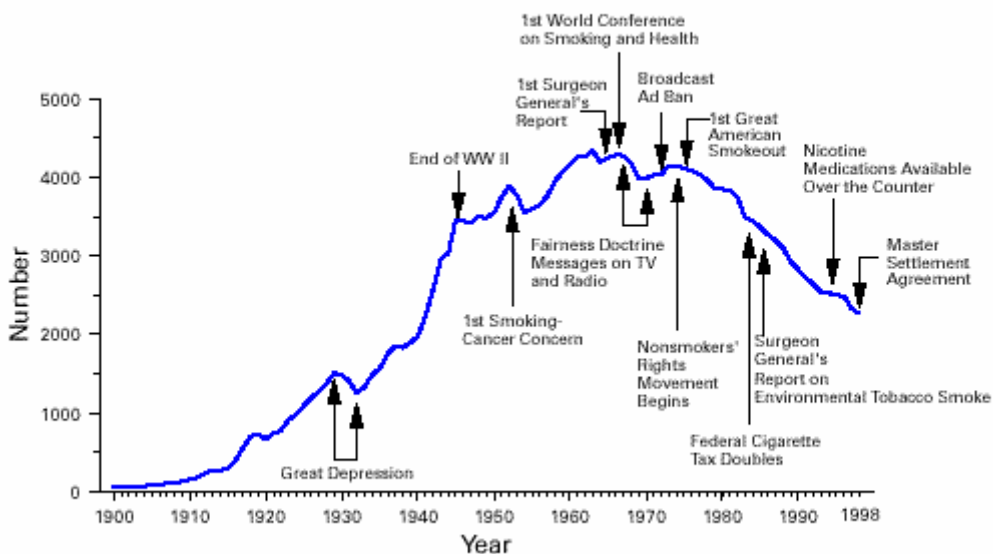
9. Fluoridation of drinking water to prevent tooth decay – Adding fluoride to community drinking water is the most equitable and cost-effective method of delivering fluoride to all members of most communities to prevent tooth decay.

FIGURE 1. Percentage of population residing in areas with fluoridated community water systems and mean number of decayed, missing (because of caries), or filled permanent teeth (DMFT) among children aged 12 years — United States, 1967–1992



10. Recognition of tobacco use as a health hazard – The reduction in smoking has resulted in a decline in smoking-related cancers and heart disease. See the graph below for correlations between smoking trends and major public health events.

FIGURE 1. Annual adult per capita cigarette consumption and major smoking and health events — United States, 1900–1998



Sources: United States Department of Agriculture; 1986 Surgeon General's Report.

Centers for Disease Control and Prevention, 1999 (<http://www.cdc.gov/od/oc/media/tengpha.htm>)