REDUCING THE RISK OF CARDIOVASCULAR DISEASE:
EFFECTS OF A COMMUNITY-BASED CAMPAIGN ON KNOWLEDGE
AND BEHAVIOR

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ABSTRACT: In 1972 the Stanford Heart Disease Prevention Program
launched a three-community field study. A multimedia campaign was
conducted for two years in two California communities (Watsonville and
Gilroy), in one of which (Watsonville) it was supplemented by an
intensive-instruction program with high-risk subjects. A third community
(Tracy) was used as a control. The campaigns were designed to increase
participants' knowledge of the risk factors for cardiovascular disease, to
change such risk-producing behavior as cigarette smoking, and to de-
crease the participants' dietary intake of calories, salt, sugar, saturated
fat, and cholesterol. Results of a sample survey indicate that substantial
gains in knowledge, in behavioral modification, and in the estimated risk
of cardiovascular disease can be produced by both methods of interven-
tion. The intensive-instruction program, when combined with the
mass-medica campaign, emerged as the most effective for those partici-
ants who were initially evaluated to be at high risk. The results after two
years of intervention are reported for effects on knowledge and be-
havioral change for the total participant samples and for the high-risk
subsamples in each of the three communities.

During this century, cardiovascular disease has become the greatest single
killer in the developed countries. The United States ranks second highest, be-
hind Finland, in its rate of morbidity and mortality due to cardiovascular disease.

Since 1968 mortality due to cardiovascular disease has declined slightly;
even so, the death rate is still excessively high. The costs to society from car-
diovascular disease continue to rise steadily; the medical costs alone command a
larger and larger share of the gross national product. Future improvements in
the health of Americans are not expected to come from improvements in their
medical care but rather from an increased attention to health promotion and
disease prevention.1 Surely, if prevention programs can be properly designed
and implemented, they could result not only in sharp reductions in medical care
costs but also in a considerable increase in the life span of many individuals.

Reducing the risk of premature cardiovascular disease will require that
individuals reduce or eliminate the primary risk factors that are associated with

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increased risk of premature heart attack and stroke, e.g., cigarette smoking, high blood pressure, and high serum-lipid concentrations. Individuals will have to take action to avoid other potential contributors to risk, such as lack of exercise, obesity, or stress and tension. All of these risk factors can be reduced through changes in lifestyle. The behaviors associated with risk-factor modification have all been demonstrated to be potentially modifiable, at least by some individuals. People do stop smoking, maintain normal blood pressure, cut down on their intake of saturated fats, dietary cholesterol, sugar, and salt; they do reduce their weight to an optimal level, relative to their body structure, and take regular exercise. Some even achieve success in bringing their daily tensions under control.

Even though it is obvious that the behavioral changes required for risk reduction are potentially achievable, earlier reported attempts to reduce these risk factors systematically via life-style changes have typically not been successful. While initial changes are often made as a consequence of a medical consultation or clinical therapy, such programs have traditionally been unable to prevent the rapid regression to the risk-promoting status quo when treatment has ended. Anti-smoking and weight-control programs, in particular those reported from clinical settings, tend to follow this pattern of results. Also, even if effective clinical protocols are developed for risk-factor behavioral change, the problem remains as to how best to convey these risk-reduction techniques to a large heterogeneous population, in a successful and cost-effective way.

**METHODS**

In 1972 the prospects for achieving community-wide risk reduction were addressed by the Stanford Heart Disease Prevention Program when it launched a field study in three California communities. The aim was to combine biomedical expertise with that of the social sciences so as to find successful methods for reducing cardiovascular risk for the adult population at large.

The family-community model, rather than the medical-center model, was chosen because a community would be able to provide the milieu in which a consensus of support and mutual help could develop and become an essential and integral part of the behavioral change program. For example, as smoking was beginning to be considered unfashionable, or was being banned outright in many places, those who were attempting to change their smoking habits could find a variety of natural reinforcements and social supports throughout the community in their daily lives. The persistence of such environmental supports for non-smoking should accelerate others' efforts to quit or cut down.

In addition, a prevention program was needed that would provide training in the skills necessary to achieve the self-directed behavioral changes required to reduce risk in most areas. A family-community model could reduce the costs of such a program because both the mass-media and nonmedical personnel could contribute to the skills-training and behavioral counseling portions of a