Problem To Be Solved

A nutrition needs assessment conducted in1987 among a 15% random sample (N=2046) of Aetna home office employees indicated the need for nutrition education programs and the desire to receive nutrition information at the worksite. Employees reported low self-efficacy for making nutrition choices, especially for skills such as selecting foods for a low-fat diet and making dietary changes to lower cancer risk. Employees also indicated a preference for receiving information through a variety of interventions such as workshops (30%), self-directed information kits (50%) and point-of-choice nutrition information in the cafeteria (92%). In addition, employee health risk data (N=7,596) show that 39% have elevated LDL cholesterol levels and 24% are obese. Self-reported data regarding health practices show that 30% have diets high in fat and 51% have diets low in fiber. A comprehensive nutrition education program was needed to meet employee needs and interests.

Nature of Innovation

We developed a comprehensive nutrition education program to help employees build skills for making food choices that reduce health risks and promote optimal health and performance. Our goals are to reduce dietary fat to an average of 30% of daily calories, to increase dietary fiber 20-30 grams per day and to balance diet and physical activity for optimal functional capacity. Nutrition programs are available to all home office employees (N=15,598). The Aenhance Information Management System (AIMS) is used to target nutrition programs to individuals at risk for health problems related to diet. Nutrition programs are provided using a variety of intervention methods for maximum participation and impact and to meet needs of individuals at different stages of readiness for health behavior change.

Communication and awareness programs are provided periodically throughout the year to build employee knowledge about specific nutrition topics. All awareness program are interactive and challenge participants to take action toward improving dietary practices. For example, the De-Fat Your Diet awareness program motivated employees (N=519) to make one or more changes in their diet to reduce the amount of fat they eat. The Strive For Five action campaign motivated participants (N=255) to make dietary changes to increase their consumption of fruits and vegetables. All awareness programs provide self-directed educational materials that help participants assess personal dietary habits and set goals for improvement. On-month follow-up results indicate that an average of 87% of participants are successful in making one or more changes and 96% intend to maintain changes made over time.

Lifestyle education workshops are provided on-going throughout the year at all home locations. The goal of all lifestyle education programs is to build competence and confidence for making healthful food choices. Program curricula are designed in-house by registered dietitians to be interactive and increase self-efficacy

for health behavior change. Both single and multi-session programs are problem-centered and help employees build skills for long-term results For example, a five-session program, Eating to Stay Young At Heart, focuses on skills needed to adopt a low-fat diet. Several singly-session workshops focus on skills such as balancing daily food choices using the USDA's Food Guide Pyramid, reading food labels and making dietary changes to reduce cancer risk. All workshops are evaluated using pre-post questionnaire that measures the self-efficacy of participants to perform specific behavioral skills needed to make healthful food choices.

Environmental support is provided through point-of-choice information which is available in Aetna cafeterias at all home office locations. Aenhance dietitians and food service management collaborated to develop a brochure to help Aetna employees make healthful food choices in Aetna cafeterias. The guide provides the fat and calorie content for more than 75 cafeteria food items recommended as healthful food selections. In addition, nutrition information is displayed at the point-of-selection for special low-fat menu items featured daily. Nutrition information is also integrated into several food management product promotions including the Bright Start breakfast program and the On the Go box lunch program.

Results Achieved

A variety of methods are used to evaluate program effectiveness. The following is a review of key findings within each measurement parameter.

Program participation

Program registration and attendance are tracked using the Aenhance Information Management System to measure participation.

- Nutrition behavior change programs = 1,400 participants per year
- Nutrition awareness programs = 3,400 participants per year

Self-efficacy

A pre-post questionnaire is used to measure the employee's confidence level for performing specific nutrition behaviors. Self-efficacy scores of participants in nutrition programs increase by an average of 77%. Figures 1 through 4 illustrate significant changes in pre-post self-efficacy scores toward achieving nutrition program goals. Self-efficacy was found to be a reliable predictor of actual behavior change. For example, the self-efficacy of participants (N=151) to read food labels increased by 60% after participating in a nutrition behavior change program. In a six-month follow evaluation of participants (N=137), 90% reported that they continued to read labels to help make nutritious food choices more than 50% of the time.

Customer satisfaction surveys show that 99% of participants recommend nutrition programs to others and 87% share nutrition information received at work with friends or family members.

Employee health risk assessment data trends suggest a significant reduction in health risks related to diet and significant improvement in health practices at a one-year follow up. For example, of 832 participants identified with elevated LDL cholesterol levels, 22% reduced LDL cholesterol to a healthy level. Out of 647 participants identified as having diets high in fat, 68% reduced dietary fat to the recommended amount. And out of 976 participants identified with diets low in fiber, 38% increased dietary fiber to within the recommended range.

Potential Cost Savings:

Self-reported health risk assessment data suggests that a low-fat diet may contribute to significant cost savings through reduced health care costs and lower absenteeism. Participants with low-fat diets (N=561) reported fewer days of hospital stay and fewer days absent from work per year compared to participants with high-fat diets (N=352). This suggests that the adoption of positive health practices can yield a potential cost savings of $373,628 per one thousand employees per year.

Implementation and Evaluation of a Medical Self Care Program

Problem to be Solved

Efforts to control health care costs must include strategies that promote prudent use of health care services as well as those that address risk reduction. Through training and decision support resources, employees and their families can play an important role in reducing the demand for health care services. Although Aetna's health enhancement program offered a comprehensive mix of programs to reduce risk for incidence of preventable disease and injury, it did not include a strategy for medical self care. A medical self care education program was added to the program menu to expand the scope of Aetna's cost containment strategy. The focus of the program is targeted at the broad range of care-seeking behaviors that impact demand related health care costs - patient preference, perceived need and morbidity.

Description of the Innovation

The Aenhance medical self care program includes use of the Healthwise Handbook, a 300-page reference and self-teaching manual, instructor-led interactive workshops, video workshops with a facilitator or self-pace viewing, and ongoing educational communication in the company news publications. The program was introduced in February, 1993 to all home office employees. A feature story in the home office company newsletter announced the program and explained how to enroll. Additional promotional efforts such as flyers and program displays were used throughout the year. All workshop attendees receive a free Healthwise

Handbook as an incentive to participate. The book can be purchased at a nominal fee by those unable or not wishing to attend a workshop.

Program goals are to achieve the following:

- Improve the quality of care participants provide at home - by using the Healthwise Handbook
- Improve the quality of care participants receive from health professionals - by communicating effectively with physicians and actively taking part in medical decisions.
- Decrease the number of unnecessary visits to the primary care physician and emergency room - by deciding when and where to seek appropriate medical care.

Instructor-led, interactive workshops were offered monthly at multiple locations. A target participation level of 10% of the eligible population was set for the first year. All enrollments were logged into the Aenhance Information Management System (AIMS). Self report pre/post workshop surveys and a follow-up survey conducted four months after workshop participation or purchase of the book were scanned into the data base.

Results Achieved

Participation level exceeded target by 2%. A total of 1,831 employees participated in the program in 1993. Self-reported results from the four month follow-up evaluation are:

- Surveys Mailed: 1,797 (10 months to date)
- Survey Returned: 1,207 (67% response)

93% had used the book one or more times

40% saved a visit to the Primary Care Physician (cost avoided $26,071)*

17% avoided a visit to the emergency room (cost avoided $53,349)**

Costs are projected based on Connecticut fee structure:

*Primary Care Physician Visit = $54.00

**Emergency Room Visit = $260.00

Projected avoidable costs (12 months) $81,420.00

Total costs for program delivery $20,126.00

Total estimated cost savings $61,294.00

Results Achieved (continued)

The above figure is minimal and extremely conservative. Due to the construction of the survey questions, it does not account for more than one saved visit or for cost of time away from work for a physician visit. Several survey participants also noted the questions for saved visits did not apply due to the lack of health problems occurring during the survey time frame (4 months). However, the estimate does indicate the program is providing cost effective results.

Participant belief in the ability to self-manage health problems and make informed health care decisions was measured with self efficacy items. Self efficacy measures were taken before the workshop and compared with four month follow up responses. Scores showed improvement in confidence at a significant level for each of the following medical self care behaviors.

- Treat minor illnesses and injuries at home
- Decide when health problems need to be brought to the attention of a health care professional
- Communicate effectively with my doctor(s)
- Determine what questions I need to ask my health care providers

Participant satisfaction with the program and the resource materials showed:

- 99% rated the workshop as very good or excellent
- 99.8% would recommend the program to others
- 97% rated the handbook as excellent

Conclusions

Program evaluation for 1993 launch efforts demonstrated positive results for cost effectiveness, improved self-efficacy and strong customer satisfaction with the program and resource materials. These results prompted the decision to expand the program in 1994. Limited budget creates the need to offer the program to as many employees as possible in as cost effective a manner as possible. Aetna's direct broadcast technology was used to deliver the workshop in a live, interactive format to 65 field offices that expressed interest. The broadcast workshop engaged 1,490 participants. Not all sites have direct broadcast capability. A video workshop has recently been developed and distributed to 123 field representatives to enable them to conduct interactive workshops at their locations or offer the program to individuals as self-paced learning. Workshop enrollment continues on a monthly basis at home office locations and the video version is available through the resource lending library. Participation target for 1994 is 4,000. Because all participants complete scannable enrollment/workshop evaluations that are captured in the AIMS data base, a variety of options for follow up and future evaluation exist.

Integrated Information Management for Effective Program Planning

The Aenhance staff has developed evaluation components and an integrated information management system that have greatly enhanced the cost effective management of the health promotion program. Through automated data collection and tracking of participant demographics, interest, health risks, self efficacy and involvement in program offerings, we can target interventions and communicate in a personalized, effective way with at-risk populations. Time-consuming tasks have been minimized or eliminated with automated features. The Aenhance Information Management System (AIMS) integrates the following program functions:

- Health risk and interest assessment
- Self efficacy - belief in the ability to self-manage health actions
- Participant health profiles - informing participants on health risks
- Analysis of demographic information
- Planning and scheduling lifestyle interventions
- Targeting at-risk populations
- Mailing targeted communications personalized to need
- Tracking participant enrollment/utilization of activities
- Analyzing behavior/risk change
- Analyzing participant perceptions - survey feedback
- Recognizing/rewarding participant accomplishments
- Reporting program effectiveness

The literature had documented the fact that program that target high risk populations have the greatest potential for cost savings. But, preventive intervention programs are also needed for maintaining low health risks and promoting optimal health over time. Focused intervention begins with assessing health risks/needs in the eligible population.

The Aenhance health risk assessment (HRA) program has been available to all home office employees since 1989. To date, 7,596 current employees have completed the Aenhance HRA. It is a free, voluntary program. Confidentiality and informed consent are stressed in the promotional messages. Participants fill out a scannable questionnaire and complete a health screening with measures for blood pressure, height/weight, body composition, waist/hip girth measures and a lipid profile including total cholesterol, HDL, triglycerides and glucose. LDL is calculated and included in the health profile report. Each participant receives a personalized health profile report. The report provides practical information to help individuals focus on their personal risk reduction needs and begin the process of positive health improvement.

A major purpose of a health risk assessment program is to help individual participants identify personal health risks and motivate them to take action to reduce those risks. The Aenhance program helped many employees discover previously undetected health risks.

Integrating Nutrition and Fitness for Maximum Program Impact and Utilization

Problem to be solved

Both nutrition and fitness health behaviors are key to reducing health risks such as high blood pressure, elevated cholesterol and obesity. But nutrition and fitness programs are often offered as separate components rather than as an integrated approach.

Nutrition programs offered at work during the lunch hour compete with time for exercise. So, it is difficult to attract fitness center members (many who have risk factors related to diet) into nutrition behavior change programs.

It is also challenging to get individuals with the greatest health needs to participate in both nutrition and fitness behavior change programs. Individuals at risk are often at different stages of readiness and for health behavior change. Providing a program which offers incentives and a means for monitoring, recording and reporting health behaviors is most likely to be effective for moving individuals from "contemplation" into "action" stages for desired health behavior change.

We needed to develop an integrated program model which would attract participants at risk for health problems related to diet and physical activity and meet the needs of individuals at different stages of readiness for health behavior change.

Description of Innovation

We developed the Nutrition Fuels Fitness incentive program to motivate Aetna employees to take action toward improving nutrition and fitness health behaviors. Our goals were to: (a) motivate employees at risk for health problems related to diet and physical activity to take action toward personal nutrition/fitness goals and to (b) maximize participation in Aenhance nutrition and fitness programs including Aenhance workshops, the health risk assessment program and fitness center utilization. The program was developed in house by a team of Aenhance dietitians and exercise physiologists. The program was piloted during National Nutrition Month (March) at four home office locations.

All home office employees were eligible to participate (N=15,598) and the Aenhance Information Management System (AIMS) was used to target special populations at risk for health problems related to diet and/or physical activity (N=2,032). Individuals identified at risk were sent a special letter or invited to

participate through the Aetna electronic mail system. The program was also promoted to the general home office population using traditional methods such as articles in the company newspaper, poster and a promotional display.

All participants who enrolled in the program were recorded using AIMS. Each participant received a self-directed Nutrition Fuels Fitness action kit which included strategies for improving diet and exercise patterns, program guidelines for achieving incentive awards and an activity calendar for monitoring and recording health behaviors. Suggested action steps focused on simple steps that participants could take to help shape healthful nutrition/fitness behaviors.

For example, nutrition action steps included strategies to reduce fat and increase dietary fiber such as "eat 5 fruits and vegetables" and "read food labels to select low-fat foods." Fitness action steps encouraged regular exercise and ways to build physical activity into daily lifestyle such as "take a 20 minute walk with a friend" and "take the stairs instead of the elevator."

Participants were eligible to earn an incentive award based on their level of participation. To complete the program and earn a token award, participants needed to complete the 10 nutrition and 10 fitness action steps any time during March. Participants could earn an award of greater value by completing additional bonus criteria such as attending a nutrition or fitness workshop, completing the Aenhance Health Profile or by joining the fitness center. Current fitness center members could also meet bonus criteria by completing a set number of workouts and achieving "activity points". A program "reminder card" was sent to participants mid-month to provide encouragement and support.

Participants completed a program entry form by recording both self-reported action steps and staff-monitored bonus criteria on the Nutrition Fuels Fitness activity calendar. A follow-up evaluation was sent to a 35% random sample of all participants who enrolled in the program (N=1,168) to assess customer satisfaction and measure maintenance of health behavior change.

Results Achieved

Specific criteria were set to measure program utilization and effectiveness and all targets were exceeded. A total of 3,407 employees registered to participate in the Nutrition Fuels Fitness program. Participants completing the program (N=1,361) took an average of 24 nutrition and 24 fitness self-reported action steps during the one month period toward achieving nutrition/fitness goals. A total of, 1,158 participants completed staff-monitored bonus criteria.

The program was effective for motivating employees at risk for health problems related to diet and or physical activity into action toward achieving nutrition/fitness goals. Of the 2,032 participants identified at risk and targeted with a special invitation to participate, 1,378 (68%) enrolled and received the self-directed Nutrition Fuels Fitness kit. Forty-six percent (N=635) of enrollees at-risk completed the program to earn an incentive award.

The program was also effective for attracting new participants into Aenhance nutrition/fitness behavior change programs. Participation in nutrition/fitness education workshops exceeded target results by 167% (N=869) with more than half (N=455) participants taking a nutrition or fitness workshop for the first time.

A one-month follow up evaluation indicated that (90%) of program enrollees (both those who did and did not complete the program) continued to maintain one or more action steps toward reaching nutrition/fitness goals. Participants reported that they read food labels more often than any other nutrition or fitness action step maintained. About 72% of all participants surveyed shared the program information with friends and/or family members and 95% said they would participate in the program if it was offered again.