

Title of Intervention: The Minnesota Heart Health Program

Intervention Strategies: Campaigns and Promotions, Provider Education, Group Education, Individual Education, Supportive Relationships, Environments and Policies

Purpose of the Intervention: To decrease population risk of coronary heart disease

Population: General population between the ages of 25-74

Setting: Six communities in Minnesota, North Dakota and South Dakota; school-based, home-based, worksite-based, health care facility-based, community-based

Partners: National Heart Lung and Blood Institute Nutrition Coding Center, Minnesota Lipid Research Clinics Core Laboratory, Community members, Local and State Health Departments

Intervention Description:

- Campaigns and Promotions: Mass media campaign materials included posters, pamphlets, booklets, press guides and press releases. Worksites offered shape-up physical activity challenges.
- Provider Education: Health professionals attended continuing education classes to enhance adoption of practical and systematic prevention programs. The classes encouraged health care providers to act as role models. The classes taught health care staff concepts and skills for risk factors assessment and reduction counseling.
- Group Education: Speakers provided health messages at club or organization meetings. Education classes were available to adults and youth at community locations, schools and worksites. Risk factor reduction videos were shown at Heart Health Centers.
- Individual Education: A weight loss correspondence program was available for individuals.
- Supportive Relationships: All education programs encouraged role modeling. Students completed "take home" assignments addressing heart health with their parents.
- Environments and Policies: Campaign messages advocated for healthy options and labeling in restaurants and grocery stores. A heart disease screening center was established. Environmental changes, such as the installation of bike racks, encouraged physical activity.

Theory: Social Learning Theory, Problem Behavior Theory

Resources Required:

- Staff/Volunteers: Program coordinator, adult education specialist, community organizer, health professionals' liaison, youth educator, graphic designer, public relations liaison, volunteers
- Training: Not mentioned
- Technology: Audiovisual equipment, media creation capabilities
- Space: Clinic, community meeting, educational sessions
- Budget: \$20/person for risk factor screening
- Intervention: Pamphlets, posters, brochures, books, guides, weight loss newsletter, incentives, computers, funds to give to communities to work on ideas developed during initial planning process, manuals/curriculum developed on how to teach heart health in schools
- Evaluation: Blood pressure cuff, scale, cholesterol testing equipment, stadiometer, phones (for interviews)

Evaluation:

- Design: Nonrandomized community trial
- Methods and Measures:
 - Attendance logs at events and activities
 - Exposure to materials: through self-reported survey
 - Annual risk factor survey measured smoking habit, reported blood pressure and blood pressure control methods, reported HDL levels, dietary behaviors, physical activity or leisure time
 - Physical activity levels assessed by self reported questionnaires, interactive computer program assessed habitual levels of physical activity

- Smoking assessed by self report and expired carbon dioxide
- Diet measured by 24-hour dietary recall
- Morbidity rates assessed through abstraction of hospital charts
- Mortality rates assessed by death certificate counts

Outcomes:

- Short Term Impact: Overall, positive trends were found for cholesterol, smoking, blood pressure, physical activity and general cardiovascular disease risk. However, no findings were statistically significant.
- Long Term Impact: There was no evidence of significant intervention effect on morbidity or mortality, either for coronary heart disease or for stroke.

Maintenance: A citizen leadership committee continued the programs at the conclusion of scientific project.

Lessons Learned: The intervention was launched during a decade of strongly declining secular trends in cardiovascular disease risk. Although individual elements of the intervention programs had the effects intended, the program as a whole did not accelerate risk reduction beyond those trends. The intervention did have an influence on national programs and policies. It is far easier to change the risk profiles of the people who participate in programs, than to engage a large enough fraction of the community to change risk profiles of the entire community. The "Shape Up Business" challenge appeared quite popular, spawning natural competition among local industries. Through the provider education, most primary care physicians expressed interest in providing effective counseling for patients with elevated risk factors, but felt they lacked the necessary skills. By using continuing medical education to teach physicians about practical intervention strategies for lifestyle changes to reduce the risk of cardiovascular disease, they were much more comfortable in advising patients

Citation(s):

Carlaw, R. W., M. B. Mittlemark, et al. (1984). "Organization for a community cardiovascular health program: experiences from the Minnesota Heart Health Program." Health Educ Q **11**(3): 243-52.

Crow, R., H. Blackburn, et al. (1986). "Population strategies to enhance physical activity: the Minnesota Heart Health Program." Acta Med Scand Suppl **711**: 93-112.

Crow, R., H. Blackburn, et al. (1986). "Population strategies to enhance physical activity: the Minnesota Heart Health Program." Acta Med Scand Suppl **711**: 93-112.

Jacobs, D. R., Jr., R. V. Luepker, et al. (1986). "Community-wide prevention strategies: evaluation design of the Minnesota Heart Health Program." J Chronic Dis **39**(10): 775-88.

Jeffery, R. W., C. W. Gray, et al. (1995). "Evaluation of weight reduction in a community intervention for cardiovascular disease risk: changes in body mass index in the Minnesota Heart Health Program." Int J Obes Relat Metab Disord **19**(1): 30-9.

Jeffery, R. W. (1995). "Community programs for obesity prevention: the Minnesota Heart Health Program." Obes Res **3 Suppl 2**: 283s-288s.

Luepker, R. V., D. M. Murray, et al. (1994). "Community education for cardiovascular disease prevention: risk factor changes in the Minnesota Heart Health Program." Am J Public Health **84**(9): 1383-93.

Luepker, R. V., L. Rastam, et al. (1996). "Community education for cardiovascular disease prevention. Morbidity and mortality results from the Minnesota Heart Health Program." Am J Epidemiol **144**(4): 351-62.

Mittlemark, M. B., R. V. Luepker, et al. (1988). "The role of physicians in a community-wide program for prevention of cardiovascular disease: the Minnesota Heart Health Program." Public Health Rep **103**(4): 360-5.

Mittelmark, M. B., R. V. Luepker, et al. (1986). "Community-wide prevention of cardiovascular disease: education strategies of the Minnesota Heart Health Program." *Prev Med* 15(1): 1-17.

Murray, D. M., R. V. Luepker, et al. (1986). "Systematic risk factor screening and education: a community-wide approach to prevention of coronary heart disease." *Prev Med* 15(6): 661-72.

Weisbrod, R. R., P. L. Pirie, et al. (1992). "Impact of a community health promotion program on existing organizations: the Minnesota Heart Health Program." *Soc Sci Med* 34(6): 639-48.