



Introduction

The San Francisco

Department of Public Health is pleased to present you with its annual *Overview of Health* in San Francisco. As in past years, we release this report in honor of Public Health Week, April 1- 5, 2002. The Overview provides our broadest view of the health and well-being of our community and is intended to contribute to the best evidence on health conditions and needs in San Francisco.

Furthermore, we have tried to present data that will be useful for thinking about prevention activities: by showing disparities across groups, determinants of ill health, trends over time, comparisons to state or

national levels or national standards, or by choosing measures of premature death or disability.

This year's *Overview* includes the latest available data about important aspects of the health and well-being of our population. In addition, we continue to expand our information about the major conditions that contribute to the patterns of health, illness and injury in San Francisco.

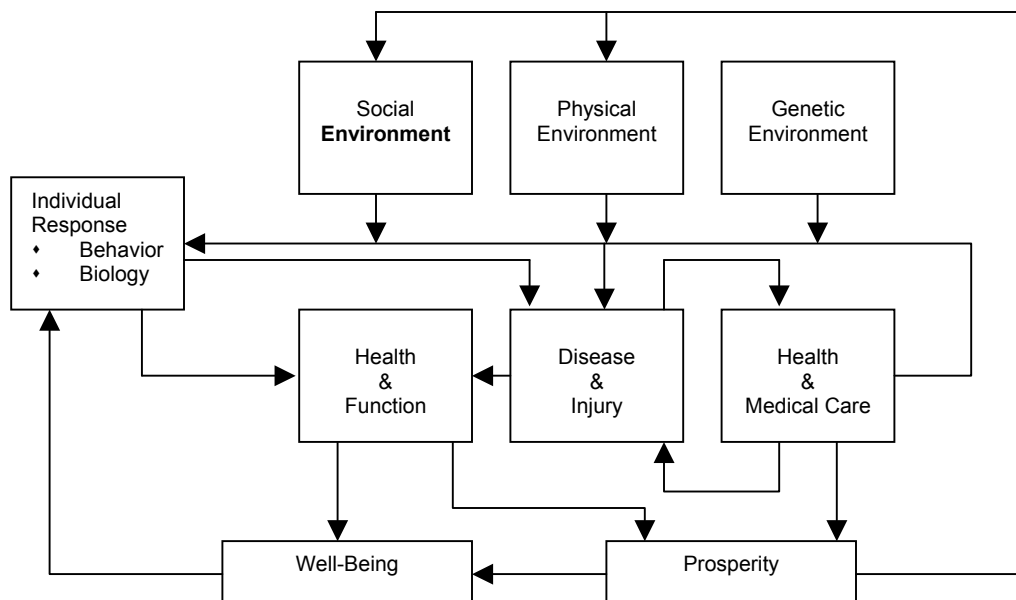
The *Overview* is organized into three sections: "Who We Are" provides a demographic view of the age and ethnic distribution of our population. "How We Live" presents information on conditions

that are known to be major determinants of health in populations, including poverty, socioeconomic conditions, air pollution, crime, substance abuse, and risky behaviors. "Our Health" covers major physical and mental health outcomes.

The Field Model of Health

Our approach is governed by a broad concept of health and well-being. The factors that contribute to health and well-being in our population are described in the following "Field Model."

Field Model of Health





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In general, the determinants that appear higher up on the diagram contribute to or influence the occurrence of factors lower down on the diagram. Some useful considerations about how a population's health is produced and represented by the diagram, are:

- ◆ The contribution of medical care to a population's health is limited.
- ◆ Conditions of the social and physical environment play an important role in producing different health, disease and injury patterns in our population.
- ◆ Individual factors, such as risk decisions or response to stress, can moderate the general effects of broader environmental factors on health. The occurrence of individual factors can also be patterned by the social and physical environment.
- ◆ Disease and injury, which can be clinically determined and reported in health systems data, are not quite the same thing as health and well-being, which is based on how people experience their own conditions and function with them.
- ◆ To change a population's health profile, we have to consider possible changes in their physical and social environment and in the factors influencing behavior, and not just at health care. Indeed, since many health care interventions occur late in sometimes long sequences of events leading to diseases or injuries, in many cases earlier interventions would be more effective or more cost-effective at reducing the ultimate burden of disease.

Note that each box in the diagram is itself complex, and not likely to be reducible to a single variable in its influence on (or representation of) any population's health and well-being. To begin organizing this complexity into pieces of evidence, we turn to another figure, the "simplified causal web linking exposures and outcomes" on the next page.

Web of Causation and Public Health

The causal web on the next page is "simplified" by the absence of specific examples and the lines that connect them. Such examples can be drawn from this report, which has been influenced by *Healthy People 2010* and by the World Health Organization's *The Solid Facts*. Each of these highly-regarded reports has identified a list of key determinants of health:

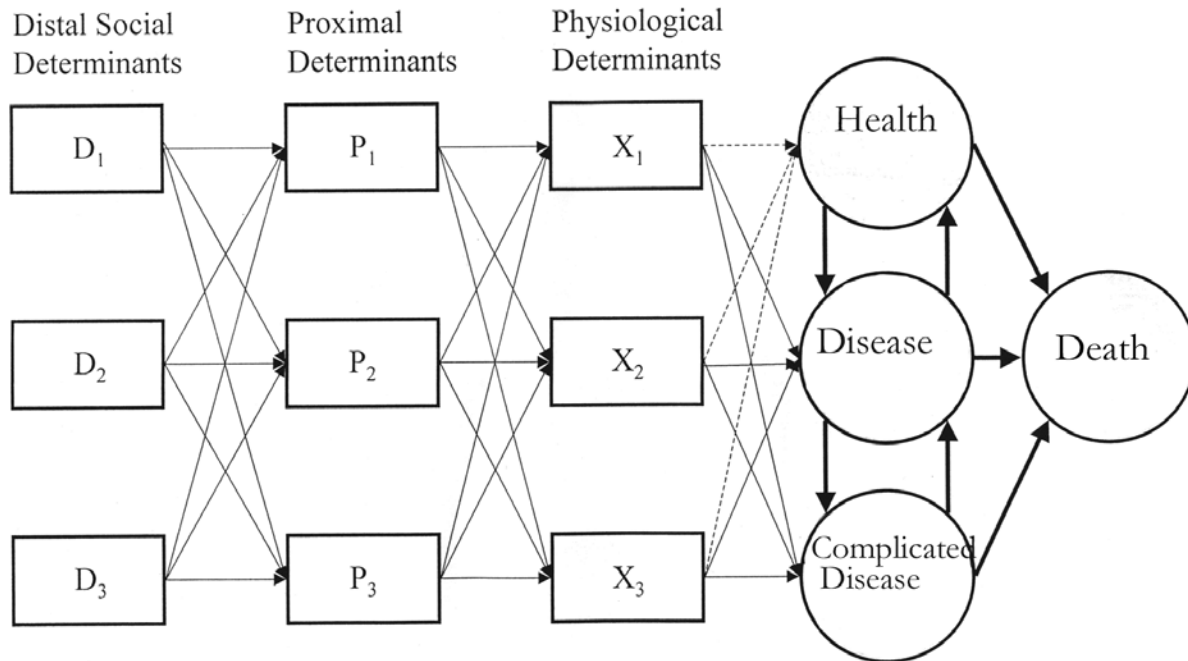
| The Solid Facts (WHO) | Healthy People 2020 (DHHS) |
|-----------------------|-----------------------------|
| The Social Gradient | Physical Activity |
| Stress | Overweight and Obesity |
| Early Life | Tobacco Use |
| Social Exclusion | Substance Abuse |
| Work | Responsible Sexual Behavior |
| Unemployment | Mental Health |
| Social Support | Injury and Violence |
| Addiction | Environmental Quality |
| Food | Immunization |
| Transport | Access to Health Care |



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Simplified causal web linking exposures and outcomes

Adapted from Murray & Lopez, *Epidemiology* 1999;10:594



To illustrate how this model might work, consider heart disease, which is the leading cause of premature death in every zip code and among every ethnic group in San Francisco. Distal social determinants such as stress, work strain, and socioeconomic context contribute directly to heart disease, and also to greater exposure to such proximal determinants of heart disease such as physical inactivity, poor diet, and smoking. Poor diet and physical inactivity lead to obesity, hypertension, diabetes, and lipid disorders, all of which are physiological determinants of heart disease. Smoking increases the risk of heart disease by adversely affecting such physiological determinants as lipid profile, risk of diabetes, and by other mechanisms. Each determinant influences multiple outcomes. For this reason, our report takes very seriously all of the possible influences on the health of San Franciscans.

By assessing our population's health in this manner, and by implementing prevention efforts that are informed by this assessment, we hope to address the two main goals of *Healthy People 2010*: increase the quality and years of healthy life, and eliminate health disparities.

We are pleased to present you with this report and hope it contributes to a better understanding of **who we are, how we live, and our health.** We welcome comments and suggestions. Please send them to:

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Sources:

1. RG Evans & GL Stoddart. *Producing health, consuming health care.* *Soc. Sci. Med.* Vol. 31, No. 12, pp 1347 – 1363, 1990.
2. CJ Murray & AD Lopez. *On the comparable quantification of health risks: lessons from the Global Burden of Disease Study.* *Epidemiology.* Vol. 10, No. 5, pp 594-605, 1999.
3. R Wilkinson & M Marmot. *The Solid Facts: Social Determinants of Health.* WHO Regional Office for Europe. 1998.
4. DHHS. *Healthy People 2010.* <http://www.health.gov/healthypeople/>