

OPTIMIZE HEART FAILURE CARE AROUND THE WORLD

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One of the most important conditions for the successful management of patients with heart failure is building an effective or, as described in the current ESC/HFA guidelines on heart failure, a “seamless” system of care, which covers both the community and the hospital throughout the health care journey.¹ In line with this, team-based or multidisciplinary care is proclaimed a cornerstone approach to reducing the burden of care and ensuring positive outcomes in patients with heart failure.²⁻⁵ Another crucial aspect of the successful management of heart failure is effective coordination of efforts by the patient, health care providers, and the health care system itself. Each of these stakeholders plays a particular role in heart failure management, which cannot be fulfilled by other participants in the process.

REDUCING MORTALITY IN PATIENTS WITH HEART FAILURE

Over the past three decades, significant progress has been made in cutting mortality in patients with heart failure with reduced ejection fraction. However, the high rehospitalization rate remains a great challenge for patients with heart failure, health care providers, and communities in most countries of the world. Solving this problem requires an integrated approach with the involvement of all stakeholders in heart failure care. For example, it is possible to reduce the rate of readmissions only by penalizing hospitals with higher readmission rates; however, such an approach would be associated with an increase in mortality.⁶ Similarly, it is impossible to expect a positive reduction in a high rehospitalization rate without the adherence of physicians and patients to the modern management of heart failure.^{7,8} This global challenge is further complicated by the fact that the organization and quality of care for patients with heart failure can significantly differ from country to country.^{9,10} All of the above factors determine the need to develop universal programs that would optimize heart failure care, regardless of the country or region where they are being implemented.

OPTIMIZE HEART FAILURE CARE PROGRAM: GLOBAL INITIATIVE FOR PATIENTS WITH HEART FAILURE

The Optimize Heart Failure Care program (www.optimize-hf.com) is a good example of a global initiative to improve the prescription of guideline-recommended drug therapies, patient education and engagement, and postdischarge planning for patients hospitalized with heart failure.¹¹ This program was initiated in 2013 and, as of the beginning of 2019, has already been implemented in 45 countries. The program includes instruments, such as best practice clinical protocols for local adaptation, pre- and postdischarge checklists, and “My HF Passport,” a printed and smart phone application to enhance patients’ understanding of heart failure, encourage their involvement in care, and improve treatment adherence. The cornerstone of the successful implementation of the Optimize Heart Failure Care program has been its flexibility to be adapted to local needs and languages, as well as the use of inexpensive clinician- and patient-focused tools. As a result, some of the participating hospitals began to use the entire program or supplemented it with new components, while others focused only on clinician- or patient-focused tools. Furthermore, the need for a close collaboration between health care professionals, on which the program is based, determined the success of the implementation of the developed tools across heart failure care services. Regular educational meetings with health care professionals who were involved in the Optimize Heart Failure Care program facilitated the sharing of personal experiences and results of heart failure interventions, as well as raising the awareness about the effects of guideline-recommended heart failure management on the mortality and the rate of rehospitalizations.

WORLDWIDE IMPLEMENTATION OF THE OPTIMIZE HEART FAILURE CARE PROGRAM

The implementation of the Optimize Heart Failure Care program in different parts of the world has shown clinically important results. According to data from the Philippines and Vietnam,^{12,13} the program was easy to implement and resulted in an improvement in both the prescription of the guideline-recommended heart failure medications and the clinical status of patients with heart failure, as well as reducing the rate of adverse outcomes. It was recommended to continuously monitor the performance measures on a yearly basis and run the program continuously and repeatedly, since new physicians and new patients with heart failure were regularly included into the program. The introduction of the Optimize Heart Failure Care program in Brazil, Colombia, and Costa Rica also led to an improvement in heart failure care and, as a result, to a better prognosis for patients with heart failure.¹⁴⁻¹⁶

EARLY INITIATION OF IVABRADINE IN THE VULNERABLE PHASE OF HEART FAILURE

Several groups participating in the Optimize Heart Failure Care program investigated the effect of an early initiation of ivabradine therapy during the vulnerable phase of heart failure. The data, which were obtained from nine Colombian specialized heart failure hospitals, showed that optimized control of clinical parameters and the use of the guideline-recommended therapy at discharge from the hospital improved the clinical status and outcomes during a 30-day follow-up.^{17,18} The early initiation of ivabradine therapy in stabilized patients in sinus rhythm and a heart rate ≥ 70 bpm who were hospitalized for worsening heart failure was well tolerated and it was associated with a clinical improvement and reduced rates of decompensation and readmissions during the vulnerable phase of heart failure. Moreover, the optimization of the heart rate-lowering therapy led to a reduction in the cost of treatment for the health care system.¹⁹

The study, which was performed in eight post-Soviet countries (Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Russia, Ukraine, and Uzbekistan) demonstrated the beneficial effect of in-hospital optimization of the heart rate-lowering therapy on overall mortality and rehospitalization in patients with a heart rate ≥ 70 bpm hospitalized for worsening heart failure.²⁰ Physicians participating in the program were free to choose their own strategy of in-hospital administration of a β -blocker alone or together with ivabradine. At 12 months of follow-up, all-cause mortality or heart failure hospitalization was significantly lower with β -blocker plus ivabradine than with β -blockers alone. In addition, a significantly greater improvement in quality of life from admission to 12 months was seen with β -blocker plus ivabradine versus β -blockers alone. Interestingly, with β -blocker plus ivabradine, significantly more patients achieved $\geq 50\%$ of the target doses for β -blockers at 12 months vs at admission, while the effect was nonsignificant with β -blockers alone.

CONCLUSIONS

In general, the optimization of heart failure care can be realized at any stage of heart failure treatment, although currently hospitalized patients after stabilization of their clinical status are considered the most promising group. Last year, investigators from the University Hospital of Heidelberg, Germany presented the novel concept of an advanced heart failure unit embedded in an academic hospital infrastructure to optimize heart failure care in patients with acute heart failure, decompensated chronic heart failure, and, in particular, in advanced and terminal forms of acute and chronic heart failure.²¹ This dedicated unit, with a multidisciplinary team, became a new model for the integration of modern pharmacological, interventional, surgical, and supportive heart failure therapy in high-risk patients including high-urgency heart transplant candidates with advanced heart failure.

The range of available treatment options for patients with heart failure, particularly for patients with a reduced ejection fraction, includes medications, cardiac devices, surgery, and lifestyle modifications. Therefore, the decision to optimize heart failure care will always be complex, based on a large number of factors, including the patient's clinical status, comorbidities, medication nonadherence, potential therapeutic inertia, and many others. It appears quite evident that a personalized approach to the optimization of heart failure treatment is mandatory.

Currently, the prescription rate of the guideline-recommended classes of heart failure medications is relatively satisfactory; however, the dosage of these therapies remains suboptimal.^{7,22} This means that, in the absence of contraindications and intolerance, the optimization of heart failure treatment should be focused on achieving target doses or at least the highest tolerated doses of heart failure medications. At the same time, the reasons for nonprescription, nontitration, or withdrawal of guideline-recommended heart failure medications, for instance, symptomatic hypotension, worsening renal function, hyperkalemia, and bradycardia, should be the subject of special attention by all heart failure care providers.

Measuring natriuretic peptides and imaging studies may provide additional information for decision-making on optimizing heart failure treatment. However, it is important to emphasize that clinicians should interpret changes in the concentration of natriuretic peptides or deterioration of the left ventricular systolic function and remodeling primarily in the context of worsening heart failure symptoms and prognosis. Persistent or worsening heart failure symptoms, adverse clinical events, laboratory, and imaging data can be helpful for the detection of heart failure patients at high risk of disease progression or death. All this information is essential for the reevaluation of heart failure care and the referral of patients to dedicated heart failure specialists. At this stage of optimizing heart failure care, the appropriateness of advanced therapies, including heart transplantation or mechanical circulatory would be considered.

Any efforts associated with the optimization of heart failure care should be harmonized with the current guidelines for heart failure management. This is especially important when novel agents are included in the algorithm of heart failure treatment. The most recent guidelines^{1,22} recommend a transition from ACE inhibitors or angiotensin receptor blockers to a angiotensin receptor-neprilysin inhibitor to further reduce morbidity and mortality in patients with symptomatic chronic heart failure with reduced ejection fraction. In this regard, a process of switching to a novel agent implies the implementation of the current heart failure guidelines, rather than the optimization of heart failure treatment. A discussion on how to optimize angiotensin receptor-neprilysin inhibitor therapy in patients with heart failure has already started. The primary results of the

TRANSITION study have demonstrated the safety and tolerability of an early initiation of sacubitril–valsartan in patients admitted for acute decompensated heart failure after hemodynamic stabilization.²⁴ In addition, data from the recently published trial PIONEER-HF showed that the initiation of sacubitril–valsartan in patients with heart failure with reduced ejection fraction, who were hospitalized for acute decompensated heart failure, led to a greater reduction in the concentration of N-terminal pro-B type natriuretic peptide compared with enalapril therapy.²⁵ Nevertheless, a larger trial on this issue powered for clinical end points is still required.

The optimization of heart failure care is one of the most important tasks for real-world clinical practice. Based on available data, it can be argued that the optimization of heart failure management, especially during the vulnerable phase of the clinical course of the disease, reduces the rate of death and rehospitalizations. Further studies, which may provide new ideas and new tools to optimize heart failure care, are extremely needed. ■

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