


COPD chronic disease management

▶ Intervention in brief

<p>High and rising risk:</p>	<p>Chronic obstructive pulmonary disease (COPD) chronic disease management support includes education about the disease, optimization of evidence-based medications, and training patients to self-manage. The goal is to promote behavior changes in physical activity, diet, and smoking to improve health outcomes, reduce symptoms, and prevent exacerbations.</p>
<p>Strength of evidence</p>	<div style="display: flex; align-items: center;">  <div style="margin-left: 10px;"> <p>Intervention has not been frequently studied within the past ten years, despite previous popularity. Inconsistent outcomes across systematic reviews.</p> <p>Medium</p> </div> </div>
<p>Impact</p>	<ul style="list-style-type: none"> • Decreased cost (wide range): \$3,043 increase to \$3,590 decrease in utilization costs per patient; \$1,570 increase to \$3,342 decrease in hospitalization costs per patient; \$161-\$487 decrease in ED costs per patient; \$593 decrease in overall costs per patient • Decreased utilization: 27-56% decrease in ED use; 22-53% decrease in hospitalizations • Improved quality, clinical outcomes: Insignificant to 1.7-point improvement in patient quality of life improvement SGRQ score • Increased access: Not demonstrated • Improved stakeholder satisfaction: 13% increase in patient satisfaction
<p>How to succeed</p>	<p>To build an effective COPD chronic disease management program:</p> <ul style="list-style-type: none"> • Empower patients to take ownership of their own health, accurately monitor day-to-day symptoms, and self-administer medication as needed • Provide consistent psychological support to prevent social isolation common among patients with COPD (e.g., regular phone calls, group visits, online community support) • Educate multi-disciplinary team about common specialist referral pathways for COPD patients and their common outcomes, pointing out that COPD flares can largely be managed in the outpatient setting <p>For strategies to strengthening inpatient and post-discharge care for patients with COPD, download the Playbook for Reducing COPD Readmissions here.</p>

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▶ Demonstrated impact

Literature review summary

Title: The Health Economic Impact of Disease Management Programs for COPD: A Systematic Literature Review and Meta-Analysis

Publication: BioMed Central Pulmonary Medicine

Date: 2013

Type: Systematic review and meta-analysis

Study population: COPD patients included in eleven studies (seven randomized controlled trials, two pre-post, and two case-control)

Major findings:

- Costs due to change in ED use: \$161–\$487 per patient
- Cost of health care: \$3,043 increase–\$3,590 decrease per patient
- Hospitalization costs: 1,590 increase–\$3,342 decrease
- Hospitalizations: 22%–53% decrease
- ED utilization: 27%–56% decrease
- Health-related quality of life (using SGRQ): Insignificant to 1.7-point improvement
- Patient satisfaction: 13% increase

Source: Full article [here](#).

Title: Economic Evaluation of a Disease Management Program for Chronic Obstructive Pulmonary Disease

Publication: COPD: Journal of Chronic Obstructive Pulmonary Disease

Date: 2011

Type: Randomized controlled trial

Study population: 743 COPD patients treated at five Veteran Affairs hospitals with at least one hospital admission or ED visit for COPD, chronic home oxygen use, or course of systemic corticosteroids for COPD within the last year

Major findings: Patients enrolled in the program received an intervention costing \$650 per patient (total: \$241,620). Overall, due to decreased utilization, the program saved an average of \$593 per patient enrolled.

Source: Full article [here](#).

Title: Disease Management Program for Chronic Obstructive Pulmonary Disease A Randomized Controlled Trial

Publication: American Journal of Respiratory and Critical Care Medicine

Date: 2010

Type: Randomized controlled trial

Study population: 743 COPD patients treated at five Veteran Affairs hospitals with at least one hospital admission or ED visit for COPD, chronic home oxygen use, or course of systemic corticosteroids for COPD within the last year

Major findings: After one year, program resulted in:

- Reduced hospitalizations for cardiac or pulmonary conditions other than COPD: 49% lower than control group
- Reduced hospitalizations for all causes: 28% lower than control group
- Reduced ED visits for all causes: 27% lower than control group

Source: Full article [here](#).

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Appendix

- Boland MR, et al., "The Health Economic Impact of Disease Management Programs for COPD: A Systematic Literature Review and Meta-Analysis," *BMC Pulmonary Medicine*, 13, no. 30 (2013): 1471-2466, <https://www.ncbi.nlm.nih.gov/pubmed/20075385>.
- Rice KL, et al., "Disease Management Program for Chronic Obstructive Pulmonary Disease A Randomized Controlled Trial," *American Journal of Respiratory and Critical Care Medicine*, 182, no. 7 (2010): 890-896, <https://www.ncbi.nlm.nih.gov/pubmed/21513435>.
- Dewan NA, et al., "Economic Evaluation of a Disease Management Program for Chronic Obstructive Pulmonary Disease," *COPD: Journal of Chronic Obstructive Pulmonary Disease*, 8, no. 3 (2011): 153-159, <https://www.ncbi.nlm.nih.gov/pubmed/23819836>.