

1. Screening-Diagnosis

Recommendation 1: Diagnostic tests Plasma BNP and N-terminal pro-BNP (I)

For the screening and diagnosis of Heart Failure, the general practitioner and healthcare professionals in Primary Health Care, are recommended except the sign and symptoms and electrocardiogram (EKG), to perform plasma BNP or NT-pro BNP measurements which have high diagnostic accuracy based on age, gender, BMI and renal function.

Level of Evidence: I

Recommendation 2: Diagnostic tests - echocardiography (I)

All patients with symptoms indicating possible heart failure, should be referred straight away for echocardiography (ECG).

Level of Evidence: I

Recommendation 3: Population for diagnosis of heart failure (I)

The diagnostic tests BNP and N-terminal pro-BNP should be considered for population at risk (gender, dyspnoea, presence/absence of ankle oedema) who are using the structures of primary health care.

Level of Evidence: I

2. Therapeutic Options (Interventions) in Primary Health Care

Recommendation 4: Pharmacological – Angiotensin Converting Enzyme Inhibitor (ACEI) and Beta-Blockers (II)

All patients with asymptomatic or symptomatic systolic LV dysfunction should be treated with ACEIs and Beta-Blockers, unless they have intolerance to any of the active substances of those drugs.

Level of Evidence: II

Recommendation 5: Pharmacological - Angiotensin II receptor antagonists (II)

Angiotensin II receptor antagonists (ARB) are recommended as an alternative for patients who do not tolerate ACEIs due to kinin side effects (e.g. cough).

Level of Evidence: II

Recommendation 6: Pharmacological - Digoxin (III-1)

Digoxin may be considered for patients with no problems with renal function and with advanced symptoms CHF (NYHA III and IV) due to LV systolic dysfunction.

Level of Evidence: III-1

Recommendation 7: Pharmacological - Diuretics (III-2)

Diuretics are recommended for the relief of congestive symptoms and fluid retention in patients with heart failure NYHA II-IV.

Level of Evidence: III-2

Recommendation 8: Pharmacological - Aldosterone receptor blockade with spironolactone (II)

Aldosterone receptor blockade with spironolactone is recommended for patients with severe symptoms (NYHA III and IV), in addition to appropriate doses of ACEIs and diuretics, when GFR>30ml/m and serum potassium < 5 mEq/L.

Level of Evidence: II

Recommendation 9: Pharmacological - Aldosterone blockade with eplerenone (II)

Aldosterone blockade with eplerenone should be considered for systolic heart failure patients who have mild symptoms (NYHA Class II), despite appropriate doses of ACEIs and beta-blockers, when GFR>30mL/m and serum potassium < 5 mEq/L and postinfarction left ventricular dysfunction.

Level of Evidence: II

Recommendation 10: Non Pharmacological – Share decision making (II)

General practitioners and health care professionals in Primary Health Care, are recommended to fully inform patients with heart failure and their families, in order to choose the appropriate therapy, according to the values and preferences of the patient and the medical evidences.

Level of Evidence: II

Recommendation 11: Non Pharmacological - aerobic exercise (II)

Regular aerobic exercise (3-5 times a week for 30-60 min) is recommended for patients with heart failure NYHA I-III without arrhythmias and ischemia in order to improve functional capacity, symptoms.

Level of Evidence: II

Recommendation 12: Non Pharmacological - Dietary sodium (III-1)

The daily dietary sodium intake is recommended to be less and individualizing case by case.

Level of Evidence: III-1

Grade of Recommendation: A

Recommendation 13: Non Pharmacological - Fluid intake (IV)

The daily fluid intake is recommended to be limited to 1.5 L with mild to moderate symptoms (NYHA II and III) and 1 L in severe cases (NYHA IV), especially with coexistent hyponatraemia when hypovolemia has been dismissed.

Level of Evidence: IV

Recommendation 14: Non Pharmacological - Smoking (IV)

Smoking is discouraged for all patients with heart failure.

Level of Evidence: IV

Grade of Recommendation: A

Recommendation 15: Non Pharmacological - Alcohol (IV)

Alcohol intake is recommended to be avoided or not exceed 10–20 g per day (one to two standard drinks) except patients with a history of alcoholic cardiomyopathy.

Level of Evidence: IV

Grade of Recommendation: A

Recommendation 16: Non Pharmacological - Obese patients (III-2)

Obese patients (BMI \geq 30) should be advised to lose weight, in order to improve physical activity tolerance and quality of life.

Level of Evidence: III-2

Grade of Recommendation: A

Recommendation 17: Non Pharmacological – Travel (IV)

High-altitude destinations are recommended to be avoided for patients with heart failure, and when travelling to very humid or hot climates fluid status should be carefully monitored.

Level of Evidence: IV

Recommendation 18: Non Pharmacological - sexual activity (IV)

For patients with severe heart failure (NYHA III and IV), personal or family physician are recommended to discuss patient's sexual activity.

Level of Evidence: IV

Recommendation 19: Non Pharmacological - Fish oil (III-1)

Patients are recommended to consume foods rich in Fish oil (n-3 polyunsaturated fatty acids) especially when heart failure concerns patients after acute myocardial infarction (AMI).

Level of Evidence: III-1

3. Health professionals in primary care and management of heart failure

Recommendation 20: Nurse (III-1)

The nurse, who works in primary health care, in cooperation with GP or physician in primary health care ought to take part in the design and health care management of the patient (after training).

Level of Evidence: III-1

Recommendation 21: Dietician - Nutritionist (III-2)

The dietician – nutritionist, who works in primary health care, is recommended to lead a management program for limited dietary sodium intake and for monitoring the body weight.

Level of Evidence: III-2

Recommendation 22: Physiotherapist (I)

The physiotherapist who works in primary health care is recommended to plan and advice people an appropriate exercise program with specific recommendations on the type, the session and the intensity of exercise.

Level of Evidence: I

Recommendation 23: Psychologist (IV)

The psychologist, who works in primary health care, in cooperation with other health care professionals in primary health care ought to assist in the screening of mental and cognitive disorders and provide the necessary assistance and support to end stage patients and their families.

Level of Evidence: IV

Recommendation 24: Social Worker (IV)

The social worker who provides services in primary health care is recommended to advice/refer patients with HF in community programs.

Level of Evidence: IV

4. Prevention

Recommendation 25: Prevention (IV)

In patients with heart failure the following are recommended: weight loss for obese patients, smoking cessation, limiting alcohol consumption, physical exercise and a healthy diet.

Level of Evidence: IV

Recommendation 26: Prevention (IV)

Patients with hypertension, hyperlipidemia, diabetes mellitus and coronary artery disease (including acute myocardial infarction), are recommended to use medication combined with a healthy lifestyle.

Level of Evidence: II

Recommendation 27: Vaccines and Heart Failure (III-2)

In patients with heart failure is recommended the check of the vaccine coverage of adults which is suggested by the National Program of Vaccination with emphasis on influenza, pneumococcal disease.

Level of Evidence: III-2

5. Referral

Recommendation 28: Valve Disease, Diastolic Dysfunction or any other cause (IV)

Patients with heart failure after the diagnosis are necessary to be referred to cardiologist or/and hospital in collaboration with general practitioner, when HF is ascertained due to valve disease, diastolic dysfunction or any other cause.

Level of Evidence: IV

Recommendation 29: Comorbidities (IV)

Patient with heart failure are recommended to be referred to cardiologist or/and hospital when coexists: cachexia, anemia, disorders of sleep / sleep apnea and renal dysfunction.

Level of Evidence: IV

Recommendation 30: Angina, atrial fibrillation or other symptomatic arrhythmia (IV)
Patients with heart failure are recommended to be referred to cardiologist or/and hospital if they experience symptoms of ischemia, atrial fibrillation or other rhythm disturbances and conduction disorder.

Level of Evidence: IV

Recommendation 31: Pregnancy (IV)

Patient with heart failure are recommended to be referred to cardiologist or/and hospital when they are women who are planning a pregnancy or who are pregnant.

Level of Evidence: IV

Recommendation 32: Severe heart failure (IV)

The general practitioner or physician who provides services in primary health care ought to exam the referral of patients with severe HF NYHA IV to cardiologist or/and hospital.

Level of Evidence: IV

Recommendation 33: Not respond to treatment (IV)

Patients with heart failure are recommended to be referred to cardiologist or/and hospital when non-responsive to therapy and continue to present obvious signs-symptoms, as discussed in the current guideline.

Level of Evidence: IV

6. Applicability

Recommendation 34: Multidisciplinary care programmes (III-2)

For effective management of heart failure in primary health care, it is recommended to have multidisciplinary care programmes at all structures of the healthcare system.

Level of Evidence: III-2

Recommendation 35: Development of Information and Communication Technology (III-2)

For this guideline to be effective, the utilization of appropriate and accessible technology in primary health care is recommended.

Level of Evidence: III-2

Recommendation 36: heart failure education plan for health professionals in primary health care (III-2)

The development, implementation and evaluation of training programs focusing in prevention and treatment of heart failure which refer to healthcare professionals in primary health care with the collaboration scientific expert authorities and NGOs is recommended.

Level of Evidence: III-2

Figure 2: Algorithm for the management of Heart Failure in Primary Health Care

