# Alabama Medicaid DUR Board Meeting Minutes
# October 26, 2011

**Members Present:** Paula Thompson, Rhonda Harden, Jimmy Jackson, Kelli Littlejohn, Bernie Olin, David Harwood, David Frazer, Denyse Thornley-Brown, Yves Morrisette, Wendy Gomez, Donald Marks

**Also Present:** Clemice Hurst, Tiffany Minnifield, Christina Faulkner, Lori Thomas

**Present via Conference Call:** Chris Barwick, Cara Leos, Amanda Sparkman

**Members Absent:** Daniel Mims, Kevin Green, Robert Moon

**Call to Order:** The DUR meeting was called to order by P.Thompson at approximately 1:00p.m.

**Introductions:** Chairman P.Thompson introduced new board members, Dr. Yves Morrisette, who specializes in Allergy/Immunology and Dr. Wendy Gomez, who specializes in Internal Medicine and Geriatrics.

**Review and Adoption of Minutes**: The minutes of the July 27, 2011 meeting were presented and reviewed. D.Thornley-Brown made a motion to approve the minutes as presented and D.Harwood seconded the motion. The motion was approved unanimously.

**Prior Authorization and Overrides Update:** L.Thomas began the Prior Authorization and Overrides Update with the Monthly Manual Prior Authorizations and Overrides Report for the month of June 2011. She reported 8,431 total requests. She then reported 13,528 electronic requests for the same time frame. In response to a question from the July DUR Board meeting, C.Faulkner added that, at this time, HID is not able to determine how many electronic PA requests are later approved through the manual PA process. From the Prior Authorization and Override Response Time Ratio report for June 2011, L.Thomas reported that approximately 89-90% of all manual PAs were responded to in less than two hours, more than 97% in less than four hours and more than 99% in less than eight hours. For the month of July 2011, L.Thomas reported 9,153 manual PA requests and 16,311 electronic PA requests. She reported that more than 87% of PAs were responded to in less than two hours, approximately 97% in less than four hours and approximately 99% in less than eight hours.

**Antipsychotic Update:** L.Thomas reported that, starting October 3, 2011, all antipsychotics require a prior authorization. She briefly reviewed the criteria with the Board and stated that the approval rate is 72% through the electronic PA system and 87% through the manual process. W.Gomez asked what the most common reasons for denial were and L.Thomas reported that the top reasons are no appropriate diagnosis found and poly-pharmacy. K.Littlejohn informed the Board that the Agency has organized a meeting with the Community Mental Health Centers on November 15 to discuss the new antipsychotic prior authorization implementation and process.

**Program Summary Review:** L.Thomas briefly reviewed the Alabama Medicaid Program Summary. She reported 4,436,704 total prescriptions, 224,291 average recipients per month and an average paid per prescription of $57.99 for the months of January 2011 through June 2011.

**Cost Management Analysis:** L.Thomas reported an average cost per claim of $59.86 for June 2011 and $59.58 for July 2009. From the 2nd Quarter 2011 Drug Analysis, L.Thomas reported 74.58% generic utilization, 14.77% brand single-source, 3.74% brand multi-source (those requests which required a DAW override) and 6.91% OTC and "other". From the Top 25 Drugs Based on Number of Claims from 04/01/2011 – 06/30/2011, L.Thomas reported the top five drugs: hydrocodone-acetaminophen, amoxicillin, Singulair®, alprazolam, and omeprazole. She then reported the top five drugs from the Top 25 Drugs Based on Claims Cost from 04/01/2011 – 06/30/2011: Singulair, Abilify®, Seroquel®, NovoSeven® RT and Vyvanse®. From the Top 15 Therapeutic Classes by Total Cost of Claims for the same time frame, L.Thomas reported the top five classes: Antipsychotic Agents, Hemostatics, Adrenals, Leukotriene Modifiers and Anorex/Respir/Cerebral Stimulants, Misc.

**UPDATES**

Anti-convulsants, Miscellaneous AHFS Class 281292: At the July 2011 DUR Meeting, the Board requested that HID verify the top anticonvulsants used without an FDA approved diagnosis. L.Thomas reviewed the top 10 anticonvulsants with the Board.

Updates to Existing Simvastatin Criteria: The prescribing information for simvastatin-containing agents changed in June 2011. L.Thomas summarized the RDUR criteria that had been updated.

**Review of Annual CMS Report:** L. Thomas reviewed the cost-savings portion of the Annual Report that is submitted to the Centers for Medicare and Medicaid Services (CMS). This report tracks the Agency's DUR activities and projected cost savings. The total estimated drug savings for the time period October 1, 2009 to September 30, 2010, was approximately $623,000. For each $1 spent, the state saved an additional $7.06 or 706%. L. Thomas reported that four intervention cycles were run during FY10, and that a total of 1,711 letters were sent to prescribers. A total of 398 responses were received (approximately 23%). L. Thomas reviewed the Cost Savings table and noted a cost savings of 21.14% for single interventions and 2.9% for multiple interventions. She also noted that a total of 7,817 prescriptions were saved.

**Proposed Criteria:** L.Thomas presented the proposed set of 33 criteria to the Board. T.Minnifield instructed the Board members to mark their ballots. Of the 33 criteria, results from the criteria vote returned 32 approved, 1 rejected (#28) and 0 criteria approved as amended.

**Medicaid Update:** T. Minnifield reminded the Board members that during the April 2011 meeting, it was requested that the Medicaid packet be sent electronically and that all updated Medicaid information discussed is available online. She informed the Board that the NDC lookup site was now being maintained by Hewlett Packard (HP) and that, while the site may look different, all the same information is available. T. Minnifield informed the Board that the Synagis® Season started on October 1, 2011. She also reminded the Board that as of October 1, 2011, Medicaid recipients will be allowed 4 brands per recipient per month. K. Littlejohn announced that the Agency is working toward having Electronic Health Records (EHR). She also announced that on January 1, 2012, all Medicaid providers will receive re-enrollment information and explained to the Board that medical residents must have a license prior to enrolling with Medicaid.

**P & T Committee Update:** C. Hurst began the P&T Update by informing the Board that the last meeting was a clinical review of antipsychotics. The next P&T meeting is scheduled to be held November 9, 2011 at 9am and will cover the Skin and Mucous Membrane agents. C. Hurst announced that generic pantoprazole no longer requires a prior authorization.

**New Business:** T. Minnifield announced the 2012 DUR Meetings will be held: January 25, April 25, July 25 and October 24. P.Thompson asked for a motion to adjourn. D.Thornley-Brown made a motion to adjourn the meeting. The motion was seconded by M.Harwood. A voice vote to adjourn was unanimous. The meeting was adjourned at 2:30p.m.

**Next Meeting Date:** The next DUR Board meeting will be held on January 25, 2012.

Respectfully submitted,

Lori Thomas, PharmD

Lori Thomas, PharmD

# ALABAMA MEDICAID
# RETROSPECTIVE DRUG UTILIZATION REVIEW
# CRITERIA RECOMMENDATIONS

| *Criteria Recommendations* | *Accepted* | *Approved As Amended* | *Rejected* |
|---|---|---|---|
| **1. Ketorolac Nasal Spray / High Dose** | ___√___ | _____ | _____ |

Alert Message: The recommended maximum daily dose of Sprix (ketorolac nasal spray), for adult patients less than 65 years of age, is 126 mg (one 15.75mg spray in each nostril q 6 to 8 hours). The nasal spray should be discarded within 24 hours of taking the first dose, even if the bottle still contains medication.

Conflict Code: HD – High Dose
Drugs/Diseases

| Util A | Util B | Util C (Negate) |
|---|---|---|
| Ketorolac Nasal Spray | | Renal Impairment |

Max Dose: 126 mg/day
Age Range: 18 – 64 yoa

References:
Sprix Prescribing Information, Jan. 2011, Luitpold Pharmaceuticals, Inc.
Facts & Comparisons, 2011 Updates.

| | | | |
|---|---|---|---|
| **2. Ketorolac Nasal Spray / High Dose (≥ 65 yoa )** | ___√___ | _____ | _____ |

Alert Message: The recommended maximum daily dose of Sprix (ketorolac nasal spray), for adult patients: 65 years of age or older, renally impaired and less than 50 kg is 63 mg (one 15.75mg spray in only one nostril q 6 to 8 hours). The nasal spray should be discarded within 24 hours of taking the first dose, even if the bottle still contains medication.

Conflict Code: HD – High Dose
Drugs/Diseases

| Util A | Util B | Util C |
|---|---|---|
| Ketorolac Nasal Spray | | |

Max Dose: 63 mg/day
Age Range: ≥ 65 yoa
References:
Sprix Prescribing Information, Jan. 2011, Luitpold Pharmaceuticals, Inc.
Facts & Comparisons, 2011 Updates.

| | | | |
|---|---|---|---|
| **3. Ketorolac Nasal Spray / Renal Impairment High Dose** | ___√___ | _____ | _____ |

Alert Message: Sprix (ketorolac nasal spray) can cause renal injury and is contraindicated in patients with advanced renal disease or patients ar risk for renal failure due to volume depletion. The recommended maximum daily dose of ketorolac nasal spray, for adult patients with mild renal impairment is 63 mg (one 15.75mg spray in only one nostril q 6 to 8 hours).

Conflict Code: HD – High Dose
Drugs/Diseases

| Util A | Util B | Util C (include) |
|---|---|---|
| Ketorolac Nasal Spray | | Renal Impairment |

Max Dose: 63 mg/day
References:
Sprix Prescribing Information, Jan. 2011, Luitpold Pharmaceuticals, Inc.
Facts & Comparisons, 2011 Updates.

| *Criteria Recommendations* | *Accepted* | *Approved As Amended* | *Rejected* |
|---|---|---|---|

**4. Ketorolac Nasal Spray / Duration** ___√___ _____ _____

Alert Message: Sprix (ketorolac) may be over-utilized. The manufacturer recommends a maximum duration (alone or sequentially with other formulations of ketorolac) of 5 days because of the potential for increasing the frequency and severity of adverse reactions.

Conflict Code: ER - Overutilization
Drugs/Diseases

| Util A | Util B | Util C |
|---|---|---|
| Ketorolac Nasal Spray | | |

Day supply: > 5 days
References:
Sprix Prescribing Information, Jan. 2011, Luitpold Pharmaceuticals, Inc.
Facts & Comparisons, 2011 Updates.

**5. Ketorolac Nasal Spray / Therapeutic Appropriateness** ___√___ _____ _____

Alert Message: Sprix (ketorolac nasal spray) has not been shown to be safe and effective in patients 17 years of age and younger.

Conflict Code: TA – Therapeutic Appropriateness
Drugs/Diseases

| Util A | Util B | Util C |
|---|---|---|
| Ketorolac Nasal Spray | | |

Age Range: 0 – 17 yoa
References:
Sprix Prescribing Information, Jan. 2011, Luitpold Pharmaceuticals, Inc.
Facts & Comparisons, 2011 Updates.

**6. Zocor & Vytorin / Contraindicated Drugs** ___√___ _____ _____

Alert Message: The concurrent use of a simvastatin-containing agent and a potent CYP3A4 inhibitor, gemfibrozil, cyclosporine or danazol is contraindicated due to the risk of simvastatin-related myopathy and rhabdomyolysis.

Conflict Code: DD – Drug/Drug Interactions
Drugs/Diseases

| Util A | Util B | Util C |
|---|---|---|
| Simvastatin | Itraconazole | |
| Simvastatin/Ezetimibe | Ketoconazole | |
| | Posaconazole | |
| | Erythromycin | |
| | Clarithromycin | |
| | Telithromycin | |
| | Nefazodone | |
| | Gemfibrozil | |
| | Cyclosporine | |
| | Danazol | |

References:
Zocor Prescribing Information, June 2011, Merck & Co., Inc.
Vytorin Prescribing Information, June 2011, Merck & Co., Inc.
MedWatch FDA Drug Safety Communication: New Restrictions, Contraindications, and Dose Limitations for Zocor (simvastatin) to Reduce the Risk of Muscle Injury. 06-08-2011.

*Protease inhibitors have a criteria already turned on for statin interaction.

| *Criteria Recommendations* | *Accepted* | *Approved As Amended* | *Rejected* |
|---|---|---|---|

**7. Simcor / Contraindicated Drugs** ___√___ _____ _____

Alert Message: The concurrent use of a Simcor (simvastatin/niacin ER) and a potent CYP3A4 inhibitor, gemfibrozil, cyclosporine, danazol, amiodarone, verapamil or diltiazem is contraindicated due to the risk of simvastatin-related myopathy and rhabdomyolysis.

Conflict Code: DD – Drug/Drug Interactions
Drugs/Diseases

| Util A | Util B | | Util C |
|---|---|---|---|
| Simvastatin/niacin ER | Itraconazole | Amiodarone | |
| | Ketoconazole | Verapamil | |
| | Posaconazole | Diltiazem | |
| | Erythromycin | | |
| | Clarithromycin | | |
| | Telithromycin | | |
| | Nefazodone | | |
| | Gemfibrozil | | |
| | Cyclosporine | | |
| | Danazol | | |

References:
Simcor Prescribing Information, June 2011, Abbott Pharmaceuticals.

*Simcor separated from Zocor and Vytorin because the product is contraindicated with additional drugs (amiodarone, verapamil and diltiazem) because it does not come in a dose (10mg simvastatin) which can be safely used with these agents.

**Protease inhibitors have a criteria already turned on for statin interaction.

**8. Pioglitazone / Bladder Cancer** ___√___ _____ _____

Alert Message: The use of pioglitazone for more than one year may be associated with an increased risk of bladder cancer. The FDA recommends the pioglitazone not be used in patients with active bladder cancer and used with caution in patients with a prior history of bladder cancer.

Conflict Code: MC – Drug Actual Disease Precaution
Drugs/Diseases

| Util A | Util B | Util C |
|---|---|---|
| Pioglitazone | Bladder Cancer | |

References:
MedWatch FDA Safety Information and Adverse Event Reporting Program. Actos (pioglitazone): Ongoing Safety Review – Potential Increased Risk of Bladder Cancer. 06-15-2011.

**9. Varenicline / Cardiovascular Disease** ___√___ _____ _____

Alert Message: Chantix (varenicline) may be associated with a small, increased risk of certain cardiovascular adverse events, including heart attack, in patients with cardiovascular disease. The known benefits of varenicline should be weighed against its potential risk when deciding to use the drug in smokers with cardiovascular disease.

Conflict Code: TA – Therapeutic Appropriateness
Drugs/Diseases

| Util A | Util B | Util C |
|---|---|---|
| Varenicline | Myocardial Infarction | |
| | Hypertension | |
| | Heart Failure | |
| | Atherosclerosis | |

References:
MedWatch FDA Safety Information and Adverse Event Reporting Program. Chantix (varenicline): Label Change – Risk of Certain Cardiovascular Adverse Events. 06-16-2011.

| *Criteria Recommendations* | *Accepted* | *Approved As Amended* | *Rejected* |
|---|---|---|---|

**10. 5-ARI's / Increased Risk of Prostate Cancer** ___√___ _____ _____

Alert Message: The use of 5-alpha reductase inhibitors (5-ARIs) may increase the risk of a more serious form of prostate cancer (high-grade prostate cancer). The risk appears to be low but weigh the known benefits against the potential risks when deciding to start or continue treatment with 5-ARIs in men.

Conflict Code: TA – Therapeutic Appropriateness

Drugs/Diseases

| Util A | Util B | Util C |
|---|---|---|
| Finasteride | | |
| Dutasteride | | |
| Dutasteride/Tamsulosin | | |

References:

MedWatch FDA Safety Information and Adverse Event Reporting Program. FDA Drug Safety Communication: 5-Alpha Reductase Inhibitors (5-ARIs) May Increase the Risk of More Serious Form of Prostate Cancer. 06-09-2011.

**11. Ezogabine / High Dose (18-65 yoa)** ___√___ _____ _____

Alert Message: Potiga (ezogabine) may be over-utilized. The optimal effective dosing range for ezogabine is 600 mg to 1,200 mg per day (in 3 divided doses daily). In clinical trials 400 mg 3 times daily showed limited evidence of additional improvement in seizure reduction but an increase in adverse events and discontinuation, compared to the 300 mg 3 times daily.

Conflict Code: HD – High Dose

Drugs/Diseases

| Util A | Util B | Util C (Negate) |
|---|---|---|
| Ezogabine | | ESRD |
| | | Stage 3, 4 & 5 CKD |

Max Dose: 1200mg/day

Age Range: 18-65 yoa

References:

Potiga Prescribing Information, June 2011, Valeant Pharma.

Facts & Comparisons, 2011 Updates.

**12. Ezogabine / High Dose (Elderly > 65yoa)** ___√___ _____ _____

Alert Message: Potiga (ezogabine) may be over-utilized. The maximum recommended daily dose of ezogabine in patients over 65 years of age is 750 mg (250 mg 3 times daily). Exceeding the dosing range may increase the risk of adverse effects, including psychosis, hallucinations, confusional state, vertigo and memory impairment.

Conflict Code: HD – High Dose

Drugs/Diseases

| Util A | Util B | Util C |
|---|---|---|
| Ezogabine | | |

Max Dose: 750mg/day

Age Range: 66 - 999 yoa

References:

Potiga Prescribing Information, June 2011, Valeant Pharma.

| *Criteria Recommendations* | *Accepted* | *Approved As Amended* | *Rejected* |
|---|---|---|---|
| **13. Ezogabine / High Dose Renal impairment** | ___√___ | _____ | _____ |

Alert Message: Potiga (ezogabine) may be over-utilized. The maximum recommended daily dose of ezogabine in patients with moderate to severe renal impairment (CrCL < 50mL /min or ESRD on dialysis) is 600 mg per day (200 mg 3 times daily). Exceeding the dosing range may increase the risk of adverse effects, including psychosis, hallucinations, confusional state, vertigo and memory impairment.

Conflict Code: HD – High Dose
Drugs/Diseases

| Util A | Util B | Util C(Include) |
|---|---|---|
| Ezogabine | | End Stage Renal Disease<br>Stage 3, 4 & 5 CKD |

Max Dose: 600mg/day
References:
Potiga Prescribing Information, June 2011, Valeant Pharma.

| | | | |
|---|---|---|---|
| **14. Ezogabine / High Dose Hepatic impairment** | ___√___ | _____ | _____ |

Alert Message: Potiga (ezogabine) may be over-utilized. The maximum recommended daily dose of ezogabine in patients with moderate hepatic impairment (Child-Pugh >7-9) is 750 mg per day or severe hepatic impairment (Child-Pugh > 9) is 600 mg per day. Exceeding the recommended dose may cause a significant increase in ezogabine exposure resulting in the risk of adverse effects including dizziness, psychosis, hallucination and confusional state.

Conflict Code: HD – High Dose
Drugs/Diseases

| Util A | Util B | Util C(Include) |
|---|---|---|
| Ezogabine | | Hepatic Impairment |

Max Dose: 600mg/day
References:
Potiga Prescribing Information, June 2011, Valeant Pharma.

| | | | |
|---|---|---|---|
| **15. Ezogabine / Non-adherence** | ___√___ | _____ | _____ |

Alert Message: Based on refill history, your patient may be under-utilizing Potiga (ezogabine). Non-adherence to the prescribed dosing regimen may result in sub-therapeutic effects, which may lead to decreased patient outcomes and additional healthcare costs.

Conflict Code: LR - Nonadherence
Drugs/Diseases

| Util A | Util B | Util C |
|---|---|---|
| Ezogabine | | |

References:
Potiga Prescribing Information, June 2011, Valeant Pharma.

| | | | |
|---|---|---|---|
| **16. Ezogabine / Therapeutic Appropriateness (0-17 yoa)** | ___√___ | _____ | _____ |

Alert Message: Safety and effectiveness of Potiga (ezogabine) in patients under 18 years of age have not been established

Conflict Code: TA - Therapeutic Appropriateness
Drugs/Diseases

| Util A | Util B | Util C |
|---|---|---|
| Ezogabine | | |

Age Range: 0-17 yoa
References:
Potiga Prescribing Information, June 2011, Valeant Pharma.

| *Criteria Recommendations* | *Accepted* | *Approved As Amended* | *Rejected* |
|---|---|---|---|
| **17. Ezogabine / Phenytoin & Carbamazepine** | ___√___ | _____ | _____ |

Alert Message: The concurrent use of Potiga (ezogabine) with phenytoin or carbamazepine may result in reduced ezogabine plasma levels. An increase in dosage of ezogabine should be considered when adding phenytoin or carbamazepine.

Conflict Code: DD – Drug/Drug Interaction
Drugs/Diseases

| Util A | Util B | Util C |
|---|---|---|
| Ezogabine | Phenytoin | |
| | Carbamazepine | |

References:
Potiga Prescribing Information, June 2011, Valeant Pharma.

| | | | |
|---|---|---|---|
| **18. Ezogabine / Digoxin** | ___√___ | _____ | _____ |

Alert Message: The concurrent use of Potiga (ezogabine) with digoxin may result in increased digoxin serum concentrations. Serum levels of digoxin should be monitored during concomitant administration with ezogabine.

Conflict Code: DD – Drug/Drug Interaction
Drugs/Diseases

| Util A | Util B | Util C |
|---|---|---|
| Ezogabine | Digoxin | |

References:
Potiga Prescribing Information, June 2011, Valeant Pharma.

| | | | |
|---|---|---|---|
| **19. Ezogabine / QT Prolongation** | ___√___ | _____ | _____ |

Alert Message: Potiga (ezogabine) use has been shown to produce QT prolongation. The QT interval should be monitored when ezogabine is prescribed with medications known to increase the QT interval and in patients with known prolonged QT interval, congestive heart failure, ventricular hypertrophy, hypokalemia or hypomagnesemia.

Conflict Code: MC - Drug (Actual) Disease Precaution
Drugs/Diseases

| Util A | Util B | Util C |
|---|---|---|
| Ezogabine | QT Prolongation | |
| | Heart Failure | |
| | Ventricular hypertrophy | |
| | Hypokalemia | |
| | Hypomagnesemia | |

References:
Potiga Prescribing Information, June 2011, Valeant Pharma.

| *Criteria Recommendations* | *Accepted* | *Approved As Amended* | *Rejected* |
|---|---|---|---|
| **20. Ezogabine / Drugs Causing QT Prolongation** | ___√___ | _____ | _____ |

Alert Message: Potiga (ezogabine) use has been shown to produce QT prolongation. The QT interval should be monitored when ezogabine is prescribed with medications known to increase the QT interval and in patients with known prolonged QT interval, congestive heart failure, ventricular hypertrophy, hypokalemia or hypomagnesemia.

Conflict Code: DD – Drug/Drug Interaction
Drugs/Diseases

| Util A | Util B | | | | | Util C |
|---|---|---|---|---|---|---|
| Ezogabine | Albuterol | Disopyramide | Imipramine | Pazopanib | Thioridazine | |
| | Alfuzosin | Dofetilide | Indapamide | Pentamidine | Tizanidine | |
| | Amantadine | Dolasetron | Isradipine | Pimozide | Tolterodine | |
| | Amiodarone | Doxepin | Itraconazole | Posaconazole | Trazodone | |
| | Amitriptyline | Dronedarone | Ketoconazole | Procainamide | TMP/SMZ | |
| | Amphetamine | Droperidol | Lapatinib | Propafenone | Trimipramine | |
| | Arsenic Trioxide | Ephedrine | Levalbuterol | Protriptyline | Vandetanib | |
| | Asenapine | Epinephrine | Levofloxacin | Quetiapine | Vardenafil | |
| | Atazanavir | Erythromycin | Lithium | Quinidine | Venlafaxine | |
| | Atomoxetine | Escitalopram | Metaproterenol | Ranolazine | Ziprasidone | |
| | Azithromycin | Felbamate | Methadone | Risperidone | Zolmitriptan | |
| | Chloral Hydrate | Flecainide | Moexipril/HCTZ | Ritonavir | | |
| | Chloroquine | Fluconazole | Moxifloxacin | Salmeterol | | |
| | Chlorpromazine | Fluoxetine | Nicardipine | Saquinavir | | |
| | Ciprofloxacin | Foscarnet | Nilotinib | Sertraline | | |
| | Citalopram | Fosphenytoin | Norfloxacin | Solifenacin | | |
| | Clarithromycin | Galantamine | Nortriptyline | Sotalol | | |
| | Clomipramine | Gemifloxacin | Octreotide | Sunitinib | | |
| | Clozapine | Granisetron | Ofloxacin | Tacrolimus | | |
| | Dasatinib | Haloperidol | Ondansetron | Tamoxifen | | |
| | Desipramine | Ibutilide | Paliperidone | Telithromycin | | |
| | Diphenhydramine | Iloperidone | Paroxetine | Terbutaline | | |

References:
Potiga Prescribing Information, June 2011, Valeant Pharma.
ArizonaCERT: Drugs That Prolong the QT Interval and/or Induce Torsades de\Pointes. Available at: http://www.azcert.org/medical-pros/drug-lists/list-03.cfm?sort=Generic_name

**21. Anticonvulsants / Suicidal Behavior and Ideation** ___√___ _____ _____

Alert Message: Anticonvulsants increase the risk of suicidal thoughts or behavior in patients taking these medications for any indication. All patients currently taking or starting on any antiepileptic agent should be closely monitored for notable changes in behavior that could indicate the emergence or worsening of depression, suicidal thoughts or behaviors, and/or any unusual changes in mood or behavior.

Conflict Code: TA therapeutic Appropriateness

Drugs/Diseases

| Util A | Util B | Util C |
|---|---|---|
| Carbamazepine | | |
| Phenytoin | | |
| Felbamate | | |
| Gabapentin | | |
| Lacosamide | | |
| Lamotrigine | | |
| Levetiracetam | | |
| Oxcarbazepine | | |
| Pregabalin | | |
| Primidone | | |
| Rufinamide | | |
| Ethosuximide | | |
| Methsuximide | | |
| Zonisamide | | |
| Tiagabine | | |
| Topiramate | | |
| Valproic Acid | | |
| Vigabatrin | | |
| Ezogabine | | |

References:

Potiga Prescribing Information, June 2011, Valeant Pharma.

Facts & Comparisons, 2011 Updates.

**22. Ticagrelor / Overutilization** ___√___ _____ _____

Alert Message: Brilinta (ticagrelor) may be over utilized. The manufacturer's recommended maintenance dose is 90 mg twice daily in conjunction with 75-100 mg of aspirin. Exceeding the recommended daily dose of ticagrelor may result in adverse effects including major bleeds.

Conflict Code: - ER - Overutilization

Drugs/Diseases

| Util A | Util B | Util C (Negating) |
|---|---|---|
| Ticagrelor | | Cirrhosis |

Max Dose: 180mg/day

References:

Brilinta Prescribing Information, July 2011, AstraZeneca.

Micromedex Healthcare Series, DrugDex Drug Evaluations, 2011 Thomson Reuters.

*As Amended*

**23. Ticagrelor / Severe Hepatic Impairment** ___√___ _____ _____

Alert Message: Brilinta (ticagrelor) is contraindicated in patients with severe hepatic impairment. Severe hepatic impairment increases the risk of bleeding because of reduced synthesis of coagulation proteins.

Conflict Code: MC - Drug (Actual) Disease Precaution
Drugs/Diseases

| Util A | Util B | Util C |
|---|---|---|
| Ticagrelor | Cirrhosis | |

References:
Brilinta Prescribing Information, July 2011, AstraZeneca.
Micromedex Healthcare Series, DrugDex Drug Evaluations, 2011 Thomson Reuters.

**24. Ticagrelor / Non-adherence** ___√___ _____ _____

Alert Message: Based on refill history, your patient may be under-utilizing Brilinta (ticagrelor). Non-adherence to the prescribed dosing regimen may result in sub-therapeutic effects, which may lead to decreased patient outcomes and additional healthcare costs.

Conflict Code: LR – Non-adherence
Drugs/Diseases

| Util A | Util B | Util C |
|---|---|---|
| Ticagrelor | | |

References:
Brilinta Prescribing Information, July 2011, AstraZeneca.
Steen H, Review: Evidence-based Prescribing and Adherence to Antiplatelet Therapy – How Much Difference do They Make to Patients with Atherothrombosis? Intern Jrnl Card. Vol. 134, Issue 2, 15 May 2009, pp 150-159.

**25. Ticagrelor / Drugs that Increase Bleeding** ___√___ _____ _____

Alert Message: Brilinta (ticagrelor) increases the risk of bleeding and can cause significant and, sometimes, fatal bleeding. Risk factors for bleeding include use of drugs that increase the risk of bleeding in general ( e.g., antiplatelet agents, heparin, fibrinolytic therapy, and chronic use of NSAIDS), older age and history of bleeding disorders. Ticagrelor is contraindicated in patients with active pathological bleeding.

Conflict Code: DD – Drug/Drug Interaction
Drugs/Diseases

| Util A | Util B | Util C |
|---|---|---|
| Ticagrelor | NSAIDS | |
| | Aspirin > 100mg | |
| | Heparin | |
| | LMWHS | |
| | Warfarin | |
| | Antiplatelet Agents | |
| | Dabigatran | |

References:
Brilinta Prescribing Information, July 2011, AstraZeneca.
Clinical Pharmacology, 2011 Gold Standard.

**26. Ticagrelor / Active Bleeds** ___√___ _____ _____

Alert Message: Brilinta (ticagrelor) increases the risk of bleeding and can cause significant and, sometimes, fatal bleeding. Ticagrelor is contraindicated in patients with active pathological bleeding.

Conflict Code: MC – Drug (Actual) disease Contraindication
Drugs/Diseases

| Util A | Util B | Util C |
|---|---|---|
| Ticagrelor | GI Bleeds | |
| | Intracranial Hemorrhage | |

References:
Brilinta Prescribing Information, July 2011, AstraZeneca.
Micromedex Healthcare Series, DrugDex Drug Evaluations, 2011 Thomson Reuters.

**27. Ticagrelor / Strong CYP3A4 Inhibitors and Inducers** ___√___ _____ _____

Alert Message: Concurrent use of Brilinta (ticagrelor) and strong CYP3A4 inhibitors or inducers should be avoided. Ticagrelor is predominately metabolized by CYP3A4 (and to a lesser extent 3A5) and the inhibition or induction of metabolism may significantly alter ticagrelor plasma concentrations.

Conflict Code: DD – Drug/Drug Interaction
Drugs/Diseases

| Util A | Util B | | Util C |
|---|---|---|---|
| Ticagrelor | Atazanavir | Phenobarbital | |
| | Clarithromycin | Rifampin | |
| | Indinavir | Carbamazepine | |
| | Itraconazole | Dexamethasone | |
| | Ketoconazole | Phenytoin | |
| | Nefazodone | | |
| | Nelfinavir | | |
| | Ritonavir | | |
| | Saquinavir | | |
| | Telithromycin | | |
| | Voriconazole | | |

References:
Brilinta Prescribing Information, July 2011, AstraZeneca.
Micromedex Healthcare Series, DrugDex Drug Evaluations, 2011 Thomson Reuters.

**28. Ticagrelor / Simvastatin & Lovastatin** _____ _____ ___√___

Alert Message: Concurrent use of Brilinta (ticagrelor) and simvastatin or lovastatin may result in higher serum concentrations of simvastatin or lovastatin resulting in the increased risk of statin-related adverse effects (e.g., myopathy and/or rhabdomyolysis). Avoid doses of simvastatin or lovastatin greater than 40 mg per day.

Conflict Code: ER – Overutilization
Drugs/Diseases

| Util A | Util B | Util C (Include) |
|---|---|---|
| Simvastatin | | Ticagrelor |
| Lovastatin | | |

Max Dose of Simvastatin: 40mg/day
Max Dose of Lovastatin: 40mg/day

References:
Brilinta Prescribing Information, July 2011, AstraZeneca.
Micromedex Healthcare Series, DrugDex Drug Evaluations, 2011 Thomson Reuters

**29. Ticagrelor / Aspirin > 100mg** ___√___ _____ _____

Alert Message: Concurrent use of Brilinta (ticagrelor) and aspirin doses above 100 mg decreases the effectiveness of ticagrelor. Therefore, after the initial loading dose of aspirin (usually 325 mg), the maintenance aspirin dose with ticagrelor should be 75-100 mg.

Conflict Code: DD – Drug/Drug Interaction
Drugs/Diseases

| Util A | Util B | Util C |
|---|---|---|
| Ticagrelor | Aspirin > 100mg | |

References:
Brilinta Prescribing Information, July 2011, AstraZeneca.
Micromedex Healthcare Series, DrugDex Drug Evaluations, 2011 Thomson Reuters

**30. Ticagrelor / Digoxin** ___√___ _____ _____

Alert Message: Due to the inhibition of the p-glycoprotein (P-gp) transporter by Brilinta (ticagrelor), concomitant use of digoxin (a P-gp substrate) and ticagrelor may increase digoxin serum concentrations. Monitor digoxin levels with initiation of or any change in ticagrelor therapy.

Conflict Code: DD – Drug/Drug Interaction
Drugs/Diseases

| Util A | Util B | Util C |
|---|---|---|
| Ticagrelor | Digoxin | |

References:
Brilinta Prescribing Information, July 2011, AstraZeneca.
Micromedex Healthcare Series, DrugDex Drug Evaluations, 2011 Thomson Reuters

**31. Simvastatin-Containing Agents / Amlodipine** ___√___ _____ _____

Alert Message: The dose of a simvastatin-containing agent should not exceed 20 mg per day in patients also receiving an amlodipine-containing product due to the increased risk of simvastatin-related myopathy and/or rhabdomyolysis. If the dose of simvastatin needs to be increased beyond 20 mg per day consider switching to an alternative statin with less potential for interaction.

Conflict Code: DD – Drug/Drug Interaction
Drugs/Diseases

| Util A | Util B | Util C |
|---|---|---|
| Simvastatin | Amlodipine | |

References:
Zocor Prescribing Information, June 2011, Merck & Co., Inc.
Vytorin Prescribing Information, June 2011, Merck & Co., Inc.
Simcor Prescribing Information, Abbott Laboratories.
MedWatch FDA Drug Safety Communication: New Restrictions, Contraindications, and Dose Limitations for Zocor (simvastatin) to Reduce the Risk of Muscle Injury. 06-08-2011.

*As Amended*

**32. Citalopram / CYP 2C19 Inhibitors** ___√___ _____ _____

Alert Message: Citalopram 20 mg per day is the maximum recommended dose for patients taking a concomitant CYP2C19 inhibitor (e.g., cimetidine, omeprazole and fluvoxamine) due to the risk of QT prolongation and torsades de pointes.

Conflict Code: ER - Overutilization
Drugs/Diseases

| Util A | Util B | Util C (Include) |
|---|---|---|
| Citalopram | | Cimetidine |
| | | Fluvoxamine |
| | | Lansoprazole |
| | | Omeprazole |
| | | Pantoprazole |
| | | Rabeprazole |
| | | Fluoxetine |
| | | Indomethacin |
| | | Ketoconazole |
| | | Modafinil |
| | | Oxcarbazepine |
| | | Probenecid |
| | | Ticlopidine |
| | | Topiramate |

Max Dose: 20 mg/day

References:
Celexa Prescribing Information, Aug. 2011, Forest Pharmaceuticals, Inc.
MedWatch The FDA Safety Information and Adverse Event Reporting Program, Celexa (citalopram hydrobromide): Drug Safety Communication – Abnormal Heart Rhythms Associated with High Doses. 08/24/2011.
Flockhart DA. Drug Interactions: Cytochrome P450 Drug Interaction Table.\Indiana University School of Medicine. Available at: http://medicine.iupui.edu/clinpharm/ddos/table.asp.

**33. Citalopram / Hepatic impairment** ___√___ _____ _____

Alert Message: The recommended dose of citalopram in patients with hepatic impairment is 20 mg once daily, with titration to 40 mg per day in nonresponsive patients only. Citalopram should not be dosed above 40 mg per day due to the risk of QT prolongation which can lead to torsades de pointes, a potentially life-threatening arrhythmia. Citalopram is contraindicated in patients with congenital long QT syndrome.

Conflict Code: ER - Overutilization
Drugs/Diseases

| Util A | Util B | Util C(Include) |
|---|---|---|
| Citalopram | | Hepatic Impairment |

Max Dose: 40 mg/day
Age Range: 65 – 999 yoa

References:
Celexa Prescribing Information, Aug. 2011, Forest Pharmaceuticals, Inc.
MedWatch The FDA Safety Information and Adverse Event Reporting Program, Celexa (citalopram hydrobromide): Drug Safety Communication – Abnormal Heart Rhythms Associated with High Doses. 08/24/2011.

R. Bob Mullins, Jr., M.D., Commissioner ( ) Approve ( ) Deny 12-16-11 Date

Kathy Hall, Deputy Commissioner (X) Approve ( ) Deny 12/16/11 Date

Robert Moon, M.D., Medical Director (X) Approve ( ) Deny 12-16-11 Date