

**Title of Intervention:** Birmingham Heart Disease Prevention Project

**Intervention Strategies:** Campaigns and Promotions, Group Education, Environments and Policies

**Purpose of the Intervention:** To reduce risk factors for cardiovascular disease

**Population:** City of Birmingham employees at risk for cardiovascular disease

**Setting:** Municipal government worksites in the city of Birmingham, Alabama; worksite-based

**Partners:** University of Alabama at Birmingham

**Intervention Description:**

- Campaigns and Promotions: Monthly posters highlighting different health topics, newsletters with various health-related articles and information tip sheets were published and distributed in campus worksites.
- Group Education: Monthly health education sessions were offered on a variety of topics, including heart disease, cancer, sleep disorders and back injury. Small group classes were held at worksites for 30 to 40 minutes during the lunch break or at the end of the day. Participants were encouraged to make lifestyle behavioral changes such as adopting regular exercise, eating a low sodium and low fat diet and losing weight. Visual teaching methods using color graphics, models and games with culturally sensitive concepts and examples were employed to target the low literacy group. Specially designed intervention programs for weight loss, smoking cessation, cholesterol reduction, physical fitness and hypertension control were offered.
- Environments and Policies: All employees were required to obtain a health screening in order to be eligible for health insurance.

**Theory:** Not mentioned

**Resources Required:**

- Staff/Volunteers: Trained facilitators, consultant to help develop visual models, researchers, trained research staff
- Training: Not mentioned
- Technology: Not mentioned
- Space: Space to conduct group sessions and group and individual evaluations and assessments
- Budget: Overall budget for the project was \$3 million with over \$1 million dedicated to program design and computer work. The program had annual operating budget of \$400,000 for the health promotion program (marketing, medical screening and intervention programs). During this time, the city also built and opened a comprehensive fitness center, which cost \$105,000 for the initial equipment and an annual \$95,000 for personnel.
- Intervention: Print materials (worksheets, tip sheets, newsletters, posters, marketing materials), incentives (t-shirts, gym bags, certificates of achievement, "Good Health Dollars"), reminder cards for intervention session, phones to make reminder calls about intervention sessions, personal diary booklets
- Evaluation: Blood pressure equipment, blood glucose measuring equipment, cholesterol measuring equipment, Health Risk Appraisal - either paper or computer software (not specified in the article), envelopes and postage to send results of screenings

**Evaluation:**

- Design: Case-control
- Methods and Measures:
  - Annual medical screenings were conducted to assess risk factors for cardiovascular disease

**Outcomes:**

- Short Term Impact: Unskilled employees who participated in the intervention program showed significant changes in both their systolic and diastolic blood pressure measurements. No significant

changes in either systolic or diastolic blood pressure were noted for skilled workers. African American employees experienced a significant decrease in systolic blood pressure. The decrease for Caucasians was not statistically significant. Employees who participated in the intervention demonstrated a greater decrease in their blood pressure from baseline to follow-up than did control subjects, but the difference did not reach significance. Between both groups, there was a large increase in the percentage of non-smokers. Alcohol usage decreased slightly for both groups.

- Long Term Impact: Not measured

**Maintenance:** Additional funding (\$235,000) was requested and provided annually by the city to continue the project. They also contracted the University of Alabama Nursing School to continue to hold the screenings on a bi-annual basis as well as provide occupational health, community health and adult health nurses to continue the educational components.

**Lessons Learned:** The findings of this study show that a culturally appropriate, educational hypertension program tailored to minority and low-income populations is feasible and may increase hypertension control. Health professionals should evaluate their target population's culture, socioeconomic status, lifestyle and literacy level in order to develop and provide relevant health information and care. They also determined that because the departments were widely distributed across the city, attending a lunchtime health education session at a centralized location was not feasible for many employees. The blending of behavioral and environmental intervention approaches may promote behavioral change by enhancing workplace awareness and providing a supportive environment conducive to change.

**Citation(s):**

Fouad, M. N., C. I. Kiefe, et al. (1997). "A hypertension control program tailored to unskilled and minority workers." *Ethn Dis* 7(3): 191-9.

Harvey, M. R., R. W. Whitmer, et al. (1993). "The impact of a comprehensive medical benefit cost management program for the city of Birmingham: results at five years." *Am J Health Promot* 7(4): 296-303.