

## Editorial

## Do All Patients With Heart Failure Benefit From a Program for Early Follow-up After Hospital Discharge?



## Seguimiento mediante programas específicos de consulta precoz tras el alta de un episodio de insuficiencia cardiaca: ¿en todos los pacientes?

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Without a doubt, heart failure (HF) is one of the most important medical problems—even beyond the cardiologic setting—that we are facing today. Because of the ever-increasing life expectancy of the population and advances in the treatment for acute cardiologic conditions, the prevalence of HF is rising, with a current estimated rate in Spain of 4% to 7%.<sup>1,2</sup> This condition is the main cause of hospitalization in the very elderly population, and it requires considerable health expenditure and resource use. Despite the widespread belief that HF is simple and easy to resolve, it is actually a complex syndrome that is challenging to diagnose and treat. Although spectacular progress has been made in HF care over the last few years, as reflected in clinical practice guidelines,<sup>3,4</sup> this disease remains an important cause of hospitalization,<sup>2</sup> markedly impairs the quality of life of affected patients,<sup>5</sup> and is associated with high mortality rates.<sup>6</sup> If factors such as the current characteristics of real-world HF patients—increasingly older, more frail, and with a higher prevalence of comorbidities—are added to the complexity of HF management, it is easy to understand why this condition creates a huge demand on the health system and affects all health areas and professionals, not only cardiologists. These factors may help to explain why adequate care by specialists limited to the hospital setting does not offer a definite solution to the problem. A more integrated approach is needed, in which the care provided is configured within interdisciplinary HF programs and units. This strategy is supported by scientific evidence documenting the prognostic benefit of this type of organizational approach. In the HF guidelines of the European Society of Cardiology published in 2016, the organization of HF care within multidisciplinary teams was assigned a class I A recommendation.<sup>3</sup>

Numerous studies and meta-analyses<sup>7–9</sup> have reported the effectiveness of programs based on HF units for reducing readmissions and even mortality rates. In Spain these programs have been developed by proactive rather than institutional efforts, and they coexist with advanced units that arose in relation to cardiac transplant. Due to the individual initiatives of many centers with professionals interested in HF, and the structured programs

organized by the Heart Failure Section of the Spanish Society of Cardiology, increasingly larger numbers of hospitals are equipped with HF units, and they are now becoming commonplace in both cardiology and internal medicine departments. Within its SEC-Excellence program, the Spanish Society of Cardiology recently established a new nomenclature for the various types of cardiology units (community, specialized, and advanced), depending on the level, equipment, and services portfolio offered by the hospital, cardiology department, and HF unit.<sup>10</sup> In addition, a series of minimum standards have been established (related to processes, infrastructure, human resources, equipment, and results), which must be met by these units and departments to receive SEC-Excellence accreditation.<sup>10</sup> This is important to ensure the quality of HF care at all levels and to guarantee the development and implementation of these units in the Spanish health system.

As mentioned, HF units provide benefits for both patients and the health system, with reductions in the number of readmissions and in some studies, decreases in mortality. Nonetheless, most of the studies evaluating these aspects, particularly those in the cardiology setting, mainly include HF patients with a low ejection fraction, age that is not too advanced, and a low prevalence of comorbidities. One aspect that clearly influences this choice of participants is that it is impossible to follow up all HF patients within intensive programs in units with a limited infrastructure. However, another factor to consider is that one of the basic benefits of these programs is optimization of medication and other treatments with a favorable effect on the prognosis, which is only possible in HF with systolic dysfunction. To date, there are no treatments that improve the prognosis in HF with preserved ejection fraction.<sup>3</sup> Furthermore, these latter patients tend to be older, more frail and have a higher prevalence of comorbidities, factors that often limit optimal use of drug therapy and make integrated treatment difficult. However, some studies including patients with both preserved and reduced ejection fraction have reported that both types can benefit from specific treatment in specialized units.<sup>7,11</sup>

In their article published in *Revista Española de Cardiología*, Pacho et al.,<sup>12</sup> of the Heart Failure Unit of Hospital de Badalona, a team with extensive experience in HF programs, confirm these results in the STOP-HF-CLINIC study, which includes a population of HF patients with unfavorable characteristics: very advanced age

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(mean, 82 years), predominantly preserved ejection fraction (mean, 56%), elevated comorbidity (Charlson index 5.6, with Charlson  $\geq 6$  in 46%), frailty, and discharge following hospitalization for HF in almost 90% of cases from internal medicine or geriatric departments. All patients underwent an interventional program including a prompt consultation (within 7 days following discharge) with an expert HF team (physicians and nursing staff) in a dedicated unit. The usual educational measures were imparted, oral and intravenous treatments (eg, diuretics, iron carboxymaltose) were optimized, and patients were offered the opportunity for immediate consultations by telephone and a minimum of 3 visits during the first 30 days following discharge. After this intensive program, the patients were referred for scheduled follow-up with their corresponding physician and specialist. The study included 518 consecutive patients between 2014 and 2016, and with the use of this approach, the total readmission rate at 30 days was 13.9% and the rate of HF readmissions was 7.5%. The authors compared these incidences with the expected rates according to the patients' CORE-HF<sup>13</sup> risk scores, and observed a 47.5% reduction in total hospitalizations (expected rate, 26.5%). In addition, the readmissions rate was significantly lower in the referral area of the study hospital than in the other areas of the Autonomous Community of Catalonia during the period when the intervention took place, as well as in the referral hospital's own area relative to the rate during the previous period, 2012-2013,<sup>12</sup> mainly because of the reduction in HF admissions.

The main limitation of this study is the absence of a randomly assigned control group. However, the authors' analysis compares the observed admission rates with the expected rates estimated according to the patients' characteristics and risk using a well-validated risk scale, CORE-HF,<sup>13</sup> with the real-life results in the 2 years before implementation of the program in their area, and with the results in the other health areas of Catalonia. These comparisons strongly confirm the value of an intervention such as that described, even in patients who would not be expected to receive a significant benefit *a priori*. Therefore, our answer to the question in the title of this editorial—"Do all patients with heart failure benefit from a program for early follow-up after hospital discharge?"—would be "Yes, it is likely that almost all patients would benefit". Although it may be appropriate to confirm the findings with a randomized, controlled study, the results of the study by Pacho et al. support the well-established concept that HF care should be organized in a manner different from the usual, which should include a prompt intervention at the time when these patients, regardless of their characteristics, are most vulnerable: following discharge from an HF admission. Naturally, these programs require specialized staff, adequate resources, and interdisciplinary organization (nursing, cardiology, internal

medicine) in accordance with the standards recommended by the Spanish Society of Cardiology.<sup>10</sup> This logistic and organizational effort to ensure the continuity of the healthcare provided (admission/discharge/follow-up), which also implies the need for a change of mentality regarding the care of patients with chronic diseases with frequent decompensations, will be rewarded by a clear improvement in prognosis: fewer readmissions, improved quality of life, cost reductions (related to fewer admissions), and possibly, lower mortality.

## CONFLICTS OF INTEREST

None.

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