HFrEF (LVEF <=40%) - Cardiology Clinic One-Page Management Guide

ACC/AHA/HFSA-aligned quick reference: initiate all 4 pillars early, reassess every 1-2 weeks as tolerated, and titrate toward target/max tolerated doses within ~3 months.

1) Confirm / Baseline

Dx: symptoms/signs of HF + LVEF <=40%. Stage C if symptomatic/previous symptomatic.
Initial review: etiology/ischemia, ECG, echo, BNP/NT-proBNP, CMP/BMP, Mg, CBC, TSH, iron studies, A1c/lipids, renal function, med causes (NSAIDs, diltiazem/verapamil, TZDs).
Volume: daily weights, sodium counseling, loop diuretic for congestion.

2) Start GDMT - Do Not Wait for Target Dose

Core 4: ARNI/ACEi/ARB + evidence-based beta blocker + MRA + SGLT2i.
Sequencing: low-dose all 4 generally better than maxing 1-2 first. MRA/SGLT2i have minimal BP effect. Defer BB start/up-titration until compensated/euvolemic. Mild eGFR dip alone is not automatic stop.

3) Follow-Up Cadence

New / post-discharge: clinic or phone within 7-14 days if feasible.
Titrate: every 1-2 weeks using BP/HR, symptoms, volume, BMP.
Labs: BMP/Mg after RAASi/ARNI/MRA/diuretic changes; closer if CKD/elderly/K issues.
Repeat echo: after >=3 months optimized GDMT for ICD/CRT decisions.

CORE 4 GDMT - INITIAL / TARGET DOSES + CLINIC PEARLS

Pillar	Common starting dose	Target dose	Use / monitor / avoid
ARNI preferred ACEi/ARB if ARNI not feasible	Sacubitril/valsartan 24/26 or 49/51 mg BID. ACEi washout: 36 hr.	97/103 mg BID	Monitor BP, Cr/eGFR, K. Avoid angioedema history, pregnancy, or concomitant ACEi. Consider ARB if ACEi cough/angioedema and ARNI not feasible.
Evidence BB metop succ / carvedilol / bisoprolol	Metop succ 12.5-25 mg daily Carvedilol 3.125 mg BID Bisoprolol 1.25 mg daily	Metop succ 200 mg daily Carvedilol 25-50 mg BID Bisoprolol 10 mg daily	Start/up-titrate when compensated and not markedly volume overloaded. Watch HR, BP, fatigue/dizziness, heart block, bronchospasm.
MRA spironolactone / eplerenone	Spironolactone 12.5-25 mg daily Eplerenone 25 mg daily	Spironolactone 25-50 mg daily Eplerenone 50 mg daily	Use if eGFR >30 and K <5.0. Check K/Cr after start and dose changes; discontinue if K cannot be maintained <5.5.
SGLT2i dapagliflozin / empagliflozin	Dapagliflozin 10 mg daily Empagliflozin 10 mg daily	Same - no titration	Benefit regardless of diabetes. Minimal BP effect; may reduce loop needs. Review genital/urinary infection risk, volume depletion, ketoacidosis risk; hold for major surgery/acute illness.

RENAL FUNCTION + POTASSIUM SAFETY AFTER GDMT/DIURETIC CHANGES

Check BMP: baseline; within 1-2 wk after ACEi/ARB/ARNI or loop change; within 1 wk after MRA start/titration, then monthly x3, then q3-4 mo if stable. **AKI definition:** Cr +0.3 mg/dL in 48 hr OR >=1.5x baseline in 7 days/oliguria. **RAASi/ARNI action threshold:** Cr rise <=30% usually acceptable; if >=30%, assess BP/volume, NSAIDs, contrast, dehydration, renal artery stenosis; reduce non-HF BP meds; if hypovolemic/overdiuresed reduce loop; recheck 5-7 days; if persistent, reduce/hold RAASi/ARNI and seek HF/nephrology input. **K 5.5-5.9:** verify/repeat, stop K supplements/salt substitutes/NSAIDs/trimethoprim; review diet; hold/reduce MRA first. **K 6.0-6.4:** same day review, hold RAASi/MRA, repeat quickly; consider binder/renal input. **K >=6.5, ECG changes, or acutely ill:** ED/hospital treatment.

Loop Diuretic + Congestion Plan

Purpose: symptom relief/decongestion; no proven mortality benefit. Use lowest dose that maintains euvolemia.
Every visit: weight trend, edema/JVP/rales, orthopnea/PND, BP, renal/K/Mg.
Call rules: +2-3 lb overnight or +5 lb/week, increasing edema/SOB, syncope, SBP <90 with symptoms, K >=5.5 or worsening Cr.
Conversions: furosemide 40 mg ~ torsemide 20 mg ~ bumetanide 1 mg.

When Core 4 Is Not Enough

Hydralazine/ISDN: add for self-identified African American patients with NYHA III-IV on optimal therapy; consider if RAASi/ARNI not tolerated due renal insufficiency/intolerance.
Ivabradine: sinus rhythm, LVEF <=35%, HR >=70 despite max tolerated BB.
Vericiguat: selected patients with recent worsening HF despite GDMT.
Digoxin: persistent symptoms/recurrent admissions; target low level 0.5-<0.9 ng/mL.

Device / Advanced HF Triggers

After >=3 mo optimized GDMT:
- ICD: LVEF <=35%, NYHA II-III, expected survival >1 yr.
- CRT: LVEF <=35%, LBBB, QRS >=150 ms, NYHA II-ambulatory IV; consider other qualifying pacing/QRS scenarios.

Refer HF specialist: recurrent HF admissions/ED visits, escalating diuretics, hypotension/GDMT intolerance, worsening renal/hyponatremia, RV failure/pulm HTN, ICD shocks, inotrope need, cachexia, uncertain etiology.

Visit checklist: NYHA | volume | BP/HR | weight trend | adherence/cost | labs BMP/Mg +/- BNP | ICD/CRT timing | comorbidities: CAD/AF/HTN/CKD/DM/OSA/iron deficiency/vaccines. Sources: 2022 AHA/ACC/HFSA HF Guideline; 2024 ACC Expert Consensus Decision Pathway for HFrEF; KDIGO AKI definition; Think Kidneys renal/K monitoring guidance. Clinic reference only - individualize to patient.