

## Background

The Better Prepared Comprehensive Health Management program seeks to make healthcare resource utilization among those with chronic conditions as efficient as possible through education, early intervention, prevention and wellness. Participants are assigned to a case manager who assesses and follows their condition, and also reinforces their physician's plan of treatment. By educating participants and promoting effective self-management of their conditions, Better Prepared gives participants a sense of control over their condition. Cost savings to employers are realized when participants can control their conditions over the long-term and reduce the incidence and severity of medical treatments.

Approximately 20% of Better Prepared cases involve asthma, which follows hypertension (36% of cases) and diabetes (29%). Of these conditions, asthma may be the most manageable through drug therapy, exercise, environmental control, and proper use of a peak flow meter to monitor the condition. Forty-three percent (43%) of the economic impact of asthma is associated with emergency room use, hospitalization and death<sup>1</sup>, making this condition particularly applicable to demonstrate the effectiveness of Better Prepared.

## Study

In order to look at the success of the Better Prepared program in dealing with asthma patients, information on 897 participants who registered between July 1, 1995 and June 30, 1996 was matched with emergency room claims data for visits related to asthma. Claims data was chosen so as to include a window of six months of claims before each participant registered and six months of claims data after joining.

## Findings

- Thirty-nine (39) participants had E.R. visits within six months prior to registering in the program, dropping 31% to 27 participants who had E.R. visits within six months after registration.
- The total number of E.R. visits dropped by 44% from 55 admissions before registration to 31 admissions after registration.
- There was evidence that participants' conditions were less severe when the E.R. visit was after registration rather than before registration: average charge per participant fell 21% from \$170 to \$134.
- Total cost for the study group declined from \$6,638 to \$3,615, yielding a gross savings in E.R. costs of over \$3,000.

## Sample Case Summaries

### Case Summary #1

Background - Participant has a strong family history of heart disease and hypertension.

Initial Assessment - Hypertension was identified at screening. Participant had been monitoring blood pressure at home and had been getting high readings but he was unaware that the readings were high. He was taking no blood pressure medication and was not exercising.

Complications - Participant had not been seeing physician on a regular basis.

Nurse Interventions - Discussed the importance of regular visits to physician, particularly with hypertension. Educated the participant regarding normal blood pressure parameters. Reinforced the benefits of regular exercise and diet modifications.

Outcome - Participant began an aerobic exercise program consisting of riding a stationary bike five miles four to five times a week. He also made positive dietary changes by monitoring his diet closely for fats and sodium, and began seeing a physician on a regular basis. Physician's treatment plan was to control hypertension through diet and exercise. He is currently monitoring his blood pressure weekly, and it has dropped from 1160/100 to 130/85.

## **Case Summary #2**

Background - Participant is a 12 year old female recently diagnosed with asthma. There is no family history of the condition.

Initial Assessment - Participant had experienced severe allergy problems throughout childhood. Her pediatrician had just diagnosed her as having asthma.

Nurse Interventions - Educated the participant and her parents about asthma, including steps to be taken to minimize asthma attacks. Helped parents locate local support groups for parents of asthmatic children.

Outcome - Participant had only one asthma attack during the year that required a visit to the emergency room, and this was early in the year. The participant's parents modified their home to minimize the conditions that cause asthma attacks, and the participant learned to identify signs that indicated an impending attack and steps to avoid or minimize the attack.

## **Case Summary #3**

Background - Participant is a 55 year old female with a 31 year history of hypertension. Additionally, her sister died of a stroke at age 42.

Initial Assessment - Participant had elevated cholesterol and weighed more than 130% of her ideal body weight.

Complications - Participant had been on medication for hypertension, but had experienced unpleasant side effects and had stopped taking the medication.

Nurse Interventions - Encouraged participant to return to her physician to discuss side effects and to ask for another medication. Educated the participant regarding the importance of regular aerobic exercise, blood pressure control, cholesterol control, and weight management. Also reinforced previous instruction on reviewing food labels for sodium, fat, and cholesterol content of food and reviewed recommended guidelines.

Outcome - Participant returned to physician and reported side effects. Physician prescribed a different medication which did not cause the undesirable side effects. Participant has lost a total of 12.5 pounds and her cholesterol has dropped from 242 to 216 on diet alone. Additionally, her blood pressure has dropped from 145/95 to 130/78.

#### **Case Summary #4**

Background - Participant's blood pressure increased from low normal to high normal. He had no family history of heart disease.

Initial Assessment - Participant had not been exercising regularly and was five pounds above his desired weight. Additionally, the participant's diet included foods high in sodium.

Nurse Interventions - Educated the participant regarding interpretation of food labels, the physiology of hypertension and methods of restricting fats in his diet.

Outcome - Participant began restricting sodium in his diet and watching his fat intake. Additionally, he began exercising three times a week and lost six pounds. His blood pressure has gone from 152/92 to 124/84.