



## Appendix G: Prescription Medication Tables for Atrial Fibrillation<sup>1, 2, 3</sup>

Generic Name	Trade name (dosage form and strength)	Adult dose	Cost per 30 days <sup>a</sup>	PharmaCare coverage <sup>b</sup>	Common and/or serious side effects	Therapeutic considerations
<b>Drugs for heart rate control</b>						
<b>Beta-blockers</b>						
atenolol	Tenormin®, G (IR tablet: 25, 50, 100 mg)	<b>IR tablet:</b> 50-150 mg PO once daily. Reduce dose by 25-50% if used concurrently with digoxin, calcium channel blockers, or amiodarone.	\$5-13 (G)	Regular Coverage	Bradycardia, hypotension, dyspnea, fatigue, and depression	Use with caution in patients with diabetes, heart failure, or bronchospastic lung disease.  Beta <sub>1</sub> -selective.  Less likely to cause depression.
bisoprolol	G (IR tablet: 5, 10 mg)	<b>IR tablet:</b> 5-20 mg PO once daily. Reduce dose by 25-50% if used concurrently with digoxin, calcium channel blockers, or amiodarone.	\$1-17 (G)	Regular Coverage	Bradycardia, hypotension, dyspnea, fatigue, and depression	Use with caution in patients with diabetes, heart failure, or bronchospastic lung disease.  Beta <sub>1</sub> -selective.
metoprolol	Betaloc®, Lopresor®, G (IV injection: 1 mg/mL; IR tablet: 25, 50, 100 mg; SR tablet: 100, 200 mg)	<b>IV injection:</b> 5-10 mg q5 min x 3 doses. <b>IR tablet:</b> 50-200 mg PO BID. <b>SR tablet:</b> 100-400 mg PO once daily. Reduce dose by 25-50% if used concurrently with digoxin, calcium channel blockers, or amiodarone.	IR tablet: \$4-17 (G) SR tablet: \$4-17 (G)	Regular Coverage	Bradycardia, hypotension, dyspnea, fatigue, and depression	Use with caution in patients with diabetes, heart failure, or bronchospastic lung disease.  Beta <sub>1</sub> -selective.
nadolol	Nadolol, G (IR tablet: 40, 80, 160 mg)	20-160 mg PO once daily. Reduce dose by 25-50% if used concurrently with digoxin, calcium channel blockers, or amiodarone.	\$8-39 (G)	Regular Coverage	Bradycardia, hypotension, dyspnea, fatigue, and depression	Use with caution in patients with diabetes, heart failure, or bronchospastic lung disease.  Less likely to cause depression.
propranolol	Inderal®, G (IV injection: 1 mg/mL; IR tablet: 10, 20, 40, 80, 120 mg; SR capsule: 60, 80, 120, 160 mg)	<b>IV injection:</b> 1-3 mg q2 minutes x 2 doses. May repeat in 4 hours. <b>IR tablet:</b> 20-80 mg PO TID. <b>SR capsule:</b> 80-240 mg PO once daily. Reduce dose by 25-50% if used concurrently with digoxin, calcium channel blockers, or amiodarone.	IR tablet: \$9-14 (G) SR tablet: \$21-64	Regular Coverage (IR tablet: 10, 20, 40, 80 mg; SR capsule: 60, 80, 120, 160 mg)  No Coverage (IR tablet: 120 mg)	Bradycardia, hypotension, dyspnea, fatigue, and depression	Use with caution in patients with diabetes, heart failure, or bronchospastic lung disease.  SR dosage forms preferred to prolong the dosing interval and improve patient compliance.



Generic Name	Trade name (dosage form and strength)	Adult dose	Cost per 30 days <sup>a</sup>	PharmaCare coverage <sup>b</sup>	Common and/or serious side effects	Therapeutic considerations
<b>Calcium channel blockers: Non-Dihydropyridine</b>						
verapamil	Isoptin <sup>®</sup> , G (IV injection: 2.5 mg/mL; IR tablet: 80, 120 mg; SR tablet: 120, 180, 240 mg)	<b>IV injection:</b> 5-10 mg. May give an extra 10 mg in 30 minutes. <b>Starting dose:</b> 120 mg/day PO. <b>Maximum dose:</b> 480 mg/day PO. <b>IR tablet</b> given in divided doses TID – QID. <b>SR tablet</b> given once daily or in divided doses BID.	IR tablet: \$14-55 (G) SR tablet: \$17-33 (G)	Regular Coverage	Bradycardia, hypotension, constipation, and flushing	Use with caution in patients with heart failure.  SR dosage generally preferred to prolong the dosing interval and improve patient compliance.
diltiazem	Cardizem <sup>®</sup> , G (IV injection: 5 mg/mL; IR tablet: 30, 60 mg; ER capsule: 120, 180, 240, 300 mg)  Tiazac <sup>®</sup> , G (ER capsule: 120, 180, 240, 300, 360 mg)	0.25 mg/kg. May give another 0.25 mg/kg after 15 minutes if needed. 180-540 mg/day PO. <b>IR tablet</b> given in divided doses TID – QID. <b>ER capsule:</b> 120-540 mg PO once daily.	IR tablet: \$32-99 (G) ER capsule: \$7-46 (G)	Regular Coverage	Bradycardia, hypotension, and ankle swelling	Use with caution in patients with heart failure.  SR dosage generally preferred to prolong the dosing interval and improve patient compliance.
<b>Digoxin</b>						
digoxin	Toloxin <sup>®</sup> , G (IV injection: 50, 250 µg/mL; IR tablet: 0.0625, 0.125, 0.25)	<b>Loading:</b> 1-1.5 mg in divided doses PO or IV. <b>Maintenance:</b> 0.125-0.375 mg PO daily. Reduce dose by 25-50% if used concurrently with beta-blockers, calcium channel blockers, or quinidine.	IR tablet: \$8-16	Regular Coverage	Bradycardia, nausea, vomiting, visual disturbances, and proarrhythmic	Only in patients with AF due to heart failure.  Check serum and potassium levels.  Correct hypokalemia if present.
<b>Drugs for rhythm control</b>						
<b>Class IC Antiarrhythmics</b>						
flecainide	Tambacor <sup>®</sup> , G (IR tablet: 50, 100 mg)	<b>Starting dose:</b> 50 mg PO q12h. Reduce by 50% in patients with renal dysfunction. <b>Titration:</b> increase by 50 mg increments based on QRS intervals. Reduce dose if QRS increases >20% from baseline. <b>Maximum dose:</b> 200 mg q12h PO.	\$26-104 (G)	Regular Coverage	Ventricular proarrhythmia, tremor, blurred vision, and heart failure	Should be used concurrently with a beta-blocker or nondihydropyridine calcium channel blocker.  Do not use in patients with coronary artery or structural heart disease.  Metabolized by CYP2D6, resulting in many potential drug interactions.

Generic Name	Trade name (dosage form and strength)	Adult dose	Cost per 30 days <sup>a</sup>	PharmaCare coverage <sup>b</sup>	Common and/or serious side effects	Therapeutic considerations
propafenone	Rythmol <sup>®</sup> , G (IR tablet: 150, 300 mg)	150 – 300 mg PO q8h.  Reduce initial dose by 50% and increase dosing interval to q12h in patients with renal or hepatic dysfunction.	\$29-51 (G)	Regular Coverage	Constipation, headache, metallic taste, and ventricular proarrhythmia	Should be used concurrently with a beta-blocker or nondihydropyridine calcium channel blocker.  Do not use in patients with coronary artery or structural heart disease.  Reduce dose of concurrently administered digoxin by 25-50%.  Metabolized by CYP2D6, resulting in many potential drug interactions.  Monitor QRS duration carefully as active metabolites accumulate in rapid metabolizers.
<b>Class III Antiarrhythmics</b>						
amiodarone	Cardarone <sup>®</sup> , G (IV: 50 mg/ml; IR tablet: 100, 200 mg)	200 mg PO TID x 2 weeks, then 200-400 mg once daily PO.  <b>IV loading:</b> 150 mg IV over 10 minutes, followed by 1.2-1.8 g/day to a total of 10 g  Loading doses may vary.	\$17-33 (G)	Regular Coverage	Various GI, dermatologic, neurologic, ophthalmologic, ventricular proarrhythmia and thyroid abnormalities  Rare, but potentially life-threatening pulmonary fibrosis, hepatic dysfunction, and aggravation of arrhythmias	Monitor transaminases and thyroid function every 6 months.  Reduce dose of concurrently used beta-blockers, procainamide, quinidine, and warfarin by 50%.
dronedarone	Multaq <sup>®</sup> (IR tablet: 400 mg)	400 mg PO BID.	\$139	Limited Coverage  Special Authority	Diarrhea, dyspepsia, nausea, and hepatic dysfunction (rare)  Slight increase in plasma creatinine related to inhibition of secretion	Contraindicated in patients with severe heart failure (NYHA class IV).  Contraindicated in patients using strong CYP3A4 inhibitors.  Use with caution with drugs metabolized by CYP3A4.  Not recommended in patients with permanent AF.
sotalol	Sotalol, G (IR tablet: 80, 160, 240 mg)	<b>Starting dose:</b> 80 mg PO q12h. <b>Titration:</b> increase by 80 mg increments if QTc <460 ms. Reduce dose if QTc ≥500 ms. <b>Maximum:</b> 240 mg PO q12h. <b>Elderly:</b> reduce initial dose to 40 mg PO q12h. <b>Renal dysfunction:</b> reduce initial dose in renal failure.	\$19-30 (G)	Regular Coverage (IR tablet: 80, 160 mg)  No Coverage (IR tablet: 240 mg)	Hypotension, bradycardia, wheezing, ventricular proarrhythmia  Torsades de pointes, especially at higher doses or with renal dysfunction	Concurrent use with digoxin, diltiazem, verapamil, or other beta-blockers may cause AV block and bradycardia.  Use with caution in patients with risk for QT prolongation or torsades de pointes.

Generic Name	Trade name (dosage form and strength)	Adult dose	Cost per 30 days <sup>a</sup>	PharmaCare coverage <sup>b</sup>	Common and/or serious side effects	Therapeutic considerations
<b>Oral anticoagulants</b>						
<b>Vitamin K Antagonists</b>						
warfarin	Coumadin®, G (IR tablet: 1, 2, 2.5, 3, 4, 5, 6, 7.5, 10 mg)	Initial: 2.5-10 mg PO daily, then individualize to maintain an INR of 2-3.	\$2-10	Regular Coverage	Bleeding and skin necrosis	Contraindicated in pregnancy.  Many potential interactions.
<b>Direct Factor Xa Inhibitors</b>						
dabigatran	Pradaxa® (IR capsule: 110, 150 mg)	150 mg PO BID or 110 mg PO BID for patients with ≥ 1 of the following: - age ≥ 75 years - CrCl 30-50 mL/min - concurrent use of strong P-gp inhibitor or antiplatelet agent - previous GI bleed	\$104	Limited Coverage <sup>c</sup>  Special Authority	Bleeding and GI intolerance	Contraindicated in combination with strong inhibitors of P-gp.  Use cautiously with other drugs acting on P-gp.  No reversal agents available.
<b>Direct Thrombin Inhibitors</b>						
rivaroxaban	Xarelto® (IR tablet: 10, 15, 20 mg)	20 mg PO daily with food or 15 mg PO daily with food for patients with CrCl 30-49 mL/min	\$92	Limited Coverage <sup>c</sup>  Special Authority	Bleeding	Contraindicated in combination with strong inhibitors of both CYP3A4 and P-gp.  No reversal agents available.
apixaban	Eliquis® (IR tablet: 2.5, 5 mg)	5 mg PO BID or 2.5 mg PO BID for patients with ≥ 2 of the following: - age ≥ 80 years - body weight ≤ 60 kg - serum creatinine ≥ 133 µmol/L	\$104	Limited Coverage <sup>c</sup>  Special Authority	Bleeding	Contraindicated in combination with strong inhibitors of both CYP3A4 and P-gp.  No reversal agents available.

**Abbreviations:** AF = atrial fibrillation; BID = twice daily; CrCl = creatinine clearance; CYP3A4 = cytochrome P450 3A4 isoenzymes; ER = extended-release; GI = gastrointestinal; G = generic version(s) available; h = hour(s); IR = immediate-release; IV = intravenous; kg = kilogram; µmol/L = micromolar per litre; mg = milligram; mL/min = milliliter per minute; P-gp = P-glycoprotein; PO = taken orally; QID = four times daily; q = every; QTc = corrected QT; SR = sustained-release; TID = three times daily.

**Note:** Please review product monographs at [hc-sc.gc.ca/dhp-mps/prodpharma/databasdon/index-eng.php](http://hc-sc.gc.ca/dhp-mps/prodpharma/databasdon/index-eng.php) and regularly review current Health Canada advisories, warnings and recalls at [www.hc-sc.gc.ca/ahc-asc/media/advisories-avis/index\\_e.html](http://www.hc-sc.gc.ca/ahc-asc/media/advisories-avis/index_e.html).

**Footnotes:**

- a Pricing is approximate as per PharmaNet 2014/08/20 and does not include dispensing fee
- b PharmaCare Coverage Definitions: **G:** generic(s) are available; **Regular Coverage:** also known as regular benefit; does not require Special Authority. Regular benefits may be fully or partially covered.\*; **Limited Coverage:** requires Special Authority for coverage. Limited Coverage benefits approved by Special Authority may be fully or partially covered.\*; **RDP:** Reference Drug Program. Drugs included in the RDP are comparable agents of the same therapeutic class. Patients receive full coverage of drugs designated as the Reference Drug(s) of the therapeutic class. Other drugs in the same RDP category are covered up to the price of the Reference Drug; **No coverage:** also known as non-benefit; does not fit the above categories.  
\* Note: Information on which products PharmaCare covers can be obtained using the B.C. PharmaCare Formulary Search ([www.health.gov.bc.ca/pharmacare/benefitslookup/](http://www.health.gov.bc.ca/pharmacare/benefitslookup/)). In all cases, coverage is subject to drug price limits set by PharmaCare and to the patient's PharmaCare plan rules and deductibles. See: [www.health.gov.bc.ca/pharmacare/plans/index.html](http://www.health.gov.bc.ca/pharmacare/plans/index.html) and [www.health.gov.bc.ca/pharmacare/policy.html](http://www.health.gov.bc.ca/pharmacare/policy.html) for further information.
- c PharmaCare coverage is currently limited to patients with non-valvular atrial fibrillation for the prevention of stroke and systemic embolism **AND** in whom anticoagulation is inadequate following at least a 2-month trial of warfarin **OR** for whom anticoagulation using warfarin is contraindicated or not possible due to inability to regularly monitor the patient via International Normalized Ratio (INR) testing (i.e., not access to INR testing services at a laboratory, clinic pharmacy, and at home).

**References:**

1. e-CPS [Internet]. Ottawa, ON: Canadian Pharmacists Association; 2014 [cited 2014/08/20].
2. Health Canada Drug Product Database Product Monographs. Ottawa, ON: Health Canada; 2014 [cited 2014/08/20].
3. e-Therapeutics [Internet]. Ottawa, ON: Canadian Pharmacists Association; 2014 [cited 2014/08/20].