CMScript
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Member of a medical scheme? Know your guaranteed benefits!
CMS Council for Medical Schemes

Cardiac (Heart) Failure

Heart Failure is classified under the diseases affecting the heart and blood vessels known in medical terms as Cardiovascular Diseases (CVDs). CVDs are the leading cause of disabilities and deaths worldwide, accounting for 31% of total global deaths. Africa is at present a major contributor to the global burden of CVDs. In 2013, 5.5% of all the global CVD-related deaths were in Africa. In South Africa, CVDs are the leading cause of death after HIV/AIDS. More South Africans die of CVDs than of all the cancers combined. CVDs are responsible for almost 1 in 6 deaths (17.3%) in the country.

What is Cardiac (Heart) Failure?

Heart failure is a serious condition where the heart struggles to pump enough blood and oxygen to the rest of the body to support other organs in the body. This can be as a result of the heart not being able to pump enough blood (caused by left-sided heart failure or systolic heart failure), or the heart not being able to fill with enough blood (caused by right-sided heart failure or diastolic heart failure), or as a result of both incidents. The condition affects adults and children alike, however the symptoms and treatments differ for the two groups.

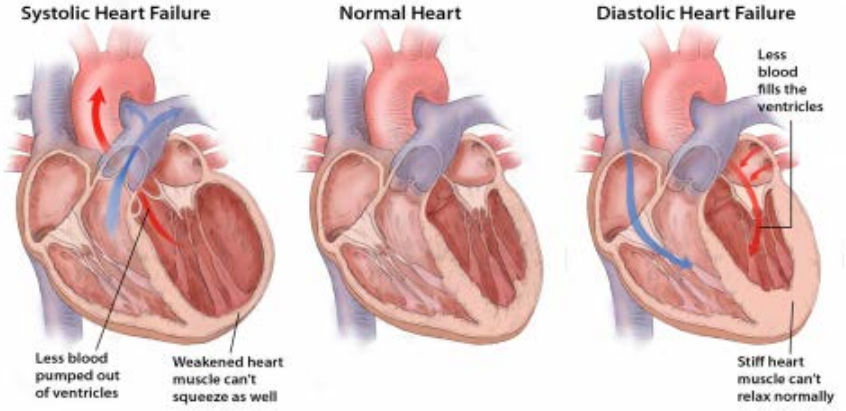

Figure 1: Illustration of different types of Heart Failure

What are the signs and symptoms of the Heart Failure?

Symptoms may vary depending on the side of the heart that is affected, but generally include some or all of the following:

- Swelling of feet, ankles, legs, abdomen and liver
- Distended neck veins
- Shortness of breath when lying down or on exertion
- Fatigue (feeling tired or weak)
- Dry cough (especially at night)
- Excessive weight gain from excess fluids

In children, the signs and symptoms may vary depending on the age of the child. Children can have the following signs and symptoms:

- Difficulty feeding
- Sweating when feeding
- Fast breathing
- Crying or shortness of breath when lying down
- Failure to grow

Risk factors for developing Heart Failure

Conditions that cause too much strain on the heart, or result in damage of the heart muscle, can lead to heart failure. These include any of the following:

- Coronary Heart Disease (CHD) - the arteries that supply oxygen-rich blood to the heart muscle is known as the coronary arteries. Plaque can build up in these arteries and cause a decrease in blood flow. A blood clot can form where plaque causes damage to the walls of these arteries, which can result in partial or total blockage of blood flow to a section of the heart muscle.
- High blood pressure - a consistently high force at

which the blood pushes against the walls of the blood vessels.
- Diabetes Mellitus - uncontrolled blood sugar.
- Arrhythmia - an abnormal heart rhythm.
- Cardiomyopathy - a disease of the heart muscle.
- Congenital heart disease – inborn problems of the heart
- Previous heart attack - a heart attack occurs when blood flow to the heart muscle is blocked resulting in damage to the heart.
- Drug abuse - specifically abuse of substances such as alcohol or Cocaine.
- Cancer treatments - such as chemotherapy and radiation.
- Heart valve disease - damaged or diseased heart valves.
- Myocarditis - inflammation of the heart muscle caused by a virus, bacteria or certain conditions.
- Thyroid disease - thyroid is essential in producing thyroid hormones and maintaining your metabolism. Over-functioning of this gland can lead to heart disease.
- Human Immune Deficiency Virus (HIV)/ Acquired Immune Deficiency Syndrome (AIDS) - virus that causes weakened immune system.
- Anaemia - a lack of oxygen-carrying haemoglobin or red blood cells in your blood.
- Sepsis - a life-threatening condition caused by your body's own response to a severe infection from harmful bacteria and their toxins.
- Aging - the risk for developing heart failure increases after the age of 65 years.
- Obesity - is a condition where there is excess body fat either due to genetic or environmental factors. This increased the risk for heart failure.

How is Heart Failure diagnosed?

Baseline investigations recommended in clinical assessment are:

- Pro-BNP/BNP – this is a blood test used to diagnose and evaluate the severity of heart failure. However, it is not routinely required.
- An electrocardiogram (ECG) – is the most useful investigation to confirm the presence of underlying structural heart disease. It is I vital screening tool.
- Chest x-ray – is needed to look at the size and shape of the heart, congestion and the presence or absence of abnormalities in the chest.
- Echocardiogram - this test is recommended for all patients with a new diagnosis of Heart Failure (HF). This investigation confirms the type of structural heart disease present and provides information on the heart function.

Advanced investigations include:

- Cardiovascular Magnetic Resonance Imaging (MRI) – to look at the heart structure, size and function
- Cardiac computed tomography – is an imaging test where a dye may be used to look at the structure of the heart, blood flow in the heart muscle and the big vessels.
- Coronary artery angiography – helps to rule out blockage in the blood vessels supplying blood to the heart muscle.
- Nuclear medicine imaging – this test is done to evaluate the heart function and blood flow to the heart muscles.

Classification of heart failure

The categorization below is based on the New York Heart Association:

Class	Description
I	Patient has no limitation when performing ordinary physical activity.
II	Comfortable at rest, ordinary activity results in symptoms (slight limitation).
III	Comfortable at rest, less than ordinary activity results in symptoms (marked limitation).
IV	Symptomatic at rest, increased discomfort with any physical activity.

Prevention

- A healthy diet plan, consult a Dietitian where necessary to get advise on the correct eating plan
- Reduce low salt and sugar intake
- Maintain a healthy body weight
- Adopt a physically active lifestyle
- Avoid smoking and excessive alcohol intake
- Follow-up with the doctor as recommended
- Take medication as prescribed

Management

The goals of treatment are to improve quality of life and functional capacity; prevent recurrent hospitalisation; and improve survival.

Medical therapy:

This treatment option is mainly based on the following:

- Disease-modifying medications which can be Angiotensin Converting Enzyme (ACE) inhibitors, Beta-blockers and Mineralocorticoid receptor antagonists.

- Symptomatic therapies, such as diuretics and digoxin, that relieve congestion, reduce hospitalisation and improve quality of life course of disease and improving survival.

Device interventions

Half of the deaths in patients with HF, especially those with milder symptoms, occur suddenly. Prevention of sudden death using appropriate devices is therefore an important goal in HF.

Implantable Cardioverter Defibrillator (ICD)

With regards to the primary and secondary prevention of sudden cardiac death, an ICD is recommended in patients where specific medical criteria is met.

Cardiac Resynchronisation Therapy (CRT)

Cardiac Resynchronisation Therapy (CRT), also referred to as biventricular pacemaker is indicated in patients where the specified medical criteria are met.

What is covered under the Prescribed Minimum Benefit level of care?

Heart failure is covered as part of the prescribed minimum benefits (PMBs) conditions, under Diagnosis and Treatment Pair (DTP) code 204E. This DTP refers to Cardiac failure: acute or recent deterioration of chronic cardiac failure. Heart failure is also listed in the Chronic Disease List (CDL) of the PMBs.

The treatment component specified for this condition according to the PMB Regulations is Medical treatment only. The CDL algorithm for this condition is shown in the diagram on page 4.

The Implantable Cardioverter Defibrillator (ICD) and Cardiac Resynchronisation Therapy (CRT devices constitute PMB level of care for the alleviation of symptoms of heart failure, in instances where the specified medical criteria has been met.

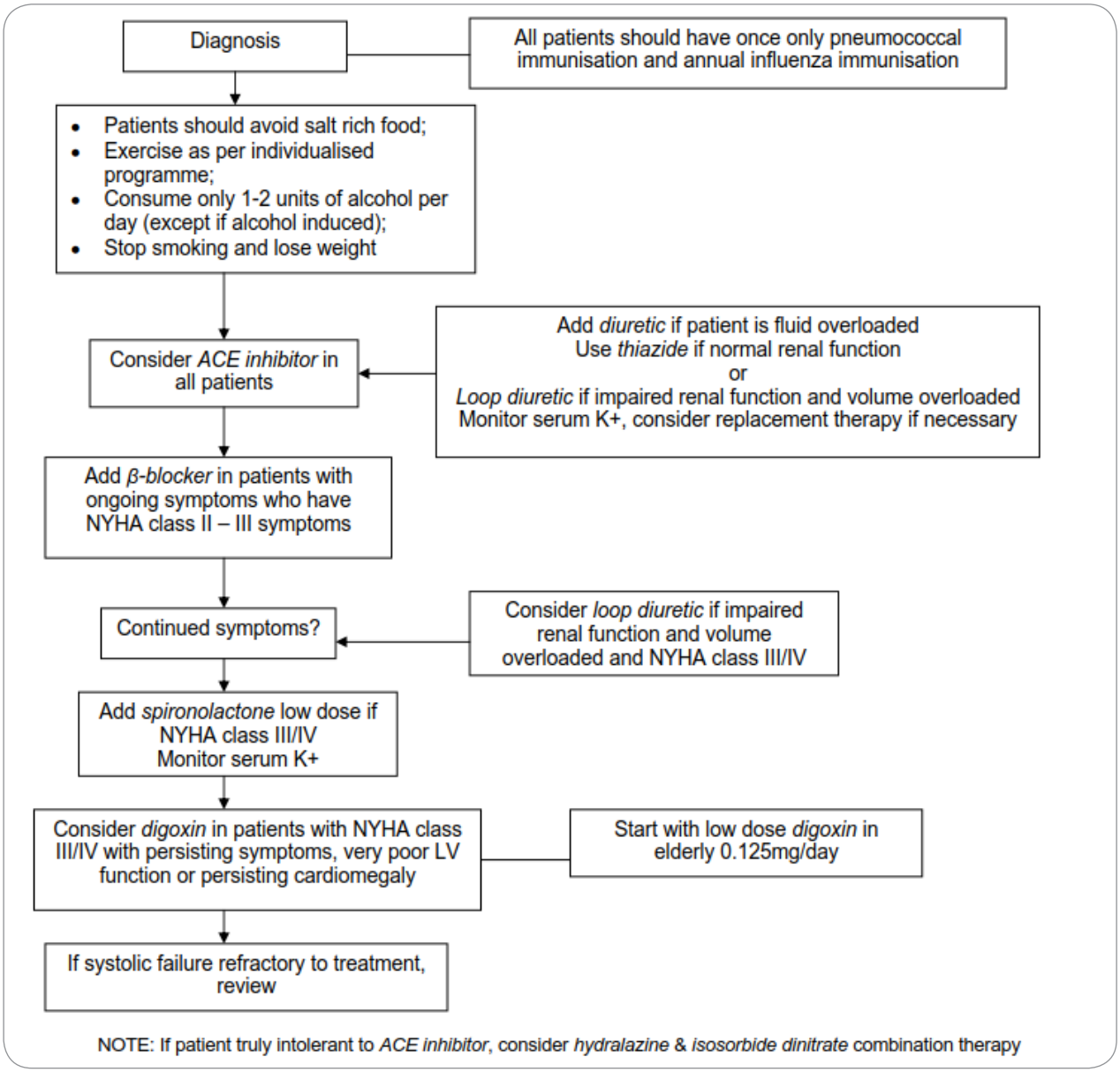

Figure 2: Therapeutic Algorithms for Chronic Conditions: Department of Health (Source: Medical Schemes Act 131 of 1998)

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WHAT ARE PRESCRIBED MINIMUM BENEFITS?

Prescribed Minimum Benefits (PMBs) are defined by law. They are the minimum level of diagnosis,treatment, and care that your medical scheme must cover – and it must pay for your PMB condition/s from its risk pool and in full. There are medical interventions available over and above those prescribed for PMB conditions but your scheme may choose not to pay for them. A designated service provider (DSP) is a healthcare provider (e.g. doctor, pharmacist, hospital) that is your medical scheme's first choice when you need treatment or care for a PMB condition. You can use a non-DSP voluntarily or involuntarily but be aware that when you choose to use a non-DSP, you may have to pay a portion of the bill as a co-payment. PMBs include 270 serious health conditions, any emergency condition, and 25 chronic diseases; they can be found on our website

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Contact information:
information@medicalschemes.com
Hotline: 0861 123 267
Fax: 012 430 7644

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