

2023 Philippine Clinical Practice Guidelines on the Diagnosis and Management of Chronic Heart Failure with Reduced Ejection Fraction for Primary Care Physicians

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<https://doh.gov.ph/dpcb/doh-approved-cpg/>. While adherence to these guidelines is encouraged, healthcare providers should exercise clinical judgment. Payors and policymakers should not rely solely on this guideline for evaluating insurance claims. Recommendations should not be considered strict rules for legal action.

DISCLOSURE: Please refer to DISCLOSURE OF AUTHORS AND GUIDELINE DEVELOPMENT GROUP MEMBERS section for details.

Abstract

INTRODUCTION: Heart failure (HF) is a common cause of hospitalization, heart failure-related readmission, poor quality of life, and mortality. It also poses a substantial economic burden. The heart failure clinical practice guideline (HFCPG) was developed to provide evidence-based recommendations on the diagnosis and management of chronic HF with reduced ejection fraction (HFrEF) among adult Filipino patients in the outpatient setting for primary care physicians.

METHODS: The GRADE approach and an Evidence-to-Decision framework were used to evaluate the evidence and formulate recommendations. The strength and direction of each recommendation were determined through voting, with consensus reached if 75% of all CP members agreed.

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RESULTS: The HFPCPG provides 19 recommendations and one good practice statement in response to 14 identified clinical questions. Careful history-taking and physical examination, use of chest x-ray to detect cardiomegaly and/or pulmonary congestion, two-dimensional echocardiography for HF diagnosis, and baseline determination of serum sodium, potassium, and creatinine to guide management have been highly recommended; however, the 12-lead electrocardiogram should not be solely used for HF diagnosis. Judicious use of diuretics to relieve congestion, use of selected beta-blockers, renin-angiotensin-aldosterone blockers, mineralocorticoid receptor antagonists, and SGLT2 inhibitors are strongly recommended for the treatment of HFrEF.

CONCLUSION: HFrEF is a complex condition that requires early recognition and careful management. Guideline-directed medical therapies, particularly the evidence-based pillars of treatment, are recommended, as well as early discussion of palliative care, timely determination of advanced heart failure and the need for referral to higher levels of care.

KEY WORDS: Heart Failure, Outpatient Care, Primary Care, Heart Failure with Reduced Ejection Fraction

Summary of Recommendations

Recommendation Statement	Certainty of Evidence	Strength of Recommendation
1A. Among adult Filipinos presenting with dyspnea at the outpatient clinic, we recommend a careful history to include paroxysmal nocturnal dyspnea for the diagnosis of chronic heart failure.	Low	Strong
1B. Among adult Filipinos presenting with dyspnea at the outpatient clinic, we recommend a careful physical examination to include the measurement of the jugular venous pressure for the diagnosis of chronic heart failure.	Low	Strong
2A. Among adult Filipinos presenting with dyspnea, PND, and elevated JVP at the outpatient clinic, we recommend using the presence of cardiomegaly and/or pulmonary congestion on chest X-ray as a basis for the diagnosis of chronic heart failure.	Low	Strong
2B. Among adult Filipinos presenting with dyspnea, PND, and elevated JVP at the outpatient clinic, we suggest using the presence of pulmonary congestion on chest X-ray as a basis for the diagnosis of chronic heart failure.	Low	Weak
3A. Among adult Filipinos presenting with dyspnea, PND, and elevated JVP at the outpatient clinic, we do not recommend relying solely on a 12-lead ECG for the diagnosis of chronic heart failure.	Very Low	Strong
<i>Good Practice Statement:</i> Among adult Filipinos with suspected chronic heart failure at the outpatient clinic, we suggest the use of 12-lead electrocardiogram to determine abnormalities in cardiac structure, function and rhythm to guide management.	-	-
4. Among adult Filipinos presenting with dyspnea, PND, and elevated JVP at the outpatient clinic, we recommend the use of 2D-echocardiogram with Doppler studies for the diagnosis of heart failure.	Low	Strong
5. Among adult Filipinos presenting with unexplained dyspnea at the outpatient clinic, we suggest using point-of-care BNP or NT-proBNP testing, if available, to diagnose or rule out chronic heart failure.	Low	Weak
6. Among adult Filipinos diagnosed with chronic heart failure at the outpatient clinic, we recommend determining the baseline value of serum sodium, potassium, and creatinine to guide management.	Very Low	Strong
7A. Among adult Filipinos diagnosed with stable, compensated chronic heart failure at the outpatient clinic, we suggest against routine strict dietary sodium restriction.	Low	Weak
7B. Among adult Filipinos diagnosed with stable, compensated chronic heart failure at the outpatient clinic, we suggest to restrict fluid intake.	Low	Weak
7C. Among adult Filipinos diagnosed with stable compensated chronic heart failure at the outpatient clinic, we suggest supervised exercise training program, and if available, referral to a cardiac rehabilitation facility.	Low	Weak
8. Among adult Filipino patients with chronic heart failure with pulmonary congestion at the outpatient clinic, we recommend the judicious use of loop diuretics to relieve congestion.	Low	Strong

Summary of Recommendations (continued)

9. Among adult Filipinos diagnosed with chronic HFrEF at the outpatient clinic, we recommend the use of beta-blockers (metoprolol succinate, carvedilol, bisoprolol or nebivolol).	High	Strong
10A. Among adult Filipinos diagnosed with chronic HFrEF at the outpatient clinic, we recommend the use of RAAS Blockers (ACE-Is or ARBs or ARNIs).	Moderate	Strong
10B. Among adult Filipinos diagnosed with chronic HFrEF at the outpatient clinic, we suggest the use of ARNIs over ACE-Is or ARBs.	Low	Weak
11. Among patients with chronic HFrEF, with estimated glomerular filtration rate (eGFR) > 30 ml/min/1.73 m ² , and serum potassium < 5 mEq/L at the outpatient clinic, we recommend the use of a MRA (spironolactone or eplerenone) on top of standard of care.	Low	Strong
12. Among adult Filipinos diagnosed with chronic HFrEF at the outpatient clinic, we recommend treatment with SGLT2 inhibitors.	High	Strong
13. Among adult Filipinos diagnosed with chronic HFrEF at the outpatient clinic, we suggest referral of patients with high risk features* and recurrent hospitalizations** to higher levels of care***. *High Risk Features: older age, lower BMI, lower SBP, NYHA Class III or IV, presence of pulmonary or peripheral congestion, third heart sound, aortic stenosis, atrial fibrillation, peripheral vascular disease, renal dysfunction, absence of ICD implantation **Recurrent Hospitalizations: The suggested definition is ≥ 2 hospitalizations in the past year. ***"Higher levels of care" refers to secondary and tertiary care.	Low	Weak
14. Among adult Filipinos diagnosed with chronic HFrEF, NYHA class III or IV, at the outpatient clinic, we suggest early integration of palliative care for holistic management.	Low	Weak

INTRODUCTION**Background**

Diseases of the heart currently account for 19.3% of the total deaths in the Philippines.¹ Among cardiovascular diseases, heart failure (HF) remains a major cause of morbidity and mortality worldwide albeit significant advances in preventive and therapeutic strategies. Despite a seemingly low estimated prevalence of 1.26 to 6.7%, it has a high in-hospital and one-year mortality rate, and one-year heart failure-related readmission rate.² Moreover, the estimated total economic burden of HF hospitalization in the Philippines was reported to be around PhP 0.85 to 1.84 billion.³

In 2021, key medical societies arrived at a consensus regarding the universal definition of HF. Heart failure was defined as “a clinical syndrome with symptoms and/or signs caused by a structural and/or functional cardiac abnormality and corroborated by elevated natriuretic peptide levels and/or objective evidence of pulmonary or systemic congestion.”⁴ Once diagnosed, HF needs to be classified to guide therapy. Classifications based mainly on left ventricular ejection fraction (LVEF).⁴ The proposed classification is as follows: HF with reduced ejection fraction (HFrEF) for symptomatic HF with LVEF ≤40%; HF with mildly reduced ejection fraction (HFmrEF) for symptomatic HF with LVEF 41-49%; HF with preserved ejection fraction (HFpEF) for symptomatic HF with LVEF ≥50%; and HF with improved ejection fraction (HFimpEF) for symptomatic HF with a baseline LVEF ≤40%, a ≥10 point increase from baseline LVEF after treatment, and a second measurement of LVEF > 40%.

Patients can present in acute (AHF) or chronic heart failure (CHF). AHF is marked by rapid or gradual onset of signs and symptoms of HF, requiring urgent medical attention in the emergency department or an unplanned hospital confinement. Chronic heart failure (CHF), on the other hand, is a condition in patients who have had a documented diagnosis of HF or who have a more gradual onset of symptoms.⁴ The clinical profile of patients with HF as well as the prevailing circumstances that influence clinical practice vary across regions and populations. A locally developed clinical practice guideline (CPG) is therefore relevant to aid the Filipino clinician in the effective diagnosis and management of patients with HF.

Objectives

The objective of this CPG is to provide evidence-based recommendations for the diagnosis and management of adult Filipino patients with chronic heart failure at the outpatient clinic. It focuses on the diagnosis and management of HFrEF for primary care physicians.

Target Population

These recommendations apply to adult Filipino patients (≥18 years or age) in stable HFrEF, seen by primary care physicians in an outpatient setting. Stable HF refers to a condition where signs and symptoms are controlled and have remained unchanged for at least one month and who are able to tolerate guideline-directed medical therapy without red flag signs such as chest pain, fainting, severe weakness, tachycardia, sudden severe shortness of breath, and coughing with frothy secretions.

Intended Users and Setting

The intended users of this guideline are the primary care physicians, general practitioners, family medicine physicians and internists who serve as frontliners in the care of Filipino patients. Specialists involved in the care of patients with CHF may also benefit from the recommendations stated to ensure continuity of care in the outpatient setting. Administrators, policy-makers, and other non-medical stakeholders may use this document as reference for the development of their respective administrative agenda or reimbursement policies.

Scope and Delimitation

The HFCPG recommendations encompass the identification of adult patients with CHF based on signs and symptoms and test findings

supporting the diagnosis of HFrEF. The CPG focuses on stable patients with HFrEF who consult at the outpatient clinic setting. This CPG did not review evidence on acute, decompensated, or worsening heart failure, HFpEF, HFmrEF, and HFimpEF.

METHODOLOGY

Guideline Preparation

This CPG was developed following the prescribed processes of the DOH for CPG development.⁵ The DOH designated the Philippine Heart Center as the implementing agency to create the HFCPG Task Force. This was composed of the 1) steering committee (SC), 2) technical working group (TWG),

Table 1. Clinical questions in the CPG

Among adult Filipinos presenting with dyspnea at the outpatient clinic, how accurate are other symptoms (easy fatigability, orthopnea, paroxysmal nocturnal dyspnea) and signs (elevated jugular venous pressure, rales, and peripheral edema) in the diagnosis of chronic heart failure?
Among adult Filipinos presenting with signs and symptoms of chronic heart failure at the outpatient clinic, how accurate is the chest X-ray for the diagnosis of heart failure?
Among adult Filipinos presenting with signs and symptoms of heart failure at the outpatient clinic, how accurate is the 12-lead electrocardiogram for the diagnosis of heart failure?
Among adult Filipinos presenting with signs and symptoms of chronic heart failure at the outpatient clinic, how accurate is the 2D-echocardiogram for the diagnosis of heart failure?
Among adult Filipinos presenting with signs and symptoms of chronic heart failure at the outpatient clinic, how accurate are cardiac biomarkers (BNP,NT-proBNP) for the diagnosis of heart failure?
Among adult Filipinos diagnosed with chronic heart failure at the outpatient clinic, what is the effect of baseline determination of serum electrolytes and creatinine on the incidence of cardiovascular mortality, heart failure-related hospitalization, and on quality of life?
Among adult Filipinos diagnosed with chronic heart failure at the outpatient clinic, what is the effect of nonpharmacologic interventions (dietary sodium and fluid restriction, exercise prescription) on the incidence of cardiovascular mortality, heart failure-related hospitalization, and on quality of life?
Among adult Filipinos diagnosed with chronic heart failure with reduced ejection fraction (HFrEF) at the outpatient clinic, what is the effect of diuretics on the incidence of cardiovascular mortality and heart failure-related hospitalization, and on quality of life?
Among adult Filipinos diagnosed with chronic heart failure with reduced ejection fraction (HFrEF) at the outpatient clinic, what is the effect of beta-blockers on the incidence of cardiovascular mortality and heart failure-related hospitalization, and on quality of life?
Among adult Filipinos diagnosed with chronic heart failure with reduced ejection (HFrEF) at the outpatient clinic, what is the effect of renin-angiotensin-aldosterone-blockers (ACEi/ARB or ARNis) on the incidence of cardiovascular mortality and heart failure-related hospitalization, and on quality of life?
Among adult Filipinos diagnosed with chronic heart failure with reduced ejection (HFrEF) at the outpatient clinic, what is the effect of mineralocorticoid receptor antagonists on the incidence of cardiovascular mortality, heart failure-related hospitalization, and on quality of life?
Among adult Filipinos diagnosed with chronic heart failure with reduced ejection fraction (HFrEF) at the outpatient clinic, what is the effect of Sodium-Glucose co-transporter 2 (SGLT2) inhibitors on the incidence of cardiovascular mortality and heart failure-related hospitalization, and on quality of life?
Among adult Filipinos diagnosed with chronic heart failure with reduced ejection (HFrEF) at the outpatient clinic, what is the effect of a timely referral to a cardiovascular specialist on the incidence of cardiovascular mortality, heart failure-related hospitalization, and on quality of life?
Among adult Filipinos diagnosed with chronic heart failure with reduced ejection (HFrEF) at the outpatient clinic, what is the effect of palliative care on quality of life and on the incidence of worsening heart failure, heart failure-related hospitalization, and cardiovascular mortality?

Table 2. Grading of certainty of evidence and strength of recommendations*

Certainty of evidence	Description
High	We are very confident that the true effect lies close to that of the estimate of the effect
Moderate	We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different
Low	Our confidence in the effect estimate is limited: The true effect maybe substantially different from the estimate of the effect
Very low	We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect
Strength of recommendation	Description
Strong	Advantages of the intervention significantly outweigh disadvantages or disadvantages of the intervention significantly outweigh advantages
Weak	Advantages of the intervention may outweigh disadvantages, disadvantages of the intervention may outweigh advantages, or the relationship between advantages and disadvantages is not clear

*According to the GRADE Working Group

which includes the evidence review experts (EREs), technical coordinators, technical facilitator, and 3) a multisectoral consensus panel (CP), 4) conflict of interest review committee, and 5) administrative officer.

The SC provided overall supervision of the CPG development process. The SC, EREs, and CP identified clinical outcomes as critical, important, or of low importance. Only critical and important outcomes were selected – 1) cardiovascular mortality, 2) all-cause mortality, 3) worsening heart failure, 4) heart failure hospitalization, 5) symptom reduction, 6) quality of life, 7) hypotension, 8) arrhythmia, and 9) deteriorating renal function. Together, members of the SC, TWG and CP agreed on 14 clinical questions to be addressed by the HFCPG.

The CP was guided by the critical outcomes in deciding on recommendations or resolving any disagreements. The TWG reviewed and prepared the evidence.

Evidence Synthesis

A systematic search of electronic databases such as MEDLINE via PubMed, CENTRAL, Google Scholar and HERDIN for relevant literature was performed. Guidelines on HF management published in the last 10 years were identified and underwent assessment using the AGREE II tool.⁶ De novo systematic reviews and meta-analysis were conducted for each question as the existing guidelines were not able to address all the clinical questions.^{7,8} NOS is used for evaluating the quality of non-randomized studies (cohort, case-control, and cross-sectional studies), while Quality Assessment of Diagnostic Accuracy Studies (QUADAS) is used for assessing individual studies. The specific search terms used by the Evidence Reviewers to search for relevant literature are found in each annex for the respective topics in the full CPG.

Evidence reviewers appraised the directness, methodological validity, results, and applicability of each relevant clinical study or guidelines included. RevMan, STATA, and GRADE Pro were used for the quantitative synthesis of important clinical

outcomes for each question. The Grading of Recommendations Assessment, Development, and Evaluation (GRADE) approach was used in assessing each recommendation statement and its strength (Table 2). Factors that affected the quality of evidence, such as publication bias, inconsistency of results and reporting bias, were considered.

Recommendation Formulation

An Evidence to Decision (EtD) framework was built to assess the strength of recommendations which was based on the quality of evidence, trade-off between the benefits and harm of the test or drug, cost-effectiveness, applicability, availability, feasibility, equity, resources, and uncertainty.⁹

The recommendation for each question and strength of each recommendation were determined through voting. Consensus building was facilitated using a modified Delphi technique, with consensus decisions being reached if 75% of all CP members agreed. In cases where direct evidence was lacking and the consensus panel deemed it necessary that a statement be articulated regarding the intervention in question, a good practice statement was included.

External Review

The Steering Committee invited three external reviewers to comprise the Task Force Guideline External Review Panel. The panel reviewed the initial manuscript of the guidelines using the Appraisal of Guidelines for Research and Evaluation II (AGREE-II) checklist and the Appraisal of Guidelines Research and Evaluation–Recommendations Excellence (AGREE-REX) checklist.¹⁰ All comments from the external reviewers were considered in the final draft of the CPG.

Editorial Independence

The funding for the development of this CPG was provided by the Department of Health (DOH) in preparation for the implementation of Universal Health Care. CPG recommendations were solely and independently formulated by the Task Force.

Any perceived potential or actual conflicts of interest were managed according to the prescribed guidelines by the DOH.⁵

Guideline Dissemination, Implementation, Monitoring, and Auditing

The following measures were proposed : 1) publication of an Executive Summary in reputable local peer-reviewed medical and cardiology journals; 2) educational webinars on the HFCPG; 3) involvement of stakeholder medical societies in the dissemination of the guidelines during their annual scientific meetings and in their websites; 4) inclusion of the HFCPG in the curricula of various training programs; 5) creation of electronic clinical decision support tools to assist primary care physicians in the implementation of the CPG recommendations; and 6) the creation and pilot-testing of guideline-based pathways of care. Strategies to determine real-world use of these guidelines will include looking into adherence to key recommendations and impact of their application. This will be done through scorecard metrics or coordinated research. Such evaluations will be planned based on pre-specified intervals.

Guideline Updating

Updates will be planned three years after publication in anticipation of the potentially practice-changing results of emerging evidence on HF. The steering committee in coordination with key medical societies will organize a CPG update group that will annually meet to assess latest clinical trials and observational studies that may impact the practice of heart failure management in the country.

RECOMMENDATIONS

The HFCPG Task Force developed 19 recommendations and one good practice statement to address 14 clinical questions.

1. Among adult Filipinos presenting with dyspnea at the outpatient clinic, how accurate are other symptoms (easy fatigability, orthopnea, paroxysmal nocturnal dyspnea) and signs (elevated jugular venous pressure, rales, and peripheral edema) in the diagnosis of chronic heart failure?

RECOMMENDATION 1A. Among adult Filipinos presenting with dyspnea at the outpatient clinic, we **recommend** a careful history to include paroxysmal nocturnal dyspnea for the diagnosis of chronic heart failure. (**LOW certainty of evidence, STRONG recommendation**)

RECOMMENDATION 1B. Among adult Filipinos presenting with dyspnea at the outpatient clinic, we **recommend** a careful physical examination to include the measurement of the jugular venous pressure for the diagnosis of chronic heart failure. (**LOW certainty of evidence, STRONG recommendation**)

Key Findings: The accuracy of clinical symptoms (easy fatigability, orthopnea, paroxysmal nocturnal dyspnea) and signs (elevated jugular venous pressure, rales, and peripheral edema) was investigated in comparison to a reference standard (i.e. the European Society of Cardiology criteria for

the diagnosis of HF) used for the diagnosis of HF.¹¹⁻¹⁶ For most of the parameters, sensitivity was generally very low. Two parameters have moderate to high specificity: paroxysmal nocturnal dyspnea (86%, 95% CI 0.82 to 0.90) and elevated jugular venous pressure (93%, 95% CI 0.81 to 0.98). The overall certainty of evidence (CoE) was rated low because of incorporation bias—the symptoms and signs (index test) being analyzed are included as criteria for the diagnosis of HF (reference standard).

Consensus Issues: The CP gave a strong recommendation despite the low CoE. Based on the universal definition of HF, the presence of symptoms and signs is the initial requirement in diagnosing HF. The clinical symptoms and signs may be useful in the early detection of HF and timely treatment.¹⁷ On the other hand, a delay in the diagnosis of heart failure due to inadequate clinical skills will lead to poor clinical outcomes.¹⁸

2. Among adult Filipinos presenting with signs and symptoms of chronic heart failure at the outpatient clinic, how accurate is the chest X-ray for the diagnosis of heart failure?

RECOMMENDATION 2A. Among adult Filipinos presenting with dyspnea, PND, and elevated JVP at the outpatient clinic, we **recommend** using the presence of cardiomegaly and/or pulmonary congestion on chest X-ray as a basis for the diagnosis of chronic heart failure. (**LOW certainty of evidence, STRONG recommendation**)

RECOMMENDATION 2B. Among adult Filipinos presenting with dyspnea, PND, and elevated JVP at the outpatient clinic, we **suggest** using the presence of pulmonary congestion on chest X-ray as a basis for the diagnosis of chronic heart failure. (**LOW certainty of evidence, WEAK recommendation**)

Key Findings: Two radiographic features reported in patients suspected with HF were cardiomegaly and pulmonary congestion. Cardiomegaly was defined as a cardiothoracic ratio of >0.50 in all studies.¹⁹⁻²⁴ Pulmonary congestion on chest X-ray was defined as the presence of cephalization, Kerley lines, and/or bilateral alveolar edema on a postero-anterior view chest X-ray in 4 out of 5 studies.^{19-22,25} Pooled de-novo meta-analyses of observational cross-sectional studies with prospective data collection were done. However, the reference standard used (i.e. clinical HF diagnosis by a physician, left ventricular [LV] dysfunction) differed among the included studies.¹⁹⁻²⁵ The meta-analysis on radiographic cardiomegaly reported a sensitivity point estimate range of 59-71% and a specificity point estimate range of 50-81%. Overall risk of bias was low and the CoE for radiographic cardiomegaly was rated high. The meta-analysis on pulmonary congestion on chest X-ray resulted in a sensitivity range of 25-86% and a specificity of 73-96%.^{19-22,25} Two studies using both cardiomegaly and/or pulmonary congestion reported low sensitivity and specificity.^{22,26}

Consensus Issues: The CP gave a strong recommendation for the chest X-ray despite low CoE. The presence of pulmonary

congestion and/or cardiomegaly seen on the chest X-ray coupled with signs and symptoms of HF would more accurately satisfy the Universal Definition of HF. Moreover, the chest X-ray has also shown to have a prognostic value for heart failure onset, morbidity, and mortality.^{27,28}

3. Among adult Filipinos presenting with signs and symptoms of heart failure at the outpatient clinic, how accurate is the 12-lead electrocardiogram for the diagnosis of heart failure?

RECOMMENDATION 3A. Among adult Filipinos presenting with dyspnea, PND, and elevated JVP at the outpatient clinic, we **do not recommend** relying solely on a 12-lead ECG for the diagnosis of chronic heart failure. (**VERY LOW certainty of evidence, STRONG recommendation**)

Good Practice Statement. Among adult Filipinos with suspected chronic heart failure at the outpatient clinic, we suggest the use of 12-lead electrocardiogram to determine abnormalities in cardiac structure, function and rhythm to guide management.

Key Findings: A de novo meta-analysis of seven cross-sectional studies that evaluated the diagnostic performance of 12 Lead (12L) ECG compared to reference standards demonstrated that an abnormal ECG had a pooled sensitivity of 75.5% and specificity of 67.2% for the diagnosis of chronic HF.^{13,15,16,19,29-31}

Consensus Issues: Because of the very low COE, the consensus panel gave a strong recommendation not to use the 12L ECG as the sole diagnostic test for chronic heart failure. Individual ECG parameters (e.g., atrial fibrillation, left ventricular hypertrophy, ischemic changes) had high specificity (>90%) but low sensitivity (<40%). This makes them unreliable for ruling out HF when used alone.¹⁹ Furthermore, evidence on the accuracy of ECG interpretation in primary care remains inconsistent, with studies noting variable competencies among general practitioners and a lack of local validation data.³²⁻³⁴ The panel, however, considered it a good clinical practice to include the ECG in the initial evaluation of patients with suspected heart failure.

4. Among adult Filipinos presenting with signs and symptoms of chronic heart failure at the outpatient clinic, how accurate is the 2D-echocardiogram for the diagnosis of chronic heart failure?

RECOMMENDATION 4. Among adult Filipinos presenting with dyspnea, PND, and elevated JVP at the outpatient clinic, we **recommend** the use of 2D-echocardiogram with Doppler studies for the diagnosis of heart failure. (**LOW certainty of evidence, STRONG recommendation**)

Key Findings: Increased left ventricular filling pressure (LVFP) or left ventricular end – diastolic pressure (LVEDP) caused by either systolic or diastolic impairment of LV function is a surrogate indicator of HF and a strong predictor of mortality.³⁵ Pooled analysis of three cohort studies showed that echocardiographic measures of increased LV filling pressures (LVFP) have a sensitivity of 63%

and a specificity of 89% in diagnosing elevated LVFP.³⁶⁻³⁸ Subgroup analysis of patients with HFrEF showed that echocardiography has a sensitivity of 76% and a specificity of 70%.

Consensus Issues: The CP gave a strong recommendation despite the low CoE because 2D echocardiography with doppler studies (2DED) can provide an assessment of LVEF and systolic and diastolic function. It can also identify the underlying etiology of HF which will help direct management. Currently, the diagnosis and classification of HF rely on the use of 2DED. Echocardiography is non-invasive and available in most secondary and tertiary hospitals, as well as in most diagnostic centers in the country.³⁹ According to the Philippine Society of Cardiac Catheterization and Intervention, there are only 55 cardiac catheterization laboratories in the country, as of 2022, that can perform the invasive procedures that are considered as the gold standard in diagnosing elevated LVFP.

5. Among adult Filipinos presenting with signs and symptoms of chronic heart failure at the outpatient clinic, how accurate are cardiac biomarkers (BNP, NT-proBNP) for the diagnosis of heart failure?

RECOMMENDATION 5. Among adult Filipinos presenting with unexplained dyspnea at the outpatient clinic, we **suggest** using point-of-care BNP or NTproBNP testing, if available, to diagnose or rule out chronic heart failure. (**LOW certainty of evidence, WEAK recommendation**)

Key Findings: Key results of two studies conducted in a primary care setting showed that at thresholds of more than 100 pg/mL, sensitivity of BNP for HF diagnosis was 95% while pooled specificity was 56%.⁴⁰ In another systematic review, BNP and NTproBNP at thresholds of more than 100 pg/mL and 400 pg/mL, respectively, determined in an ambulatory care setting using point-of-care testing (POCT), showed that BNP had a sensitivity of 94% and specificity of 94%. NTproBNP had a sensitivity of 96% and specificity of 73%.⁴¹

In a cross-sectional study of patients presenting with dyspnea, BNP levels at a threshold of more than 100 pg/mL determined in primary and ambulatory care settings (POCT) revealed a sensitivity of 90% and a specificity of 73%.⁴²

Consensus Issues: Accessibility and affordability have been factored in by the panel for making a weak recommendation.

6. Among adult Filipinos diagnosed with chronic heart failure at the outpatient clinic, what is the effect of baseline determination of serum electrolytes and creatinine on the incidence of cardiovascular mortality and heart failure-related hospitalization, and on quality of life?

RECOMMENDATION 6. Among adult Filipinos diagnosed with chronic heart failure at the outpatient clinic, we **recommend** determining the baseline value of serum sodium, potassium, and creatinine to guide management. (**VERY LOW certainty of evidence, STRONG recommendation**)

Key Findings: Low serum sodium levels (< 135 mmol/L),⁴³⁻⁴⁶ high serum sodium levels (> 145 mEq/L),⁴⁷ low serum potassium levels (< 3.5 mEq/L),^{48,49} high serum potassium levels (> 5 mEq/L),⁵⁰ and elevated serum creatinine levels (> 1.2 mg/dL)^{51,52} were associated with a significant risk for overall mortality compared to CHF patients with normal levels of these laboratory parameters.

Consensus Issues: Despite the very low CoE, the consensus panel still gave a strong recommendation for performing laboratory examinations for kidney function, serum sodium and potassium levels. They recognized its widespread availability and manageable cost while also highlighting the importance of securing baseline levels for safety and monitoring, prior to initiation of specific pharmacologic therapies.

7. Among adult Filipinos diagnosed with chronic heart failure at the outpatient clinic, what is the effect of non-pharmacologic interventions (dietary sodium and fluid restriction, exercise prescription) on the incidence of cardiovascular mortality and heart failure-related hospitalization, and on quality of life?

RECOMMENDATION 7A. Among adult Filipinos diagnosed with stable, compensated chronic heart failure at the outpatient clinic, we **suggest** against routine strict dietary sodium restriction. (**LOW certainty of evidence, WEAK recommendation**)

RECOMMENDATION 7B. Among adult Filipinos diagnosed with stable, compensated chronic heart failure at the outpatient clinic, we **suggest** to restrict fluid intake. (**LOW certainty of evidence, WEAK recommendation**)

Key Findings: Five randomized controlled trials (RCTs) investigated the effect of dietary sodium and/or fluid restriction vs. usual care (i.e., routine dietary advice from the physicians with no specified sodium level) on the incidence of all-cause mortality and heart failure hospitalization, and on the quality of life.⁵³⁻⁵⁷ Dietary restriction of both sodium and fluid resulted in higher rates of hospitalization and death.^{53,56} Dietary restriction of sodium alone did not affect rates of hospitalization and death.^{54,55} Based on the Kansas City Cardiomyopathy Questionnaire (KCCQ) scores, quality of life improved following sodium and/or fluid restriction.⁵⁵ A randomized cross-over study showed no difference in the median Minnesota Living With Heart Failure questionnaire (MLWHFQ) scores for study participants whether they were in the restricted or the liberal fluid intake intervention.⁵⁷

Consensus Issues: The improvement in quality of life resulting from sodium and/or fluid restriction was offset by the higher rates of hospitalization and lack of mortality benefit. This led to a weak panel recommendation for fluid restriction and AGAINST routine sodium restriction. The optimal amount of sodium and fluid intake have yet to be determined. Acceptability will also be a challenge since Asian cuisine is high in salt. Self-restriction may not be effective.

RECOMMENDATION 7C. Among adult Filipinos diagnosed with stable compensated chronic heart failure at the outpatient clinic, we **suggest** supervised exercise training program, and if available, referral to a cardiac rehabilitation facility. (**LOW certainty of evidence, WEAK recommendation**)

Key Findings: There is low quality of evidence from a meta-analysis that exercise-based cardiac rehabilitation programs have no effect on the incidence of all-cause mortality in the short-term (< 12 months), may decrease rates of hospitalization for heart failure, and results in improved quality of life.⁵⁸ HF-ACTION, the largest RCT reviewed, reported the occurrence of adverse events, such as angina, arrhythmia, dizziness, and presyncope, within three hours of the exercise training.⁵⁹

Consensus Issues: Exercise rehabilitation has been promoted to counteract physical deconditioning in heart failure. However, studies have still been unable to demonstrate a consistent benefit. This resulted in a weak panel recommendation. Moreover, cardiac rehabilitation programs are not widely available. Supervised exercise training is suggested instead.⁵⁸

8. Among adult Filipinos diagnosed with chronic heart failure with reduced ejection fraction (HFrEF) at the outpatient clinic, what is the effect of diuretics on the incidence of cardiovascular mortality and heart failure-related hospitalization, and on quality of life?

RECOMMENDATION 8. Among adult Filipino patients with chronic heart failure with pulmonary congestion at the outpatient clinic, we **recommend** the judicious use of loop diuretics to relieve congestion. (**LOW certainty of evidence, STRONG recommendation**)

Key Findings: Diuretics were shown to be beneficial in terms of reducing all-cause mortality, hospitalization due to heart failure, and exercise tolerance in the RCTs included in this meta-analysis.⁶⁰ Quality of life was not assessed among the studies. Adverse events, such as hypokalemia, hyponatremia, and arrhythmia were more frequently observed in the group that received diuretics. These were not reported in the RCTs.^{49,61-65}

Consensus Issues: The panel gave a strong recommendation despite low CoE for the use of diuretics in HF patients with pulmonary congestion because of the benefits gained in reducing all-cause mortality and for the significant and rapid relief of signs and symptoms of fluid overload. Among the diuretics investigated in the appraised studies, furosemide, thiazides, bumetanide are included in the Philippine National Formulary (PNF).⁶⁶ Other international guidelines also support the use of diuretics in patients with HF and congestive symptoms.^{67,68} Physicians must be judicious in starting the use of loop diuretics, titrating the dose, and withholding loop diuretics. Physical examination findings, hemodynamic status, and electrolyte levels must be taken into account.

9. Among adult Filipinos diagnosed with chronic heart failure with reduced ejection fraction (HFrEF) at the outpatient clinic, what is the effect of beta-blockers on the incidence of cardiovascular mortality and heart failure-related hospitalization, and on quality of life?

RECOMMENDATION 9. Among adult Filipinos diagnosed with chronic HFrEF at the outpatient clinic, we **recommend** the use of beta-blockers (metoprolol succinate, carvedilol, bisoprolol or nebivolol). (**HIGH certainty of evidence, STRONG recommendation**)

Key Findings: A de novo meta-analysis of seven studies showed that, compared to placebo, the use of beta-blockers, specifically bisoprolol, carvedilol, metoprolol succinate and nebivolol, on top of standard of care decreased cardiovascular mortality.⁶⁹⁻⁷⁵ Furthermore, bisoprolol, carvedilol, and metoprolol succinate reduced HF-related hospitalization.^{69,70,72,74,76,77} On the other hand, one meta-analysis on quality of life showed that there was no significant difference in the quality of life scores.⁷⁸ Among patients with HFrEF who were given beta-blockers compared to placebo, the frequency of the adverse events such as dizziness, hypotension, and bradycardia was significantly higher with the use of beta-blockers. These studies also showed a significantly lower incidence of worsening heart failure and malignant ventricular arrhythmias.^{69,72,73,76,77,79-84}

Consensus Issues: The effect of beta-blockers in HF is not a class effect. Evidence also shows that the intake of specific beta-blockers significantly decreased the incidence of cardiovascular mortality, HF mortality, and heart failure-related hospitalization. With this, the panel strongly recommended the use of bisoprolol, carvedilol, metoprolol succinate and nebivolol specifically in patients with chronic HF with reduced ejection fraction. Among the beta-blockers with evidence for reduction of mortality and HF-related hospitalizations, only bisoprolol and carvedilol are included in the PNF while metoprolol succinate and nebivolol are not.

10. Among adult Filipinos diagnosed with chronic heart failure with reduced ejection fraction (HFrEF) at the outpatient clinic, what is the effect of renin-angiotensin-aldosterone blockers (ACEi/ARB or ARNIs) on the incidence of cardiovascular mortality and heart failure-related hospitalization, and on quality of life?

RECOMMENDATION 10A. Among adult Filipinos diagnosed with chronic HFrEF at the outpatient clinic, we **recommend** the use of RAAS Blockers (ACE-Is or ARBs or ARNIs). (**MODERATE certainty of evidence, STRONG recommendation**)

RECOMMENDATION 10B. Among adult Filipinos diagnosed with chronic HFrEF at the outpatient clinic, we **suggest** the use of ARNIs over ACE-Is or ARBs. (**LOW certainty of evidence, WEAK recommendation**)

Key Findings: A network meta-analysis of RCTs supports the use of RAAS blockers in HF with HFrEF. ACE inhibitors

significantly reduced all-cause and cardiovascular mortality and heart failure hospitalizations compared to placebo. ARBs also lowered heart failure hospitalizations. However, effects on mortality were less clear, and showed no significant differences compared to ACE inhibitors. Sacubitril/valsartan (ARNI) demonstrated superior outcomes versus ACE inhibitors or ARBs, reducing mortality and HF hospitalizations, though it has not been directly compared to placebo. Regarding safety, ARNI was associated with less renal failure than ARBs but more hypotension compared to ACE inhibitors and ARBs. Both drug classes posed similar risks of hyperkalemia or angioedema. ARBs carried higher renal failure risk than ACE inhibitors, while ACE inhibitors increased risks of hypotension and hyperkalemia versus placebo. Overall, targeting the RAAS pathway with ACE inhibitors, ARBs, or ARNIs consistently improves mortality and morbidity in HFrEF, with ARNIs preferred over ACE inhibitors or ARBs.⁸⁵⁻⁹⁰

There are no RCTs that directly compare ARNIs to placebo. ARNIs were indirectly compared to placebo in the network meta-analysis that was reviewed.⁹¹ Furthermore, in the study that compared ARNIs to ARBs, the patients included in this trial were in NYHA Class IV and were hospitalized.

Consensus Issues: The significant clinical advantage of ARNIs formed the basis for the panel to preferably recommend ARNIs over other RAAS inhibitors. However, the high cost of ARNIs remains a substantial barrier to widespread implementation, particularly in low-resource settings. As a result, despite the demonstrated benefits of ARNIs, the recommendation remains weak due to concerns about accessibility and long-term affordability. ACEIs, ARBs, and ARNIs have been recommended in the PNF for patients with symptomatic HFrEF and for those who have been on stable doses of ACEIs and/or ARBs but remain symptomatic.⁶⁶

11. Among adult Filipinos diagnosed with chronic heart failure with reduced ejection fraction (HFrEF) at the outpatient clinic, what is the effect of mineralocorticoid receptor antagonists on the incidence of cardiovascular mortality and heart failure-related hospitalization, and on quality of life?

RECOMMENDATION 11. Among patients with chronic HFrEF, with estimated glomerular filtration rate (eGFR) > 30 ml/min/1.73 m², and serum potassium < 5 mEq/L, at the outpatient clinic, we **recommend** the use of a MRA (spironolactone or eplerenone) on top of standard of care. (**LOW certainty of evidence, STRONG recommendation**)

Key Findings: Six randomized trials showed that there was an improvement in CV mortality, all-cause mortality, and a reduction in hospitalization from heart failure associated with mineralocorticoid receptor antagonists (MRA) use.⁹²⁻⁹⁷ Based on four randomized trials, there was also a higher risk of

hyperkalemia associated with the use of MRAs compared to placebo.⁹²⁻⁹⁵

Consensus Issues: The panel gave a strong recommendation for the use of MRA because there is moderate to high CoE in reducing critical outcomes of all-cause mortality, CV mortality, and hospitalizations for HF with the use of MRAs. Since the majority of studies included patients with acute HF, more studies investigating the use of MRAs on patients with chronic heart failure should be conducted. Among the MRAs, only spironolactone is included in the PNF.⁶⁶

12. Among adult Filipinos diagnosed with chronic heart failure with reduced ejection fraction (HFrEF) in an outpatient clinic, what is the effect of Sodium-glucose co-transporter 2 (SGLT2) inhibitors on the incidence of cardiovascular mortality and heart failure-related hospitalization, and on quality of life?

RECOMMENDATION 12. Among adult Filipinos diagnosed with chronic HFrEF in an outpatient clinic, we **recommend** treatment with SGLT2 inhibitors. (**HIGH certainty of evidence, STRONG recommendation**)

Key Findings: Four randomized placebo-controlled trials comparing SGLT2 inhibitors versus placebo in addition to guideline-directed treatment for HFrEF were reviewed. In the EMPEROR-Reduced trial, Empagliflozin significantly reduced the primary outcome of HF hospitalization but did not significantly reduce cardiovascular death versus placebo.⁹⁸ In the Dapagliflozin and Prevention of Adverse Outcomes in Heart Failure (DAPA-HF) trial, dapagliflozin significantly reduced the primary outcome of CV death, HF hospitalization, and worsening renal function compared to placebo.⁹⁹ Both trials revealed the same results regardless of the diabetes status. The Dapagliflozin Effects on Biomarkers, Symptoms, and Functional Status in Patients with Heart Failure with Reduced Ejection Fraction (DEFINE-HF) and Empagliflozin Outcome Trial in Patients with Chronic Heart Failure (EMPERIAL-Reduced) were designed to evaluate the effect of SGLT2 inhibitors on exercise capacity and quality of life within 12 weeks were reviewed.^{100,101} DEFINE-HF demonstrated clinically meaningful improvements in HF-related symptoms, functional status and quality of life, or natriuretic peptides, as compared with placebo, on top of optimal standard therapy. EMPERIAL-Reduced did not show any significant effect on exercise ability. In a de novo meta-analysis combining three trials, empagliflozin and dapagliflozin given on top of guideline-directed medical therapy reduced all-cause and cardiovascular death, and heart failure hospitalization.⁹⁸⁻¹⁰⁰ Altogether, the four studies reported an inconclusive improvement in the quality of life probably owing to the differing scoring systems and timelines during which the KCCQ scores were re-measured.⁹⁸⁻¹⁰¹

Worsening renal function was likewise significantly reduced with the use of SGLT2 inhibitors compared to placebo, improving renal outcomes by slowing down progression.⁹⁸⁻¹⁰¹ The pooled treatment effects revealed consistent benefits regardless of age,

sex, diabetes status, co-administration with ARNI, and baseline renal function. There were no reported significant adverse events like volume depletion, fractures, or drug discontinuations due to side effects. However, there was a significant increase in genital infections.^{97,100}

A cost-utility study was done locally which showed that the Incremental Cost-Effectiveness Ratio (ICER) was below the threshold of PHP 180,500, and therefore, considered cost-effective therapy.¹⁰² On March 7, 2023, HTAC recommended the inclusion of dapagliflozin in the Philippine National Formulary.¹⁰³

13. Among adult Filipinos diagnosed with chronic heart failure with reduced ejection fraction (HFrEF) at the outpatient clinic, what is the effect of a timely referral to a cardiovascular specialist on the incidence of cardiovascular mortality, worsening heart failure, and heart failure-related hospitalization, and on quality of life?

RECOMMENDATION 13. Among adult Filipinos with chronic HFrEF at the outpatient clinic, we **suggest** referral to higher levels of care (i.e. secondary or tertiary care levels) for patients with high risk features (i.e., *older age, lower BMI, lower SBP, NYHA Class III or IV, presence of pulmonary or peripheral congestion, third heart sound, aortic stenosis, atrial fibrillation, peripheral vascular disease, renal dysfunction, and absence of an implantable cardioverter defibrillator (ICD)*) and/or recurrent hospitalizations (i.e., *2 or more hospitalizations in the past year*). (**LOW certainty of evidence, WEAK recommendation**)

Key Findings: No studies directly address referral timeliness, but two factors support appropriate referral : *high-risk features and the benefits of multidisciplinary team (MDT) care*. Guidelines recommend referral for patients with high-risk features,^{4,67} based on evidence that MDT care¹⁰⁴⁻¹⁰⁶ reduces mortality and hospitalizations. However, most of this data came from post-hospitalization trials. Predictors of higher mortality include advanced age, low BMI and BP, advanced NYHA class, congestion, arrhythmias, valvular disease, renal dysfunction, and prior HF hospitalizations.^{106,107} Outpatient MDT studies showed trends toward fewer hospitalizations¹⁰⁸⁻¹¹¹ and better quality of life but were done in systems with strong referral pathways and not in Filipino populations. In the Philippines, government facilities have a tiered referral system from lower-level facilities to Level 2 (intermediate cardiovascular care) and Level 3 (specialty cardiovascular centers).¹¹² HF MDTs typically include a cardiologist or HF specialist, a specialist nurse, and collaborate with primary care, rehabilitation, tertiary, and palliative services.

Consensus Issues: The panel members considered timely referral based on the urgency and importance of higher-level care considering the higher risk clinical profile of some patients with HF and potentially worse prognosis if not referred. The panel also recognizes that access to MDT-based heart failure care remains limited in the Philippines.

14. Among adult Filipinos diagnosed with chronic heart failure with reduced ejection fraction (HFrEF) at the outpatient clinic, what is the effect of palliative care on quality of life and on the incidence of worsening heart failure, heart failure-related hospitalization, and cardiovascular mortality?

RECOMMENDATION 14. Among adult Filipinos diagnosed with chronic HFrEF, NYHA class III or IV, at the outpatient clinic, we **suggest** early integration of palliative care for holistic management. (**LOW certainty of evidence, WEAK recommendation**)

Key Findings: Palliative care is an approach that improves the quality of life of patients and families through the prevention and relief of suffering, and may be instituted in the early stages of the disease.¹¹³ A palliative care team may consist of family medicine–palliative care specialists, general cardiologists, HF specialists, nurses, counselors, and social workers.

Five RCTs showed that palliative care intervention was associated with a significant reduction in the number of rehospitalizations and an improvement in the quality of life (QOL) measure using the KCCQ or the McGill QOL questionnaire.^{114–118} Four RCTs did not show any benefit for mortality within a period of three to six months.^{113–116} Only one RCT reported a reduction in the worsening of HF symptoms but was not statistically significant.¹¹⁶

Consensus Issues: A concern was raised regarding the readiness of the present palliative care specialists to cater to HF patients. The DOH responded to this need for availability of palliative care services by issuing Administrative Order (AO) 2015-0052. This aimed to facilitate the implementation and institutionalization of palliative and hospice care in the country.¹¹⁹

DISCUSSION

The cascade algorithm aims to help primary care physicians apply the guideline recommendations in managing patients with suspected or confirmed HF by emphasizing specific steps that need to be considered for each key decision checkpoint (See Figure 1). It begins with the *first decision checkpoint* in the algorithm. This serves as the initial assessment of the clinical likelihood of HF in patients presenting with dyspnea based on signs and symptoms suggestive of the condition (Clinical Question 1). The *second key decision checkpoint* is determining the presence of pulmonary and/or systemic congestion (suggested particularly by PND and elevated JVP). In this situation, the clinician is advised to consider diuretic therapy and manage any identified co-morbidities so as interventions not be unnecessarily delayed in the absence of confirmatory laboratory tests. After the issue of congestion is settled, selected laboratory tests (Clinical Questions 2 to 6) can be requested to support the diagnosis (BNP/NTproBNP, chest X-ray, 12-lead ECG, 2DED) and provide baseline data for therapeutic guidance (serum electrolytes, creatinine). Confirmation of the diagnosis through laboratory testing represents the *third decision checkpoint*. Since this CPG puts

the spotlight on HFrEF, ejection fraction determination (*fourth key decision checkpoint*) with 2DED will greatly aid the clinician in classifying HF and choosing the most appropriate and evidence-based pharmacologic therapies. Treatment of patients with HF includes nonpharmacologic strategies (Clinical Question 7) such as lifestyle modifications (fluid and sodium restrictions) as well as pharmacologic interventions (Clinical questions 8-12) or medications (ARNi/ACE inhibitor/ARB, beta blocker, MRA, SGLT2i). The final part of the cascade deals with clinical practice patterns (Clinical questions 13-14). The *last decision checkpoint* is ascertaining advanced heart failure (e.g. those with recurrent hospitalizations, those refractory to certain treatments, and those requiring devices) and the need for referral to higher levels of care (e.g. Level 2 or Level 3 hospitals equipped to deliver cardiovascular care) as well as palliative care.

Successful implementation requires widespread dissemination, education, and impact monitoring, with specialty societies and training institutions playing key roles. Inclusion of recommended medications in the national formulary, and ensuring their availability in health facilities, is essential to improve access and adherence. Limited access to HF clinics and cardiac rehabilitation remains a challenge. The guideline promotes coordination between primary care and cardiologists and supports establishing HF clinics for complex cases. The HFPCPG task force also hopes that the inclusion of palliative care in the guidelines would encourage further capacity-building for the care of HF patients and for the DOH to provide more training opportunities for primary care physicians in basic palliative care. An equitable approach is needed to ensure access to diagnostics and treatments, especially in underserved areas, where many tests and medications remain unavailable. Key facilitators include increased awareness, affordable evidence-based options, and incentives for adherence. Strong leadership from the DOH, in collaboration with national agencies, medical societies, and local health units, is crucial. Implementation should be monitored through metrics or rapid assessments to track adherence and clinical outcomes over time.

RESEARCH GAPS

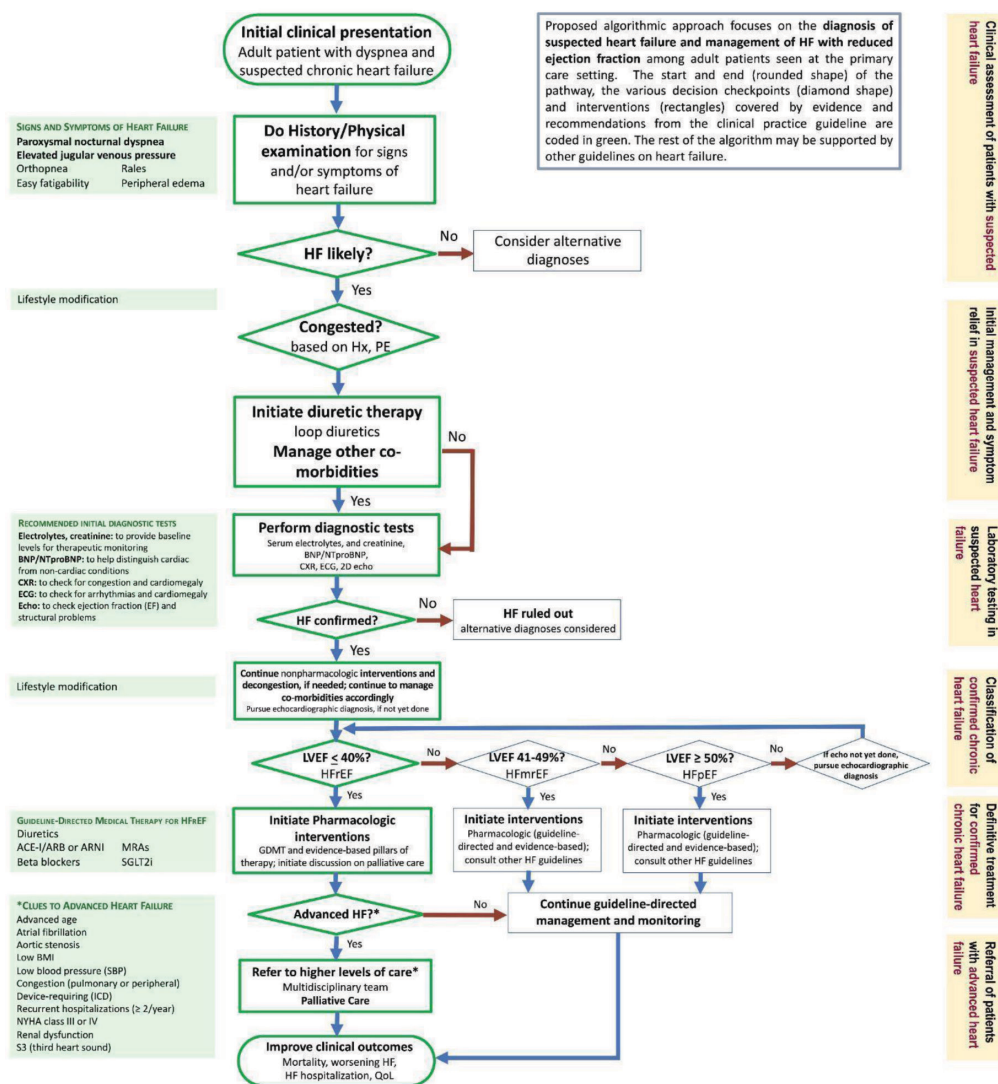
Key evidence gaps remain, including the lack of local studies on the accuracy of HF signs and symptoms in primary care, and the accuracy, cost-effectiveness, and prognostic value of chest X-ray. Data on 12L ECG utility, availability, and physician proficiency as well as role of point-of-care 2D echo are also limited. Evidence is sparse on the prognostic value of electrolytes and creatinine, optimal sodium and fluid restriction in stable patients, loop diuretic dosing with newer therapies, timely referral to multidisciplinary teams, and early integration of palliative care. Future work should prioritize developing an evidence-based national HF pathway with monitoring tools, updating epidemiological data across heart failure subtypes, and conducting economic and budget impact analyses to guide resource allocation and PhilHealth coverage. Performance metrics for HFrEF management, including GDMT adherence, timeliness, and referrals, should be assessed. Research on precision medicine may also help inform future updates.

CONCLUSION

The Heart Failure Task Force developed 19 recommendations and one good practice statement on the diagnosis and management of chronic HFrEF among adult Filipinos seen by primary care physicians in the outpatient clinic. Comprehensive history taking, physical examination, and monitoring are essential in the evaluation of patients suspected or confirmed to have HF by all primary care providers, regardless of their geographic or logistical setting. The unavailability or inaccessibility of recommended diagnostic tests, medications,

and services in selected areas in the country is a real-world concern that must be carefully addressed by concerned policy-makers and stakeholders at the local and national levels. Finally, this CPG does not necessarily supersede the various stakeholders' values, settings, and circumstances. Although this CPG is intended to guide administrators in setting the general direction of health policies for the general population, it should not be the sole basis for reinforcing, recreating or abolishing certain health practices and procedures linked to the care of patients with heart failure.

Algorithmic approach to the Diagnosis and Management of HFrEF Heart Failure with Reduced Ejection Fraction (HF Cascade) for the Primary Care Physician



Algorithms are made to guide physicians in treating clinical conditions. But they should not supplant sound clinical and practical judgement by each and every physician.

Philippine Clinical Practice Guidelines on the
Diagnosis and Management of Heart Failure
with Reduced Ejection fraction
for Primary Care Physicians



Figure 1. Heart Failure Cascade Algorithm

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