

Title of Intervention: The Pawtucket Heart Health Study

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

Purpose: To use community-based approaches for modify cardiovascular disease risk factors, morbidity and mortality

Population: A blue-collar community

Setting: Suburban Pawtucket, Rhode Island in southeastern New England; school-based, worksite-based, faith-based, community-based

Partners: Local hospital, health agencies, schools, worksites, community organizations and businesses, churches, newspapers, television stations, grocery stores, restaurants, radio stations, local physicians, parade organizers

Intervention Description: This program focused on the provision of nutrition, exercise, smoking, general health, weight and blood pressure interventions run by trained volunteers in community-, school-, faith-, and worksite-based settings.

- **Campaigns and Promotions:** The “Look for Labels” campaign included posters, taste samples and recipe cards used to promote healthy eating. The “Rate your Plate” campaign promoted healthy eating by featuring restaurants with healthy options on the radio and with posters. The “Lighten Up” contest encouraged weight loss through a contest for prizes. Community-wide weigh-ins were held. Recipe cook-off contests challenged participants to prepare healthier versions of recipes (e.g., low sodium, low-fat). Labels were placed in grocery stores near items that were low-fat, low-sodium, both, and/or had a healthy fat ratio. The “Know your Cholesterol” campaign targeted men with high risk for cardiovascular disease due to cholesterol levels through mailings, screening, counseling and referrals. A six-week local newspaper column was written regarding cholesterol knowledge and program promotion. The “Quit and Win” program offered incentives for successful tobacco cessation. Program announcements, healthy cooking demonstrations, and behavior change programs were delivered via free public access television. A regular column was written for the local newspaper to inform, motivate, teach, reinforce and promote the program. Short articles were also placed in numerous church, company, and organization newsletters/publications or on bulletin boards.
- **Provider Education:** Risk factor-related materials (e.g., nutrition, physical activity, tobacco, cholesterol, blood pressure) were sent to 300 local physicians to help them counsel at-risk patients. SCORES (Screening, COounseling, and Referral EventS) events screened participants for risk factors like weight, blood pressure or cholesterol.
- **Individual Education:** Participants were given self-help materials (e.g., cooking, nutrition, smoking), and urged to obtain a follow-up measure of risk factors after attempts at behavior modification were made.
- **Group Education:** Small weight loss education groups were formed both in the community and at worksites.
- **Supportive Relationships:** SCORES events provided on-the-spot counseling sessions.
- **Environments and Policies:** SCORES events increased access to screening and health counseling. Coupons for cholesterol tests at SCORES were passed out at the local St. Patrick’s Day parade.

Theory: Social Action, Social Learning Theory, Collective Efficacy

Resources Required:

- **Staff/Volunteers:** lay volunteers to develop, deliver, evaluate and manage nearly all intervention activities
- **Training:** training for lay volunteers; training for store employees to promote healthy foods; SCORES training (three 1.5-hour sessions) for employees on how to measure blood pressure and guidelines for counseling and referrals in worksites
- **Technology:** graphic design, printers, computers, video equipment

- Space: meeting space for program activities (e.g., group meetings, cooking classes); space for SCORES events
- Budget: not mentioned
- Intervention: posters, banners, bumper stickers, contest prizes, recipe books, pamphlets and other mailings; blood pressure, weight, and cholesterol measurement tools; weight loss kits; radio and print messages; mobile SCORES units; radio and TV time (free public access time); newspaper space
- Evaluation: call center manned by volunteers; contact cards; blood pressure, weight, and cholesterol measurement tools; questionnaires/surveys; telephones

Evaluation:

- Design: Quasi-experimental design
- Methods and Measures:
 - Community: content analysis of newspapers to track health-related articles; annual reviews with health agencies to document trends for heart disease risk factors; morbidity and mortality rates of heart disease and stroke assessed via a systematic hospital record abstraction process and EKG recoding for all related hospital discharges; out of hospital deaths were reviewed and coded in a similar manner with information being obtained through telephone interview
 - Volunteer: questionnaires regarding socio-demographic information, reasons for volunteering, medical history and skills/experiences; face-to-face volunteer interviews (e.g., those who resign or are effective)
 - Individual: contact cards completed by all individuals who participated in any intervention activity to determine participation rates as well as the socio-demographic makeup of participants of different activities; telephone interviews with participants who completed cards to assess immediate (4-6 weeks) and long-term (6-12 months) changes in risk factor status, behavior and knowledge relating to heart disease; baseline data on behaviors (e.g., tobacco, nutrition, physical activity) and knowledge of heart disease was obtained from telephone interviews with adults; sample of population completed step test to measure oxygen uptake; diet assessed by questionnaire; total cholesterol, systolic/diastolic blood pressure, smoking %, BMI, and projected heart disease rates were all measured through screening at baseline, during intervention, post intervention, and 8-9 years later; heart disease knowledge, smoking status, BMI, diabetes status, cholesterol, alcohol use, exercise behavior, postmenopausal hormone use, antihypertensive use, beta-blocker use, and lipid lowering drug use were all measured by telephone questionnaire every 2 years for 12 years

Outcomes:

- Short Term Impact: Heart disease and physical activity knowledge generally increased. No significant changes were measured in total cholesterol, systolic/diastolic blood pressure or BMI. The percentage of current smokers and percentage that used alcohol in the past 24 hours dropped. Estrogen and lipid lowering drug use increased, but antihypertensive and beta-blocker use did not change. Regular exercise increased; however, percentage of individuals with diabetes also increased. No significant changes were found in smoking or heart disease rates. A subsample of people who participated in community-wide weight loss programs showed significant reductions in body weight. In total, 80% lost weight during the duration of the program: 65% lost weight between the end of the program and 1-3 years later, and 26% lost enough weight to move them down one grade of obesity. Students with elevated cholesterol levels had significantly lower cholesterol levels after participating in a school-based heart healthy cook-off.
- Long Term Impact: not mentioned

Maintenance: Many of the intervention components were designed to be useable even after the 11-year study was over; however, there was no mention of any continuation of community-wide activities.

Lessons Learned: The program experienced inertia and lack of concern for heart disease from the Pawtucket community. Many participants mentioned that the number and variety of intervention components was too complex and overwhelming.

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