

Study finds heart failure medications highly cost-effective

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A UCLA study shows that heart failure medications recommended by national guidelines are highly cost effective in saving lives and may also provide savings to the health care system.

Heart failure, a chronic, progressive disease, affects millions of individuals and results in considerable morbidity, the use of extensive [health care resources](#), and substantial costs.

Currently published online, the study will also appear in the April 2 print issue of the *Journal of the American College of Cardiology*. Researchers studied the incremental health and cost benefits of three common heart failure medications that are recommended by national guidelines developed by organizations like the American College of Cardiology and American Heart Association.

This is one of the first studies analyzing the incremental cost effectiveness of heart failure medications and taking into account the very latest information, including the lower costs of generic versions of the medications. Researchers found that the combination of these [medical](#) therapies demonstrated the greatest gains in quality-adjusted life years for heart failure patients.

"We found that use of one or more of these key medications in combination was associated with significant health gains while at the same time being cost-effective or providing a cost-savings," said the study's senior author Dr. Gregg Fonarow, UCLA's Eliot Corday

Professor of [Cardiovascular Medicine](#) and Science and director of the Ahmanson–UCLA Cardiomyopathy Center at the David Geffen School of Medicine at UCLA. "Our findings demonstrate the importance of prescribing these [national guideline](#)-directed medical therapies to [patients with heart failure](#)."

The study focused on mild to moderate [chronic heart failure](#) patients who had weakening function in the heart's left ventricle and symptoms of heart failure, which occurs when the ventricle can no longer pump enough blood to the body's other organs. With the heart's diminishing function, fluid can build-up in the lungs so most patients also take a diuretic.

The team used an advanced statistical model to assess the specific incremental and cumulative health and cost benefit contributions of three medications compared with diuretics alone in the treatment of heart failure patients. The medications studied included angiotensin converting enzyme inhibitors, aldosterone antagonists, and beta blockers.

Researchers found that treatment with one or a combination of these medications was associated with lower costs and higher quality of life when compared to just receiving a diuretic alone. The greatest quality-adjusted life years gained for patients was achieved when all three guideline-directed medications were provided.

The team calculated different scenarios and found that the incremental cost-effectiveness ratio of adding each medication was less than \$1,500 per each quality-adjusted life year for patients. In some scenarios, the medications were actually cost-saving where heart failure patients lives were prolonged at lower costs to the [health care system](#).

The study found that up to \$14,000 could be spent over a lifetime on a [heart failure](#) disease management program to improve medication

adherence and still be highly cost effective.

For the study, cost-effective interventions were defined as those providing good value with a cost of less than \$50,000 per quality-adjusted life year, which is the general standard, according to Fonarow. Cost-saving interventions are those that not only extend life but also actually save money to the health care system. Such interventions are not only more effective, but are less costly.

Fonarow notes that the costs of not effectively taking these key medications would be higher due to increased hospitalizations and need for other interventions.

"Given the high healthcare value provided by these medical therapies for health failure, reducing patient costs for these medications or even providing a financial incentive to promote adherence is likely to be advantageous to patients as well as the health care system," said Fonarow. "Further resources should be allocated to ensure full adherence to guideline directed medical therapies for [heart failure patients](#) to improve outcomes, provide high-value care, and minimize health care costs."

The researchers used previous clinical trials and government statistics to help calculate mortality, hospitalization rates, and health care costs used in the model.

Fonarow notes that the study offers broad insight into the cost-effectiveness of these medications and a real-world model would provide an additional perspective.

The costs used in this study were estimates of true costs and the actual costs in different [health care](#) delivery systems may vary.

Provided by University of California, Los Angeles

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