AHRQ FOCUS ON RESEARCH

Agency for Healthcare Research and Quality www.ahrq.gov

Chronic Disease in Adults

SCOPE OF THE PROBLEM

About 108 million people in the United States have at least one chronic disease such as heart disease, diabetes, asthma, hypertension, or osteoarthritis. These conditions have severe impact upon the quality of peoples' lives and health care costs. For example:

- Approximately 1.7 million hospitalizations occur annually for a heart attack or congestive heart failure, and over 600,000 people die each year of heart disease.
- Nearly 50,000 people die each year as a result of diabetes, making it the sixth leading cause of death.
- Health care costs for asthma patients rose dramatically from $4.5 billion in the 1980's to $10.7 billion in the 1990's.
- Over 50 million people suffer from high blood pressure (hypertension), which contributes to the incidence of stroke and heart disease.
- More than half of people age 65 and over have evidence of osteoarthritis; it is the major cause of disability in this age group.

Background

As our population ages, more and more people will develop chronic disease, placing an unprecedented burden on families, purchasers of care, and health care providers. For over 30 years, the Agency for Healthcare Research and Quality (AHRQ) and its predecessors have sponsored and supported research on improving quality of care and health outcomes for chronic disease. AHRQ research has helped develop and evaluate interventions and tools to improve management of chronic disease in clinical practice. AHRQ reseach has helped identify areas where management of chronic disease can be improved.

Impact of AHRQ Research

Heart Disease

- **Reduced costs**. Patients with heart failure who were enrolled in a home-based monitoring program had fewer medical claims and lower health care costs than patients not involved in the monitoring program. Medical claims decreased for patients enrolled in the monitoring program from $8,500 to $7,500 but claims for patients not participating in the program increased from $9,200 to $18,800. The cost of the monitoring program was less than $200 a month for each patient.
- **Improved quality of life**. When patients with heart failure engaged in a home-based walking and resistance training program, their quality of life improved, according to AHRQ researchers. These patients had less fatigue, better emotional function, and more control over their symptoms with no reports of injuries or cardiac problems related to the exercise program.

Diabetes

- **Better blood sugar control**. AHRQ researchers found that by using a combination of two medications or an oral medication plus insulin, 87% of diabetics achieved good control of their blood sugar. A second study found that patients who participated in an automated telephone disease management (ATDM) program to

report their blood sugar readings as measured by hemoglobin $A1_c$ test had better blood sugar control, resulting in a 0.3% lower level.

Asthma

- **Improved outcomes and lower costs**. Treating patients with asthma in an emergency diagnostic and treatment unit (EDTUs) rather than admitting them to the hospital resulted in an average reduction of $1,000 in costs per patient, according to AHRQ researchers. EDTU patients averaged approximately $1,200 per visit while patients admitted to the hospital averaged $2,200 per visit. There were no differences in relapse rates between the two groups and patients treated in the EDTU expressed more satisfaction with service.

High Blood Pressure

- **Improved quality of life**. Men and women with mild diastolic hypertension benefited more from treatment with the anti-hypertensive drug propranolol than from diet modifications, increased exercise, and relaxation techniques. An AHRQ study found that patients who received propranolol had significantly better control of their diastolic blood pressure than those who did not receive propranolol regardless of their lifestyle changes. In addition, propranolol had very few reported adverse effects on mental functioning or quality of life.

Osteoarthritis

- **Improved quality of life through occupational therapy**. Preventive occupational therapy may lessen health risks in older adults with osteoarthritis. Participants in the AHRQ-funded Well Elderly study group reported better interaction with other people, self-perceived health status, satisfaction with life, mental health, and improvements in pain, physical and social functioning, vitality, and fewer emotional problems when they underwent preventive occupational therapy to avoid functional disability.

Current AHRQ Chronic Disease Research Priorities

AHRQ is continuing to fund numerous studies and sponsor projects that will help prevent and manage chronic disease. Examples of these studies include:

- **Cardiovascular disease**. At Duke University, a Center for Education and Research on Therapeutics (CERT) is collecting data on improved use of new drugs and working with the FDA on surveillance programs for cardiovascular devices.
- **Diabetes care**. Researchers at the University of Illinois at Chicago are developing a new computer program to provide diabetes education to improve knowledge, attitudes, and increase compliance with self-care.
- **High blood pressure**. Researchers at the Mount Sinai School of Medicine in New York are assessing the underlying causes of the underuse of effective health care services among blacks and Hispanics and will develop, implement, and evaluate interventions to eliminate underuse.
- **Arthritis**. The CERT at the University of Alabama at Birmingham is focused on musculoskeletal disorders including an arthritis center to disseminate new knowledge about therapeutics.

For More Information

For more information on AHRQ's research on chronic disease, contact:

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