

## Letter



# Systemic Gaps in Heart Failure Care and the Need for Specialized Management: A Nationwide Survey of Korean Cardiologists

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## INTRODUCTION

Heart failure (HF) is not a simple single disease entity but rather a complex syndrome frequently combined with multiple comorbidities and different stages, requiring diverse healthcare resources and a multidisciplinary approach for optimal management.<sup>1)</sup> With the increasing complexity of HF management and the development of multiple novel therapeutic agents such as sodium-glucose cotransporter 2 inhibitors, angiotensin receptor-neprilysin inhibitor, vericiguat, and other disease-modifying therapies, the need for specialized HF expertise and dedicated multidisciplinary care teams has become crucial for optimizing guideline-directed medical therapy implementation and improving patient outcomes.<sup>2)</sup> This multifaceted nature demands comprehensive care teams and sophisticated healthcare infrastructure to address the diverse needs of patients with HF effectively.<sup>3)</sup> Despite compelling evidence supporting specialist-led care and multidisciplinary team approaches, many healthcare systems lack adequate infrastructure, workforce, and institutional support for comprehensive HF management.<sup>4)</sup> The gap between evidence-based recommendations and implementation remains substantial, particularly in resource allocation and care coordination. In contrast, other countries and regions have increasingly recognized HF as a condition requiring specialized care infrastructure. In Europe, the Heart Failure Association of the European Society of Cardiology has established a Quality of Care Centres

Programme that defines 3 tiers of HF care—community, specialized, and advanced centers—each with specific accreditation standards for multidisciplinary management.<sup>5)</sup> Similarly, in Japan, the importance of dedicated multidisciplinary HF teams has been nationally acknowledged, though implementation rates of such programs remain suboptimal, particularly in outpatient settings.<sup>6)</sup>

In Korea, the healthcare burden of HF has increased dramatically, with prevalence rising from 0.77% in 2002 to 3.41% in 2023, and healthcare costs escalating 16-fold to \$2.4 billion.<sup>7,8)</sup> Furthermore, as tertiary general hospitals in Korea transition to specialized centers for severe conditions, the management of advanced HF patients has become increasingly sophisticated and intensive. However, despite this evolution toward highly specialized care, HF patients presenting to emergency departments or requiring intensive care unit (ICU) admission at these tertiary centers are still classified as general admission patients rather than specialized care cases, creating significant limitations in delivering appropriate medical services. In Korea's healthcare reimbursement system, diseases are classified into Group A (specialized care requiring multidisciplinary teams) and Group B (general care) categories. However, HF remains classified under Group B rather than Group A, which is particularly inadequate for addressing the resource-intensive nature of this condition. This misalignment may limit access to appropriate specialist expertise, dedicated nursing support, and comprehensive care. Additional challenges include inadequate reimbursement for complex care delivery, insufficient dedicated staff, and diagnostic resource limitations, particularly during emergencies where specialized rapid response is crucial.

Understanding physicians' perspectives on the current care delivery challenges, resource adequacy, and classification appropriateness is crucial for informing healthcare policy reforms and improving the quality of HF care. However, comprehensive data on Korean cardiologists' experiences with HF care barriers and their perspectives on the current classification system remain limited. Therefore, we conducted a nationwide survey study of Korean cardiologists to assess the current status of HF treatment, identify major barriers and challenges in clinical practice, and determine the necessary improvements for optimal HF care delivery.

## METHODS

This cross-sectional survey study was conducted among board-certified cardiologists who are active members of the Korean Society of Cardiology and currently practicing in Korea. A structured questionnaire was developed and approved by the Public Relations Committee of the Korean Society for Heart Failure. The survey was distributed to all 2,061 physicians registered with the Korean

Society of Cardiology. Participants were recruited through official communication channels, including email distribution lists and society announcements.

The survey comprised the following 4 main sections: (1) demographic characteristics and clinical experience, (2) current HF care practices and associated difficulties, (3) resource adequacy and institutional support, and (4) HF severity classification and reclassification needs. The questionnaire includes both single- and multiple-choice responses.

Participation was voluntary and anonymous, and informed consent was obtained upon survey initiation. No personal or institutional identifiers were used to ensure confidentiality. The participants were allowed to complete the survey at their convenience within a designated timeframe.

Survey responses were compiled and analyzed using Microsoft Excel (Microsoft, Redmond, WA, USA). Descriptive statistics, including absolute frequencies and percentage distributions, were calculated for all variables. Individual response frequencies and cumulative percentages were reported for multiple-response questions. Data are presented as numbers and percentages of the total respondents, unless otherwise specified.

This study was conducted in accordance with the principles of the Declaration of Helsinki. The study protocol was reviewed and approved by the Institutional Review Board (IRB) of the Korea University Anam Hospital (IRB number: 2025AN0227). Participation was voluntary, and respondents could withdraw at any time during survey completion.

## RESULTS

Data collection was conducted from February 28, 2025, to March 31, 2025, and 246 cardiologists in Korea responded to the survey. **Table 1** presents the characteristics and clinical practice patterns of the respondents. The largest proportions had 10 to 20 years (33.7%) and 5 to 10 years (33.3%) of HF treatment experience. Regarding the monthly outpatient volume, 42.7% managed 100 to 250 patients, while 39.8% treated 1 to 100 patients. Most respondents (82.5%) treated 1 to 100 inpatients monthly. HF was the primary clinical area for 67.9% of the respondents, followed by hypertension (54.1%) and coronary artery disease (47.6%).

**Figure 1A** shows that 58.9% of respondents encountered difficulties in treating patients with HF, 34.6% treated patients without difficulties, and 7% did not treat patients with HF. Regarding resource adequacy (**Figure 1B**), 95.1% reported insufficient resources and 61.0% described resources as severely insufficient. The most commonly reported treatment challenges (**Figure 1C**) were inadequate compensation (70.3%), insufficient dedicated staff (67.1%), and financial barriers to advanced therapies (58.9%).

**Table 1.** Demographics of responding cardiologists (n=246)

Category	Number (%)
Heart failure treatment experience (years)	
≤1	44 (17.9)
5–10	82 (33.3)
10–20	83 (33.7)
>20	37 (15.0)
Monthly heart failure outpatient volume (patients)	
1–100	98 (39.8)
100–250	105 (42.7)
250–500	32 (13.0)
>500	11 (4.5)
Monthly heart failure inpatient volume (patients)	
1–100	203 (82.5)
100–250	41 (16.7)
250–500	1 (0.4)
>500	1 (0.4)
Primary clinical areas*	
Heart failure	167 (67.9)
Hypertension	133 (54.1)
Coronary artery disease	117 (47.6)
Valvular heart disease	115 (46.7)
Cardiomyopathy	109 (44.3)
Dyslipidemia/atherosclerosis	95 (38.6)
Arrhythmia	55 (22.4)
Congenital heart disease	42 (17.1)

\*Multiple selections allowed.

**Figure 2A** shows that respondents demonstrated strong support for HF reclassification, with 96.3% supporting some degree of reclassification to the specialized care category, including 68.7% strongly supporting and 27.6% supporting partial reclassification. When identifying priority patients for specialized care (**Figure 2B**), the respondents prioritized emergency department presentation with acute decompensation (42.6%), ICU admission requirements (26.6%), and intravenous diuretic needs (15.4%).

## DISCUSSION

This nationwide survey revealed substantial gaps in Korean HF care delivery, with nearly 60% of cardiologists encountering treatment difficulties and 95% reporting inadequate resources. These findings highlight the critical mismatch between HF complexity and current healthcare system support, consistent with global challenges in HF management.<sup>9)</sup> The overwhelming support for reclassification to the specialized care category (96.3%) reflects the recognition that the current classification inadequately addresses the complexity and resource intensity of HF management.

The primary barriers identified were inadequate compensation (70.3%), insufficiently dedicated staff (67.1%), and financial barriers to advanced therapy (58.9%). International evidence strongly supports specialized multidisciplinary HF programs, demonstrating substantial reductions in mortality and hospitalizations while

proving to be cost-effective.<sup>10)</sup> The prioritization of emergency department presentations with acute decompensation (42.6%) and ICU admission requirements (26.6%) for specialized care aligns with evidence-based approaches to identify high-risk populations most likely to benefit from intensive management.

Current Korean healthcare policy classifies HF under general care categories despite its complex resource-intensive nature requiring multidisciplinary expertise. This misalignment creates financial disincentives for hospitals and limits access to appropriate specialist care, potentially compromising patient outcomes.<sup>11)</sup>

This study has several limitations. This cross-sectional survey captured physicians' perspectives at a single time point and may not reflect evolving practice patterns. The focus on cardiologists' views may not fully represent multidisciplinary team perspectives or patient experiences. The response rate was 11.9% (246 of 2,061 registered cardiologists). Self-selection bias may occur as cardiologists experiencing greater care delivery challenges may be more motivated to respond, potentially inflating perceived support for reclassification. Characteristics of non-respondents were unavailable due to anonymous distribution.

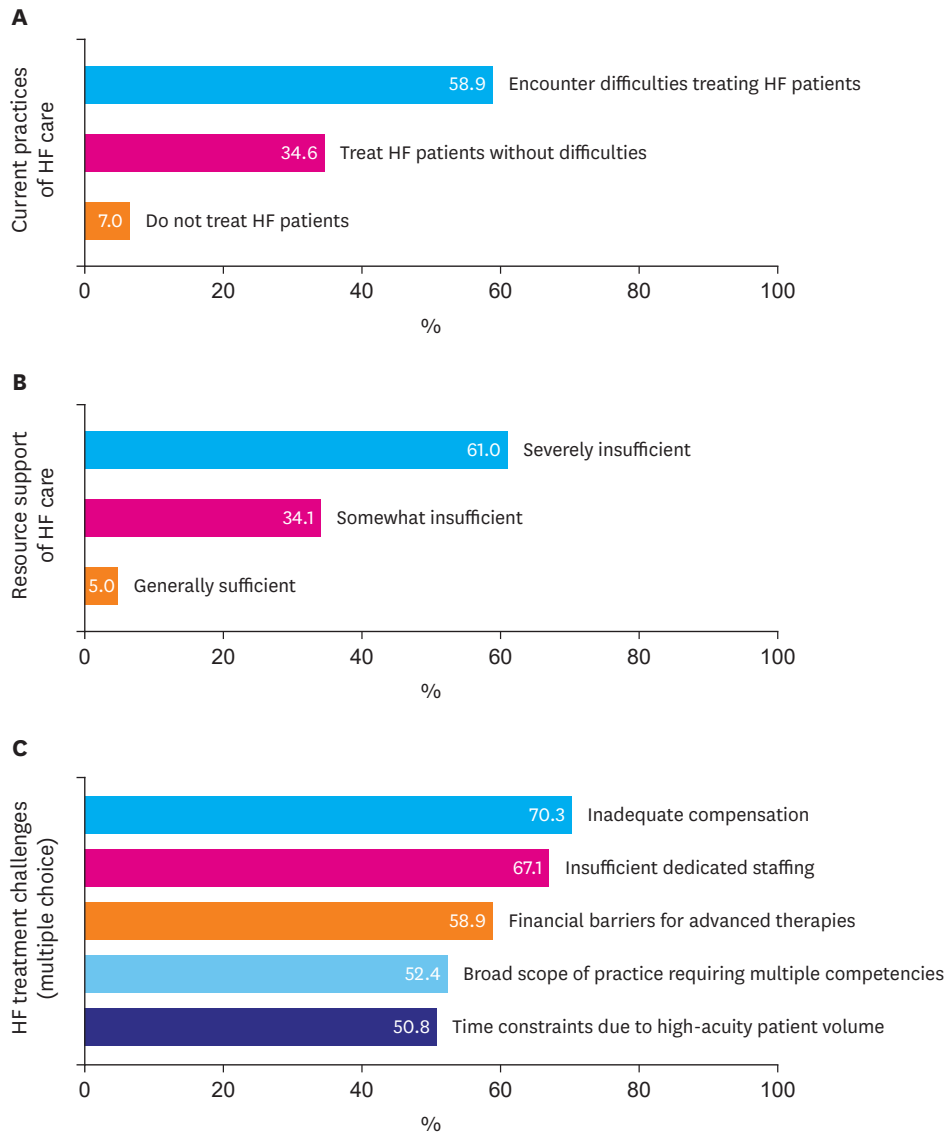
Future research should include perspectives from multidisciplinary team members, patients and their families, and healthcare administrators to provide a more comprehensive view. Additionally, objective outcome measures comparing current versus specialized care models, cost-effectiveness analyses, and detailed implementation strategies including specific reclassification criteria and phased introduction plans would strengthen the evidence base for policy decisions.

## CONCLUSION

This survey of Korean cardiologists revealed substantial gaps in HF care delivery, with the majority of cardiologists experiencing treatment difficulties and reporting inadequate resources. The overwhelming support for reclassification from general to specialized care demonstrates the urgent need for healthcare policy reform. The key barriers include inadequate compensation, insufficient dedicated staffing, and limited access to advanced therapies. These findings highlight the need for comprehensive healthcare system changes to address the resource-intensive nature of HF management in Korea's evolving healthcare landscape.

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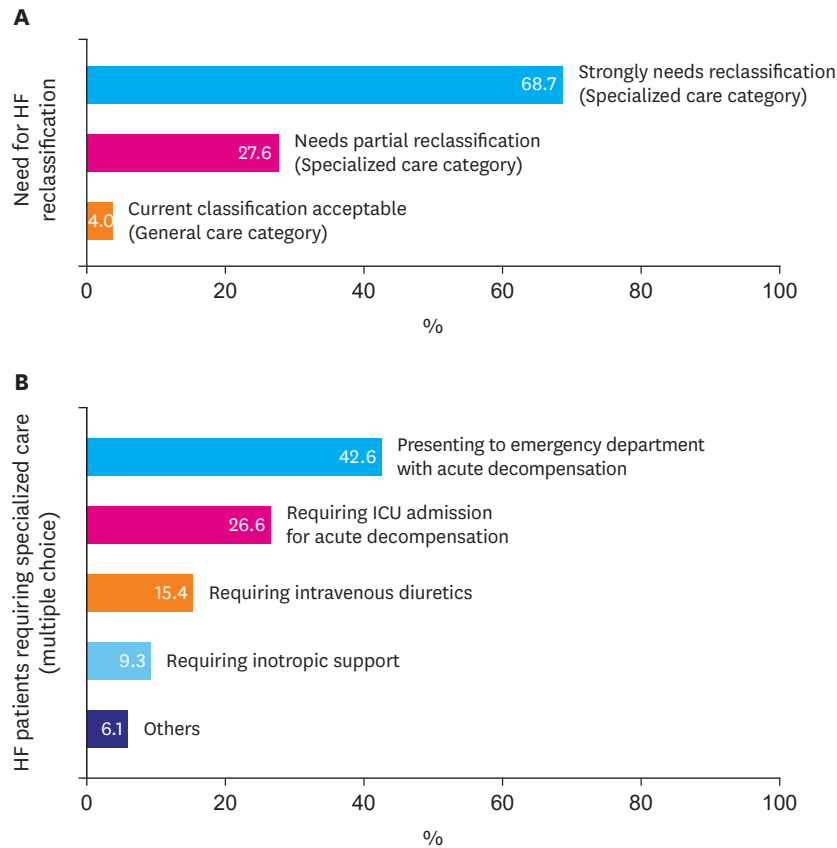
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**Figure 1.** Current status of HF care delivery and treatment challenges among Korean cardiologists. (A) Distribution of respondents according to their experience with treating HF patients. (B) Respondents' perceptions of resource adequacy for HF care. (C) Major challenges in HF treatment as reported by respondents (multiple choice). HF = heart failure.

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**Figure 2.** Perspectives on HF reclassification to specialized care category. (A) Cardiologists' view on the need for reclassification of HF from general care to specialized care category. (B) HF patient profiles considered to require specialized HF care (multiple choice). HF = heart failure; ICU = intensive care unit.

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**Conflict of Interest**

Soo-Yong Lee serves as an associate editor of the *International Journal of Heart Failure*, but has no role in the decision to publish this article. Except for that, no potential conflict of interest relevant to this article was reported.

**Author Contributions**

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## REFERENCES

1. Zavaleta-Monestel E, Arguedas-Chacón S, Quirós-Romero A, et al. Optimizing heart failure management: a review of the clinical pharmacist integration to the multidisciplinary health care team. *Int J Heart Fail* 2024;6:1-10. [PUBMED](#) | [CROSSREF](#)
2. Sokos G, Kido K, Panjath G, et al. Multidisciplinary care in heart failure services. *J Card Fail* 2023;29:943-58. [PUBMED](#) | [CROSSREF](#)
3. McDonagh TA, Blue L, Clark AL, et al. European Society of Cardiology Heart Failure Association standards for delivering heart failure care. *Eur J Heart Fail* 2011;13:235-41. [PUBMED](#) | [CROSSREF](#)
4. Raat W, Smeets M, Vandewal I, et al. Cardiologists' perceptions on multidisciplinary collaboration in heart failure care - a qualitative study. *BMC Health Serv Res* 2021;21:170. [PUBMED](#) | [CROSSREF](#)
5. Seferovic PM, Piepoli M, Polovina M, Milinkovic I, Rosano GMC, Coats AJS. ESC/HFA Quality of Care Centres: the ultimate frontier in unifying heart failure management. *Eur Heart J* 2021;43:11-3. [PUBMED](#) | [CROSSREF](#)
6. Kamiya K, Yamamoto T, Tsuchihashi-Makaya M, et al. Nationwide survey of multidisciplinary care and cardiac rehabilitation for patients with heart failure in Japan: an analysis of the AMED-CHF study. *Circ J* 2019;83:1546-52. [PUBMED](#) | [CROSSREF](#)
7. Lee CJ, Lee H, Yoon M, et al. Heart failure statistics 2024 update: a report from the Korean Society of Heart Failure. *Int J Heart Fail* 2024;6:56-69. [PUBMED](#) | [CROSSREF](#)
8. Korean Society of Heart Failure Fact Sheet & Data Management Committee. Korean heart failure fact sheet 2025 [Internet]. Seoul: Korean Society of Heart Failure; 2025 [cited 2025 December 22]. Available from: [https://www.kshf.or.kr/uploaded/board/kspatientdata/\\_b558c96e4be351da5ccf1917c24f89141.pdf](https://www.kshf.or.kr/uploaded/board/kspatientdata/_b558c96e4be351da5ccf1917c24f89141.pdf).
9. Manla Y, Vest AR, Anderson L, et al. Global innovations in the care of patients with heart failure. *Int J Heart Fail* 2025;7:47-57. [PUBMED](#) | [CROSSREF](#)
10. Yang YF, Hoo JX, Tan JY, Lim LL. Multicomponent integrated care for patients with chronic heart failure: systematic review and meta-analysis. *ESC Heart Fail* 2023;10:791-807. [PUBMED](#) | [CROSSREF](#)
11. Psotka MA, Fonarow GC, Allen LA, et al. The hospital readmissions reduction program: nationwide perspectives and recommendations: a JACC: heart failure position paper. *JACC Heart Fail* 2020;8:1-11. [PUBMED](#) | [CROSSREF](#)