



## EDITORIAL COMMENT

## TOGETHER we can overcome barriers for optimal management of heart failure

### JUNTOS, podemos ultrapassar as barreiras para uma gestão ótima da insuficiência cardíaca

João Presume, Daniel Gomes, Jorge Ferreira \*

Department of Cardiology, Hospital de Santa Cruz, CHLO, Carnaxide, Portugal

Available online 11 January 2024

Heart failure (HF) is a progressive and multifactorial clinical syndrome that can be viewed as the final path of heart disease. It affects more than 15 million people living in Europe and this number is expected to increase significantly as the population ages.<sup>1</sup> As the final common pathway of heart disease, HF is associated with high mortality, at least 50% at 5 years. HF contributes to more than two million hospital stays per year in Europe, and is the most common cause of hospitalizations over the age of 65 years and is associated with low quality of life.<sup>1</sup>

Notwithstanding these facts, the awareness of the syndrome among the general population, health professionals, and decision-makers is poor. This is reflected in suboptimal prevention and clinical management, inappropriate adherence to therapy, low treatment reimbursements and scarce research funding.<sup>2,3</sup>

In this issue of the *Journal*, Silva-Cardoso et al.<sup>4</sup> describe 16 statements belonging to four major HF domains, defined by a group of Portuguese HF experts and designed to improve HF care in Portugal (Figure 1). These statements were validated by a large Delphi-like panel encompassing cardiologists, internists, general practitioners, and nurses interested in or dedicated to HF.

The authors establish four critical statements to raise HF patient literacy and awareness of the syndrome. Most HF features including morbidity and impact on survival are unknown to the general population and even among patients.<sup>2</sup> The prognostic impact of HF is similar to more common forms of cancer concerning hospitalizations and five-year case mortality, which supports the concept that HF is as malignant as cancer.<sup>5,6</sup> Moreover, a large proportion of patients with cancer will die of cardiovascular disease including HF. However, public perception and investment are still mainly focused on oncology, with HF still falling behind when it comes to the true perception of the associated prognosis and funding invested in research.<sup>3</sup> Despite all therapeutic developments, HF should be perceived as the malignant phase of heart disease deserving at least a similar investment to cancer in evidence-based treatments and research.

Due to the progressive nature of HF, early diagnosis is crucial to start pharmacologic and device interventions that reverse or slow the progression of cardiac dysfunction and change the natural history of HF.<sup>1</sup> The importance of early diagnosis of HF is underscored by the authors through four dedicated statements. Since the diagnosis of HF requires the presence of symptoms and/or signs of HF and objective evidence of structural and/or functional abnormality of the heart, echocardiography, and measurement of natriuretic peptides (NP) are essential for this purpose.<sup>1</sup> Furthermore, the detection of structural heart disease, abnormal cardiac function, or elevated NP levels enables the identification

DOI of original article: <https://doi.org/10.1016/j.repc.2023.05.012>

\* Corresponding author.

E-mail address: [jorge.ferreira@netcabo.pt](mailto:jorge.ferreira@netcabo.pt) (J. Ferreira).

<https://doi.org/10.1016/j.repc.2024.01.001>

0870-2551/© 2024 Published by Elsevier España, S.L.U. on behalf of Sociedade Portuguesa de Cardiologia. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).



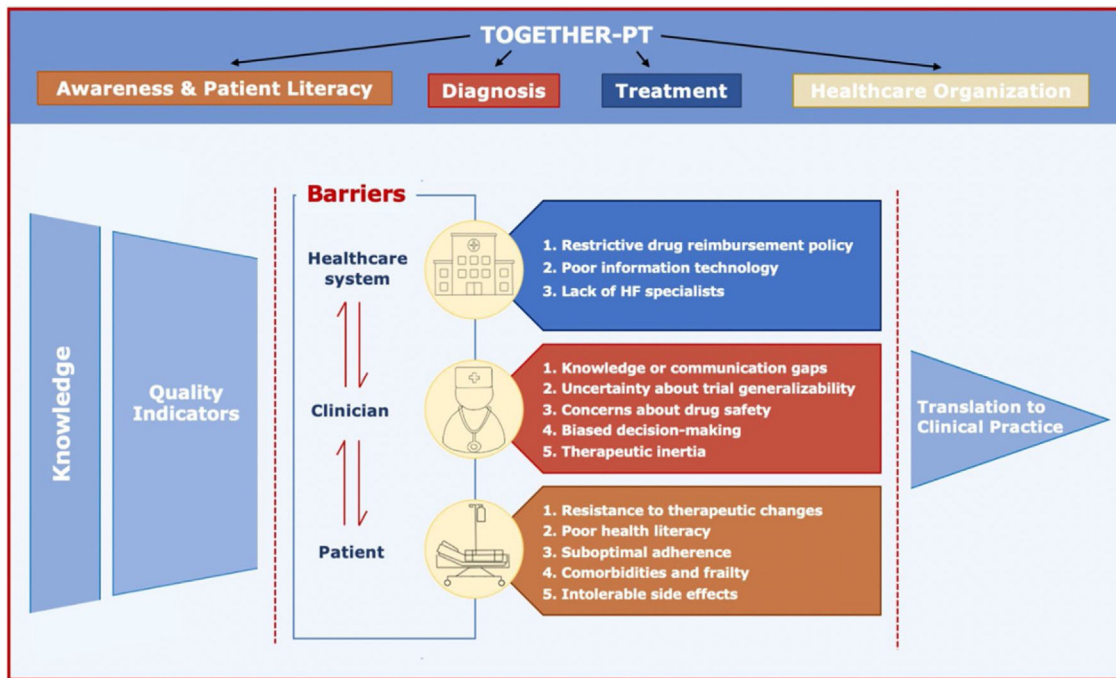


Figure 1 Barriers and facilitators of knowledge translation in heart failure.<sup>4,12</sup>

of patients with pre-HF (ACC/AHA stage B), in the absence of current or prior symptoms and/or signs of HF.<sup>7</sup> This population with subclinical heart disease calls for the development of effective treatment strategies for the prevention of HF. The PORTuguese Heart failure Observational Study (PORTHOS)<sup>8</sup> designed to determine the HF prevalence in the Portuguese population will also identify the burden of pre-HF.

Combined pharmacologic therapy including beta-blocker, angiotensin receptor-neprilysin inhibitor, mineralocorticoid receptor antagonist and newer sodium-glucose cotransporter-2 (SGLT-2) inhibitor can reduce the relative risk of all-cause death by 70% and HF hospitalization by 80% in patients with HF with reduced ejection fraction (EF).<sup>9</sup> The benefit of these four fantastic drugs in reducing cardiovascular death or HF hospitalization and improving quality of life can be extended to patients with mildly reduced EF and even for those with preserved EF receiving SGLT-2 inhibitor. Although this impressive impact on the natural history of HF, contemporary real-world studies demonstrate a clear underuse of these guideline-directed medical therapies (GDMT).<sup>10,11</sup> The authors describe four statements highlighting the need for adherence to guideline treatment recommendations. Barriers to the implementation of HF clinical guidelines have been described at the healthcare system, clinician, and patient level that must be addressed comprehensively<sup>12</sup> (Figure 1).

Finally, the authors proposed four statements to improve the organization of the HF healthcare system. In addition to the hierarchy of three levels of care, primary care, regional hospitals, and central hospitals, they propose the development of a single, integrated, shared electronic health record (EHR) combined with quality of care indicators (QI).<sup>13</sup> The European Society of Cardiology recognizes the need for reporting QI and outcomes of cardiovascular care through

continuous clinical registries to assess adherence to clinical guidelines and develop quality improvement programs designated by the EuroHeart project.<sup>14,15</sup> A single shared EHR with encoded demographic and clinical data can be the platform for launching a high-quality continuous clinical registry harmonized with the EuroHeart. Furthermore, EHR can be used to alert the clinician to prescribe dose targeted GDMT, a strategy that led to significantly higher rates of GDMT at 30 days when compared with usual care.<sup>16</sup>

## Conflicts of interest

The authors have no conflicts of interest to declare.

## References

- McDonagh TA, Metra M, Adamo M, et al. 2021 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure. *Eur Heart J*. 2021;42:3599–726.
- Stork S, Kavoliuniene A, Vinereanu D, et al. What does the lay public know about heart failure? Findings from the Heart Failure Awareness Day Initiative. *Eur J Heart Fail*. 2016;18:66–70.
- Nicholls M. Funding of cardiovascular research in the USA: Robert Califf and Peter Libby – speak about cardiovascular research funding in the United States and what the latest trends are with Mark Nicholls. *Eur Heart J*. 2018;39:3629–31.
- Silva-Cardoso J, Santos J, Araújo I, et al. conTemporary reflectiOns regarding heart Failure manaGEmenT – how to oVERcome the PorTuguese barriers (TOGETHER-PT). *Rev Port Cardiol*. 2023. <http://dx.doi.org/10.1016/j.repc.2023.05.012>.
- Stewart S, Ekman I, Ekman T, et al. Population impact of heart failure and the most common forms of cancer: a study of 1 162 309 hospital cases in Sweden (1988 to 2004). *Circ Cardiovasc Qual Outcomes*. 2010;3:573–80.
- Mamas MA, Sperrin M, Watson MC, et al. Do patients have worse outcomes in heart failure than in cancer? A primary care-based

- cohort study with 10-year follow-up in Scotland. *Eur J Heart Fail.* 2017;19:1095–104.
7. Bozkurt B, Coats AJS, Tsutsui H, et al. Universal definition and classification of heart failure. A report of the Heart Failure Society of America, Heart Failure Association of the European Society of Cardiology, Japanese Heart Failure Society and Writing Committee of the Universal Definition of Heart Failure. *J Card Fail.* 2021;27:387–413.
  8. PORTHOS – PORTuguese Heart Failure Observational Study (PORTHOS). Available from: <https://classic.clinicaltrials.gov/ct2/show/NCT05434923> [assessed 26.09.23].
  9. De Marzo V, Savarese G, Tricarico L, et al. Network meta-analysis of medical therapy efficacy in more than 90,000 patients with heart failure and reduced ejection fraction. *J Intern Med.* 2022;292:333–49.
  10. Greene SJ, Butler J, Albert NM, et al. Medical therapy for heart failure with reduced ejection fraction: the CHAMP-HF registry. *J Am Coll Cardiol.* 2018;72:351–66.
  11. Tromp J, Ouwerkerk W, Teng THK, et al. Global disparities in prescription of guideline-recommended drugs for heart failure with reduced ejection fraction. *Eur Heart J.* 2022;43:2224–34.
  12. Van Spall HGC, Fonarow GC, Mamas MA. Underutilization of guideline-directed medical therapy in heart failure: can digital health technologies PROMPT change? *J Am Coll Cardiol.* 2022;79:2214–8.
  13. Aktaa S, Polovina M, Rosano G, et al. European Society of Cardiology quality indicators for the care and outcomes of adults with heart failure. Developed by the Working Group for Heart Failure Quality Indicators in collaboration with the Heart Failure Association of the European Society of Cardiology. *Eur J Heart Fail.* 2022;24:132–42.
  14. Wallentin L, Gale CP, Maggioni A, et al. EuroHeart: European Unified Registries On Heart Care Evaluation and Randomized Trials: an ESC project to develop a new IT registry system which will encompass multiple features of cardiovascular medicine. *Eur Heart J.* 2019;40:2745–9.
  15. Aktaa S, Batra G, Cleland JGF, et al. Data standards for heart failure: the European Unified Registries for Heart Care Evaluation and Randomized Trials (EuroHeart). *Eur Heart J.* 2022;43:2185–95.
  16. Ghazi L, Yamamoto Y, Riello RJ, et al. Electronic alerts to improve heart failure therapy in outpatient practice: a cluster randomized trial. *J Am Coll Cardiol.* 2022;79:2203–13.