A Comprehensive Care Management Program to Prevent Chronic Obstructive Pulmonary Disease Hospitalizations

What is the problem and what is known about it so far?
Chronic obstructive pulmonary disease (COPD) is a disease of the lungs most often caused by cigarette smoking. Many patients with COPD have progressively worsening shortness of breath and are limited in their ability to exercise. Symptoms may suddenly worsen, often because of an infection or other identifiable cause, and these acute exacerbations may result in the need to be hospitalized or may even lead to death. Several studies have found that treating acute flare-ups of COPD promptly (with steroids or antibiotics) reduces the need for hospitalization. Some, but not all, studies have found that providing intensive education and an “emergency plan” to help patients identify and treat symptoms of an acute flare-up early reduce the number of hospitalizations in patients with COPD.

Why did the researchers do this particular study?
To test whether an educational program and care management program can reduce the need for hospitalizations for COPD.

Who was studied?
426 patients with COPD at 20 Veterans Affairs medical centers who had had a flare-up of COPD in the past year.

How was the study done?
The researchers randomly assigned patients to 2 groups. Patients in both groups received informational pamphlets describing the care of COPD. Patients in one group also attended educational sessions to learn how to identify and start early treatment for a flare-up of COPD, received a written plan of action and prescriptions to fill so that medications would be available if and when needed, and received telephone calls from health care workers to check in on them. The researchers recorded how often patients required treatment for COPD and whether they were hospitalized, and they tested how well the patients understood COPD and how comfortable they felt caring for themselves. A committee of health care workers independent from the researchers monitored the results of the study as it proceeded to ensure safety.

What did the researchers find?
After less than half of the planned number of patients had been enrolled in the study, the independent safety monitoring committee noted that more patients had died in the group that received educational sessions and emergency care plans. The study was stopped immediately, and patients were followed for an additional 6 months. By the time the study was stopped, there was no difference in the number of hospitalizations for COPD between the 2 groups, nor had the patients in the education and emergency plan group started treatment for flare-ups sooner than the other patients. Although patients in the intensive education and emergency plan group felt more confident overall in their ability to care for their COPD, there was no difference in their knowledge of COPD.

What were the limitations of the study?
The researchers were not able to identify the cause of the increased number of deaths in the group that received the intensive educational sessions and emergency care plans. Certain issues that might have contributed to the increase could not be fully assessed, such as differences in medications used for COPD or whether the lessons were understood fully by patients.

What are the implications of the study?
Further study is needed to evaluate which educational programs and care plans are useful for which patients. Committees that monitor the ongoing safety of a study are important.