Heart failure guidelines implementation: Lifting barriers using registries and networks

Heart failure (HF) is a disorder that is characterized by poor prognosis, comparable to that for cancer, despite treatment advances. The underutilization of disease-modifying drugs and devices is a major reason for the poor prognosis despite overwhelming evidence from clinical-trials and strong recommendations established in national and international guidelines. Several surveys and registries have confirmed that patients who are not treated with the recommended therapy or are treated with a low dose have a higher risk of hospitalization and/or death (1). Adherence to guidelines and implementation of evidence-based treatment is difficult, and there is no consensus on the optimal implementation strategy (2). There is wide regional variation and space for improvement (3, 4), with the first and most important step in this process being the organization of a national HF clinics network, initiation of national registries, and quality improvement programs (5, 6).

In this issue of the journal, Kocabaş et al. (7) present the results of the adherence to guideline-directed medical and device therapy in outpatients (ATA) study that involved HF patients with reduced ejection fraction (rEF) across 24 centers in Turkey from January 2019 to June 2019. This study focused on 1462 outpatients with chronic HF and rEF. ATA study showed better adherence to guideline-recommended treatments than that reported in previous national data.

The present results can be compared with previous reports that have assessed the difference between routine clinical practice and the use of guideline-recommended therapy. The ESC-HF Long Term Registry (8) was conducted across 21 European and Mediterranean countries; the QUALIFY (9) was performed across 36 countries of Africa, Asia, Australia, Europe, the Middle East, and North, Central, and South America; ASIA-HF (10) was conducted in 11 Asian countries.

In the ATA study, the rates of ACE inhibitors/ARBs, b-blockers and MRAs prescription were 78.2%, 90.2% and 55.4%, respectively; however, only 24.6%, 9.9%, and 10.5% of these patients, respectively, were on target doses of these medications. The use of ACE-inhibitors/ARBs was lower than that in the ESC-HF Long Term Registry (92.2%) and QUALIFY (87.2%); however, it was comparable to that in the ASIA-HF (77%). The use of beta-blockers was higher (90.2%), while the use of MRAs (55.4%) was similar to that in the ASIA-HF (58%) vs. that (67%) in the ESC-HF Long Term Registry and 69.3% in the QUALIFY. Ivabradine administration was low (12.1%) in the ATA study.

More than 75% of the ATA population was NYHA class I and II and was older than that in the other registries. This may cause the physicians to hesitate in up titrating medications. New medications have not been reported, highlighting the fact that new therapies need time to be incorporated in routine clinical practice. The low rate of implantable cardioverter defibrillator (ICD) (18.8%) and CRT (34.5%) implantation, when indicated, is also multifactorial. In ATA, devices have been recommended in <50% of the patients who had an indication and more than 10% refused the device. Low use of ICDs has been reported in other registries with disparity across geographic regions and socio-economic status, potentially owing to the reimbursement policy and government healthcare expenditure (9).

Several barriers to guidelines implementation have been identified. They could be classified into the following four main categories (Fig. 1): human factors, organizational factors, healthcare system-related factors, and guideline-related factors. These barriers vary across regions, and although implementation strategies to overcome these challenges have been proposed by scientific societies (11), these strategies have not yet been tested. In order to implement a new therapy, it is necessary to raise awareness regarding the need for evidence-based medicine that challenges empirical practices, to explain and disseminate guidelines in a practical form, to identify barriers and to develop solutions.

Guidelines implementation should not be considered a moral imperative or a legal obligation. Adherence to guidelines is above all, a scientific, responsible choice that helps improve treatment outcomes. Clinicians will be able to implement guidelines more efficiently if they are familiar with them, have the necessary administrative support, and are able to assess patients' outcomes with appropriate follow-up and feedback strategies. We believe that studies, such as the ATA, are important steps in this direction.

Disclosure: Dr. Filippatos reports Committee Member in trials sponsored by Medtronic, Vifor, Servier, Novartis, BI and Bayer outside the submitted work.

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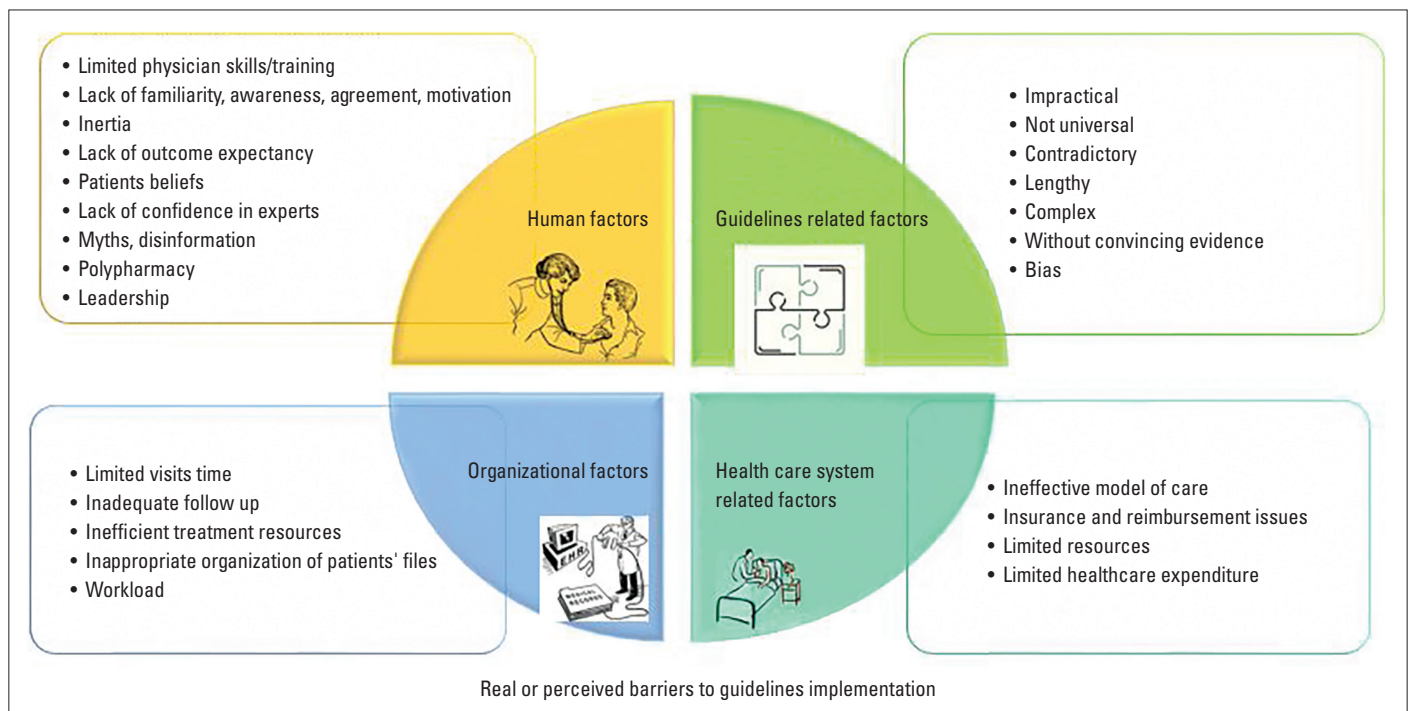
Figure 1. Real or perceived barriers to the implementation of guidelines

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