



Government of **Western Australia**
Department of **Health**



PATHFINDER Study Follow-up Form

GP Visit: 1 week Post Discharge

Please complete the sections in yellow and return this form to:

Fax: 61524888 or Email: fsh.ahfcts@health.wa.gov.au

[Sticker]

See overleaf for Heart Failure Medication Titration Problem Solving guide.

Dial 0480111493 if you require further guidance with medication titration or enacting an action plan for this patient.

A. Assessment					
Dry weight (at discharge) kg	Weight kg	HR bpm	BP mmHg	Symptom: <input type="checkbox"/> NA <input type="checkbox"/> Dyspnoea <input type="checkbox"/> Dizziness <input type="checkbox"/> Fatigue Other _____	
B. Please titrate HF Medications					
Drug Class	Medication Name	Current dose	Target dose [#]	Guideline-recommended medication titration plan	Dose after the current appointment
ACEI/ ARB/ ARNI*				Start at the low dose. Up-titrate by doubling the dose every 2 to 4 weeks.	<input type="checkbox"/> _____ mg <input type="checkbox"/> OD <input type="checkbox"/> BD <input type="checkbox"/> Maximum-tolerated <input type="checkbox"/> Cease medication
Beta-blocker				Start at the low dose. Up-titrate by doubling the dose every 2 to 4 weeks.	<input type="checkbox"/> _____ mg <input type="checkbox"/> OD <input type="checkbox"/> BD <input type="checkbox"/> Maximum-tolerated <input type="checkbox"/> Cease medication
MRA*				Commence with 25mg daily. Up-titrate in 4 to 8 weeks aiming for target dose for 50mg.	<input type="checkbox"/> _____ mg <input type="checkbox"/> OD <input type="checkbox"/> BD <input type="checkbox"/> Cease medication
Diuretics			Variable dose with no target	Adjust according to clinical assessment.	<input type="checkbox"/> _____ mg <input type="checkbox"/> OD <input type="checkbox"/> BD <input type="checkbox"/> Cease medication
#Target dose approved by PATHFINDER Cardiologist: Name: _____ Signature: _____ * Kidney function test and electrolytes should be checked 1 week after commencing or titrating dose of ACEI/ARB/ARNI/MRA					
C. Further actions					
Is any further action required for this patient at this time? <input type="checkbox"/> No further action needed <input type="checkbox"/> GP review within a week <input type="checkbox"/> Refer to Emergency Department <input type="checkbox"/> Refer to a Cardiologist <input type="checkbox"/> Refer to Allied Health Professional (i.e. Chronic Disease Management Plan) <input type="checkbox"/> Other: _____					



GP Name: _____ Signature: _____ Date: _____



Government of **Western Australia**
Department of **Health**



Heart Failure Medication Titration Problem Solving Guide

NSAIDS or COX-2 inhibitors are contraindicated in patients with heart failure. Avoid negatively inotropic calcium channel blockers (verapamil, diltiazem) in patients with heart failure with reduced ejection fraction (HFrEF).

Hypotension

- **Asymptomatic hypotension** does not usually require any change in therapy (systolic BP 90–100 mmHg)
- **Symptomatic hypotension** (dizziness, light-headedness and/or confusion):
 - I. Stop or reduce calcium - channel blockers and/or other vasodilators unless essential e.g. for angina
 - II. Consider reducing diuretic dose if there are no signs or symptoms of congestion
 - III. Temporarily reduce ACEI / ARB / ARNI or beta-blocker dose if above measures do not work
 - IV. Review patient as clinically appropriate within one week and seek specialist advice if the above measures do not work

Severe symptomatic hypotension or shock requires immediate referral to an emergency department

Worsening renal function

- ACEI / ARB are generally well tolerated even in patients with renal impairment (eGFR less than 30mL/min). Use ARNI with caution in patients with eGFR less than 30mL/min.
- Heart failure patients are more vulnerable to acute renal failure following a destabilising event such as a dehydrating illness or over-diuresis or addition of nephrotoxic medications.
NB. Advise patients experiencing such an event to seek urgent medical attention and to stop the ACEI / ARB / ARNI until clinically reviewed and blood chemistry is checked.
- Some rise in urea, creatinine and serum K⁺ is expected after commencing an ACEI / ARB / ARNI. Blood chemistry must be checked one week after commencing or titrating dose and monitored closely there after to ensure kidney function is not worsening.
- An eGFR decrease of up to 30% is acceptable provided it stabilises within 2 weeks. Check serum K⁺, creatinine and urea within 48 hours if required.
- If the eGFR declines more than 30%, the patient should be reviewed urgently for clinical assessment of volume status and review of nephrotoxic medications. Seek specialist advice regarding the safety of continuing therapy.

Caution: eGFR may over estimate renal function in low body weight individuals and does not reflect accurate renal function in individuals with fluctuating creatinine levels.

Hyperkalaemia

Careful serum K⁺ monitoring is required with ACEI / ARB / ARNI and MRA. Urgently check serum K⁺, creatinine and urea if patient is dehydrated or septic. If serum K⁺ rises to:

- I. 5.0–5.5 mmol/L, review and reduce K⁺ supplements or retaining agents (e.g. amiloride, spironolactone, eplerenone)
- II. 5.6–5.9 mmol/L, cease all K⁺ supplements or retaining agents
- III. 6 mmol/L or greater, immediately seek specialist advice

Bradycardia

- Where heart rate is less than 50 beats per minute, and the patient is on a beta-blocker, review the need for other drugs that slow heart rate (e.g. digoxin, amiodarone) in consultation with specialist; and arrange ECG to exclude heart block
- Consider reduction of beta-blocker where there is marked fatigue or symptomatic bradycardia

Congestion or peripheral oedema

Suggested actions when congestion or peripheral oedema is worsening:

- Increase the diuretic dose and then consider halving the dose of beta-blocker
- Liaise with the heart failure service and review the patient daily or weekly (as appropriate)
- Seek specialist advice if symptoms do not improve; and, if there is severe deterioration, refer patient to an emergency department immediately.

Angioedema and cough

I. Angioedema, although rare, can occur at any time when using ACEI / ARB / ARNI. Actions include:

- Stop ACEI / ARB / ARNI immediately
- Seek specialist advice where angioedema occurs with an ACEI before trialling ARB due to possible cross-sensitivity
- Avoid ARNI where angioedema is due to ACEI / ARB

II. Cough is common in patients with heart failure.

Actions include:

- Exclude pulmonary oedema as a cause if cough is new or worsening
- Consider if cough is caused by ACEI or other drugs and only discontinue drug if cough is not tolerable
- Consider substituting ACEI with an ARB if the cough is troublesome or interferes with sleep

Reference: Qld Health HF Medication Titration Plan, https://www.health.qld.gov.au/__data/assets/pdf_file/0018/428121/Medn_Titration.pdf (Last accessed date: 04-Feb-2021)



The current Australian Heart Failure Management Guidelines are available at:
[https://www.heartlungcirc.org/article/S1443-9506\(18\)31777-3/fulltext](https://www.heartlungcirc.org/article/S1443-9506(18)31777-3/fulltext)
Please return the form by fax to 61524888

PATHFINDER study follow-up form GP visit week 1 ver 2 dated 11 Feb 2021

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Government of **Western Australia**
Department of **Health**



PATHFINDER Study Follow-up Form

GP Visit: 4 week Post Discharge

Please complete the sections in yellow and return this form to:

Fax: 61524888 or Email: fsh.ahfcts@health.wa.gov.au

[Sticker]

See overleaf for Heart Failure Medication Titration Problem Solving guide.

Dial 0480111493 if you require further guidance with medication titration or enacting an action plan for this patient.

D. Assessment					
Dry weight (at discharge) _____ kg	Weight _____ kg	HR _____ bpm	BP _____ mmHg	Symptom: <input type="checkbox"/> NA <input type="checkbox"/> Dyspnoea <input type="checkbox"/> Dizziness <input type="checkbox"/> Fatigue Other _____	
E. Please titrate HF Medications					
Drug Class	Medication Name	Current dose	Target dose [#]	Guideline-recommended medication titration plan	Dose after the current appointment
ACEI/ ARB/ ARNI*				Start at the low dose. Up-titrate by doubling the dose every 2 to 4 weeks.	<input type="checkbox"/> _____ mg <input type="checkbox"/> OD <input type="checkbox"/> BD <input type="checkbox"/> Maximum-tolerated <input type="checkbox"/> Cease medication
Beta-blocker				Start at the low dose. Up-titrate by doubling the dose every 2 to 4 weeks.	<input type="checkbox"/> _____ mg <input type="checkbox"/> OD <input type="checkbox"/> BD <input type="checkbox"/> Maximum-tolerated <input type="checkbox"/> Cease medication
MRA*				Commence with 25mg daily. Up-titrate in 4 to 8 weeks aiming for target dose for 50mg.	<input type="checkbox"/> _____ mg <input type="checkbox"/> OD <input type="checkbox"/> BD <input type="checkbox"/> Cease medication
Diuretics			Variable dose with no target	Adjust according to clinical assessment.	<input type="checkbox"/> _____ mg <input type="checkbox"/> OD <input type="checkbox"/> BD <input type="checkbox"/> Cease medication
#Target dose approved by PATHFINDER Cardiologist: Name: _____ Signature: _____ * Kidney function test and electrolytes to be checked 1 week after commencing or titrating dose of ACEI/ARB/ARNI/MRA					
F. Further actions					
Is any further action required for this patient at this time? <input type="checkbox"/> No further action needed <input type="checkbox"/> GP Review within a week <input type="checkbox"/> Refer to Emergency department <input type="checkbox"/> Refer to a Cardiologist <input type="checkbox"/> Refer to Allied Health Professional (i.e. Chronic Disease Management Plan) <input type="checkbox"/> Other: _____					



GP Name: _____ Signature: _____ Date: _____



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Department of **Health**



Heart Failure Medication Titration Problem Solving Guide

NSAIDS or COX-2 inhibitors are contraindicated in patients with heart failure. Avoid negatively inotropic calcium channel blockers (verapamil, diltiazem) in patients with heart failure with reduced ejection fraction (HFrEF).

Hypotension

- **Asymptomatic hypotension** does not usually require any change in therapy (systolic BP 90–100 mmHg)
- **Symptomatic hypotension** (dizziness, light-headedness and/or confusion):
 - I. Stop or reduce calcium - channel blockers and/or other vasodilators unless essential e.g. for angina
 - II. Consider reducing diuretic dose if there are no signs or symptoms of congestion
 - III. Temporarily reduce ACEI / ARB / ARNI or beta-blocker dose if above measures do not work
 - IV. Review patient as clinically appropriate within one week and seek specialist advice if the above measures do not work

Severe symptomatic hypotension or shock requires immediate referral to an emergency department

Worsening renal function

- ACEI / ARB are generally well tolerated even in patients with renal impairment (eGFR less than 30mL/min). Use ARNI with caution in patients with eGFR less than 30mL/min.
- Heart failure patients are more vulnerable to acute renal failure following a destabilising event such as a dehydrating illness or over-diuresis or addition of nephrotoxic medications.
NB. Advise patients experiencing such an event to seek urgent medical attention and to stop the ACEI / ARB / ARNI until clinically reviewed and blood chemistry is checked.
- Some rise in urea, creatinine and serum K⁺ is expected after commencing an ACEI / ARB / ARNI. Blood chemistry must be checked one week after commencing or titrating dose and monitored closely there after to ensure kidney function is not worsening.
- An eGFR decrease of up to 30% is acceptable provided it stabilises within 2 weeks. Check serum K⁺, creatinine and urea within 48 hours if required.
- If the eGFR declines more than 30%, the patient should be reviewed urgently for clinical assessment of volume status and review of nephrotoxic medications. Seek specialist advice regarding the safety of continuing therapy.

Caution: eGFR may over estimate renal function in low body weight individuals and does not reflect accurate renal function in individuals with fluctuating creatinine levels.

Hyperkalaemia

Careful serum K⁺ monitoring is required with ACEI / ARB / ARNI and MRA. Urgently check serum K⁺, creatinine and urea if patient is dehydrated or septic. If serum K⁺ rises to:

- I. 5.0–5.5 mmol/L, review and reduce K⁺ supplements or retaining agents (e.g. amiloride, spironolactone, eplerenone)
- II. 5.6–5.9 mmol/L, cease all K⁺ supplements or retaining agents
- III. 6 mmol/L or greater, immediately seek specialist advice

Bradycardia

- Where heart rate is less than 50 beats per minute, and the patient is on a beta-blocker, review the need for other drugs that slow heart rate (e.g. digoxin, amiodarone) in consultation with specialist; and arrange ECG to exclude heart block
- Consider reduction of beta-blocker where there is marked fatigue or symptomatic bradycardia

Congestion or peripheral oedema

Suggested actions when congestion or peripheral oedema is worsening:

- Increase the diuretic dose and then consider halving the dose of beta-blocker
- Liaise with the heart failure service and review the patient daily or weekly (as appropriate)
- Seek specialist advice if symptoms do not improve; and, if there is severe deterioration, refer patient to an emergency department immediately.

Angioedema and cough

I. Angioedema, although rare, can occur at any time when using ACEI / ARB / ARNI. Actions include:

- Stop ACEI / ARB / ARNI immediately
- Seek specialist advice where angioedema occurs with an ACEI before trialling ARB due to possible cross-sensitivity
- Avoid ARNI where angioedema is due to ACEI / ARB

II. Cough is common in patients with heart failure.

Actions include:

- Exclude pulmonary oedema as a cause if cough is new or worsening
- Consider if cough is caused by ACEI or other drugs and only discontinue drug if cough is not tolerable
- Consider substituting ACEI with an ARB if the cough is troublesome or interferes with sleep

Reference: Qld Health HF Medication Titration Plan, https://www.health.qld.gov.au/__data/assets/pdf_file/0018/428121/Medn_Titration.pdf (Last accessed date: 04-Feb-2021).



The current Australian Heart Failure Management Guidelines are available at:
[https://www.heartlungcirc.org/article/S1443-9506\(18\)31777-3/fulltext](https://www.heartlungcirc.org/article/S1443-9506(18)31777-3/fulltext)
Please return the form by fax to 61524888.

PATHFINDER study follow-up form GP visit week 1 ver 2 dated 11 Feb 2021

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PATHFINDER Study Follow-up Form

GP Visit: 3 month Post Discharge

Please complete the sections in yellow and return this form to:

Fax: 61524888 or Email: fsh.ahfcts@health.wa.gov.au

[Sticker]

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G. Assessment					
Dry weight (at discharge) _____ kg	Weight _____ kg	HR _____ bpm	BP _____ mmHg	Symptom: <input type="checkbox"/> NA <input type="checkbox"/> Dyspnoea <input type="checkbox"/> Dizziness <input type="checkbox"/> Fatigue Other _____	
H. Please titrate HF Medications					
Drug Class	Medication Name	Current dose	Target dose [#]	Dose recommended by PATHFINDER cardiologist [#]	Dose after the current appointment
ACEI/ ARB/ ARNI*					<input type="checkbox"/> _____ mg <input type="checkbox"/> OD <input type="checkbox"/> BD <input type="checkbox"/> Maximum-tolerated <input type="checkbox"/> Cease medication
Beta-blocker					<input type="checkbox"/> _____ mg <input type="checkbox"/> OD <input type="checkbox"/> BD <input type="checkbox"/> Maximum-tolerated <input type="checkbox"/> Cease medication
MRA*					<input type="checkbox"/> _____ mg <input type="checkbox"/> OD <input type="checkbox"/> BD <input type="checkbox"/> Cease medication
Diuretics			Variable dose with no target	Adjust according to clinical assessment.	<input type="checkbox"/> _____ mg <input type="checkbox"/> OD <input type="checkbox"/> BD <input type="checkbox"/> Cease medication
[#] Target dose and recommended dose approved by PATHFINDER Cardiologist: Name: _____ Signature: _____ * Kidney function test and electrolytes to be checked 1 week after commencing or titrating dose of ACEI/ARB/ARNI/MRA					
I. Further actions					
Is any further action required for this patient at this time?					
<input type="checkbox"/> No further action needed <input type="checkbox"/> GP Review within a week <input type="checkbox"/> Refer to Emergency department <input type="checkbox"/> Refer to a Cardiologist <input type="checkbox"/> Refer to Allied Health Professional (i.e. Chronic Disease Management Plan) <input type="checkbox"/> Other: _____					



GP Name: _____ Signature: _____ Date: _____

PATHFINDER study follow-up form GP visit week 1 ver 2 dated 11 Feb 2021

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Heart Failure Medication Titration Problem Solving Guide

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Severe symptomatic hypotension or shock requires immediate referral to an emergency department

Worsening renal function

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Actions include:

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