Subject: Formulary Management through Establishing Guidelines, Policies or Therapeutic Interchanges (TI)

Purpose: To establish guidelines which authorize the exchange of therapeutic alternatives when the pharmacy receives an order for a non-formulary or non-preferred medication, without the need to contact the Prescriber.

Policy: To support a cost effective formulary management, MMSC recognizes the need for processes which support standards of practice, consistency in prescribing aside from established order sets. These can be further achieved through approved Guidelines or Therapeutic Interchanges (TI). MMSC will only establish Guidelines or TI which are scientifically defensible and pharmacoeconomically beneficial and adhere to the rigorous criteria determined and enforced by MMSC’s Pharmacy & Therapeutics Committee (P&T).

1) MMSC P&T enables several processes which help to improve therapeutic outcomes, prevent adverse events, or reduce costs. Efforts include;
   a) Periodic reviews of standards of practice, and medication availability
      i) i.e. crash carts and ACLS recommendations
      ii) i.e. standard medication stock in specialty areas such as Cath Lab, ICU…
   b) A Non-Formulary Review Process [see P&T approved form – Appendix A]
   c) Review impact of changes in FDA recommendations (i.e. Black Box Warnings)
   d) Class Review – as market or generic availability support evaluation for cost effective solutions

2) Any review which supports action(s) in support of patient care may include;
   a) Removal of a drug from formulary
   b) Addition of a drug to the formulary
   c) Consideration of Established-use criteria. Patients must meet the established criteria before the medication is dispensed.
   d) Restricting drug use to a Service. Consulting of a Specialist or Service Provider for approval for the use of the drug before dispensing. This strategy helps to mitigate inappropriate use or when severe adverse effects may occur. Restrictions can also be employed for antimicrobial agents when inappropriate use or overuse can result in resistant organisms and pose a danger to the general patient population or the public.
e) **Limiting use of the drug to specially trained individuals.** This strategy may be appropriate when the drug is inherently dangerous and should only be used by individuals with specific training (e.g., restricting use of chemotherapy agents to oncologists).

f) **Designating medications for use in specific areas:** when administration of a medication requires special equipment or staff with particular skill set for safe medication delivery (e.g., limiting neuromuscular blockers to operating rooms and critical care areas).

g) TI which safely allow the conversion of one medication, or class of medications (i.e. “Statins”, ACE Inhibitors) to one specified agent and dosing regimen for use while inpatient at MMSC

3) Initiatives such as TI which do not warrant a policy, therefore will be added as Appendixes to this Policy following approval of P&T.

4) Adequate educational initiatives will be undertaken to ensure that everyone affected (prescribers, patients, pharmacists, nurses, and other health care professionals) are notified of all medication removals, restrictions or TI.

Originated by: Pharmacy
Effective date: 6/11
Authorized by: Director of Pharmacy Services    Date

Review date:    Distribution: Pharmacy
Appendix A – CURRENT SUBSTITUTIONS (Previously approved/practice)

<table>
<thead>
<tr>
<th>Order Received for</th>
<th>Autosub/dispensed as</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Oral PPI</td>
<td>omeprazole</td>
</tr>
<tr>
<td>2. INJ PPI</td>
<td>Protonix</td>
</tr>
<tr>
<td>3. Vancomycin for oral use</td>
<td>reconstitute INJ vials for dose</td>
</tr>
<tr>
<td>4. Oxycodone/APAP combinations</td>
<td>5 mg/325 mg</td>
</tr>
<tr>
<td>5. Oral bulk laxatives (non-psyllium)</td>
<td>Fiber Lax</td>
</tr>
<tr>
<td>3. Calcium any strength</td>
<td>500 mg tablet</td>
</tr>
<tr>
<td>4. Calcium/Vitamin D any strength</td>
<td>500 mg / 200 mg</td>
</tr>
<tr>
<td>5. Folic Acid</td>
<td>1 mg tablets</td>
</tr>
<tr>
<td>6. Vitamin B12</td>
<td>1000 mcg</td>
</tr>
<tr>
<td>7. Vitamin C</td>
<td>500 mg tablets</td>
</tr>
<tr>
<td>8. Vitamin D</td>
<td>1000 unit capsules</td>
</tr>
<tr>
<td>9. Vitamin E</td>
<td>500 mg tablets</td>
</tr>
<tr>
<td>10. Preservison or Ocuvite</td>
<td>I-Vite (Prosite)</td>
</tr>
<tr>
<td>11. Any adult vitamin formulation</td>
<td>Therapeutic Vitamin w/Mineral</td>
</tr>
<tr>
<td>12. Fish Oil (any style/formulation)</td>
<td>Fish Oil 1000 mg</td>
</tr>
<tr>
<td>13. Cranberry formulations</td>
<td>AZO Cranberry</td>
</tr>
</tbody>
</table>
## Appendix B - SEDATIVE / HYPNOTICS

<table>
<thead>
<tr>
<th>Drug/Dose Written</th>
<th>Drug/Dose INTERCHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estazolam (Prosom)</td>
<td></td>
</tr>
<tr>
<td>1 mg</td>
<td>Temazepam</td>
</tr>
<tr>
<td>2 mg</td>
<td>15 mg</td>
</tr>
<tr>
<td></td>
<td>30 mg</td>
</tr>
<tr>
<td>Eszopiclone (Lunesta)</td>
<td></td>
</tr>
<tr>
<td>1 mg</td>
<td>Zolpidem</td>
</tr>
<tr>
<td>2 mg</td>
<td>2.5 mg</td>
</tr>
<tr>
<td>3 mg</td>
<td>5 mg</td>
</tr>
<tr>
<td></td>
<td>10 mg</td>
</tr>
<tr>
<td>Flurazepam (Dalmane)</td>
<td></td>
</tr>
<tr>
<td>15 mg</td>
<td>Temazepam</td>
</tr>
<tr>
<td>30 mg</td>
<td>15 mg</td>
</tr>
<tr>
<td></td>
<td>30 mg</td>
</tr>
<tr>
<td>Oxazepam (Serax)</td>
<td></td>
</tr>
<tr>
<td>10 mg</td>
<td>Lorazepam</td>
</tr>
<tr>
<td>15 mg</td>
<td>0.5 mg</td>
</tr>
<tr>
<td>30 mg</td>
<td>1 mg</td>
</tr>
<tr>
<td></td>
<td>2 mg</td>
</tr>
<tr>
<td>Quzepam (Doral)</td>
<td></td>
</tr>
<tr>
<td>7.5 mg</td>
<td>Temazepam</td>
</tr>
<tr>
<td>15 mg</td>
<td>15 mg</td>
</tr>
<tr>
<td></td>
<td>30 mg</td>
</tr>
<tr>
<td>Temazepam (Restoril)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Temazepam as written</td>
</tr>
<tr>
<td>Traizolam (Halcion)</td>
<td></td>
</tr>
<tr>
<td>0.125 mg</td>
<td>Temazepam</td>
</tr>
<tr>
<td>0.25 mg</td>
<td>7.5 mg</td>
</tr>
<tr>
<td></td>
<td>15 mg</td>
</tr>
<tr>
<td>Zaleplon (Sonata-now generic)</td>
<td></td>
</tr>
<tr>
<td>5 mg</td>
<td>Zolpidem</td>
</tr>
<tr>
<td>10 mg</td>
<td>5 mg</td>
</tr>
<tr>
<td></td>
<td>10 mg</td>
</tr>
<tr>
<td>Zolpidem (Ambien)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Zolpidem as written</td>
</tr>
<tr>
<td>Zolpidem CR (Ambien CR)</td>
<td></td>
</tr>
<tr>
<td>6.25 mg</td>
<td></td>
</tr>
<tr>
<td>12.5 mg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Zolpidem</td>
</tr>
<tr>
<td></td>
<td>5 mg</td>
</tr>
<tr>
<td></td>
<td>10 mg</td>
</tr>
</tbody>
</table>
Appendix C - HMG CoA REDUCTASE INHIBITORS ("Statins")

<table>
<thead>
<tr>
<th>Drug/Dose Written</th>
<th>Drug/Dose INTERCHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atorvastatin (Lipitor)</td>
<td>Simvastatin</td>
</tr>
<tr>
<td>10 mg</td>
<td>20 mg</td>
</tr>
<tr>
<td>20 mg</td>
<td>40 mg</td>
</tr>
<tr>
<td>40 mg</td>
<td>80 mg</td>
</tr>
<tr>
<td>80 mg</td>
<td></td>
</tr>
<tr>
<td>Fluvastatin (Lescol)</td>
<td>simvastatin</td>
</tr>
<tr>
<td>20 mg</td>
<td>5 mg</td>
</tr>
<tr>
<td>40 mg</td>
<td>10 mg</td>
</tr>
<tr>
<td>80 mg</td>
<td>20 mg</td>
</tr>
<tr>
<td>Lovastatin (Mevacor)</td>
<td>simvastatin</td>
</tr>
<tr>
<td>10 mg</td>
<td>5 mg</td>
</tr>
<tr>
<td>20 mg</td>
<td>10 mg</td>
</tr>
<tr>
<td>40 mg</td>
<td>20 mg</td>
</tr>
<tr>
<td>80 mg</td>
<td>40 mg</td>
</tr>
<tr>
<td>Now generic</td>
<td></td>
</tr>
<tr>
<td>Pravastatin (Pravachol)</td>
<td>Pravastatin as ordered</td>
</tr>
<tr>
<td>any dose</td>
<td></td>
</tr>
<tr>
<td>Rosuvastatin (Crestor)</td>
<td>simvastatin</td>
</tr>
<tr>
<td>5 mg</td>
<td>20 mg</td>
</tr>
<tr>
<td>10 mg</td>
<td>40 mg</td>
</tr>
<tr>
<td>20 mg</td>
<td>80 mg</td>
</tr>
<tr>
<td>40 mg</td>
<td></td>
</tr>
<tr>
<td>Simvastatin</td>
<td>As written</td>
</tr>
<tr>
<td>any dose</td>
<td></td>
</tr>
</tbody>
</table>

Discussion points

1) Zocor is the preferred formulary statin: dosing is not to exceed 80 mg QD

2) Pravastatin will be statin of choice if patient is on:

- Amiodorone
- Cyclosporine
- Danazol
- Diltiazem
- Gemfibrozil
- HIV Protease Inhibitor
- Ketokonazole
- Niacin > 1 gram/day
- Verapamil

3) If on Biaxin or Erythromycin – Hold statin until 2 says post completion of course of treatment
### Appendix D - SECOND GENERATION ANTIHISTAMINES

<table>
<thead>
<tr>
<th>Product Ordered</th>
<th>Loratadine conversion **</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cetirizine (Zyrtec)</td>
<td></td>
</tr>
<tr>
<td>2.5 mg</td>
<td>Loratadine 5 mg</td>
</tr>
<tr>
<td>5 mg Chew</td>
<td>Loratadine 10 mg</td>
</tr>
<tr>
<td>10 mg</td>
<td>Loratadine 10 mg</td>
</tr>
<tr>
<td>Desloratidine (Clarinex)</td>
<td></td>
</tr>
<tr>
<td>5 mg</td>
<td>Loratadine 10 mg</td>
</tr>
<tr>
<td>5 mg Redi-Tab</td>
<td>Loratadine 10 mg</td>
</tr>
<tr>
<td>Fexofenadine (Allegra)</td>
<td></td>
</tr>
<tr>
<td>60 mg BID</td>
<td>Loratadine 10 mg</td>
</tr>
<tr>
<td>180 mg QD</td>
<td>Loratadine 10 mg</td>
</tr>
</tbody>
</table>

This therapeutic interchange is based on available literature that demonstrates equivalent safety and clinical efficacy of second generation antihistamines

** For patients with Cr Cl < 30 or with liver failure starting doses should be 10mg every other day

### SECOND GENERATION ANTIHISTAMINE/PSEUDOEPHEDRINE COMBINATIONS

The antihistamine will be dispensed as above PLUS equivalent pseudoephedrine up to 60 mg QID

- Zyrtec D 12 H
- Clarinex D 12 H
- loratdine D 12 H
- Zyrtec D 24 H
- Clarinex D 24 H
- loratdine D 24 H

Will be dispense as: Loratadine 10mg QD+ pseudoephedrine 30mg tabs QID
<table>
<thead>
<tr>
<th>Drug/Dose written</th>
<th>Drug/Dose Formulary Interchange</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bupropion Extended Release (as Wellbutrin XL)</td>
<td>Bupropion Sustained Release</td>
</tr>
<tr>
<td>150 mg</td>
<td>150 mg BID</td>
</tr>
<tr>
<td>300 mg</td>
<td></td>
</tr>
<tr>
<td>Bupropion Sustained Release (as Wellbutrin SR)</td>
<td>Bupropion Sustained Release</td>
</tr>
<tr>
<td>100 mg</td>
<td>100 mg</td>
</tr>
<tr>
<td>150 mg</td>
<td>150 mg</td>
</tr>
<tr>
<td>Bupropion (Wellbutrin)</td>
<td>Bupropion</td>
</tr>
<tr>
<td>75 mg</td>
<td>75 mg</td>
</tr>
<tr>
<td>100 mg</td>
<td>100 mg</td>
</tr>
<tr>
<td>Escitalopram (Lexapro)</td>
<td>Citalopram</td>
</tr>
<tr>
<td>5 mg</td>
<td>10 mg</td>
</tr>
<tr>
<td>10 mg</td>
<td>20 mg</td>
</tr>
<tr>
<td>20 mg</td>
<td>40 mg</td>
</tr>
<tr>
<td>Paroxetine extended Release (a/k/a Paxil CR)</td>
<td>Paroxetine</td>
</tr>
<tr>
<td>12.5 mg</td>
<td>10 mg</td>
</tr>
<tr>
<td>25 mg</td>
<td>20 mg</td>
</tr>
<tr>
<td>37.5 mg</td>
<td>30 mg</td>
</tr>
</tbody>
</table>
## Appendix F - ANGIOTENSIN CONVERTING ENZYME (ACE) INHIBITORS

<table>
<thead>
<tr>
<th>Drug/Dose written</th>
<th>Drug/Dose Formulary Interchange</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benazepril (Lotensin)</td>
<td></td>
</tr>
<tr>
<td>5 mg</td>
<td>Lisinopril</td>
</tr>
<tr>
<td>10 mg</td>
<td></td>
</tr>
<tr>
<td>20 mg</td>
<td></td>
</tr>
<tr>
<td>40 mg</td>
<td></td>
</tr>
<tr>
<td>Captopril (Capoten)</td>
<td></td>
</tr>
<tr>
<td>any dose</td>
<td>As written</td>
</tr>
<tr>
<td>Enalapril (Vasotec)</td>
<td></td>
</tr>
<tr>
<td>2.5 mg</td>
<td>Lisinopril</td>
</tr>
<tr>
<td>5 mg</td>
<td></td>
</tr>
<tr>
<td>10 mg</td>
<td></td>
</tr>
<tr>
<td>20 mg</td>
<td></td>
</tr>
<tr>
<td>Fosinopril (Monopril)</td>
<td></td>
</tr>
<tr>
<td>10 mg</td>
<td>Lisinopril</td>
</tr>
<tr>
<td>20 mg</td>
<td></td>
</tr>
<tr>
<td>40 mg</td>
<td></td>
</tr>
<tr>
<td>Lisinopril (Prinivil, Zestril,)</td>
<td>lisinopril written (formulary)</td>
</tr>
<tr>
<td>any dose</td>
<td></td>
</tr>
<tr>
<td>Moexepril (Univasc)</td>
<td></td>
</tr>
<tr>
<td>7.5 mg</td>
<td>Lisinopril</td>
</tr>
<tr>
<td>15 mg</td>
<td></td>
</tr>
<tr>
<td>Perindopril (Aceon)</td>
<td></td>
</tr>
<tr>
<td>2 mg</td>
<td>Lisinopril</td>
</tr>
<tr>
<td>4 mg</td>
<td></td>
</tr>
<tr>
<td>8 mg</td>
<td></td>
</tr>
<tr>
<td>Pravachol (pravasttin)</td>
<td></td>
</tr>
<tr>
<td>any dose</td>
<td>pravastatin as written (formulary)</td>
</tr>
<tr>
<td>Quinapril (Accupril)</td>
<td></td>
</tr>
<tr>
<td>5 mg</td>
<td>Lisinopril</td>
</tr>
<tr>
<td>10 mg</td>
<td></td>
</tr>
<tr>
<td>20 mg</td>
<td></td>
</tr>
<tr>
<td>40 mg</td>
<td></td>
</tr>
<tr>
<td>Ramipril (Altace)</td>
<td></td>
</tr>
<tr>
<td>1.25 mg QD or BID</td>
<td>Lisinopril</td>
</tr>
<tr>
<td>2.5 mg QD or BID</td>
<td></td>
</tr>
<tr>
<td>5 mg QD or BID</td>
<td></td>
</tr>
<tr>
<td>10 mg QD</td>
<td></td>
</tr>
<tr>
<td>Trandolapril (Mavik)</td>
<td></td>
</tr>
<tr>
<td>1 mg</td>
<td>Lisinopril</td>
</tr>
<tr>
<td>2 mg</td>
<td></td>
</tr>
<tr>
<td>4 mg</td>
<td></td>
</tr>
</tbody>
</table>
### Appendix G - OPTHALMIC PROSTAGLANDIN ANALOGS

<table>
<thead>
<tr>
<th>Drug/Dose written</th>
<th>Drug/Dose Formulary Interchange</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lumigan (bimatoprost) 0.03% one drop in affected eye(s) once daily in the evening</td>
<td>Xalatan (latanoprost) 0.005% one drop in affected eye(s) once daily in the evening</td>
</tr>
<tr>
<td>Travatan Z* (travoprost) 0.004% one drop in affected eye(s) once daily in the evening</td>
<td><em>Travatan Z does not contain benzalkonium chloride. If a patient has an allergy to benzalkonium chloride, dispense Travatan Z.</em></td>
</tr>
</tbody>
</table>