Waitemata District Health Board

Best Care for Everyone

Guide for initiation and up-titration of ACE inhibitors for patients with heart failure

If initiating ACE inhibitor…

- Start with a low dose (see table over)
- Start only if:
  - Blood pressure at least 100mmHg systolic
  - Potassium no higher than 5.5mmol/L
  - Creatinine less than 250micromol/L or eGFR at least 50 (or seek specialist advice)

- Arrange to check potassium and creatinine **one week** after first dose
- Ask them to arrange another GP appointment at least two weeks after first dose
- Provide a Heart Failure Action Plan (see www.saferx.co.nz)

When up-titrating dose…

- Double dose at not less than two weekly intervals
- Aim for target dose or highest tolerated dose
- Make sure they have a biochemistry form to check electrolytes before next dose titration

Ask about:

- Cough – if troubling consider angiotensin receptor blocker (ARB)
- Hypotensive symptoms – consider reducing other blood pressure lowering medicines (eg diuretics), or dosing at night
- Angioedema – **STOP** the ACE inhibitor (consider ARB)
- Symptoms that may be exacerbated by a drug interaction eg NSAID

Up-titrate ONLY if:

Blood pressure at least 95mmHg

Potassium is no higher than 5.5mmol/L

- If potassium is between 5 – 5.9mmol/L – consider adjustments of potassium sparing medications or high potassium food and repeat electrolytes
- If potassium is above 5.9mmol/L – **STOP** ACE inhibitor and seek specialist advice

Creatinine is no more than 25% above baseline (or seek specialist opinion)

Note: During **initiation** of treatment an increase in creatinine up to 30% above baseline is acceptable (provided creatinine is no greater than 250micromol/L) and should stabilise within the first two months. Consider other medications that may affect renal function.

Important: *This is a general guide provided to assist clinicians with the management of heart failure Users of this guide must always consider current best practice and use their clinical judgement with each patient.This guide is not a substitute for individual clinical decision making.*

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Increase dose:

	Cilazapril	Lisinopril	Enalapril	Quinapril
Start dose	**0.5mg daily**	**2.5mg daily**	**2.5mg BD**	**2.5mg BD**
1st titration	1mg daily	5mg daily	5mg BD	5mg BD
2nd titration	2.5mg daily	10mg daily	10mg BD	7.5mg BD
3rd titration	**5mg daily**	**20mg daily**	**20mg BD**	**10mg BD**

Higher doses may be indicated for some patients (e.g. those with coexisting hypertension)

Explain:

- The benefits of ACE inhibitors – improving symptoms and mortality related to heart failure
- Symptoms should improve within a few weeks to a few months after starting treatment
- Adverse effects such as dizziness, cough should be reported
- Self-medicating with NSAIDs and salt substitutes should be avoided
- Where to go for more information; there are patient resources on www.healthnavigator.org.nz

Arrange:

- Potassium and creatinine to be checked **one week** after changed dose
- Another GP appointment at least two weeks after any dose increase

After reaching target dose or maximum tolerated dose…

- If they remain stable and have no medications changed then check biochemistry at each three monthly visit. Electrolytes should be repeated earlier:
  - In the presence of any illness that may alter biochemistry **OR**
  - If medications that increase the risk of adverse effects are added or increased eg NSAIDs, lithium, spironolactone

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