

Title of Intervention: Coronary Health Improvement Project (CHIP)

Website: <http://www.chipusa.org/>

Intervention Strategies: Group Education, Supportive Relationships, Individual Education

Purpose of the Intervention: To reduce coronary risk factor levels

Population: Adults aged 21 and older

Setting: community members and workers from metropolitan Rockford, Illinois; community-based, worksite-based

Partners: Swedish-American Center for Complimentary Medicine, Lifestyle Medicine Institute, Center for Science in the Public Interest, Physicians Committee for Responsible Medicine, Service clubs and corporations, churches, health care providers, media (radio, TV, billboards, newspaper), hospitals, Justus-Liebig University, trained facilitators, trained staff, lab, grocery stores, local corporations (blue and white collar)

Intervention Description: Researchers conducted three programs: pilot, community-based and worksite-based

- Group Education: Community residents could participate in a 40-hour intensive educational program. The program included shopping tours, nutrition workshops, food demonstrations, breakout sessions and physical activity and nutrition recommendations. Worksites offered a 32-hour video version of the community educational program.
- Supportive Relationships: Community participants could attend monthly alumni meetings. Worksite participants attended breakout sessions with physicians, nutritionists and nurses.
- Individual Education: Worksite participants received an individualized heart health screening report and referrals to health care providers.

Theory: Social-ecological Model, Social Learning Theory, Health Belief Model

Resources Required:

- Staff/Volunteers: Company managers and administrators, program alumni, on-site health promotion administrators, health care providers, dietitian, health educators
- Training: Facilitators were trained for each intervention site
- Technology: Television or projector, media player
- Space: Space for training, space for educational sessions
- Budget: Pilot program cost \$395/person or \$650/couple
- Intervention: Textbook, workbook, syllabi, space for lectures/workshops/breakout sessions, kitchen set-up, facilitator manual, video lectures, television or projector, media player
- Evaluation: Nutrition analysis software, lab for biometric analysis, logs, attendance sheets, Vacutainer (blood container), sample collection materials, computer, surveys

Evaluation:

- Design: Pilot, cohort
- Methods and Measures:
 - Attendance sheets at education sessions

- Biometric screening included cholesterol, glucose, blood pressure, heart rate, weight and height
- Survey measured lifestyle/nutrition knowledge, medical history, demographics, food frequency diary, exercise frequency, stress inventory, smoking

Outcomes:

- Short Term Impact: Analysis of the pilot program showed significant reductions in most coronary risk factors. Coronary risk factors include blood pressure, cholesterol (Total, LDL, Triglycerides), fasting glucose, overweight, smoking and sedentary lifestyle. There were also improvements in diet. The community-wide program analysis showed a significant improvement in weight, blood pressure, glucose and cholesterol. There were also significant increases in physical activity. Analysis of the worksite program showed significant improvements in weight, body mass index and cholesterol. Healthful lifestyles knowledge improved significantly across all sites. In general, participants at highest risk showed the greatest improvement across all risk factors. Also, men had significantly greater improvements than women.
- Long Term Impact: Not measured

Maintenance: The Coronary Health Improvement Project is a multi-phase project. As more people graduate from the program, the community becomes more aware of the benefits. Coronary Health Improvement Project alumni groups meet monthly to provide continued support and education. Coronary Health Improvement Project graduates also worked to implement the program in workplaces.

Lessons Learned: The pilot program was successful in reducing coronary risk factors. Community-based lifestyle change programs may have the same outcomes as residential programs with the added benefit of infrastructural changes in the community to support behaviors. Several restaurants began offering heart healthy menu options as a result of the program. The short term impact of the program included significant improvements in cholesterol, triglycerides, blood pressure and glucose. Strong social support may have contributed to success of program. It appears that the worksite program can empower participants with the cognitive content and behavioral skills needed to make lifestyle changes.

Citation(s):

Aldana, S.G., Greenlaw, R., et al. (2002). "Impact of the Coronary Health Improvement Project (CHIP) on Several Employee Populations." *J Occup Environ Med* 44(9):831-9.

Englert, H. S., H. A. Diehl, et al. (2004). "Rationale and design of the Rockford CHIP, a community-based coronary risk reduction program: results of a pilot phase." *Prev Med* 38(4): 432-41.

Englert, H. S., H. A. Diehl, et al. (2007). "The effect of a community-based coronary risk reduction: the Rockford CHIP." *Prev Med* 44(6): 513-9.