

Beta Blocker Titration by RN in the Heart Function Clinic and Inherited Arrhythmia Clinic

Site Applicability

SPH Heart Function Clinic

SPH Inherited Arrhythmia Clinic (IAC)

Practice Level

Specialized: Nurse titration of beta-blockers may only be performed by Registered Nurses (RN) employed to work in the Heart Function Clinic or Inherited Arrhythmia Clinic.

Need to Know

This protocol is to be used for patients placed onto the “Fast Track” or “Standard Track” Pathway within the Heart Function Clinic

- The IAC at St Paul’s Hospital is one of two British Columbia Inherited Arrhythmia Program sites. This protocol is only applicable to SPH site for adult dosing and treatment.
- Refer to B.C. College of Nurses and Midwives Standard – Virtual health
https://www.bccnm.ca/RM/learning/Pages/virtual_care.aspx
- Nurse titration of beta-blockers require physician orders-refer to PowerPlan: *CARD Outpatient Heart Function Clinic Medication Titration (Module)* or, *CARD AMB Inherited Arrhythmia Medication Titration (Module)*
- Beta Blockers are generally started at a low dose and titrated upwards at 2 to 4 weekly intervals depending on how the patient is tolerating the dose. This up-titration can be done in person, or over the phone.
- A clinical response to beta-blocker therapy may take as long as 3 months and the patient and caregivers should be informed that they will often feel worse before they feel better.
- Transient dizziness, headache and tiredness are common and not necessarily a cause to stop increasing dose. Any concerns should be discussed with the physician.

Protocol

Assessment (this may be in-person or virtual)

A) Initial

At baseline, the physician should:

- Assess the patient determine that the patient suitable for the drug and RN up-titration based on diagnostic studies and indications for beta-blocker initiation.

- Determine if they feel telephone titrations are suitable for a particular patient and document this.

At any time the nurse may decide to have the patient come into the clinic if they believe that telephone titrations are not safe or feasible. Refer to "Heart Function Clinic Virtual Visit Decision Support Guideline" to aid with decision. Examples include (but not limited to):

- Cognitive deficit
- English as a second language
- Hearing deficit
- Confusion with medications and doses
- Patient's condition is not conducive to telephone management

With patient, the nurse should assess

- Blood pressure & heart rate
- Ability to have regular bloodwork performed
- Understanding of medications
- Ability to communicate effectively over the phone

B) Ongoing (in-person or virtual)

- At each visit, observe patient for side-effects and report to physician if the patient exhibits the following:
 - Symptomatic hypotension and/or (if virtual, provided with at-home BP)
 - BP less than 80 mmHg systolic
 - BP more than 20 mmHg postural drop
 - Bradycardia (less than 50 bpm)
 - Fluid retention (determined by weight and symptoms)
 - Worsening NYHA symptom class
 - For syncope; Instruct patient to go to Emergency Department, notify prescriber

Interventions

- Only physicians can commence the drug and order titration PowerPlan via Cerner
- Up-titrate according to table below
- If patient exhibits significant side-effects of beta-blockade, dose should be down-titrated to the previous level that the patient was on
- Down-titration of beta-blocker may be ordered via the telephone, in this instance, patient follow-up visit to be decided in consultation with the physician
- Do not abruptly stop beta blocker therapy without a heart failure physician or electrophysiologist order
- If there is any question about dose changes or side-effects, physician is to be consulted
- Usual dosage regimen as follows:

DRUG	USUAL STARTING DOSE	INCREASE BY	TARGET DOSE	DR PRESCRIPTION
Carvedilol	3.125 mg BID	Increase dose by 50 to 100% every 2 to 4 weeks	25 mg BID unless otherwise ordered *If weight more than 85 kg, target regimen: 50 mg BID – to be ordered by MD	6.25 mg tablets 3 month supply with 3 repeats
Metoprolol	12.5 mg BID	Increase dose by 50 to 100% every 2 to 4 weeks	100 mg BID (when reached, physician to change to SR)	25 mg tablets, 3 month supply with 3 repeats
Bisoprolol	1.25 mg daily	Increase dose by 50 to 100% every 2 to 4 weeks	10 mg daily	5 mg tablets, 3 month supply with 3 repeats
Propanolol *used in IAC only	20 mg bid (usual) 10 mg bid (optional)	Increase dose by 50 to 100% every 2 to 4 weeks	80-160 mg per day in 2-3 divided doses	10 or 20 mg tablets, 3 month supply with 3 repeats
Nadolol *used in IAC only	40 mg daily (usual) 20 mg daily (optional) May require renal dosing- see Lexicomp	Increase dose by 50 to 100% every 2 to 4 weeks	80 to 160 mg daily Can by OD or BID dosing	40 mg or 80 mg tablets, 3 month supply with 3 repeats

Special considerations for IAC patients only:

Nursing Assessment	Frequency	Intervention
RN to assess ECG changes in-person, by telephone or virtual visit	Within 4 weeks of initiation or dose change	Notify prescriber if acute onset, severe, or persistently problematic
Exercise treadmill test	Repeat treadmill test 4 to 8 weeks after target dose beta-blocker achieved	Review results with prescriber to assess for target dose therapy

Labs (serum electrolytes and renal function)	Annually for stable patients (advise GP to order) Every 6 months (CrCl 3 to 60 mL/min)	Arrange labs with patient and inform MD of abnormal results of change to trend
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Documentation

The following should be completed by the physician prior to nurse titration:

- Document in clinic note: “Nurse to perform up-titration as per protocol” & specify whether patient is suitable for telephone up-titrations
- Order CARD Outpatient Heart Function Clinic Medication Titration (Module) Or CARD AMB Inherited Arrhythmia Medication Titration (Module)

The following should be completed by the RNs before/during the titration period:

- Review PowerPlan order & physician’s documentation
- Select the “Medication Titration” PowerForm and complete all pertinent sections.

Patient and Family Education

Provide patient/family written and verbal information:

- <http://www.cardiacbc.ca/Documents/Beta%20blocker.pdf>
- Beta-blocker patient information sheet (available in the clinic).
- Fill out “Snapshot of your visit” form if in person visit, summarizing changes made from clinic visit
- Perform “Teach-back” method and ask patient/family to repeat titration instructions to you before end of virtual health session/clinic visit

Related Documents

1. [B-00-13-10051](#) – Furosemide (Oral) Titration by RN in Heart Function Clinic
2. [B-00-13-10133](#) – Angiotensin Converting Enzyme (ACE-1)/ Angiotensin Receptor Blocker (ARB): Titration by RN in Heart Function Clinic
3. [B-00-13-10233](#) - Angiotensin receptor-neprilysin inhibitor (ARNI) Titration by RN in Heart Function Clinic

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First Released Date:	May 2003
Posted Date:	07-APR-2022
Last Revised:	07-APR-2022
Last Reviewed:	07-APR-2022
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