



ASL-02 Automatic Substitution List - ACE Inhibitors and ARBs

Overview

In order to simplify drug therapy, orders for one medication may be automatically substituted (also known as therapeutic interchange) to a different medication that is considered therapeutically equivalent.

These substitutions are approved by the Calgary Zone Long Term Care Pharmacy and Therapeutics Committee.

The rationale for auto-substitutions may vary by drug product, but the typical motivating factors for any given product may be (in no particular order):

- Ease of medication regimen
- Decreasing number and variability of available medication (i.e. decreasing overall items of in drug inventory to reduce workload on pharmacy and nursing staff)
- Cost of therapy
- Clinical effect should be non-inferior to the original prescribed therapy
- To support drug shortage situations

During the initial assessment period taking place during the 3-6 week grace period following a resident's admission, the pharmacist may use this time to determine the appropriateness of any auto-substitution to and not feel compelled to immediately change therapy during Medication Reconciliation.

At anytime, if the substituted product is considered clinically inappropriate for the resident, the automatic substitution should not take place and the pharmacist should consult with the resident's physician to determine the most appropriate therapy and apply if non-formulary funding if necessary.

ACE inhibitors and Angiotensin II Receptor Blockers (ARBs)

The Formulary ACE-I is ramipril. Enalapril, lisinopril and perindopril have additional restrictions (see RS-11).

The Formulary ARBs are **valsartan**, **losartan**, and **candesartan**.

For non-formulary ARBs, an auto-substitution is considered **mandatory** for indications of hypertension. Selection of which Formulary ARB should be based on clinical judgement including indications, availability, cost, and site utilization patterns. For all other indications, in particular structural diseases of the heart (e.g. heart failure of any kind), in collaboration with the resident's physician, the pharmacist will be expected to assess each individual case and either **a)** follow the automatic substitution, or **b)** submit an NF request for funding consideration if a non-formulary ARB is medically necessary.

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Angiotensin Converting Enzyme Inhibitors (ACEI)			
ORIGINAL ORDER		SUBSTITUTION	
		<i>Approximate doses: monitor blood pressure and titrate to effective dose. Consider monitoring electrolytes. Consult the resident's physician as necessary for collaborative decision making</i>	
benazepril (Lotensin)	5 mg once daily	ramipril	1.25 mg once daily
	10 mg once daily		2.5 mg once daily
	15 mg once daily		3.75 mg once daily
	20 mg once daily		5 mg once daily
	30 mg once daily		7.5 mg once daily
	40 mg once daily		10 mg once daily
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cilazapril (Inhibace)	1 mg once daily	ramipril	1.25 mg once daily
	2.5 mg once daily		2.5 mg once daily
	5 mg once daily		5 mg once daily
	10 mg once daily		10 mg once daily
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enalapril (Vasotec)	2.5 mg once daily	enalapril	2.5 mg once daily
	5 mg once daily	ramipril	1.25 mg once daily
	10 mg once daily		2.5 mg once daily
	20 mg once daily		5 mg once daily
	40 mg once daily		10 mg once daily
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fosinopril (Monopril)	5 mg once daily	ramipril	1.25 mg once daily
	10 mg once daily		2.5 mg once daily
	15 mg once daily		3.75 mg once daily
	20 mg once daily		5 mg once daily
	30 mg once daily		7.5 mg once daily

ORIGINAL ORDER		SUBSTITUTION	
		<i>Approximate doses: monitor blood pressure and titrate to effective dose. Consider monitoring electrolytes. Consult the resident's physician as necessary for collaborative decision making</i>	
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lisinopril (Prinivil, Zestril)	2.5 mg once daily	lisinopril	2.5 mg once daily
	5 mg once daily	ramipril	1.25 mg once daily
	10 mg once daily		2.5 mg once daily
	20 mg once daily		5 mg once daily
	40 mg once daily		10 mg once daily
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perindopril (Coversyl) ¹	1 mg once daily		-
	2 mg once daily	ramipril	1.25 mg once daily
	4 mg once daily		2.5 mg once daily
	8 mg once daily		5 mg once daily
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quinapril (Accupril)	2.5 mg once daily		-
	5 mg once daily	ramipril (Altace®)	1.25 mg once daily
	10 mg once daily		2.5 mg once daily
	20 mg once daily		5 mg once daily
	40 mg once daily		10 mg once daily
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trandolopril (Mavik)	0.5 mg once daily	ramipril (Altace®)	1.25 mg once daily
	1 mg once daily		2.5 mg once daily
	2 mg once daily		5 mg once daily
	4 mg once daily		10 mg once daily
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1. If perindopril meets restricted criteria, auto-substitution not required			

Angiotensin II Receptor Blockers (ARBs)						
ORIGINAL ORDER	SUBSTITUTION Option #1 valsartan		SUBSTITUTION Option #2a losartan		SUBSTITUTION Option #3a candesartan	
	<i>Approximate doses: monitor blood pressure and titrate to effective dose. Consider monitoring electrolytes. Consult the resident's physician as necessary for collaborative decision making</i>		<i>Approximate doses: monitor blood pressure and titrate to effective dose. Consider monitoring electrolytes. Consult the resident's physician as necessary for collaborative decision making</i>		<i>Approximate doses: monitor blood pressure and titrate to effective dose. Consider monitoring electrolytes. Consult the resident's physician as necessary for collaborative decision making</i>	
candesartan (Atacand)	4 mg once daily	valsartan	40 mg once daily	losartan	25 mg once daily	
	8 mg once daily		80 mg once daily		50 mg once daily	
	16 mg once daily		160 mg once daily		100 mg once daily	
	32 mg once daily		320 mg once daily		100 -150 mg once daily	
losartan (Cozaar)	25 mg once daily	valsartan	40 mg once daily			candesartan
	50 mg once daily		80 mg once daily			4 mg once daily
	100 mg once daily		160 mg once daily			8 mg once daily
	150 mg once daily		320 mg once daily			16 mg once daily
						32 mg once daily
valsartan (Diovan)	40 mg once daily			losartan	25 mg once daily	candesartan
	80 mg once daily				50 mg once daily	4 mg once daily
	160 mg once daily				100 mg once daily	8 mg once daily
	320 mg once daily				100 -150 mg once daily	16 mg once daily
						32 mg once daily
valsartan (Diovan)	40 mg BID			losartan	50 mg once daily	candesartan
	80 mg BID				100 mg once daily	8 mg once daily
	160 mg BID				100 -150 mg once daily	16 mg once daily
						32 mg once daily
eprosartan (Teveten)	400 mg once daily	valsartan	40 mg once daily	losartan	25 mg once daily	candesartan
	600 mg once daily		80 mg once daily		50 mg once daily	4 mg once daily
	800 mg once daily		160 mg once daily		100 mg once daily	8 mg once daily
						16 mg once daily
irbesartan (Avapro)	75 mg once daily	valsartan	40 mg once daily	losartan	25 mg once daily	candesartan
	150 mg once daily		80 mg once daily		50 mg once daily	4 mg once daily
	300 mg once daily		160 mg once daily		100 mg once daily	8 mg once daily
						16 mg once daily
olmesartan (Olmotec)	5 mg once daily	valsartan	40 mg once daily	losartan	25 mg once daily	candesartan
	10 mg once daily		80 mg once daily		50 mg once daily	4 mg once daily
	20 mg once daily		160 mg once daily		100 mg once daily	8 mg once daily
	40 mg once daily		320 mg once daily		100 -150 mg once daily	16 mg once daily
						32 mg once daily
telmisartan (Micardis)	40 mg once daily	valsartan	160 mg once daily	losartan	100 mg once daily	candesartan
	80 mg once daily		320 mg once daily		100 -150 mg once daily	16 mg once daily
						32 mg once daily