

GDMT Initiation and Titration Pathway

For Patients with HFrEF (LVEF ≤ 40%)

STEP 1:

Select initiation strategy:

1. Simultaneous initiation of all 4 classes OR
2. Start 2 classes at first visit and 1 class per subsequent visit until on all 4 classes OR
3. If on partial GDMT, initiate the rest of the 4 classes

- ✓ DO aim to reach target or maximally tolerated doses within 5 visits, every 2 weeks (by 3 months after diagnosis of HFrEF)
- ✓ DO titrate 1-2 medication(s) per visit and double the dose when up-titrating
- ✓ DO assess BP (sitting & standing), HR and change in symptoms and/or NYHA class every visit. Check NTproBNP if volume status uncertain
- ✓ DO check Na/K+/sCr/eGFR 1-2 weeks after initiating or titrating ACEi/ARB/ARNI or MRA (see page 2 for management guidance)
- ✓ DO seek specialist support if eGFR 20-30, K+ 5.0-5.5, SBP 90-95mmHg at initiation

✗ DON'T initiate a new medication if initiating parameters (STEP 2) are not met - reassess eligibility at next visit

✗ DON'T titrate ACEi/ARB/ARNI and MRA on same visit unless stable renal function and BP, and no hyperkalemia

STEP 2:

Ensure initiating parameters are met

ACEi/ARB/ARNI

SBP >95mmHg, K+ <5.0, eGFR >30

Beta Blocker

Patient euvoletic, SBP >95mmHg, HR >55

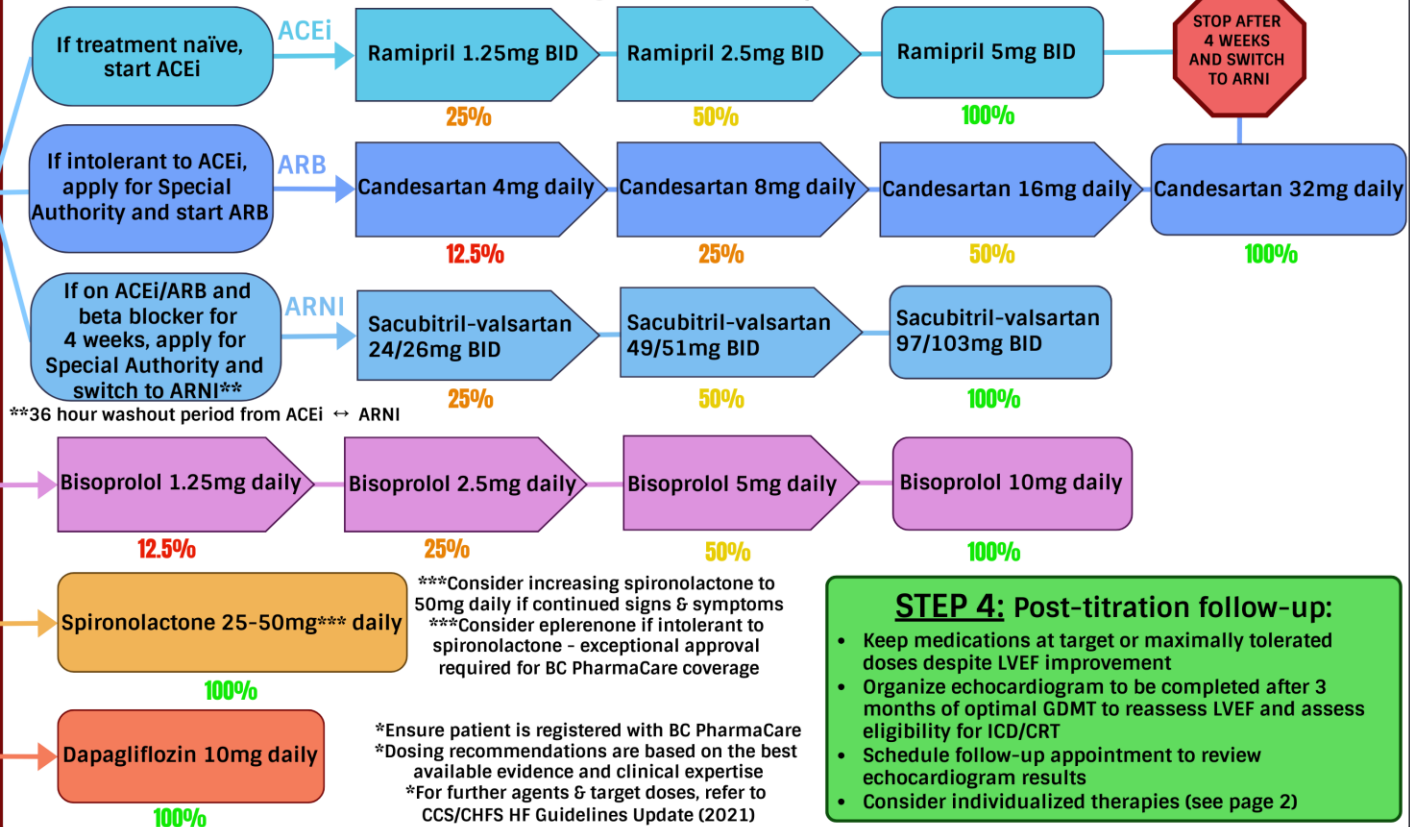
MRA

SBP >95mmHg, K+ <5.0, eGFR ≥30

SGLT2i

No Type 1 diabetes or prior ketoacidosis, and eGFR >20

STEP 3: Titrate to target or maximally tolerated doses*



STEP 4: Post-titration follow-up:

- Keep medications at target or maximally tolerated doses despite LVEF improvement
- Organize echocardiogram to be completed after 3 months of optimal GDMT to reassess LVEF and assess eligibility for ICD/CRT
- Schedule follow-up appointment to review echocardiogram results
- Consider individualized therapies (see page 2)

Hyperkalemia, Renal Dysfunction & Individualized Therapies

Management of Hyperkalemia			
Severity	Initial Management	Reassessing K+	Restarting and/or re-titrating ACEi/ARB/ARNI and/or MRA
Mild K+ 5.0-5.5 mmol/L	<ul style="list-style-type: none"> Continue ACEi/ARB/ARNI & MRA unless new & major increase in K+ If so, stop most recently added agent 	<ul style="list-style-type: none"> Routine measurement unless K+ has been increasing over time If ACEi/ARB/ARNI and/or MRA has been stopped, recheck within 72 hours 	<ul style="list-style-type: none"> When K+ decreases to within the patient's usual level, or < 5.0 mmol/L (whichever is higher), <u>and</u> Any concomitant condition contributing to recent changes is under control, <u>then</u> ACEi/ARB/ARNI and MRA should usually be reintroduced 1 at a time with intervening measurement of renal function & electrolytes
Moderate K+ 5.6-5.9 mmol/L	<ul style="list-style-type: none"> Notify MD/NP (if applicable) If on MRA, decrease MRA to half current dose* If not on MRA, decrease ACEi/ARB/ARNI to half current dose* <p>*Unless K+ increasing over time or major increase in K+</p> <ul style="list-style-type: none"> If so, stop most recently added agent 	<ul style="list-style-type: none"> Within 72 hours Repeated K+ >5.5: If on MRA, decrease ACEi/ARB/ARNI to half of current dose; If not on MRA, stop ACEi/ARB/ARNI Repeat measurement in 72 hours Subsequent repeated K+ >5.5: consider calcium or sodium polystyrene, or sodium zirconium cyclosilicate administration 	
Severe K+ >5.9 mmol/L	<ul style="list-style-type: none"> Notify MD/NP (if applicable) Contact patient to proceed to ED for clinical assessment & 12-lead ECG Treatment according to local protocol for serious hyperkalemia HOLD all ACEi/ARB/ARNI & MRA until reassessment 	<ul style="list-style-type: none"> Within 4-24 hours, based on local acute hyperkalemia protocol Repeat approximately 72 hours later 	
<p>For ALL hyperkalemic patients:</p> <ul style="list-style-type: none"> Reinforce K+ diet restriction Avoid other sources of K+ Ensure patient is not hypovolemic Review all medications & stop K+ supplements 			

Management of Renal Dysfunction	
If increase in sCr > 30% or decrease in eGFR > 30%	
<p>Consider:</p> <ul style="list-style-type: none"> Any new nephrotoxic drugs? Worsening HF? Co-morbidities (diabetes, dehydration, CKD)? 	<p>Review medications, assess volume status and notify MD/NP (if applicable)</p>

Post-Titration Considerations for Individualized Therapies
Ivabradine → If sinus rhythm, symptoms and HR > 77bpm on 3 consecutive visits by ECG or continuous monitoring despite treatment with GDMT, including target dose or maximally-tolerated dose of beta blocker
Hydralazine/Nitrate → If intolerant to ACEi/ARB/ARNI, or in Black patients on optimal GDMT
Digoxin → If suboptimal rate control for Afib, or persistent symptoms despite optimal GDMT
Vericiguat → If worsening symptoms and HF decompensation in the last 6 months despite optimal GDMT
ICD/CRT → If LVEF ≤ 35% when reassessed 3 months after GDMT titrated to target or maximally tolerated doses, and if patient is ambulatory with NYHA class I-IV - refer for ICD/CRT evaluation
Percutaneous Mitral Valve Repair (PMVR) → If symptomatic despite optimal GDMT and moderate-to-severe functional mitral regurgitation or greater - refer to a MitraClip/TEER Program
Referral for advanced HF therapies and/or referral for supportive/palliative care → If NYHA III/IV, advanced HF or high-risk markers (refer to CCS 2017 HF Guidelines)