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From the desk of the Specialist Physician – a message of support to colleagues

GP Bulletin #7: Heart Failure with Reduced Ejection Fraction (HFrEF)

"IF YOUR PATIENT HAS A HEART SONAR WITH EJECTION FRACTION (LVEF) < 40 % THE FABULOUS^4 SHOULD BE PRESCRIBED TO SAVE A PATIENT'S LIFE – HEFSSA"

After the Echo – The FABULOUS^4 Pillars That Save Lives

After the Echo – The FABULOUS^4 Pillars That Save Lives

A New Era in Heart Failure

In the past, a diagnosis of HFrEF (EF <40%) carried a 5-year mortality of **up to 75%**, especially before modern therapies were available.

But this has changed.

With modern evidence-based therapies — especially **ARNI class medications** — many patients now stabilise or even improve, often avoiding heart transplantation altogether.

In South Africa, **sacubitril/valsartan (ARNI)** is a **Prescribed Minimum Benefit (PMB)** condition — most medical aids are obliged to cover it (e.g. Vimada®). If the patient has enough blood pressure to tolerate it, **ARNI can give them their life back**.

When the Echo Confirms HFrEF: What to Do

Once the diagnosis is confirmed, your role as GP is to stabilise and initiate the Six Pillars of HFrEF Management.

NYHA Functional Classification – Know the Classes

Include NYHA class in every referral – it guides ICD, CRT, transplant and therapy decisions

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The FABULOUS^4 Pillars of HFrEF Therapy

1. ACE Inhibitor or ARB → Transition to ARNI if Possible

- Start with ACEi (e.g. enalapril 2.5 mg BD → 10–20 mg BD) or ARB (e.g. valsartan)
- Titrate every 2–4 weeks if BP allows
- Transition to **ARNI (e.g. sacubitril/valsartan / Vimada®)** once patient is stable and SBP >100 mmHg
- If patient is still symptomatic on the Fabulous4 then the ACE/ARB should be changed to an ARNI (Vimada/Entresto)
- Ensure 48 hour washout period if switching from ACEi (but not ARB)
- **PMB-covered** and life-extending

2. Alpha/Beta Blocker – Carvedilol Only

- **Do not use atenolol, bisoprolol, or propranolol** in HFrEF
- Use **Carvedilol**, the preferred alpha-beta blocker
- Start: **3.125 mg BD orally**, uptitrate monthly to **max 25 mg BD**
- Hold uptitration if **HR <65 bpm** or hypotension occurs

3. Mineralocorticoid Receptor Antagonist (Spironolactone)

- Start **12.5–25 mg OD**
- Reduces mortality and hospitalisation
- Monitor **K+ and renal function**

4. SGLT2 Inhibitor (Empagliflozin / Dapagliflozin)

- Use even in **non-diabetics**
- As shown in DAPA-HF and EMPEROR-Reduced trials:
- **Reduces all-cause mortality by ~30%**
- **Reduces CV mortality by ~30%**
- **Reduces hospital admissions** for heart failure
- Minimal BP effect – very well tolerated

Additional Support Therapy of HFrEF

5. IV Iron for Iron Deficiency

- Check ferritin and TSAT in all HFrEF patients
- Treat if:
  - Ferritin <100, or
  - Ferritin 100–300 **with** TSAT <20%
  - Use **IV iron only** (e.g. iron sucrose, ferric carboxymaltose)

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6. Thiamine (Vitamin B1) in Alcohol Users

- If any history of alcohol use, give **thiamine 100 mg BD orally**
- Prevents **wet beriberi** and alcohol-related cardiomyopathy
- Safe, cheap, and life-preserving

Sample Initiation Script for Stable Patients

- Enalapril 2.5 mg BD → uptitrate
- Carvedilol 3.125 mg BD → uptitrate monthly
- Spironolactone 25 mg OD
- Empagliflozin 10 mg OD
- Add IV iron and thiamine if indicated

⚠ *Check K+, eGFR, BP before initiation and after titration*

Additional Causes – Don't Miss the Reversible Ones

- **Ischemic (hibernating) myocardium** → Send for angiogram
- **HIV-related cardiomyopathy** → Always check HIV
- **Peripartum / Postpartum cardiomyopathy** → In late pregnancy or up to 5 months postpartum
- **Tachycardia-induced** → AF, SVT, hyperthyroidism
- **Viral myocarditis** → Often post-viral, young patients
- **Cor Pulmonale** → Obesity + OSA – very common

⚠ Use with Caution: Digoxin

- May help in AF with poor rate control or persistent symptoms where you struggle to get the patient on the FABULOUS^4 Pillars
- **Start low**: 0.125 mg OD or 0.25 mg Mon–Fri only
- **Avoid 0.25 mg daily** in elderly (>65 years)
- Aim for serum digoxin level **<0.7 ng/mL**
- Monitor: confusion, bradycardia, nausea, visual changes

Use only if monitored and clearly beneficial

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Follow-Up and Referral Guidance

Routine Follow-Up

- Review **every 3–6 months**
- **6-12 monthly echo** is indicated
- Monitor: NYHA class, weight, pulse, BP, creatinine, K+
- Reassess therapy response and uptitrate where possible

When to Refer for ICD

- EF <35% after **≥3 months of optimal therapy**, and NYHA II–III

When to Refer for CRT

- EF <35%, **QRS >120 ms** (especially LBBB), and persistent symptoms

When to Refer for Heart Transplant

- Persistent NYHA III/IV symptoms despite full therapy
- Repeated fluid overload or admission
- Consider if unresponsive to meds or intolerant to up-titration

Always include NYHA class, medications and recent labs in referral

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Common Pitfalls in GP Management

- Continuing atenolol or propranolol in HFrEF
- Not initiating therapy early or titrating slowly
- Missing IV iron in symptomatic fatigue
- Forgetting HIV, ischemia, or alcohol-related causes
- Delaying ICD/CRT referral beyond 3 months

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Snapshot Summary for HFrEF GP Care

- Confirm EF <40% on echo
- Start ACEi/ARB + Carvedilol + MRA + SGLT2i
- Add IV iron and thiamine if indicated
- Reassess at 3 months
- Refer for ICD (EF <35%), CRT (QRS >120 ms), or transplant if needed
- Review every 3–6 months

> *📌 *This is a PMB condition – medical aids must cover guideline-directed therapy (e.g. ARNI/Vimada®)**

Optional High-Impact GP Tools

☑ "HFrEF Management in 5 Clicks" Checklist (for GP desk)

1. Confirm EF <40% on Echo

2. Start FABULOUS^4: ACEi/ARB + Alpha/Beta Blocker + Spironolactone + SGLT2 inhibitor

3. Check and treat iron deficiency

4. Check for alcohol use → Add thiamine

5. Plan follow-up & referral as needed

Disclaimer

All guidance is based on clinical best practice and current guidelines. Final treatment should be individualised, and specialist referral should not be delayed if patient condition is unstable or unclear.

Please be empowered to treat reduced ejection fraction heart failure patients effectively. If you need any more assistance do not hesitate to contact us.

Kind regards Dr. Freek Bester & Sanelle Bosch