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Changes to Formulary

In order to align with the BCHA Formulary, the following medications are now stocked at Vancouver Acute. A list of BCHA P&T approved deletions follows.

Additions

- 1. Azacitidine 100 mg injection (Vidaza®)**
 - Antineoplastic agent used at VA to treat myelodysplastic syndrome (MDS) and acute myeloid leukemia (AML)
 - Restricted to indications as outlined in the BCCA Benefit Drug List and patients who are registered with BCCA
- 2. Bicalutamide 50 mg tablets (Casodex®)**
 - Antineoplastic agent used at VA to treat metastatic prostate cancer
 - Restricted to indications as outlined in the BCCA Benefit Drug List and patients who are registered with BCCA
- 3. Imatinib 100 mg, 400 mg tablets (Gleevec®)**
 - Antineoplastic agent used at VA to treat chronic myeloid leukemia (CML)
 - Restricted to indications as outlined in the BCCA Benefit Drug List and patients who are registered with BCCA

4. Letrozole 2.5 mg tablets (Femara®)

- Antineoplastic agent used at VA to treat breast cancer
- Restricted to indications as outlined in the BCCA Benefit Drug List and patients who are registered with BCCA

5. Multivitamins with Minerals plus Beta-Carotene and Lutein (Vitalux® AREDS)

- See page 3 for Comparison of Oral Solid Multivitamins with Minerals

6. Multivitamins with Minerals, Prenatal (Materna®)

- See page 3 for Comparison of Oral Solid Multivitamins with Minerals

7. Vitamin C 250 mg chewable tablets

- This strength is now available in addition to the 500 mg non-chewable tablets

8. Alfacalcidol 2 mcg/mL liquid (One Alpha®)

- Vitamin D analogue for use in patients with chronic kidney disease

9. Doxazosin 2 mg tablets (Cardura®)

- Long-acting selective postsynaptic alpha-1 adrenoceptor antagonist; it is structurally similar to terazosin.
- For management of benign prostatic hypertrophy (BPH) and hypertension

10. Sildenafil 25 mg, 50 mg tablets (Viagra®)

- Phosphodiesterase-5 enzyme inhibitor
- Restricted to the treatment of pulmonary arterial hypertension (PAH)

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11. Fenofibrate micronized 67 mg, 200 mg caps (Lipidil Micro®)

- Fibrate antihyperlipidemic agent effective for reducing triglyceride levels and raising HDL levels
- See page 2 for Comparison of Lipid Lowering Medications and Therapeutic Interchange

12. Ticagrelor 90 mg tablets (Brilinta®)

- Antiplatelet drug
- Restricted to patients on prior to admission **or** in combination with ASA in those with Acute Coronary Syndrome (ACS) (i.e. STEMI, non-STEMI, unstable angina (UA)) **AND**
 - 1) Failure on optimal clopidogrel and ASA therapy **or** recurrent ACS after revascularization with Percutaneous Coronary Intervention (PCI); **OR**
 - 2) STEMI **and** undergoing revascularization via PCI; **OR**
 - 3) Non-STEMI or UA **and** high risk angiographic anatomy **and** undergoing revascularization via PCI
- See page 4 for Antiplatelet Comparison Chart

13. Ticarcillin-Clavulanate 3.1 g vial (Timentin®)

- Broad spectrum penicillin-type antibiotic restricted to treatment of *Stenotrophomonas maltophilia* infections when other agents cannot be used due to intolerance or resistance

14. Minocycline 100 mg capsules (Minocin®)

- Tetracycline-type antibiotic

15. Rifabutin 150 mg capsules (Mycobutin®)

- Anti-tubercular/mycobacterial agent

Deletions**1. Fenofibrate microcoated capsules (Lipidil Supra®)**

- Alternative: Fenofibrate micronized capsules (Lipidil Micro®); see Therapeutic Interchange Policy on page 2

2. Nystatin 500,000 unit tablets (Mycostatin®)

- Alternative: Nystatin suspension

3. Ketoconazole 200 mg tablets (Nizoral®)

- Alternative: Fluconazole tablets

4. Lindane 1% lotion and shampoo

- Discontinued by manufacturer
- Alternative: Permethrin 1% crème rinse/hair lotion, 5% dermal cream

Updated Policies**1. FENOFIBRATE FORMULATIONS AND THERAPEUTIC INTERCHANGE POLICY**

Fenofibrate is available in 4 formulations (Table 1). Previously, VA Pharmacy carried the following 2 formulations: non-micronized and microcoated. The new BCHA formulary has replaced the microcoated formulation with the micronized formulation. Table 2 illustrates the Therapeutic Interchange Policy for fenofibrate orders.

Table 1. Fenofibrate Formulations

Formulation	Marketed Products
Regular release (non-micronized)	Apo-fenofibrate® Nu-fenofibrate®
Micronized (50% increase in bioavailability compared to non-micronized)	Lipidil Micro® Apo-Feno-Micro® Novo/Mylan/Dom/PHL/ PMS/Ratio/Riva-fenofibrate Micro®
Microcoated (75% increase in bioavailability compared to non-micronized)	Lipidil Supra®; Fenomax® Apo/Pro-Feno-Super® Novo-Fenofibrate-S® Sandoz Fenofibrate S®
Nanocrystal (~90% increase in bioavailability compared to non-micronized)	Lipidil EZ®

Table 2. Fenofibrate Therapeutic Interchange

Drug Ordered	Drug Dispensed (same interval)
Fenofibrate regular release	As ordered
Fenofibrate micronized (e.g. Lipidil Micro®)	As ordered
Fenofibrate microcoated 100 mg (e.g. Lipid Supra®)	Fenofibrate micronized 134 mg (2 x 67 mg) (Lipidil Micro®)
Fenofibrate microcoated 160 mg (e.g. Lipidil Supra®)	Fenofibrate micronized 200 mg (Lipidil Micro®)
Fenofibrate nanocrystals 48 mg (Lipidil EZ®)	Fenofibrate micronized 67 mg (Lipidil Micro®)
Fenofibrate nanocrystals 145 mg (Lipidil EZ®)	Fenofibrate micronized 200 mg (Lipidil Micro®)

2. LIPID LOWERING MEDICATION COMPARISON CHART

Table 3. Lipid Lowering Medication Comparison

Drug	LDL	HDL	Triglycerides
Statins (e.g. atorvastatin)	↓ (20-60%)	↑ (5-15%)	↓ (7-30%)
Fibrates (e.g. fenofibrate)	↔ or ↓ (5-20%)	↑ (10-20%)	↓ (20-50%)
Cholestyramine/Resins	↓ (15-30%)	↑ (3-5%)	↔ or possible ↑
Niacin	↓ (5-25%)	↑ (15-35%)	↓ (20-50%)
Ezetimide	↓ (18%)	↔ or ↑ (1.3%)	↓ (6%)
Omega-3 fatty acids	↔ or ↑	↔ or ↑	↓ (up to 44%)

References: Rx files, 9th edition; Metabolism 2004;53:153-8.

3. CHEMOTHERAPY DOSE CALCULATION CHANGES FOR LEUKEMIA/BMT SERVICE

All NON-BMT protocols/orders (e.g. patients at VGH being treated with chemotherapy for acute leukemia, lymphoma, myeloma, etc).

- Chemotherapy doses will be calculated based on **actual body weight** or BSA using actual body weight.

Exceptions:

- Vincristine will be capped at 2 mg in all protocols.
- In some circumstances such as morbidly obese patients, physicians may choose to use an adjusted dose; this will be at physician's discretion and should be clearly stated in the order.

ALL BMT protocols/orders (i.e. stem cell transplant, autologous or allogeneic)

- Chemotherapy doses will continue to be based on an **adjusted body weight** or BSA using an adjusted body weight
- Patients whose actual body weight (ABW) is greater than their ideal body weight (IBW) will have an adjusted body weight (AdjBW) calculated as: $\text{AdjBW} = (\text{TBW} + \text{IBW}) / 2$
- Patients whose ABW is less than their IBW will continue to be dosed based on their ABW.

4. COMPARISON OF ORAL SOLID MULTIVITAMINS WITH MINERALS

Table 4. Oral Solid Multivitamin with Minerals

Drug (tablet)	Centrum Forte ¹	Centrum Select ¹ Chewtab	Materna	Vitalux AREDS
Vitamin A	1000 units	1000 units	1000 units	
Beta-Carotene	3000 units	3000 units	2500 units	4773 units
Thiamine (B1)	2.25 mg	2.25 mg	1.4 mg	
Riboflavin (B2)	3.2 mg	3.2 mg	1.4 mg	
Niacinamide	15 mg	15 mg	18 mg	
Pantothenic Acid	10 mg	10 mg	6 mg	
Pyridoxine (B6)	5 mg	8 mg	1.9 mg	
Vitamin B12	20 mcg	25 mcg	2.6 mcg	
Biotin	45 mcg	45 mcg	30 mcg	
Vitamin C	90 mg	90 mg	85 mg	250 mg
Vitamin D	600 units	600 units	400 units	
Vitamin E	50 units	75 units	30 units	200 units
Vitamin K-1	25 mcg	25 mcg		
Folic Acid	0.6 mg	0.6 mg	1 mg	
Iron	10 mg	4 mg	27 mg	
Calcium	200 mg	200 mg	250 mg	
Phosphorus	125 mg	125 mg		
Magnesium	50 mg	50 mg	50 mg	
Iodine	0.15 mg	0.15 mg	0.22 mg	
Copper	1 mg		1 mg	1 mg
Manganese	5 mg	5 mg	2 mg	
Potassium	80 mg			
Chromium	35 mcg	100 mcg	30 mcg	
Molybdenum	45 mcg	45 mcg	50 mcg	
Selenium	55 mcg	55 mcg	30 mcg	
Zinc	7.5 mg	3 mg	7.5 mg	40 mg
Lutein	0.5 mg	0.5 mg		5 mg

¹ also contains licosene 600 mcg

5. ANTIPLATELET COMPARISON CHART

Table 5. Antiplatelet Comparison

Drug	ASA	Clopidogrel (Plavix®)	Prasugrel (Effient®)	Ticagrelor (Brilinta®)
Indications	<ul style="list-style-type: none"> 1° and 2° prevention of stroke and MI ACS PCI with stent PVD 	<ul style="list-style-type: none"> ASA intolerance or failure 1° and 2° prevention of stroke and MI (+/- ASA) ACS (+ ASA) PCI (+ ASA) PVD 	<ul style="list-style-type: none"> With ASA, for treatment of ACS in patients treated with PCI Contraindicated if: age > 75 years; OR wt < 60 kg; OR history of stroke NON-FORMULARY 	<ul style="list-style-type: none"> With ASA, for treatment of ACS See BCHA restrictions below¹
Dose and Duration	Load: 160-325 mg Maintenance: 80 or 81 mg daily Duration: Indefinite	Load: 300-600 mg Maintenance: 75 mg daily Duration: ACS: up to 1 year BMS: minimum 30 days DES: minimum 1 year	Load: 60 mg Maintenance: 10 mg daily Duration: up to 1 year	Load: 180 mg Maintenance: 90 mg BID Duration: up to 1 year
Class	Non-Steroidal Anti-Inflammatory Agent	Second generation thienopyridine (Prodrug)	Third-generation thienopyridine (Prodrug)	Cyto-pentyl-triazolo-pyrimidine
Mechanism of Platelet Inhibition	Irreversible inhibitor of COX-1 causing decrease in thromboxane A ₂	Irreversible inhibitor of P2Y ₁₂ component of ADP receptor (preventing ADP binding and activation of platelets)	Irreversible inhibitor of P2Y ₁₂ component of ADP receptor (preventing ADP binding and activation of platelets)	Reversibly modifies P2Y ₁₂ component of ADP receptor (preventing ADP binding and activation of platelets)
Oral Bioavailability	50-75%	> 50% (active metabolite)	> 78% (active metabolite)	30-42%
Peak Effect	1-3 hours	6 hours (after load)	4 hours (after load)	2 hours (after load)
Half-life (active metabolite)	3 hours (salicylate)	0.5 hours	7 hours (range 2-15 hrs)	9 hours (range 6.7-9.1 hrs)
Elimination	Hydrolyzed by esterases; Hepatic conjugation	Esterases; Metabolism by CYP-450 enzymes	Esterases; Metabolism by CYP-450 enzymes	Metabolism by CYP-450 enzymes
CYP Metabolism	No	CYP2C19	CYP3A4, CYP2B6	CYP3A4/5
When to Hold Dose Prior to Surgery	7 days (optional)	5-7 days	7 days	5 days

¹ Ticagrelor restricted to patients on prior to admission **or** those on ASA with ACS i.e. STEMI, non-STEMI, unstable angina (UA) **AND one of the following:**

- Failure on optimal doses of clopidogrel and ASA therapy **or** recurrent ACS after revascularization with PCI; **OR**
- STEMI **and** undergoing revascularization via PCI; **OR**
- Non-STEMI or UA **and** high risk angiographic anatomy **and** undergoing revascularization via PCI

Abbreviations:

ACS = Acute Coronary Syndrome; PCI = Percutaneous Coronary Intervention; PVD = Peripheral Vascular Disease; BMS = Bare Metal stent; DES = Drug-Eluting Stent; ADP = Adenosine Diphosphate