

## Appendix B: Prescription Medication Table for Chronic Obstructive Pulmonary Disease (COPD)

Generic Name	Trade Name (formulation) [strengths]	Standard Rx for Adults (max. dose per day)	Approximate Cost*	PharmaCare Coverage
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### Short-Acting Beta<sub>2</sub> Agonists Inhaled (SABA)

salbutamol	<b>Airomir™, Ventolin® HFA, G</b> (pMDI) [100 µg]	100-200 µg qid prn (max. 800 µg per day)	\$4.14 - \$14.56/100 doses G:\$2.48 - \$4.96/100 doses	Regular benefit, LCA
	<b>Ventolin® Diskus®</b> (DPI) [200 µg]	200 µg tid-qid prn (max. 800 µg per day)	\$23.49/100 doses	Not a benefit
	<b>Ventolin®, G</b> (inh. sol.)	2.5 -5 mg qid prn	G:\$26.04 - \$63.13/100 doses	Limited coverage
terbutaline	<b>Bricanyl®</b> Turbuhaler® (DPI) [500 µg]	500 µg prn (max. 3 mg per day)	\$7.86/100 doses	Regular benefit

### Short-Acting Anticholinergic Inhaled (SAAC)

ipratropium	<b>Atrovent® HFA</b> (pMDI) [20 µg]	40 µg tid-qid (max. 240 µg per day)	\$0.59 - \$0.78/day	Regular benefit
	<b>G</b> (inh. sol.)	500 µg tid-qid (max. 2 mg per day)	G:\$3.55 - \$6.46/day	Limited coverage

### Long-Acting Anticholinergic Inhaled (LAAC)

tiotropium	<b>Spiriva®</b> Handihaler (DPI) [18 µg]	18 µg once daily	\$2.25/day	Limited coverage <sup>‡</sup>
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### Short-Acting Beta<sub>2</sub> Agonist/Short-Acting Anticholinergic Inhaled Combination (SABA/SAAC)

fenoterol/ ipratropium	<b>Duovent® UDV</b> (inh. sol.)	4 mL q6h prn	\$14.15/day	Not a benefit
salbutamol/ ipratropium	<b>Combivent®, G</b> (inh. sol.)	2.5 mL tid-qid	\$2.90 - \$3.87/day G:\$1.78 - \$2.38/day	Limited coverage

### Inhaled Corticosteroids (ICS)

beclomethasone	<b>Qvar™</b> (pMDI) [50 and 100 µg]	50-400 µg bid (max. 800 µg per day)	LD \$0.31/day HD \$2.50/day	Regular benefit
budesonide	<b>Pulmicort®</b> Turbuhaler® (DPI) [100, 200, 400 µg]	200-400 µg bid (max. 2400 µg per day)	LD \$0.65 /day HD \$1.17/day	Regular benefit
	<b>Pulmicort®</b> <b>Nebuamp®</b> (inh. sol.)	1-2 mg bid	LD \$3.53/day HD \$7.06/day	Limited coverage
ciclesonide	<b>Alvesco®</b> (pMDI) [100 and 200 µg]	100-200 µg daily (up to 400 µg bid)	LD \$0.38/day HD \$0.63/day	Regular benefit
fluticasone	<b>Flovent® HFA</b> (pMDI) [125 and 250 µg]	100-500 µg bid (max. 2000 µg bid)	LD \$0.85/day HD \$2.88/day	Regular benefit
	<b>Flovent® Diskus</b> (DPI) [100, 250 and 500 µg]	100-500 µg bid (max. 2000 µg per day)	LD \$0.85/day HD \$2.88/day	Regular benefit

Long-Acting Beta <sub>2</sub> Agonists Inhaled (LABA)				
<b>formoterol fumarate</b>	<b>Foradil®</b> (DPI) [12 µg]	12-24 µg bid (max. 48 µg per day)	LD \$1.67/day HD \$1.34/day	Limited coverage <sup>†</sup>
<b>formoterol fumarate dihydrate</b>	<b>Oxeze®</b> Turbuhaler (DPI) [6 and 12 µg]	6-12 µg bid (max. 48 µg per day)	LD \$1.17/day HD \$1.55/day	Limited coverage <sup>†</sup>
<b>salmeterol</b>	<b>Serevent® Diskus, Serevent® Diskhaler</b> (DPI) [50 µg]	50 µg bid	\$1.95/day	Limited coverage

Inhaled Corticosteroid / Long-acting Beta <sub>2</sub> Agonist Combination (ICS/LABA)				
<b>budesonide/formoterol</b>	<b>Symbicort®</b> Turbuhaler® (DPI) [200/6 and 400/12 µg]	400/12 µg bid	LD \$1.07/day HD \$2.78/day	Limited coverage <sup>†</sup>
<b>fluticasone/salmeterol</b>	<b>Advair® Diskus</b> (DPI) [250/50 and 500/50 µg]	i puff bid	LD \$2.79/day HD \$4.75/day	Limited coverage
<b>fluticasone/salmeterol</b>	<b>Advair®</b> (pMDI) [125/25 and 250/25 µg]	ii puffs bid	LD \$3.34/day HD \$4.75/day	Limited coverage

Theophylline (oral)				
<b>aminophylline</b>	<b>Phyllocontin®</b> oral sustained release tablets	225-350 mg po q12h <sup>†</sup>	\$0.46 - \$0.59/day	Regular benefit
<b>theophylline</b>	<b>Theolair™</b> , G oral solution	100 mg po qid <sup>†</sup>	\$2.04/day	Regular benefit
<b>theophylline</b>	G oral extended release (12-hour) tablets	200-300 mg po q12h <sup>†</sup>	\$0.30 - \$0.57/day G:\$0.29 - \$0.30/day	Regular benefit, LCA
	<b>Uniphyll®</b> oral extended release (24-hour) tablets	400-600 mg po qhs <sup>†</sup> (max. 10-13 mg/kg/day based on IBW or 900 mg/day whichever is less in non-smoking adults)	\$0.53 - \$0.65/day	Regular benefit

**Abbreviations and footnotes:** **DPI** = dry powder inhaler; **G** = generics available; **HD** = high dose; **HFA** = Alternate propellant hydrofluoroalkane formulation; **IBW** = Ideal Body Weight; **inh. sol.** = inhalation solution; **LD** = low dose; **max.** = maximum; **pMDI** = pressurized metered dose inhaler (aerosol); **Nebs** = nebulers; **UDV** = Unit Dose Vial

\* Prices are approximate retail cost, not including dispensing fee.

‡ PharmaCare coverage for tiotropium by inhalation is currently limited to patients with diagnosis of COPD where FEV<sub>1</sub> ≤ 65% and FEV<sub>1</sub>/FVC < 0.7 plus inadequate response after a 3 month trial of ipratropium at a dose of 12 puffs daily.

† Limited Criteria coverage does not include COPD.

<sup>†</sup> Adjust dose based on serum levels (therapeutic 55-110 µmol/L); To minimize toxicity aim for serum levels at the lower end of therapeutic. Serum levels less than 55 µmol/L have been associated with good bronchodilator effect. Drug interactions causing decreased serum levels: alcohol, carbamazepine, phenobarbital, phenytoin, rifampin, tobacco smoking; drug interactions causing increased serum levels: amiodarone, cimetidine, ciprofloxacin, clarithromycin, erythromycin, fluvoxamine, isoniazid, mexiletine, propranolol, verapamil

**Note:** Please review product monographs at <http://webprod.hc-sc.gc.ca/dpd-bdpp/index-eng.jsp> and regularly review current Health Canada advisories, warnings and recalls at: [http://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)

See <http://www.health.gov.bc.ca/pharmacare/> for further information.

## PharmaCare Coverage Explanations

**Regular benefit drugs:** do not require Special Authority. Patients may receive full or partial coverage, since some of these drugs are included in the Low Cost Alternative (LCA) program or Reference Drug Program (RDP).  
**LCA:** when multiple medications contain the same active ingredient (usually generic products), patients receive full coverage for the drug with the lowest average PharmaCare claimed price. The remaining products are partial benefits.

**Limited coverage drugs:** require Special Authority. These drugs are not normally regarded as first-line therapies or there are drugs for which a more cost-effective alternative exists.

**In all cases:** coverage is subject to drug price limits set by PharmaCare and to the patient's PharmaCare plan rules and deductibles.

### References:

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3. e-CPS [Internet]. Ottawa (ON): Canadian Pharmacists Association; c2009 [cited 2009 Nov 24]. Available from: <http://www.e-cps.ca>. Also available in paper copy from the publisher.
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7. Vassallo R, Lipsky JJ. Theophylline: recent advances in the understanding of its mode of action and uses in clinical practice. *Mayo Clin Proc.* 1998;73:346-354.