Division of Medicaid
Office of the Governor
State of Mississippi
Drug Utilization Review (DUR) Board Meeting

MISSISSIPPI DIVISION OF
MEDICAID

August 15, 2013 at 2:00pm

Woolfolk Building, Room 117

Jackson, MS

Prepared by:

The University of Mississippi School of Pharmacy

Evidence-Based DUR Initiative, MS-DUR

MS | DUR

Drug Utilization Review Board

Allison Bell, Pharm.D.
University of MS School of Pharmacy
2500 North State St.
Jackson, MS 39216
Term Expires: June 30, 2015

James R. “Beau” Cox, Pharm.D.
Tara Pharmacy
110 Metroplex Blvd., Suite H
Pearl, MS 39208
Term Expires: June 30, 2016

Logan Davis, Pharm.D.
Vital Care, Inc.
1170 NE Industrial Park Rd
Meridian, MS 39301
Term Expires: June 30, 2016

Lee Greer, M.D.
IMA-Tupelo
845 S. Madison St.
Tupelo, MS 38801
Term Expires: June 30, 2015

Antoinette M. Hubble, M.D.
McComb Children's Clinic
300 Rawls Dr. Ste 100
McComb, MS 39648
Term Expires: June 30, 2014

Sarah Ishee, Pharm.D.
Kroger Pharmacy
2340 Hwy 15 N
Laurel, MS 39440
Term Expires: June 30, 2015

Cherise McIntosh, Pharm.D.
UMC Dept of Pharmacy
2500 North State St.
Jackson, MS 39216
Term Expires: June 30, 2014

Jason Parham, M.D.
UMMC Department of Medicine
2500 North State Street
Jackson, MS 39216
Term Expires: June 30, 2016

Bobby Proctor, M.D.
South Central Urgent Care
1430 Jefferson St.
Laurel, MS 39440
Term Expires: June 30, 2016

Sue H. Simmons, M.D.
Maben Medical Clinic
49 Turner St.
Maben, MS 39750
Term Expires: June 30, 2015

Dennis Smith, R.Ph. .(Chair)
Polk's Discount Pharmacy
1031 Star Rd
Brandon, MS 39042
Term Expires: June 30, 2014

Cynthia Undesser, M.D.
MS Children's Home Services
402 Wesley Ave
Jackson, MS 39202
Term Expires: June 30, 2014

2013 DUR Board Meeting Dates

February 19, 2013
May 16, 2013
August 15, 2013
November 21, 2013

As with any analysis, great efforts are made to ensure that the information reported in this document is accurate. The most recent administrative claims data available are being used at the time the reports are generated, which includes the most recent adjudication history. As a result, values may vary between reporting periods and between DUR Board meetings, reflecting updated reversals and claims adjustments.

Only Mississippi Medicaid beneficiaries with fee-for-service claims are included in the analyses, including dual enrollees with Medicare Part D. MississippiCAN data is not being reported unless otherwise specified. Further, reported dollar figures represent reimbursement to providers and are not representative of overall Medicaid costs.

Please refer to the Mississippi Division of Medicaid website for the official PDL list.

MISSISSIPPI DIVISION OF MEDICAID

OFFICE OF THE GOVERNOR

DRUG UTILIZATION REVIEW BOARD

AGENDA

August 15, 2013

DUR Board Meeting Minutes

MISSISSIPPI DIVISION OF MEDICAID
DRUG UTILIZATION REVIEW (DUR) BOARD
MINUTES OF THE MAY 16, 2013 MEETING

DUR Board Members:	Present	Absent
Allison Bell, Pharm.D.	✓	
Logan Davis, Pharm.D.	✓	
Edgar Donahoe, M.D.	✓	
Lee Greer, M.D.	✓	
Antoinette M. Hubble, M.D.	✓	
Sarah Ishee, Pharm.D.	✓	
Cherise McIntosh, Pharm.D.		✓
Mark Reed, M.D. **(Chair)**	✓	
Sue Simmons, M.D.	✓	
Dennis Smith, R.Ph.	✓	
Cynthia Undesser, M.D.	✓	
Vicki Veazey, R.Ph.	✓	
Total	**11**	**1**

Also Present:

DOM Staff:
Judith Clark, R.Ph., DOM Pharmacy Bureau Director; Shannon Hardwick, R.Ph., DOM Clinical Pharmacist, DUR Coordinator; Terri Kirby, R.Ph., DOM Clinical Pharmacist; Laura Sue Reno, DOM Program Integrity; Andrea McNeal, DOM Program Integrity

MS-DUR Staff:
Kyle Null, Pharm.D., Ph.D., Clinical Director; Ben Banahan, Ph.D., Project Director

GHS Staff:
Chad Bissell, Pharm.D.

Xerox Staff:
Leslie Leon, Pharm.D.

Visitors:
Greg Johnson, Pfizer Inc.; Teri Breidenbach, Pfizer, Inc; Dan Barbera, Lilly; Callista Goheen, MedImmune; Tim Hambacher, Otsuka; John Mowbray, Auxilium Pharmaceuticals; Hope Berry, Forest Labs

Call to Order: Dr. Mark Reed, Chairman of the Board, called the meeting to order at 2:00 pm.

Dr. Reed asked for a motion to accept the minutes from the meeting of February 19, 2013. Dr. Reed made a motion to accept the minutes with a second from Dr. Donahoe. All voted in favor of the motion.

Resource Utilization Review:
Dr. Null reviewed the resource utilization report and noted this is first time that we are looking at a 3-month trend following the December 1, 2012 shift of select beneficiaries into MS-CAN. While utilization in most categories remained similar to previous quarters, several categories moved into top 15 class report for first time, including antineoplastic agents and biologic response modifiers. Dr. Null noted that this was a result of the new beneficiary mix following the shift into MS-CAN. Dr. Null also noted a data anomaly in March with claims almost doubled in report, which would be reconciled in future reports. Dr. Null also reviewed palivizumab utilization for the 2012-2013 RSV season, noting that utilization had declined in the fee-for-service population because the category of eligibility for infants had shifted into MS-CAN. Dr. Null noted further that all cases identified as outliers based on the 2012 Redbook guidelines were justified based on the existence of diagnoses in the medical claims data indicating cardiopulmonary compromised neonates.

Pharmacy Program Update:
Ms. Hardwick provided an update on the pharmacy program, including the DOM Pharmacy Newsletter and new classes of drugs being reviewed, including cystic fibrosis agents. Dr. Banahan informed the Board about research abstracts at national meetings and new CMS quality indicators being developed for children and antipsychotic medications that will be reviewed at a future DUR Board meeting. Ms. Clark discussed the increase in use of IDC-9 codes in clinical edits which may be input at the point of sale (POS). Ms. Clark also introduced Billy Thompson, the Pharmacy's new Deputy Bureau Director.

Ms. Clark recognized DUR Board members rotating off, thanking Dr. Reed, Dr. Donahoe, Ms. Veazey, and Dr. Davis for their service on the DUR Board. Ms. Clark noted that Dr. Davis had filled last year of another Board member's 3 year term, which was vacated early due to the Board member moving out of state. Ms. Clark asked Mr. Smith if he would serve as chair for remainder of time with elections to be held at a later meeting. Mr. Smith agreed to serve as chair following Ms. Clark's request.

Program Integrity Update
Ms. Reno provided an overview of a CMS continuing education presentation on program integrity issues and updated the DUR Board on the outcome of pharmacy lock-in initiatives based on recommendations provided by the DUR Board. Ms. Reno reported that one beneficiary was placed in the lock-in program after removing beneficiaries that shifted into MS-CAN, dual eligibles, and others due to diagnoses found in the medical claims. Dr. Null noted that MS-DUR would continue to enhance the report based on feedback from program integrity and that the cut point used to generate the report (currently defined as a beneficiary receiving controlled substance prescriptions from 7 or more prescribers AND pharmacies within a 90 day period, with several exclusions for diagnostic history) could be moved to generate a new list of beneficiaries. Ms. Clark reminded the Board that the cut point that was identified at a previous DUR Board meeting was very conservative for the purpose of testing and that the cut point could be adjusted to meet the needs of program integrity.

New Business:
Special Analysis Projects
Activities to Identify Potential Drug Abuse and Diversion Cases
Dr. Banahan provided an overview of drug abuse and diversion activities. Dr. Simmons noted a need for a way to allow physicians to know beneficiary is in lock in at time they are being treated. Dr. Bell asked about how discharge planning will be affected by lock in when several attending physicians are following up with patient post-discharge. Dr. Undesser mentioned including stimulant medications to the analysis,

noting that multiple children in the same home receiving prescriptions from multiple prescribers may be a good metric to identify potential abuse or misuse. A lengthy discussion followed.

A motion was made by Mr. Smith and seconded by Dr. Davis for MS-DUR to provide numbers on raising the 85% rule for controlled substance refills and raising the 75% rule for non-controls. Future analyses recommended were to explore an edit for detecting over-compliance. It was noted that the analysis should include the number of beneficiaries affected, the number of prescriptions, and classes of drugs.

Controlled Substances Utilization and Monitoring Suggestions
Dr. Null reviewed the report on controlled substances utilization and monitoring, noting key differences between the Special Needs Consulting Services report and the report generated by MS-DUR. Several quality measures were proposed to monitor controlled substances utilization. Dr. Ishee noted the impact of having prescription drug monitoring program (PDMP) data included in the analysis and how the results might change to reflect more accurate consumption. Dr. Ishee also noted the need to account for health conditions in the analysis that were associated with pain medication utilization. Suggestions were made to account for beneficiaries with sickle cell anemia, cancer, gastroparesis and post-surgery as well as a separate analysis for stimulant medications.

The motion was made by Dr. Ishee and seconded by Dr. Hubble to monitor use and report on metrics based on the proposed measures and other recommendations of the Board. There was a unanimous vote in favor of the motion.

"Grandfathering" Criteria on Preferred Drug List
Dr. Banahan discussed the need to refine the definition of "grandfathering" for the purpose of identifying continuous therapy in clinical edits, noting that having the same definition for all drugs and classes of drugs may not be ideal. A robust discussion ensued and the DUR Board concurred that the topic should be tabled until a future meeting.

Condition Overview: Coronary Artery Disease
Dr. Null presented an overview of the coronary artery disease (CAD) report, focusing on the use of lipid lowering therapies in beneficiaries with CAD. Results of this quality measure from a national Medicaid study were reported and the DUR Board provided feedback on a targeted provider educational letter for increasing prescribing of lipid lowering therapies. The suggestion was made to provide an article on the topic for the state medical and pharmacy journals regarding how Mississippi Medicaid does on the measure and what recommendations there are for improving the measure with a targeted prescriber educational letter campaign to follow the article.

Smoking Cessation Utilization Review and Initiatives
Dr. Null reviewed the smoking cessation utilization report and asked for recommendation on how to encourage smoking cessation efforts in the Medicaid population. A discussion followed. The recommendation was made that DOM should explore a change for smoking cessation agents so that they not count toward prescription limits and possibly reducing copay on smoking cessation agents. The motion was made by Dr. Simmons and seconded by Dr. Undesser was approved unanimously.

Exceptions Monitoring Criteria Recommendations
Exceptions monitoring recommendations were taken as a block vote and were unanimously approved.

Next Meeting Information:
Dr. Reed announced next meeting date is August 15, 2013 at 2:00p.m. and thanked everyone for making the effort to attend the DUR Board meeting in order to have a quorum. The meeting adjourned at 4:25p.m.

Submitted,
Evidence-Based DUR Initiative, MS-DUR

Resource Utilization Report

Top 15 Drugs by Class

Top 25 Drug Detail

By Amount Paid* and Number of Claims

Resource Utilization Report
Drug Class Report
Top 15 Classes By Amount Paid*ł

AHFS Class / Generic Molecule	April 2013		May 2013		June 2013		Quarter	
	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims
Antipsychotics (atypical And Typical)	**$2,005,004.37**	**7,221**	**$2,736,138.01**	**9,864**	**$1,529,619.44**	**5,568**	**$6,270,761.82**	**22,653**
Aripiprazole	$839,671.54	1,390	$1,190,954.73	1,935	$637,109.43	1,023	$2,667,735.70	4,348
Quetiapine	$439,137.83	1,216	$590,599.18	1,611	$316,963.27	907	$1,346,700.28	3,734
Risperidone	$278,337.37	3,028	$386,817.41	4,195	$212,857.15	2,306	$878,011.93	9,529
Olanzapine	$210,016.74	390	$268,096.58	562	$175,642.33	364	$653,755.65	1,316
Ziprasidone	$52,811.18	122	$67,737.12	156	$44,277.88	97	$164,826.18	375
Asenapine	$45,862.88	88	$51,429.43	93	$33,541.66	65	$130,833.97	246
Paliperidone	$45,197.71	52	$57,558.93	71	$26,635.65	32	$129,392.29	155
Lurasidone	$27,588.41	42	$27,114.04	37	$22,240.07	29	$76,942.52	108
Chlorpromazine	$21,553.50	242	$30,234.82	322	$25,313.80	216	$50,213.44	498
Iloperidone	$11,248.01	15	$21,372.59	38	$9,568.32	16	$42,188.92	69
Haloperidol	$13,652.87	337	$17,748.60	444	$10,753.33	266	$42,154.80	1,047
Clozapine	$9,374.81	81	$16,017.45	146	$7,733.84	71	$33,126.10	298
Perphenazine	$5,004.62	58	$4,498.86	58	$3,193.24	42	$12,696.72	158
Prochlorperazine	$1,550.38	60	$1,339.36	72	$998.18	56	$3,887.92	188
Thioridazine	$1,005.37	35	$1,294.56	45	$888.78	30	$3,188.71	110
Trifluoperazine	$821.57	14	$856.30	15	$511.38	9	$2,189.25	38
Fluphenazine	$620.91	20	$767.28	30	$732.48	23	$2,120.67	73

Note: Resource Utilization Report Currently Contains Only Fee For Service Medicaid Claims

* Dollar figures represent reimbursement to pharmacies and are not representative of overall Medicaid costs.

ł Molecule names accounting for less than $500 in quarterly amount paid are not shown

Prepared by the Evidence-Based DUR Initiative, MS-DUR

Resource Utilization Report
Drug Class Report
Top 15 Classes By Amount Paid*ǂ

AHFS Class / Generic Molecule	April 2013		May 2013		June 2013		Quarter	
	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims
Loxapine	$628.56	9	$855.74	8	$383.66	3	$1,867.96	20
Thiothixene	$452.79	18	$385.90	19	$211.03	11	$1,049.72	48
Pimozide	$467.32	4	$459.13	7	$63.96	2	$990.41	13
Adrenals	**$2,092,619.40**	**14,894**	**$2,579,514.11**	**18,108**	**$1,181,472.26**	**7,363**	**$5,853,605.77**	**40,365**
Budesonide	$1,682,357.60	3,714	$2,075,243.88	4,594	$935,496.96	1,968	$4,693,098.44	10,276
Prednisolone	$122,072.25	6,589	$144,882.15	7,997	$52,169.90	2,829	$319,124.30	17,415
Fluticasone	$95,581.68	613	$119,325.93	804	$60,263.02	371	$275,170.63	1,788
Beclomethasone	$63,085.61	443	$76,758.66	524	$43,029.61	285	$182,873.88	1,252
Budesonide-formoterol	$47,369.23	203	$63,704.30	269	$39,853.48	158	$150,927.01	630
Mometasone	$33,685.38	239	$36,392.27	255	$20,075.18	143	$90,152.83	637
Formoterol-mometasone	$22,658.53	100	$29,793.56	127	$15,604.55	67	$46,596.26	200
Methylprednisolone	$9,664.06	742	$12,110.67	926	$5,838.15	453	$27,612.88	2,121
Prednisone	$10,226.19	1,815	$12,030.75	2,066	$4,505.34	807	$26,762.28	4,688
Dexamethasone	$2,516.83	316	$4,255.61	391	$2,118.45	197	$8,890.89	904
Hydrocortisone	$2,037.46	69	$2,274.41	97	$1,174.30	49	$5,486.17	215
Fludrocortisone	$1,265.12	49	$1,501.40	52	$978.90	33	$3,745.42	134
Flunisolide Nasal			$1,214.64	4	$303.66	1	$1,518.30	5
Amphetamines	**$1,886,867.78**	**11,086**	**$2,418,140.94**	**14,173**	**$1,103,323.40**	**6,549**	**$5,408,332.12**	**31,808**
Lisdexamfetamine	$1,108,990.81	6,146	$1,439,892.20	7,992	$631,393.64	3,518	$3,180,276.65	17,656
Amphetamine-dextroamphetamine	$731,831.46	4,681	$921,606.36	5,855	$444,439.63	2,888	$2,097,877.45	13,424
Dextroamphetamine	$46,045.51	259	$56,642.38	326	$27,490.13	143	$130,178.02	728

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Resource Utilization Report
Drug Class Report
Top 15 Classes By Amount Paid*ǂ

AHFS Class / Generic Molecule	April 2013		May 2013		June 2013		Quarter	
	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims
Hemostatics	**$2,165,849.89**	**82**	**$1,376,033.18**	**57**	**$1,107,059.32**	**44**	**$4,648,942.39**	**183**
Antihemophilic Factor	$1,128,624.18	43	$848,261.23	23	$788,782.50	25	$2,765,667.91	91
Anti-inhibitor Coagulant Complex	$847,548.24	10	$132,264.62	3	$189,363.67	1	$1,169,176.53	14
Antihemophilic Factor-von Willebrand Fa	$109,753.96	5	$134,277.38	8	$79,832.97	2	$323,864.31	15
Coagulation Factor Ix	$11,564.12	2	$258,596.01	7	$45,742.33	2	$315,902.46	11
Coagulation Factor Viia	$65,268.62	2					$65,268.62	2
Aminocaproic Acid	$1,628.58	8	$1,797.58	10	$2,117.96	4	$5,544.12	22
Tranexamic Acid	$1,462.19	12	$836.36	6	$1,219.89	10	$3,518.44	28
Anorex., Resp. & Cerebral Stim., Misc.	**$1,424,478.34**	**8,269**	**$1,833,748.03**	**10,700**	**$805,298.41**	**4,645**	**$4,063,524.78**	**23,614**
Methylphenidate	$924,775.02	5,390	$1,193,344.21	6,943	$539,178.47	3,088	$2,657,297.70	15,421
Dexmethylphenidate	$488,021.63	2,869	$628,754.97	3,744	$262,508.59	1,552	$1,379,285.19	8,165
Modafinil	$10,778.39	8	$11,638.85	12	$3,149.70	3	$25,566.94	23
Armodafinil	$903.30	2			$451.65	1	$1,354.95	3
Anticonvulsants, Miscellaneous	**$961,537.18**	**8,309**	**$1,223,202.71**	**11,829**	**$722,755.53**	**6,668**	**$2,907,495.42**	**26,806**
Oxcarbazepine	$150,890.86	1,116	$197,588.87	1,500	$114,860.39	902	$463,340.12	3,518
Divalproex Sodium	$137,452.82	1,434	$185,134.95	1,987	$107,588.64	1,134	$430,176.41	4,555
Levetiracetam	$113,956.27	1,302	$172,757.75	1,894	$91,153.97	1,043	$377,867.99	4,239
Lacosamide	$91,641.47	188	$108,933.33	250	$74,724.66	150	$275,299.46	588
Lamotrigine	$85,399.55	745	$106,789.64	1,070	$61,211.33	589	$253,400.52	2,404
Pregabalin	$67,612.53	301	$112,490.39	494	$55,299.55	242	$235,402.47	1,037
Vigabatrin	$101,811.45	11	$58,057.56	8	$39,300.92	5	$199,169.93	24

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	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims
Topiramate	$59,545.93	870	$87,127.72	1,208	$50,509.49	674	$197,183.14	2,752
Gabapentin	$49,808.23	1,378	$69,853.02	2,064	$39,958.21	1,103	$159,619.46	4,545
Carbamazepine	$26,115.28	435	$34,854.72	608	$23,526.34	359	$84,496.34	1,402
Rufinamide	$23,230.25	31	$28,118.59	48	$22,037.62	30	$73,386.46	109
Felbamate	$27,377.74	25	$24,946.84	28	$18,923.81	21	$71,248.39	74
Zonisamide	$11,907.67	272	$18,910.32	383	$9,368.75	205	$40,186.74	860
Valproic Acid	$9,237.45	194	$12,878.90	281	$6,706.76	150	$28,823.11	625
Tiagabine	$5,549.68	7	$4,760.11	6	$6,528.76	7	$16,838.55	20
Magnesium Sulfate					$1,056.33	54	$1,056.33	54
Corticosteroids	**$1,005,827.37**	**7,925**	**$1,171,997.74**	**9,442**	**$618,446.02**	**5,298**	**$2,796,271.13**	**22,665**
Mometasone Nasal	$716,030.17	5,036	$795,404.37	5,597	$326,112.32	2,303	$1,837,546.86	12,936
Ciprofloxacin-dexamethasone Otic	$176,644.38	1,148	$230,170.81	1,486	$200,144.76	1,294	$606,959.95	3,928
Fluticasone Nasal	$55,209.63	596	$68,203.12	736	$30,731.83	332	$154,144.58	1,664
Dexamethasone-tobramycin Ophthalmic	$26,515.96	245	$29,362.30	262	$16,740.08	153	$72,618.34	660
Hydrocortisone/neomycin/polymyxin B	$9,980.46	412	$16,158.48	695	$19,059.10	817	$45,198.04	1,924
Ciprofloxacin-hydrocortisone Otic	$4,709.78	27	$10,195.70	55	$11,497.48	62	$26,402.96	144
Ciclesonide Nasal	$5,885.89	48	$7,930.76	64	$2,528.71	21	$16,345.36	133
Hydrocortisone/neomycin/polymyxin B	$2,660.10	23	$3,805.91	33	$2,666.38	23	$9,132.39	79
Loteprednol Ophthalmic	$2,637.65	15	$3,021.42	19	$3,050.28	18	$8,709.35	52
Tobramycin Ophthalmic	$3,147.43	239	$3,979.76	276	$1,288.12	127	$8,415.31	642
Dexamethasone/neomycin/polymyxin B	$3,474.49	238	$4,723.32	278	$2,018.00	142	$6,767.30	423
Beclomethasone Nasal	$1,753.00	10	$3,524.00	20	$704.80	4	$5,981.80	34

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Resource Utilization Report
Drug Class Report
Top 15 Classes By Amount Paid*ǂ

AHFS Class / Generic Molecule	April 2013		May 2013		June 2013		Quarter	
	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims
Prednisolone Ophthalmic	$1,585.15	105	$2,522.51	167	$1,037.73	71	$5,145.39	343
Colistin/hc/neomycin/thonzonium Otic	$1,368.29	17	$903.15	12	$1,992.44	28	$4,263.88	57
Acetic Acid-hydrocortisone Otic	$1,250.36	8	$629.92	4	$887.96	8	$2,768.24	20
Fluorometholone Ophthalmic	$606.26	28	$978.10	51	$598.04	31	$2,182.40	110
Loteprednol-tobramycin Ophthalmic	$1,087.42	6	$467.66	2	$483.07	3	$2,038.15	11
Flunisolide Nasal			$1,214.64	4	$303.66	1	$1,518.30	5
Bacitracin/neomycin/polymyxin B Ophth	$366.47	7	$640.29	13	$497.21	10	$1,503.97	30
Prednisolone-sulfacetamide Sodium Oph	$251.51	9	$494.29	12	$303.98	7	$1,049.78	28
Beta-adrenergic Agonists	**$875,214.93**	**12,696**	**$1,048,227.66**	**14,987**	**$493,948.44**	**6,573**	**$2,417,391.03**	**34,256**
Albuterol	$533,857.09	11,339	$632,423.45	13,342	$277,386.23	5,716	$1,443,666.77	30,397
Fluticasone-salmeterol	$298,752.14	1,143	$364,823.13	1,390	$192,925.18	716	$856,500.45	3,249
Albuterol-ipratropium	$32,817.71	168	$33,863.55	202	$13,438.75	97	$80,120.01	467
Levalbuterol	$8,333.55	31	$12,471.84	35	$8,049.78	31	$28,855.17	97
Formoterol	$283.64	3	$3,063.15	14	$588.60	3	$3,935.39	20
Arformoterol	$924.54	2	$1,582.54	4	$1,270.76	4	$3,777.84	10
Pirbuterol					$1,516.70	5	$1,516.70	5
Terbutaline	$246.26	10			$289.14	6	$535.40	16
Central Nervous System Agents, Misce	**$794,710.78**	**3,427**	**$1,031,436.68**	**4,487**	**$507,321.54**	**2,202**	**$2,333,469.00**	**10,116**
Guanfacine	$529,203.37	2,507	$704,502.99	3,318	$350,174.75	1,642	$1,583,881.11	7,467
Atomoxetine	$169,155.19	803	$213,819.41	1,022	$107,146.00	476	$490,120.60	2,301
Tetrabenazine	$68,060.46	8	$78,681.35	9	$27,475.47	3	$174,217.28	20

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Prepared by the Evidence-Based DUR Initiative, MS-DUR

Resource Utilization Report
Drug Class Report
Top 15 Classes By Amount Paid*ǂ

AHFS Class / Generic Molecule	April 2013		May 2013		June 2013		Quarter	
	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims
Memantine	$18,593.93	89	$23,524.86	108	$13,914.93	63	$56,033.72	260
Dextromethorphan-quinidine	$9,491.35	19	$10,804.38	29	$8,610.39	18	$28,906.12	66
Proton-pump Inhibitors	**$618,273.00**	**2,856**	**$793,010.15**	**3,630**	**$445,784.21**	**2,022**	**$1,857,067.36**	**8,508**
Esomeprazole	$492,629.92	2,308	$640,367.26	2,992	$359,158.74	1,675	$1,135,559.30	5,309
Rabeprazole	$39,588.75	125	$58,785.66	185	$36,393.23	107	$134,767.64	417
Lansoprazole	$38,901.00	163	$42,757.08	166	$25,855.38	107	$107,513.46	436
Pantoprazole	$20,586.82	121	$22,525.98	132	$12,973.89	74	$56,086.69	327
Amoxicillin/clarithromycin/lansoprazole	$16,037.89	32	$17,811.79	36	$8,051.62	16	$41,901.30	84
Omeprazole	$5,277.25	74	$6,493.02	93	$2,207.28	36	$13,977.55	203
Dexlansoprazole	$5,251.37	33	$4,269.36	26	$1,144.07	7	$10,664.80	66
Antineoplastic Agents	**$605,545.89**	**1,078**	**$688,123.42**	**1,580**	**$505,767.46**	**915**	**$1,799,436.77**	**3,573**
Everolimus	$177,923.48	22	$90,037.26	12	$124,790.14	16	$392,750.88	50
Leuprolide	$51,870.44	36	$230,071.44	86	$96,694.56	40	$373,425.84	162
Sunitinib	$86,678.18	8	$18,487.46	2	$92,841.84	10	$198,007.48	20
Capecitabine	$37,598.89	12	$77,228.28	24	$37,194.01	12	$152,021.18	48
Imatinib	$13,239.63	2	$58,503.24	6	$24,757.02	3	$96,499.89	11
Lapatinib	$19,829.36	4	$57,505.52	12	$18,507.64	4	$95,842.52	20
Megestrol	$27,548.06	210	$40,639.46	338	$18,457.18	156	$86,644.70	704
Temozolomide	$49,014.11	10	$17,858.54	4	$2,134.66	1	$69,007.31	15
Sorafenib	$16,596.40	4	$15,473.02	4	$30,965.98	6	$63,035.40	14
Erlotinib	$35,331.33	6	$11,240.33	2	$11,445.93	2	$58,017.59	10

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Resource Utilization Report
Drug Class Report
Top 15 Classes By Amount Paid*ǂ

AHFS Class / Generic Molecule	April 2013		May 2013		June 2013		Quarter	
	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims
Letrozole	$16,429.50	42	$23,829.90	68	$10,686.70	30	$50,946.10	140
Methotrexate	$14,455.56	428	$19,492.44	644	$14,466.24	412	$48,414.24	1,484
Anastrozole	$13,084.04	54	$16,325.08	86	$10,132.38	46	$39,541.50	186
Histrelin			$33,972.28	2			$33,972.28	2
Topotecan			$14,647.14	1	$14,647.14	1	$29,294.28	2
Dasatinib	$9,063.64	1	$9,063.64	1	$9,063.64	1	$27,190.92	3
Nilotinib	$8,459.59	1	$8,459.59	1	$8,459.59	1	$25,378.77	3
Bevacizumab	$9,181.07	2	$5,246.19	1	$5,246.19	1	$19,673.45	4
Interferon Alfa-2b			$14,061.74	2			$14,061.74	2
Mercaptopurine	$3,756.79	42	$5,326.72	55	$3,248.09	36	$12,331.60	133
Hydroxyurea	$4,145.24	80	$3,703.04	81	$3,036.63	57	$10,884.91	218
Tamoxifen	$3,331.02	72	$4,675.38	88	$1,963.90	50	$9,970.30	210
Tretinoin	$2,815.05	1	$2,815.05	1	$3,284.07	1	$8,914.17	3
Bicalutamide	$1,842.16	20	$4,418.84	44	$2,037.02	20	$8,298.02	84
Procarbazine	$1,533.75	2	$6,132.24	5	$0.92	1	$7,666.91	8
Pazopanib			$7,530.56	1			$7,530.56	1
Etoposide	$2,335.57	1	$1,633.07	1	$1,633.07	1	$5,601.71	3
Mitotane			$1,706.40	5	$1,005.00	1	$2,711.40	6
Exemestane	$1,290.32	6	$402.72	2	$402.72	2	$2,095.76	10
Flutamide	$568.10	2					$568.10	2
Thioguanine	$135.62	3			$375.01	1	$510.63	4
Biologic Response Modifiers	**$567,833.38**	**79**	**$684,352.13**	**103**	**$451,125.77**	**60**	**$1,703,311.28**	**242**

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Resource Utilization Report
Drug Class Report
Top 15 Classes By Amount Paid*ǂ

AHFS Class / Generic Molecule	April 2013		May 2013		June 2013		Quarter	
	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims
Lenalidomide	$239,509.72	28	$351,968.84	38	$230,575.92	24	$822,054.48	90
Interferon Beta-1a	$84,916.92	20	$182,227.11	43	$70,260.55	17	$337,404.58	80
Interferon Gamma-1b	$100,255.05	5	$60,153.03	3	$64,372.83	3	$224,780.91	11
Glatiramer	$58,365.00	12	$72,957.75	15	$38,915.00	8	$170,237.75	35
Thalidomide	$50,536.26	6			$25,641.51	3	$76,177.77	9
Natalizumab	$21,306.75	5	$17,045.40	4	$17,045.40	4	$55,397.55	13
Interferon Beta-1b	$12,943.68	3			$4,314.56	1	$17,258.24	4
Insulins	**$496,138.51**	**2,166**	**$750,675.60**	**3,039**	**$431,806.46**	**1,744**	**$1,678,620.57**	**6,949**
Insulin Aspart	$170,554.69	589	$251,016.29	860	$137,222.12	463	$558,793.10	1,912
Insulin Glargine	$135,371.62	621	$224,998.88	891	$129,374.87	515	$489,745.37	2,027
Insulin Detemir	$57,124.63	240	$81,774.59	315	$49,959.29	199	$188,858.51	754
Insulin Aspart-insulin Aspart Protamine	$48,011.39	120	$63,257.44	173	$44,558.39	104	$155,827.22	397
Insulin Isophane	$27,133.38	242	$35,328.55	297	$22,797.89	189	$85,259.82	728
Insulin Isophane-insulin Regular	$22,296.61	118	$38,194.43	169	$18,767.86	104	$79,258.90	391
Insulin Lispro	$18,565.04	81	$29,393.29	126	$16,218.34	66	$64,176.67	273
Insulin Regular	$13,723.50	141	$18,240.71	180	$10,454.97	93	$42,419.18	414
Insulin Lispro-insulin Lispro Protamine	$2,078.70	8	$4,305.39	11	$1,189.40	5	$7,573.49	24
Insulin Glulisine	$1,278.95	6	$4,166.03	17	$1,263.33	6	$6,708.31	29
Leukotriene Modifiers	**$528,484.24**	**3,152**	**$604,503.96**	**3,604**	**$272,688.07**	**1,629**	**$1,405,676.27**	**8,385**
Montelukast	$1,188,677.17	7,050	$1,511,920.92	8,963	$731,258.07	4,276	$3,431,856.16	20,289
Zafirlukast	$332.75	3	$211.68	2	$208.68	2	$753.11	7

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Resource Utilization Report
Drug Class Report
Top 15 Classes By Amount Paid*ł

AHFS Class / Generic Molecule	April 2013		May 2013		June 2013		Quarter	
	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims
Cephalosporins	**$533,968.09**	**9,014**	**$629,692.96**	**10,966**	**$222,493.72**	**4,319**	**$1,386,154.77**	**24,299**
Cefdinir	$351,172.19	4,215	$420,092.21	5,212	$145,165.92	1,808	$916,430.32	11,235
Cefprozil	$105,404.22	1,723	$115,148.93	1,864	$40,459.35	668	$261,012.50	4,255
Cephalexin	$43,315.99	2,438	$53,351.76	3,095	$28,486.13	1,605	$125,153.88	7,138
Cefuroxime	$8,275.77	378	$12,416.19	496	$3,061.43	139	$23,753.39	1,013
Ceftriaxone	$8,079.20	102	$11,098.99	105	$2,033.44	50	$21,211.63	257
Cefadroxil	$6,581.04	123	$8,674.27	167	$1,886.49	39	$17,141.80	329
Cefepime	$6,271.09	8	$7,241.89	10	$492.93	3	$14,005.91	21
Cefixime	$3,436.71	10	$763.10	3	$411.85	2	$4,611.66	15
Cefaclor	$630.84	10	$202.41	3	$368.39	3	$1,201.64	16
Cefpodoxime	$255.76	2	$703.21	11	$14.02	1	$972.99	14
Ceftazidime	$405.02	4			$113.77	1	$518.79	5

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Resource Utilization Report
Drug Detail Report
Top 25 Drugs By Quarterly Amount Paid*ǂ

Generic Molecule / Drug Name	April 2013		May 2013		June 2013		Quarter	
	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims
Budesonide	**$1,682,357.60**	**3,714**	**$2,075,243.88**	**4,594**	**$935,496.96**	**1,968**	**$4,693,098.44**	**10,276**
Pulmicort Respules	$1,635,357.74	3,574	$2,007,951.52	4,338	$900,274.88	1,844	$4,543,584.14	9,756
Budesonide	$31,471.52	46	$33,786.96	46	$19,812.24	28	$85,070.72	120
Pulmicort Flexhaler	$15,528.34	94	$33,505.40	210	$15,409.84	96	$64,443.58	400
Montelukast	**$1,188,677.17**	**7,050**	**$1,511,920.92**	**8,963**	**$731,258.07**	**4,276**	**$3,431,856.16**	**20,289**
Singulair	$1,188,677.17	7,050	$1,511,920.92	8,963	$731,258.07	4,276	$3,431,856.16	20,289
Singulair	$524,069.09	3,114	$598,885.48	3,556	$270,219.00	1,608	$1,393,173.57	8,278
Montelukast Sodium	$4,082.40	35	$5,406.80	46	$2,260.39	19	$11,749.59	100
Lisdexamfetamine	**$1,108,990.81**	**6,146**	**$1,439,892.20**	**7,992**	**$631,393.64**	**3,518**	**$3,180,276.65**	**17,656**
Vyvanse	$1,108,990.81	6,146	$1,439,892.20	7,992	$631,393.64	3,518	$3,180,276.65	17,656
Antihemophilic Factor	**$1,128,624.18**	**43**	**$848,261.23**	**23**	**$788,782.50**	**25**	**$2,765,667.91**	**91**
Advate Rahf-pfm	$722,092.40	26	$580,014.21	9	$433,190.18	6	$1,735,296.79	41
Advate Rahf-pfm	$642,312.48	15	$50,553.65	14	$247,751.99	8	$940,618.12	37
Recombinate	$334,557.44	21	$173,271.58	12	$202,821.25	13	$710,650.27	46
Helixate Fs	$67,175.93	2	$59,374.76	1	$59,374.76	1	$185,925.45	4
Xyntha	$33,660.74	1	$35,600.68	1	$33,660.74	1	$102,922.16	3
Hemofil-m	$50,917.59	4			$37,292.55	3	$88,210.14	7

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Resource Utilization Report
Drug Detail Report
Top 25 Drugs By Quarterly Amount Paid*ǂ

Generic Molecule / Drug Name	April 2013		May 2013		June 2013		Quarter	
	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims
Kogenate Fs With Bioset					$22,443.02	1	$22,443.02	1
Aripiprazole	**$839,671.54**	**1,390**	**$1,190,954.73**	**1,935**	**$637,109.43**	**1,023**	**$2,667,735.70**	**4,348**
Abilify	$835,006.62	1,386	$1,189,658.53	1,930	$637,109.43	1,023	$2,661,774.58	4,339
Abilify Discmelt	$4,664.92	4	$1,296.20	5			$5,961.12	9
Methylphenidate	**$924,775.02**	**5,390**	**$1,193,344.21**	**6,943**	**$539,178.47**	**3,088**	**$2,657,297.70**	**15,421**
Methylphenidate Hydrochloride Er	$744,215.70	4,034	$977,723.11	5,270	$446,671.72	2,391	$2,168,610.53	11,695
Metadate Cd	$82,771.68	373	$95,119.12	435	$42,615.90	195	$220,506.70	1,003
Daytrana	$62,265.44	305	$79,528.23	400	$31,658.86	155	$173,452.53	860
Methylphenidate Hydrochloride	$13,186.05	577	$13,055.27	720	$6,910.13	294	$33,151.45	1,591
Methylin	$9,090.95	27	$14,073.85	38	$4,376.24	14	$27,541.04	79
Concerta	$9,807.56	40	$7,223.18	26	$4,460.07	18	$21,490.81	84
Methylphenidate Hydrochloride Cd	$1,460.01	7	$3,469.62	21	$150.46	1	$5,080.09	29
Methylphenidate Hydrochloride Sr	$927.75	19	$1,418.78	24	$439.73	8	$2,786.26	51
Quillivant Xr	$346.62	2	$1,128.35	5	$939.64	4	$2,414.61	11
Ritalin La	$511.05	3	$511.05	3	$740.79	5	$1,762.89	11
Amphetamine-dextroamphetamine	**$731,831.46**	**4,681**	**$921,606.36**	**5,855**	**$444,439.63**	**2,888**	**$2,097,877.45**	**13,424**
Adderall Xr	$551,782.44	2,288	$697,195.64	2,889	$323,704.98	1,325	$1,572,683.06	6,502
Amphetamine-dextroamphetamine	$110,366.94	1,905	$139,370.35	2,377	$73,160.36	1,232	$322,897.65	5,514
Amphetamine-dextroamphetamine Er	$68,567.44	482	$84,483.05	586	$47,016.97	328	$200,067.46	1,396
Adderall	$1,114.64	6	$557.32	3	$557.32	3	$2,229.28	12

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Resource Utilization Report
Drug Detail Report
Top 25 Drugs By Quarterly Amount Paid*ǂ

Generic Molecule / Drug Name	April 2013		May 2013		June 2013		Quarter	
	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims
Mometasone Nasal	**$716,030.17**	**5,036**	**$795,404.37**	**5,597**	**$326,112.32**	**2,303**	**$1,837,546.86**	**12,936**
Nasonex	$716,030.17	5,036	$795,404.37	5,597	$326,112.32	2,303	$1,837,546.86	12,936
Guanfacine	**$529,203.37**	**2,507**	**$704,502.99**	**3,318**	**$350,174.75**	**1,642**	**$1,583,881.11**	**7,467**
Intuniv	$529,203.37	2,507	$704,502.99	3,318	$350,174.75	1,642	$1,583,881.11	7,467
Guanfacine Hydrochloride	$18,772.68	1,345	$23,967.70	1,677	$13,852.81	945	$56,593.19	3,967
Albuterol	**$533,857.09**	**11,339**	**$632,423.45**	**13,342**	**$277,386.23**	**5,716**	**$1,443,666.77**	**30,397**
Proventil Hfa	$347,686.88	5,476	$407,073.52	6,452	$196,308.72	3,118	$951,069.12	15,046
Albuterol Sulfate	$184,997.89	5,814	$223,572.69	6,819	$80,493.22	2,573	$489,063.80	15,206
Ventolin Hfa	$695.30	22	$836.59	23	$334.27	11	$1,866.16	56
Albuterol	$287.62	25	$802.17	47	$111.54	13	$1,201.33	85
Dexmethylphenidate	**$488,021.63**	**2,869**	**$628,754.97**	**3,744**	**$262,508.59**	**1,552**	**$1,379,285.19**	**8,165**
Focalin Xr	$465,797.72	2,310	$597,894.97	2,986	$249,130.33	1,232	$1,312,823.02	6,528
Focalin Xr	$28,665.92	137	$38,984.09	178	$16,026.16	74	$83,676.17	389
Dexmethylphenidate Hydrochloride	$21,211.01	541	$28,424.33	725	$12,605.11	309	$62,240.45	1,575
Focalin	$1,012.90	18	$2,435.67	33	$773.15	11	$4,221.72	62
Quetiapine	**$439,137.83**	**1,216**	**$590,599.18**	**1,611**	**$316,963.27**	**907**	**$1,346,700.28**	**3,734**
Quetiapine Fumarate	$208,546.80	682	$319,154.03	1,016	$167,409.06	568	$695,109.89	2,266
Seroquel	$130,074.72	330	$127,599.28	333	$77,396.80	201	$335,070.80	864
Seroquel Xr	$100,516.31	204	$143,845.87	262	$72,157.41	138	$316,519.59	604
Somatropin	**$373,630.91**	**107**	**$638,932.96**	**179**	**$327,126.46**	**94**	**$1,339,690.33**	**380**

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Resource Utilization Report
Drug Detail Report
Top 25 Drugs By Quarterly Amount Paid*ǂ

Generic Molecule / Drug Name	April 2013		May 2013		June 2013		Quarter	
	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims
Nutropin Aq Nuspin 20	$136,442.04	24	$229,731.97	47	$101,907.85	20	$468,081.86	91
Nutropin Aq Nuspin 10	$67,702.81	26	$111,703.10	47	$55,576.76	21	$234,982.67	94
Genotropin	$67,951.85	16	$96,380.88	23	$67,932.75	16	$232,265.48	55
Norditropin Flexpro Pen	$40,303.11	16	$103,520.03	29	$50,511.51	17	$194,334.65	62
Genotropin Miniquick	$38,139.02	12	$33,498.20	10	$21,647.24	7	$93,284.46	29
Saizen	$9,477.50	1	$37,910.00	4	$9,477.50	1	$56,865.00	6
Nutropin Aq Pen 10 Cartridge	$4,326.54	3	$11,238.07	5	$3,459.67	2	$19,024.28	10
Nutropin Aq Pen 20 Cartridge	$5,181.69	1	$5,181.69	1	$5,524.07	2	$15,887.45	4
Nutropin Aq Nuspin 5	$2,592.80	1	$6,911.53	2	$2,592.80	1	$12,097.13	4
Omnitrope Pen 10 Cartridge	$714.04	4	$468.27	3	$4,888.18	3	$6,070.49	10
Norditropin Nordiflex Pen					$2,566.57	1	$2,566.57	1
Tev-tropin			$1,090.64	2	$545.32	1	$1,635.96	3
Omnitrope Pen 5 Cartridge	$200.00	1	$1,000.00	5	$200.00	1	$1,400.00	7
Humatrope	$599.51	2	$298.58	1	$296.24	1	$1,194.33	4
Anti-inhibitor Coagulant Complex	**$847,548.24**	**10**	**$132,264.62**	**3**	**$189,363.67**	**1**	**$1,169,176.53**	**14**
Feiba Nf	$847,548.24	10	$132,264.62	3	$189,363.67	1	$1,169,176.53	14
Esomeprazole	**$492,629.92**	**2,308**	**$640,367.26**	**2,992**	**$359,158.74**	**1,675**	**$1,135,559.30**	**5,309**
Nexium	$492,629.92	2,308	$640,367.26	2,992	$2,562.12	9	$1,135,559.30	5,309
Nexium	$4,051.79	13	$7,893.01	26	$359,158.74	1,675	$371,103.54	1,714
Cetirizine	**$387,571.31**	**18,751**	**$450,774.08**	**21,846**	**$193,774.50**	**9,644**	**$1,032,119.89**	**50,241**
Cetirizine Hydrochloride	$385,878.30	18,524	$448,719.10	21,551	$192,750.54	9,498	$1,027,347.94	49,573

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ǂ Molecule names accounting for less than $500 in quarterly amount paid are not shown

Resource Utilization Report
Drug Detail Report
Top 25 Drugs By Quarterly Amount Paid*ǂ

Generic Molecule / Drug Name	April 2013		May 2013		June 2013		Quarter	
	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims
All Day Allergy	$1,293.01	192	$1,427.84	240	$867.86	134	$3,588.71	566
All Day Allergy Children's	$372.08	27	$627.14	55	$156.10	12	$1,155.32	94
All Day Allergy Children's	$400.00	35	$127.77	11	$163.71	13	$691.48	59
Epinephrine	**$265,133.01**	**1,059**	**$421,847.55**	**1,683**	**$266,068.62**	**1,065**	**$953,049.18**	**3,807**
Epipen Jr 2-pak	$143,676.24	567	$229,522.20	906	$134,921.91	537	$508,120.35	2,010
Epipen 2-pak	$118,355.85	480	$191,052.99	765	$125,641.83	504	$435,050.67	1,749
Auvi-q	$3,100.92	12	$1,272.36	12	$5,426.61	21	$9,799.89	45
Medroxyprogesterone	**$273,863.43**	**6,810**	**$405,648.96**	**10,005**	**$262,112.37**	**6,615**	**$941,624.76**	**23,430**
Medroxyprogesterone Acetate	$271,746.75	6,792	$402,041.88	9,954	$261,403.08	6,612	$935,191.71	23,358
Depo-provera Contraceptive	$1,079.10	30	$5,429.16	297	$658.08	36	$7,166.34	363
Depo-subq Provera 104	$1,556.76	12	$3,113.52	24			$4,670.28	36
Depo-provera Contraceptive	$559.92	6	$493.56	27	$658.08	36	$1,711.56	69
Depo-provera					$709.29	3	$709.29	3
Cefdinir	**$351,172.19**	**4,215**	**$420,092.21**	**5,212**	**$145,165.92**	**1,808**	**$916,430.32**	**11,235**
Cefdinir	$351,172.19	4,215	$420,092.21	5,212	$145,165.92	1,808	$916,430.32	11,235
Risperidone	**$278,337.37**	**3,028**	**$386,817.41**	**4,195**	**$212,857.15**	**2,306**	**$878,011.93**	**9,529**
Risperidone	$269,601.30	3,013	$380,013.72	4,181	$208,026.03	2,299	$857,641.05	9,493
Risperdal Consta	$7,289.85	8	$5,479.08	9	$4,556.12	5	$17,325.05	22
Risperdal	$1,446.22	7	$1,324.61	5	$275.00	2	$3,045.83	14
Fluticasone-salmeterol	**$298,752.14**	**1,143**	**$364,823.13**	**1,390**	**$192,925.18**	**716**	**$856,500.45**	**3,249**

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ǂ Molecule names accounting for less than $500 in quarterly amount paid are not shown

Resource Utilization Report
Drug Detail Report
Top 25 Drugs By Quarterly Amount Paid*ǂ

Generic Molecule / Drug Name	April 2013		May 2013		June 2013		Quarter	
	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims
Advair Diskus	$261,986.42	1,015	$320,377.18	1,231	$167,882.76	634	$750,246.36	2,880
Advair Hfa	$36,765.72	128	$44,445.95	159	$25,042.42	82	$106,254.09	369
Azithromycin	**$338,176.66**	**10,735**	**$376,976.76**	**11,842**	**$122,667.50**	**3,846**	**$837,820.92**	**26,423**
Azithromycin	$280,109.86	8,240	$317,286.46	9,265	$105,275.75	3,085	$702,672.07	20,590
Azithromycin 5 Day Dose Pack	$54,350.53	2,348	$56,681.71	2,458	$16,378.12	716	$127,410.36	5,522
Azithromycin 3 Day Dose Pack	$3,716.27	147	$3,008.59	119	$1,013.63	45	$7,738.49	311
Lenalidomide	**$239,509.72**	**28**	**$351,968.84**	**38**	**$230,575.92**	**24**	**$822,054.48**	**90**
Revlimid	$239,509.72	28	$351,968.84	38	$230,575.92	24	$822,054.48	90
Ondansetron	**$321,672.11**	**3,147**	**$270,144.11**	**2,807**	**$114,988.11**	**1,235**	**$706,804.33**	**7,189**
Ondansetron Hydrochloride	$321,406.45	3,146	$270,144.11	2,807	$114,988.11	1,235	$706,538.67	7,188
Amoxicillin-clavulanate	**$252,151.28**	**4,333**	**$304,547.52**	**5,148**	**$117,406.42**	**2,028**	**$674,105.22**	**11,509**
Amoxicillin-clavulanate	$252,151.28	4,333	$304,547.52	5,148	$117,406.42	2,028	$674,105.22	11,509
Amoxicillin-clavulanate	$94,328.81	1,487	$105,174.25	1,761	$45,012.57	720	$244,515.63	3,968
Augmentin	$1,221.84	12	$1,023.67	12	$819.75	6	$3,065.26	30
Augmentin Xr	$388.88	2	$607.45	5			$996.33	7

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Resource Utilization Report
Drug Class Report
Top 15 Classes By Number of Claims*ł

AHFS Class / Generic Molecule	April 2013		May 2013		June 2013		Quarter	
	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims
Second Generation Antihistamines	**$422,555.23**	**22,198**	**$491,808.68**	**25,985**	**$210,706.98**	**11,440**	**$1,125,070.89**	**59,623**
Cetirizine	$387,571.31	18,751	$450,774.08	21,846	$193,774.50	9,644	$1,032,119.89	50,241
Loratadine	$20,783.98	2,750	$23,606.58	3,307	$10,677.11	1,518	$55,067.67	7,575
Cetirizine-pseudoephedrine	$10,955.36	577	$12,834.17	665	$3,917.62	200	$27,707.15	1,442
Penicillins	**$413,579.78**	**18,520**	**$484,699.12**	**21,409**	**$188,982.39**	**8,800**	**$1,087,261.29**	**48,729**
Amoxicillin	$141,723.20	12,985	$161,263.33	14,939	$63,199.66	6,067	$366,186.19	33,991
Amoxicillin-clavulanate	$252,151.28	4,333	$304,547.52	5,148	$117,406.42	2,028	$674,105.22	11,509
Penicillin V Potassium	$12,198.86	1,073	$13,055.66	1,189	$6,962.20	630	$32,216.72	2,892
Adrenals	**$2,092,619.40**	**14,894**	**$2,579,514.11**	**18,108**	**$1,181,472.26**	**7,363**	**$5,853,605.77**	**40,365**
Prednisolone	$122,072.25	6,589	$144,882.15	7,997	$52,169.90	2,829	$319,124.30	17,415
Budesonide	$1,682,357.60	3,714	$2,075,243.88	4,594	$935,496.96	1,968	$4,693,098.44	10,276
Prednisone	$10,226.19	1,815	$12,030.75	2,066	$4,505.34	807	$26,762.28	4,688
Methylprednisolone	$9,664.06	742	$12,110.67	926	$5,838.15	453	$27,612.88	2,121
Fluticasone	$95,581.68	613	$119,325.93	804	$60,263.02	371	$275,170.63	1,788
Beclomethasone	$63,085.61	443	$76,758.66	524	$43,029.61	285	$182,873.88	1,252
Dexamethasone	$2,516.83	316	$4,255.61	391	$2,118.45	197	$8,890.89	904
Mometasone	$33,685.38	239	$36,392.27	255	$20,075.18	143	$90,152.83	637

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Prepared by the Evidence-Based DUR Initiative, MS-DUR

Resource Utilization Report
Drug Class Report
Top 15 Classes By Number of Claims*ł

AHFS Class / Generic Molecule	April 2013		May 2013		June 2013		Quarter	
	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims
Budesonide-formoterol	$47,369.23	203	$63,704.30	269	$39,853.48	158	$150,927.01	630
Beta-adrenergic Agonists	**$875,214.93**	**12,696**	**$1,048,227.66**	**14,987**	**$493,948.44**	**6,573**	**$2,417,391.03**	**34,256**
Albuterol	$533,857.09	11,339	$632,423.45	13,342	$277,386.23	5,716	$1,443,666.77	30,397
Fluticasone-salmeterol	$298,752.14	1,143	$364,823.13	1,390	$192,925.18	716	$856,500.45	3,249
Opiate Agonists	**$239,927.30**	**10,734**	**$330,910.57**	**13,734**	**$200,597.98**	**7,635**	**$771,435.85**	**32,103**
Acetaminophen-hydrocodone	$81,933.36	5,988	$104,495.90	7,560	$62,827.76	4,219	$249,257.02	17,767
Acetaminophen-codeine	$21,475.29	2,674	$27,785.41	3,437	$15,248.58	1,834	$64,509.28	7,945
Acetaminophen-oxycodone	$21,350.45	680	$31,259.48	970	$17,782.78	564	$70,392.71	2,214
Tramadol	$3,356.88	636	$3,893.45	736	$2,137.88	398	$7,638.25	1,391
Fentanyl	$85,593.58	185	$129,537.05	261	$82,507.71	164	$297,638.34	610
Amphetamines	**$1,886,867.78**	**11,086**	**$2,418,140.94**	**14,173**	**$1,103,323.40**	**6,549**	**$5,408,332.12**	**31,808**
Lisdexamfetamine	$1,108,990.81	6,146	$1,439,892.20	7,992	$631,393.64	3,518	$3,180,276.65	17,656
Amphetamine-dextroamphetamine	$731,831.46	4,681	$921,606.36	5,855	$444,439.63	2,888	$2,097,877.45	13,424
Dextroamphetamine	$46,045.51	259	$56,642.38	326	$27,490.13	143	$130,178.02	728
Nonsteroidal Anti-inflammatory Agen	**$107,004.27**	**10,809**	**$125,651.29**	**12,598**	**$59,585.01**	**6,305**	**$292,240.57**	**29,712**
Ibuprofen	$57,958.94	5,863	$63,106.79	6,479	$27,591.30	2,963	$148,657.03	15,305
Aspirin	$6,528.84	1,988	$8,680.82	2,628	$4,803.36	1,480	$20,013.02	6,096
Naproxen	$22,972.92	1,640	$26,348.81	1,795	$11,799.98	896	$61,121.71	4,331
Meloxicam	$5,538.20	714	$8,008.30	943	$3,824.97	517	$17,371.47	2,174
Acetaminophen/butalbital/caffeine	$12,093.67	529	$17,609.13	660	$8,515.88	361	$27,667.66	1,038
Ketorolac	$3,040.22	246	$3,244.01	263	$2,056.86	173	$8,341.09	682

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Resource Utilization Report
Drug Class Report
Top 15 Classes By Number of Claims*ł

AHFS Class / Generic Molecule	April 2013		May 2013		June 2013		Quarter	
	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims
Diclofenac	$3,818.92	187	$5,262.81	245	$3,335.18	144	$12,416.91	576
Antitussives	**$108,390.59**	**12,717**	**$117,254.55**	**13,210**	**$35,391.79**	**3,694**	**$261,036.93**	**29,621**
Brompheniramine/dextromethorph/phe	$78,130.61	8,348	$80,244.37	8,612	$22,250.94	2,438	$180,625.92	19,398
Codeine-guaifenesin	$11,451.49	2,087	$17,344.52	2,206	$7,158.71	555	$35,954.72	4,848
Dextromethorphan-guaifenesin	$5,653.69	1,005	$4,884.75	902	$1,437.64	267	$11,976.08	2,174
Nitrofurantoin	$47,307.53	708	$64,851.65	884	$35,368.68	488	$147,527.86	2,080
Benzonatate	$5,534.89	598	$6,974.74	766	$2,478.08	264	$14,987.71	1,628
Dextromethorphan	$6,167.41	520	$6,368.25	557	$1,610.71	138	$14,146.37	1,215
Sulfonamides	**$125,523.02**	**9,184**	**$166,803.10**	**12,216**	**$106,747.24**	**7,512**	**$399,073.36**	**28,912**
Sulfamethoxazole-trimethoprim	$124,852.86	9,144	$165,963.56	12,160	$106,202.32	7,480	$397,018.74	28,784
Macrolides	**$387,674.23**	**11,514**	**$436,292.21**	**12,753**	**$141,628.47**	**4,134**	**$965,594.91**	**28,401**
Azithromycin	$338,176.66	10,735	$376,976.76	11,842	$122,667.50	3,846	$837,820.92	26,423
Clarithromycin	$44,870.92	720	$54,728.26	871	$15,382.97	256	$114,982.15	1,847
Anticonvulsants, Miscellaneous	**$961,537.18**	**8,309**	**$1,223,202.71**	**11,829**	**$722,755.53**	**6,668**	**$2,907,495.42**	**26,806**
Divalproex Sodium	$137,452.82	1,434	$185,134.95	1,987	$107,588.64	1,134	$430,176.41	4,555
Gabapentin	$49,808.23	1,378	$69,853.02	2,064	$39,958.21	1,103	$159,619.46	4,545
Levetiracetam	$113,956.27	1,302	$172,757.75	1,894	$91,153.97	1,043	$377,867.99	4,239
Oxcarbazepine	$150,890.86	1,116	$197,588.87	1,500	$114,860.39	902	$463,340.12	3,518
Topiramate	$59,545.93	870	$87,127.72	1,208	$50,509.49	674	$197,183.14	2,752
Lamotrigine	$85,399.55	745	$106,789.64	1,070	$61,211.33	589	$253,400.52	2,404
Carbamazepine	$26,115.28	435	$34,854.72	608	$23,526.34	359	$84,496.34	1,402

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Resource Utilization Report
Drug Class Report
Top 15 Classes By Number of Claims*ǂ

AHFS Class / Generic Molecule	April 2013		May 2013		June 2013		Quarter	
	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims
Pregabalin	$67,612.53	301	$112,490.39	494	$55,299.55	242	$235,402.47	1,037
Zonisamide	$11,907.67	272	$18,910.32	383	$9,368.75	205	$40,186.74	860
Valproic Acid	$9,237.45	194	$12,878.90	281	$6,706.76	150	$28,823.11	625
Lacosamide	$91,641.47	188	$108,933.33	250	$74,724.66	150	$275,299.46	588
Cephalosporins	**$533,968.09**	**9,014**	**$629,692.96**	**10,966**	**$222,493.72**	**4,319**	**$1,386,154.77**	**24,299**
Cefdinir	$351,172.19	4,215	$420,092.21	5,212	$145,165.92	1,808	$916,430.32	11,235
Cephalexin	$43,315.99	2,438	$53,351.76	3,095	$28,486.13	1,605	$125,153.88	7,138
Cefprozil	$105,404.22	1,723	$115,148.93	1,864	$40,459.35	668	$261,012.50	4,255
Cefuroxime	$8,275.77	378	$12,416.19	496	$3,061.43	139	$23,753.39	1,013
Progestins	**$282,885.70**	**6,856**	**$442,448.46**	**10,100**	**$279,696.45**	**6,666**	**$1,005,030.61**	**23,622**
Medroxyprogesterone	$273,863.43	6,810	$405,648.96	10,005	$262,112.37	6,615	$941,624.76	23,430
Norethindrone	$16,395.44	546	$22,996.56	792	$10,707.62	366	$50,099.62	1,704
Megestrol	$27,548.06	210	$40,639.46	338	$18,457.18	156	$86,644.70	704
Anorex., Resp. & Cerebral Stim., Misc.	**$1,424,478.34**	**8,269**	**$1,833,748.03**	**10,700**	**$805,298.41**	**4,645**	**$4,063,524.78**	**23,614**
Methylphenidate	$924,775.02	5,390	$1,193,344.21	6,943	$539,178.47	3,088	$2,657,297.70	15,421
Dexmethylphenidate	$488,021.63	2,869	$628,754.97	3,744	$262,508.59	1,552	$1,379,285.19	8,165
Anti-inflammatory Agents	**$136,915.49**	**7,342**	**$181,219.38**	**9,676**	**$103,405.57**	**5,651**	**$421,540.44**	**22,669**
Triamcinolone Topical	$34,166.25	2,678	$44,401.96	3,598	$25,544.95	2,083	$71,889.74	5,839
Mometasone Topical	$57,338.75	1,722	$76,703.31	2,366	$45,271.63	1,381	$179,313.69	5,469
Hydrocortisone Topical	$19,834.00	1,674	$24,417.74	2,252	$14,369.83	1,331	$58,621.57	5,257
Fluticasone Nasal	$55,209.63	596	$68,203.12	736	$30,731.83	332	$154,144.58	1,664

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Resource Utilization Report
Drug Class Report
Top 15 Classes By Number of Claims*ł

AHFS Class / Generic Molecule	April 2013		May 2013		June 2013		Quarter	
	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims
Desonide Topical	$8,666.80	459	$8,617.76	459	$5,470.18	282	$22,754.74	1,200
Nystatin-triamcinolone Topical	$2,427.78	344	$3,323.98	463	$1,711.00	246	$7,462.76	1,053

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Resource Utilization Report
Drug Detail Report
Top 25 Drugs By Quarterly Number of Claims*ł

Generic Molecule / Drug Name	April 2013		May 2013		June 2013		Quarter	
	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims
Cetirizine	**$387,571.31**	**18,751**	**$450,774.08**	**21,846**	**$193,774.50**	**9,644**	**$1,032,119.89**	**50,241**
Cetirizine Hydrochloride	$385,878.30	18,524	$448,719.10	21,551	$192,750.54	9,498	$1,027,347.94	49,573
All Day Allergy	$1,293.01	192	$1,427.84	240	$867.86	134	$3,588.71	566
Amoxicillin	**$141,723.20**	**12,985**	**$161,263.33**	**14,939**	**$63,199.66**	**6,067**	**$366,186.19**	**33,991**
Amoxicillin	$141,255.56	12,982	$161,263.33	14,939	$63,199.66	6,067	$365,718.55	33,988
Albuterol	**$533,857.09**	**11,339**	**$632,423.45**	**13,342**	**$277,386.23**	**5,716**	**$1,443,666.77**	**30,397**
Albuterol Sulfate	$184,997.89	5,814	$223,572.69	6,819	$80,493.22	2,573	$489,063.80	15,206
Proventil Hfa	$347,686.88	5,476	$407,073.52	6,452	$196,308.72	3,118	$951,069.12	15,046
Sulfamethoxazole-trimethoprim	**$124,852.86**	**9,144**	**$165,963.56**	**12,160**	**$106,202.32**	**7,480**	**$397,018.74**	**28,784**
Sulfamethoxazole-trimethoprim	$92,243.68	5,730	$126,728.38	8,012	$83,780.48	5,124	$302,752.54	18,866
Sulfamethoxazole-trimethoprim Ds	$31,699.88	3,318	$38,224.34	4,028	$22,061.52	2,306	$91,985.74	9,652
Azithromycin	**$338,176.66**	**10,735**	**$376,976.76**	**11,842**	**$122,667.50**	**3,846**	**$837,820.92**	**26,423**
Azithromycin	$280,109.86	8,240	$317,286.46	9,265	$105,275.75	3,085	$702,672.07	20,590
Azithromycin 5 Day Dose Pack	$54,350.53	2,348	$56,681.71	2,458	$16,378.12	716	$127,410.36	5,522
Medroxyprogesterone	**$273,863.43**	**6,810**	**$405,648.96**	**10,005**	**$262,112.37**	**6,615**	**$941,624.76**	**23,430**
Medroxyprogesterone Acetate	$271,746.75	6,792	$402,041.88	9,954	$261,403.08	6,612	$935,191.71	23,358

Note: Resource Utilization Report Currently Contains Only Fee For Service Medicaid Claims

* Dollar figures represent reimbursement to pharmacies and are not representative of overall Medicaid costs.

ł Molecule names accounting for less than $500 in quarterly amount paid are not shown

Prepared by the Evidence-Based DUR Initiative, MS-DUR

Resource Utilization Report
Drug Detail Report
Top 25 Drugs By Quarterly Number of Claims*ł

Generic Molecule / Drug Name	April 2013		May 2013		June 2013		Quarter	
	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims
Montelukast	**$1,188,677.17**	**7,050**	**$1,511,920.92**	**8,963**	**$731,258.07**	**4,276**	**$3,431,856.16**	**20,289**
Singulair	$1,188,677.17	7,050	$1,511,920.92	8,963	$731,258.07	4,276	$3,431,856.16	20,289
Singulair	$524,069.09	3,114	$598,885.48	3,556	$270,219.00	1,608	$1,393,173.57	8,278
Brompheniramine/dextromethorph/p	**$78,130.61**	**8,348**	**$80,244.37**	**8,612**	**$22,250.94**	**2,438**	**$180,625.92**	**19,398**
Rynex Dm	$76,376.94	8,103	$78,714.78	8,393	$21,772.92	2,368	$176,864.64	18,864
Endacof-dm	$3,792.63	428	$4,063.30	486	$1,195.11	137	$9,051.04	1,051
Acetaminophen-hydrocodone	**$81,933.36**	**5,988**	**$104,495.90**	**7,560**	**$62,827.76**	**4,219**	**$249,257.02**	**17,767**
Acetaminophen-hydrocodone Bitartrate	$81,933.36	5,988	$104,491.10	7,559	$62,808.56	4,217	$249,233.02	17,764
Acetaminophen-hydrocodone Bitartrate	$16,298.04	844	$26,813.63	1,325	$13,170.34	678	$56,282.01	2,847
Lisdexamfetamine	**$1,108,990.81**	**6,146**	**$1,439,892.20**	**7,992**	**$631,393.64**	**3,518**	**$3,180,276.65**	**17,656**
Vyvanse	$1,108,990.81	6,146	$1,439,892.20	7,992	$631,393.64	3,518	$3,180,276.65	17,656
Prednisolone	**$122,072.25**	**6,589**	**$144,882.15**	**7,997**	**$52,169.90**	**2,829**	**$319,124.30**	**17,415**
Prednisolone	$22,892.58	2,650	$28,009.65	3,243	$9,419.76	1,109	$60,321.99	7,002
Prednisolone Sodium Phosphate	$38,666.10	2,590	$43,080.98	3,058	$17,306.95	1,135	$99,054.03	6,783
Veripred 20	$44,812.68	1,174	$54,018.73	1,486	$18,791.68	508	$117,623.09	3,168
Diphenhydramine	**$25,169.56**	**5,092**	**$34,990.72**	**7,288**	**$19,168.96**	**3,976**	**$79,329.24**	**16,356**
Q-dryl	$14,079.16	2,756	$21,732.52	4,340	$10,838.68	2,176	$46,650.36	9,272
Diphenhydramine Hydrochloride	$7,017.80	1,488	$8,095.84	1,820	$5,108.00	1,152	$20,221.64	4,460
Diphenhydramine Hydrochloride	$79.80	12	$8,095.84	1,820	$5,108.00	1,152	$13,283.64	2,984
Diphenhist	$1,704.64	356	$2,368.04	492	$1,631.20	316	$5,703.88	1,164

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Resource Utilization Report
Drug Detail Report
Top 25 Drugs By Quarterly Number of Claims*ł

Generic Molecule / Drug Name	April 2013		May 2013		June 2013		Quarter	
	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims
Banophen	$1,485.92	340	$2,149.12	516	$1,130.24	256	$4,765.28	1,112
Methylphenidate	**$924,775.02**	**5,390**	**$1,193,344.21**	**6,943**	**$539,178.47**	**3,088**	**$2,657,297.70**	**15,421**
Methylphenidate Hydrochloride Er	$744,215.70	4,034	$977,723.11	5,270	$446,671.72	2,391	$2,168,610.53	11,695
Methylphenidate Hydrochloride	$13,186.05	577	$13,055.27	720	$6,910.13	294	$33,151.45	1,591
Metadate Cd	$82,771.68	373	$95,119.12	435	$42,615.90	195	$220,506.70	1,003
Daytrana	$62,265.44	305	$79,528.23	400	$31,658.86	155	$173,452.53	860
Ibuprofen	**$57,958.94**	**5,863**	**$63,106.79**	**6,479**	**$27,591.30**	**2,963**	**$148,657.03**	**15,305**
Ibuprofen	$50,941.86	4,776	$55,030.74	5,193	$24,163.55	2,422	$130,136.15	12,391
Ibu	$5,579.46	933	$6,375.28	1,092	$2,827.26	475	$14,782.00	2,500
Amphetamine-dextroamphetamine	**$731,831.46**	**4,681**	**$921,606.36**	**5,855**	**$444,439.63**	**2,888**	**$2,097,877.45**	**13,424**
Adderall Xr	$551,782.44	2,288	$697,195.64	2,889	$323,704.98	1,325	$1,572,683.06	6,502
Amphetamine-dextroamphetamine	$110,366.94	1,905	$139,370.35	2,377	$73,160.36	1,232	$322,897.65	5,514
Amphetamine-dextroamphetamine Er	$68,567.44	482	$84,483.05	586	$47,016.97	328	$200,067.46	1,396
Promethazine	**$57,391.06**	**5,408**	**$59,097.82**	**5,242**	**$32,711.68**	**2,368**	**$149,200.56**	**13,018**
Promethazine Hydrochloride	$3,804.52	282	$54,225.76	4,946	$30,929.54	2,260	$88,959.82	7,488
Promethazine Hydrochloride	$53,807.96	5,142	$4,858.60	314	$1,696.42	144	$60,362.98	5,600
Hydroxyzine	**$68,485.32**	**3,924**	**$93,679.66**	**5,600**	**$59,311.24**	**3,470**	**$221,476.22**	**12,994**
Hydroxyzine Hydrochloride	$1,256.42	42	$80,426.98	4,232	$51,738.40	2,694	$133,421.80	6,968
Hydroxyzine Hydrochloride	$59,340.06	3,016	$1,126.74	38	$374.92	12	$60,841.72	3,066
Hydroxyzine Pamoate	$9,145.26	908	$13,252.68	1,368	$7,572.84	776	$29,970.78	3,052

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Resource Utilization Report
Drug Detail Report
Top 25 Drugs By Quarterly Number of Claims*ł

Generic Molecule / Drug Name	April 2013		May 2013		June 2013		Quarter	
	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims
Mometasone Nasal	**$716,030.17**	**5,036**	**$795,404.37**	**5,597**	**$326,112.32**	**2,303**	**$1,837,546.86**	**12,936**
Nasonex	$716,030.17	5,036	$795,404.37	5,597	$326,112.32	2,303	$1,837,546.86	12,936
Amoxicillin-clavulanate	**$252,151.28**	**4,333**	**$304,547.52**	**5,148**	**$117,406.42**	**2,028**	**$674,105.22**	**11,509**
Amoxicillin-clavulanate	$252,151.28	4,333	$304,547.52	5,148	$117,406.42	2,028	$674,105.22	11,509
Amoxicillin-clavulanate	$94,328.81	1,487	$105,174.25	1,761	$45,012.57	720	$244,515.63	3,968
Cefdinir	**$351,172.19**	**4,215**	**$420,092.21**	**5,212**	**$145,165.92**	**1,808**	**$916,430.32**	**11,235**
Cefdinir	$351,172.19	4,215	$420,092.21	5,212	$145,165.92	1,808	$916,430.32	11,235
Budesonide	**$1,682,357.60**	**3,714**	**$2,075,243.88**	**4,594**	**$935,496.96**	**1,968**	**$4,693,098.44**	**10,276**
Pulmicort Respules	$1,635,357.74	3,574	$2,007,951.52	4,338	$900,274.88	1,844	$4,543,584.14	9,756
Mupirocin Topical	**$115,451.06**	**2,784**	**$162,664.79**	**3,945**	**$126,082.49**	**2,970**	**$404,198.34**	**9,699**
Mupirocin	$104,158.95	2,671	$147,851.09	3,790	$112,082.45	2,832	$364,092.49	9,293
Clonidine	**$151,432.36**	**3,125**	**$216,070.66**	**4,229**	**$133,778.95**	**2,210**	**$501,281.97**	**9,564**
Clonidine Hydrochloride	$23,234.14	2,537	$30,772.26	3,415	$1,818.26	191	$55,824.66	6,143
Clonidine Hydrochloride	$2,016.82	216	$2,570.84	282	$16,165.21	1,811	$20,752.87	2,309
Kapvay	$118,050.66	557	$174,783.82	780	$109,540.11	372	$402,374.59	1,709
Risperidone	**$278,337.37**	**3,028**	**$386,817.41**	**4,195**	**$212,857.15**	**2,306**	**$878,011.93**	**9,529**
Risperidone	$269,601.30	3,013	$380,013.72	4,181	$208,026.03	2,299	$857,641.05	9,493
Dexmethylphenidate	**$488,021.63**	**2,869**	**$628,754.97**	**3,744**	**$262,508.59**	**1,552**	**$1,379,285.19**	**8,165**
Focalin Xr	$465,797.72	2,310	$597,894.97	2,986	$249,130.33	1,232	$1,312,823.02	6,528

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Generic Molecule / Drug Name	April 2013		May 2013		June 2013		Quarter	
	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims	Total Paid*	Total Claims
Dexmethylphenidate Hydrochloride	$21,211.01	541	$28,424.33	725	$12,605.11	309	$62,240.45	1,575

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Pharmacy Program Update

MEDICAID PROGRAM UPDATE

PROVIDER NOTICE:

On July 26, 2013, the U.S. Food & Drug Administration (FDA) released new warnings for the oral antifungal drug, ketoconazole. Warnings of severe liver injuries, adrenal gland problems and multiple harmful drug interactions have been added to the drug's label. As a result of these new warnings, it is recommended that ketoconazole tablets only be used to treat endemic mycoses when alternative antifungal therapies are not available or tolerated. While the FDA has strengthened the warnings contained within the medication guide, the European Medicines Agency took one step further and recommended that use oral ketoconazole products be suspended throughout the European Union. For your easy reference, the FDA's warning, attached to this email, can be located at http://www.fda.gov/Drugs/DrugSafety/ucm362415.htm.

In response to these new warnings, the Mississippi Division of Medicaid has elected to change the Preferred Drug List (PDL) status of ketoconazole tablets from preferred to non-preferred. Patients currently taking ketoconazole will be allowed a two week transition period to switch to an alternative, preferred oral antifungal product. Prescribers, whose patients are currently on ketoconazole and wish for them to receive the 14 day transition provision, are requested to call the Pharmacy PA unit at 1-877-537-0722. Otherwise, prescribers are to submit prior authorization requests for the on-going use of ketoconazole tablets. This will allow the DOM pharmacy staff and its clinical contractors to evaluate the risks and benefits of using ketoconazole tablets within the Mississippi Medicaid population. Be advised that this change in PDL status will be effective immediately. The revised PDL will be posted to DOM's website by COB, August 2, 2013.

Thank you for your attention to this important and timely information.

The FDA notice may be found in the Appendix.

Drug Utilization Review (DUR) Board Background and Responsibilities

Background

Title 42 of the Code of Federal Regulations (CFR), Section 456, Subpart K outlines the requirements for the Division of Medicaid's drug utilization review program to ensure appropriate use of drug therapy. These requirements can be divided into two components:

1. Retrospective drug use review
2. Educational program

The following is an excerpt from Title 42, Section 456, Subpart K of the CFR:

§ 456.709 Retrospective drug use review

(a) *General.* The State plan must provide for a retrospective DUR program for ongoing periodic examination (no less frequently than quarterly) of claims data and other records in order to identify patterns of fraud, abuse, gross overuse, or inappropriate or medically unnecessary care among physicians, pharmacists, and Medicaid recipients, or associated with specific drugs or groups of drugs. […]

(b) *Use of predetermined standards.* Retrospective DUR includes, but is not limited to, using predetermined standards to monitor for the following:

(1) Therapeutic appropriateness, that is, drug prescribing and dispensing that is in conformity with the predetermined standards.
(2) Overutilization and underutilization, as defined in § 456.702.
(3) Appropriate use of generic products, that is, use of such products in conformity with State product selection laws.
(4) Therapeutic duplication as described in § 456.705(b)(1).
(5) Drug-disease contraindication as described in § 456.705(b)(2).
(6) Drug-drug interaction as described in § 456.705(b)(3).
(7) Incorrect drug dosage as described in § 456.705(b)(4).
(8) Incorrect duration of drug treatment as described in § 456.705(b)(5).
(9) Clinical abuse or misuse as described in § 456.705(b)(7).

§ 456.711 Educational program

The State plan must provide for ongoing educational outreach programs that, using DUR Board data on common drug therapy problems, educate practitioners on common drug therapy problems with the aim of improving prescribing and dispensing practices. The program may be established directly by the DUR Board or through contracts with accredited health care educational institutions, State medical societies or State pharmacists associations/ societies, or other organizations. The program must include the interventions listed in paragraphs (a) through (d) of this section. The DUR Board determines the content of education regarding common therapy problems and the circumstances in which each of the interventions is to be used.

(a) Dissemination of information to physicians and pharmacists in the State concerning the duties and powers of the DUR Board and the basis for the standards required by § 456.705(c) for use in assessing drug use.
(b) Written, oral, or electronic reminders containing patient-specific or drug-specific information (or both) and suggested changes in prescribing or dispensing practices. These reminders must be conveyed in a manner designed to ensure the privacy of patient-related information.
(c) Face-to-face discussions, with follow up discussions when necessary, between health care professionals expert in appropriate drug therapy and selected prescribers and pharmacists who have been targeted for educational intervention on optimal prescribing, dispensing, or pharmacy care practices.
(d) Intensified review or monitoring of selected prescribers or dispensers.

Special Analysis Projects

USE OF ANTIPSYCHOTICS IN CHILDFREN UNDER AGE 5

BACKGROUND

At their annual meeting in May, the Pharmacy Quality Alliance (PQA) membership approved a new pharmacy quality indicator for use in Medicaid and other programs. This measure is very similar, but slightly different, to one of the measures MS-DUR included in the white paper prepared last year on use of antipsychotics in foster and non-foster children in Mississippi Medicaid. The use of antipsychotics in children continues to be a very important area of interest; therefore, MS-DUR has conducted an analysis of how Mississippi Medicaid performs on this new measure.

Antipsychotic Use in Children Under 5 Years Old (Lower rate is better)	
Description	
The percentage of children under age 5 using antipsychotic medications during the measurement period.	
Definitions	
Measurement period	The period of time over which the antipsychotic medication use is observed. (Most often a calendar year).
Antipsychotics (APs)	First generation (e.g., chlorpromazine, haloperidol, perphenazine) and second generation (e.g., risperidone, olanzapine, aripiprazole) antipsychotics.
Methodology	
Denominator	Beneficiaries under 5 years old any time during the measurement period.
Numerator	The number of beneficiaries with one or more prescription claims for an antipsychotic medication with days supply greater or equal to 30 days.

METHODOLOGY

Measures were computed for all children and for foster and non-foster children. The proportions for Mississippi were computed using DOM FFS and MSCAN prescription claims for the calendar year 2012. The proportions for the state comparisons were computed using data from the Centers for Medicare and Medicaid Services (CMS) for the calendar year 2007. The state comparison analyses included all beneficiaries reported, regardless of whether they were provided benefits through FFS or managed care.

RESULTS

Table 1 shows the characteristics of the beneficiaries included in the Mississippi analysis. The age distribution is heavily skewed to young children and is reflective of the Medicaid population. Since the major increase in enrollment in MSCAN did not occur until December 2012, the vast majority of beneficiaries were enrolled in the FFS program the entire observation period. The sample included 1,326 foster children. Since this is a very small percentage of overall beneficiaries, use of antipsychotics for this group is reported separately in the following tables.

TABLE 1 Beneficiary Characteristics 2012 Mississippi Medicaid Data		
Denominator		167,482
Gender[1]	Female	49.3%
	Male	50.6%
Age at End of Period	<=2 yrs	51.6%
	3 yrs	16.6%
	4 yrs	16.8%
	5 yrs	15.1%
Race	White	35.2%
	Black	56.3%
	Hispanic	4.7%
	Other	3.7%
Managed Care Status	FFS only	86.1%
	MAN only	1.3%
	Mixed	12.6%
Foster Child	Number	1,326
	%	0.8%

[1] *Percentages may not sum to 100% due to small percentage of unkown.*

The overall rate for Mississippi was 0.11%. As was found in the earlier MS-DUR white paper on mental health and children, the rate for foster children was significantly higher than for non-foster children. On this specific measure, foster children were 6 times more likely to be using an antipsychotic than were non-foster children. Although this may sound alarming, the earlier white paper found that use of antipsychotics among all foster children was three times higher than for all non-foster children. Since the increased use among foster children is associated with higher levels of trauma, often arising from dysfunctional or abusive home lives, it is not surprising that foster children would be more likely to begin using antipsychotics earlier than non-foster children.

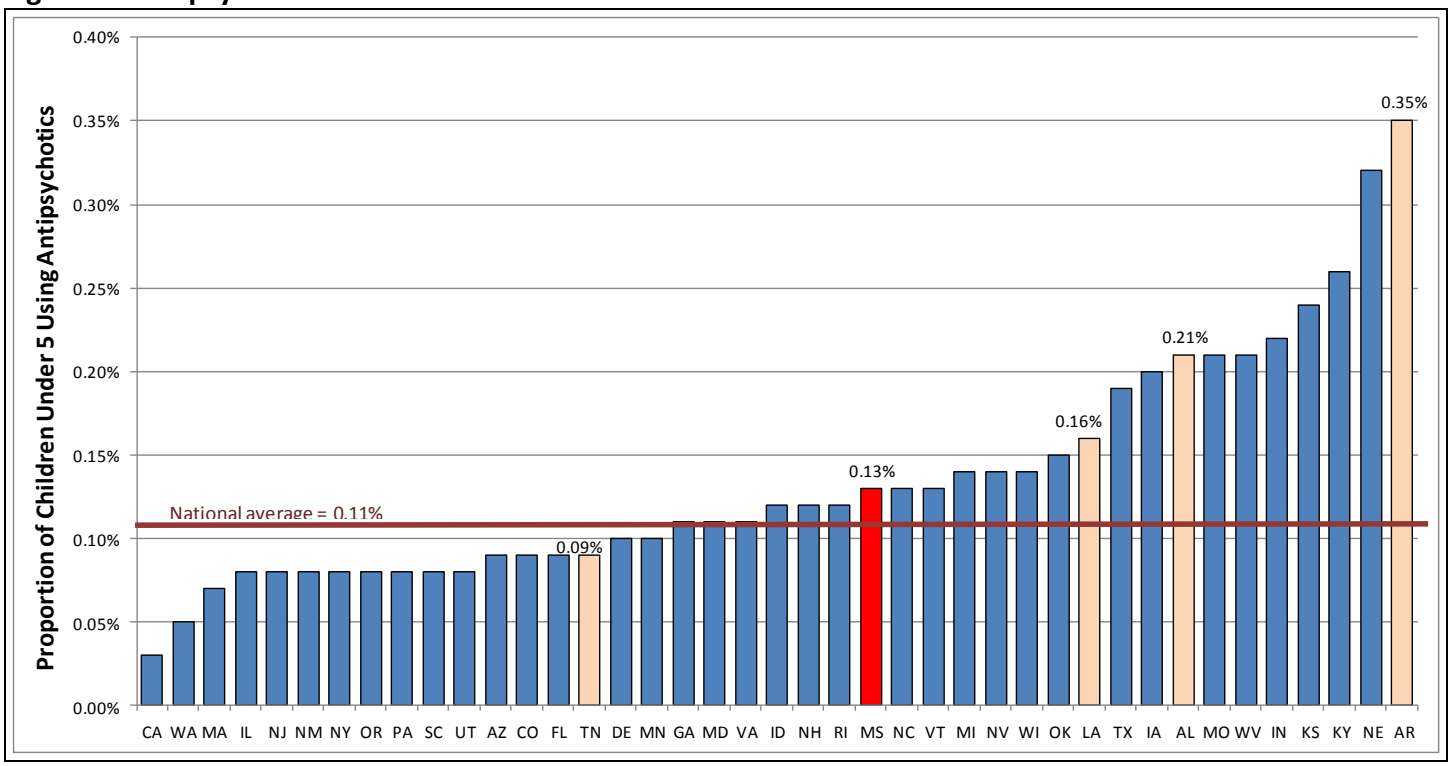
TABLE 2 Use of Antipsychotics Among Children Under 5 Years Old 2012 Mississippi Medicaid Data						
	ALL BENES		**FOSTER CHILDREN**		**NON-FOSTER**	
	Numerator	**Rate**	**Numerator**	**Rate**	**Numerator**	**Rate**
167,482	184	0.11%	9	0.68%	175	0.11%

Table 3 and Figure 1 show the rates on this measure for 40 states and the District of Columbia Medicaid programs. Using the same methodology, these data show that in 2007 the rate for Mississippi was 0.13%, which would indicate a 15% decline between 2007 and 2013. Based on the 2007 analysis, Mississippi Medicaid was slightly above the national average and roughly in the middle of the states examined. As shown in Figure 1, Mississippi Medicaid had a much lower score than did the Medicaid programs in all but one (TN) of the surrounding states.

TABLE 3
Antipsychotic Use Among Children Under 5 Years Old
2007 Medicaid MAX File Data

		ALL BENES		FOSTER CHILDREN		NON-FOSTER	
		Numerator	Rate	Numerator	Rate	Numerator	Rate
Total	11,302,233	12,767	0.11%	2,283	0.99%	10,484	0.09%
AL	184,094	391	0.21%	31	1.41%	360	0.20%
AR	151,956	537	0.35%	54	2.44%	483	0.32%
AZ	298,135	279	0.09%	48	1.07%	231	0.08%
CA	1,340,065	339	0.03%	53	0.18%	286	0.02%
CO	151,963	131	0.09%	44	0.83%	87	0.06%
DE	34,142	33	0.10%	-	-	27	0.08%
FL	579,748	496	0.09%	63	0.59%	433	0.08%
GA	444,040	490	0.11%	125	1.29%	365	0.08%
IA	95,421	189	0.20%	47	1.45%	142	0.15%
ID	62,603	77	0.12%	-	-	72	0.12%
IL	529,668	446	0.08%	81	0.63%	365	0.07%
IN	249,093	548	0.22%	82	1.87%	466	0.19%
KS	94,440	228	0.24%	72	2.05%	156	0.17%
KY	169,182	435	0.26%	66	1.83%	369	0.22%
LA	229,715	359	0.16%	38	1.18%	321	0.14%
MA	180,272	127	0.07%	-	-	126	0.07%
MD	188,369	214	0.11%	27	0.80%	187	0.10%
MI	369,539	501	0.14%	87	1.06%	414	0.11%
MN	140,723	141	0.10%	23	0.90%	118	0.09%
MO	226,899	469	0.21%	90	1.44%	379	0.17%
MS	166,277	210	0.13%	-	-	201	0.12%
NC	405,779	545	0.13%	63	0.99%	482	0.12%
NE	69,097	218	0.32%	67	2.14%	151	0.23%
NH	29,286	35	0.12%	-	-	33	0.11%
NJ	198,878	169	0.08%	29	0.58%	140	0.07%
NM	103,719	84	0.08%	21	1.41%	63	0.06%
NV	51,112	71	0.14%	37	1.59%	34	0.07%
NY	719,505	573	0.08%	88	0.78%	485	0.07%
OK	194,234	298	0.15%	72	0.98%	226	0.12%
OR	114,176	96	0.08%	44	0.77%	52	0.05%
PA	364,165	291	0.08%	28	0.25%	263	0.07%
RI	35,981	43	0.12%	-	-	36	0.10%
SC	193,881	156	0.08%	24	0.71%	132	0.07%
TN	271,788	243	0.09%	35	0.80%	208	0.08%
TX	1,270,853	2,441	0.19%	579	2.80%	1,862	0.15%
UT	80,888	66	0.08%	18	0.87%	48	0.06%
VA	209,409	224	0.11%	38	1.19%	186	0.09%
VT	21,474	27	0.13%	-	-	22	0.11%
WA	241,056	130	0.05%	22	0.33%	108	0.05%
WI	181,700	259	0.14%	31	0.77%	228	0.13%
WV	71,434	147	0.21%	15	0.86%	132	0.19%

Figure 1: Antipsychotic Use in Children Under 5 Years Old – 2007



Current DOM Interventions

Age edits for atypical antipsychotics:

- >/= 3 years old -- Haloperidol oral
- >/= 5 years old -- Risperidone oral
- >/= 6 years old -- Aripiprazole oral
- >/= 10 years old -- Quetiapine Fumarate, Quetiapine Fumarate SR
- >/= 13 years old -- Olanzapine oral
- >/= 18 years old -- Aripiprazole IM, Clozapine, Haloperidol Decanoate IM, Iloperidone, Lurasidone HCL, Olanzapine IM, Paliperidone oral and IM, Risperidone Microspheres IM, Ziprasidone HCL oral, Ziprasidone Mesylate IM

Diagnosis edits for injectable atypical antipsychotics:

- Schizophrenia, schizoaffective or bipolar disorder -- Risperdal Contra
- Schizophrenia or schizoaffective disorder -- Invega Sustenna, Zyprexa Relprevv, Abilify Maintena

CONCLUSIONS AND RECOMMENDATIONS

At this time, use of antipsychotics in children under 5 years old appears to be in line with national standards. MS-DUR and DOM should continue monitoring performance on this quality measure. No new interventions are recommended at this time.

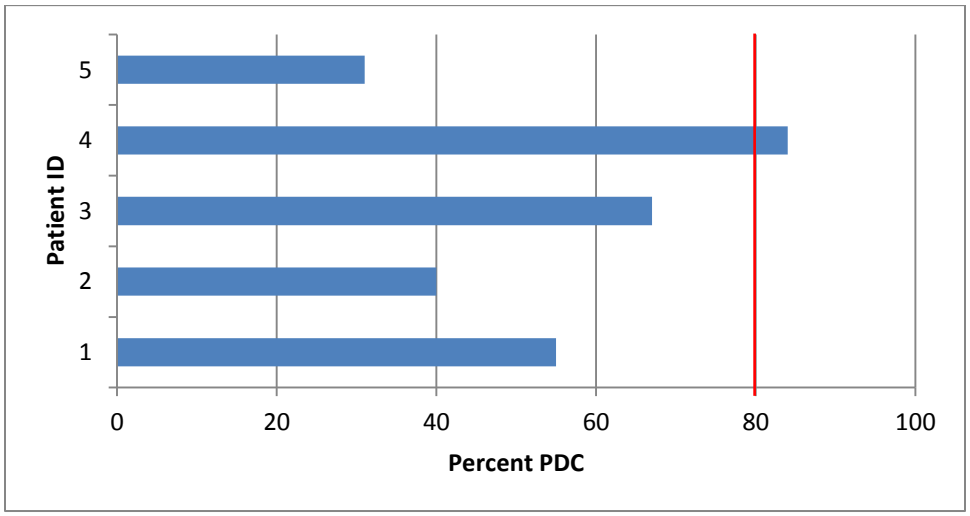
ADHERENCE OF THE PQA MEASURE 'ADHERENCE TO NON-WARFARIN ORAL ANTICOAGULANTS' IN THE MISSISSIPPI MEDICAID POPULATION

BACKGROUND

Adherence to anticoagulants is extremely important to monitor due to a short half-life and absence of a surrogate lab value to monitor patient use. The Pharmacy Quality Alliance (PQA) has recently endorsed a new measure – Adherence to non-warfarin oral anticoagulants which assesses the percentage of patients 18 years and older who met the Proportion of Days Covered (PDC) threshold of 80 percent during the measurement period for non-warfarin oral anticoagulants.[1] A pilot study by the PQA with several large Medicaid plans found PDC rates ranging from 58.4% to 85.6%. This report assesses the 'Adherence to Non-Warfarin Oral Anticoagulants' measure endorsed by the PQA using the Mississippi Medicaid prescription claims data. The representation of the final measure is as follows:

$$\frac{\text{Patients who met the PDC threshold of 80 percent during the measurement period}}{\text{Total number of eligible patients qualifying for the measure}}$$

A pictorial depiction of the measure with an example is provided in Figure 1.



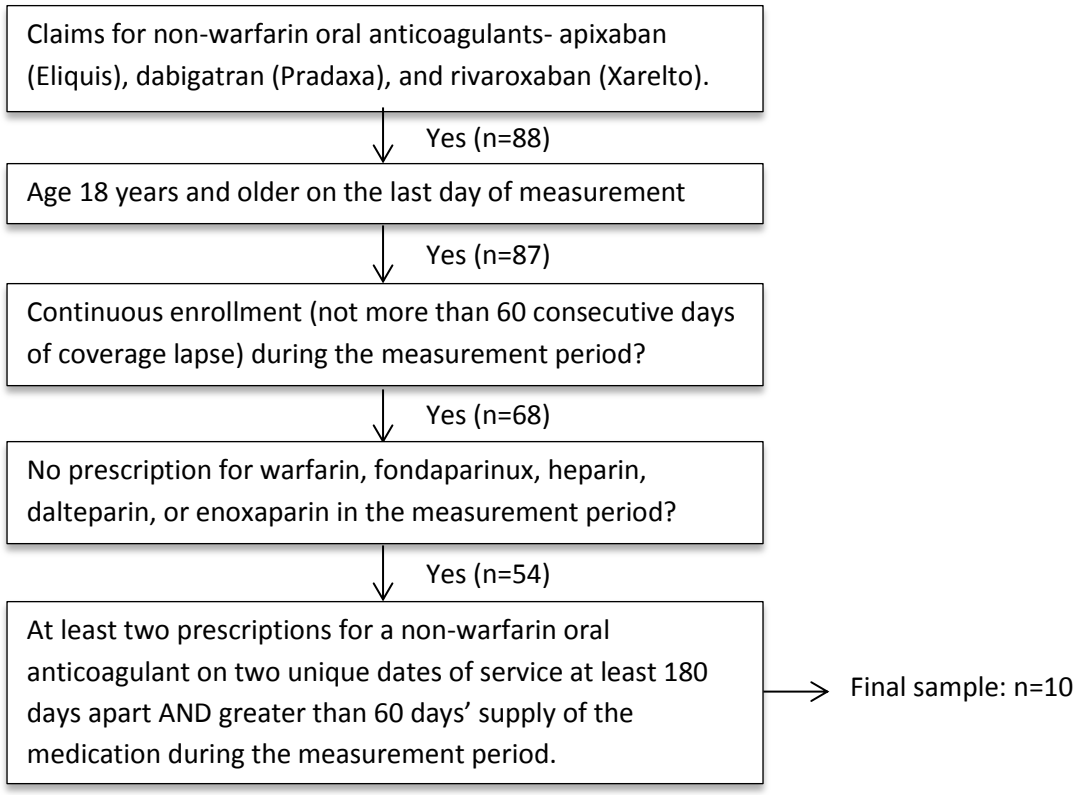
*PDC = Proportion of days covered

In this example, let us consider the percent PDC values of 5 patients who qualified for the measure after applying the inclusion criteria provided by PQA. Out of 5, only 1 patient has a percent PDC value above the 80 percent threshold. Hence, the PDC rate for the measure in this example is 20%.

[1] New measures endorsed by the PQA membership – May 2013. Available at http://www.pqaalliance.org/images/uploads/files/2013%20Endorsed_Adherence%20to%20Non-Warfarin%20Oral%20Anticoagulants.pdf

METHODS

A retrospective analysis was conducted using Mississippi Medicaid pharmacy claims and beneficiary eligibility data from 1st July 2012 to 30th June 2013. The following flowchart demonstrates the inclusion/exclusion criteria applied to the population to identify the final sample (denominator) for computation of the measure.



Proportion of days covered (PDC) was used to measure adherence to non-warfarin oral anticoagulants in the final sample. The denominator for the PDC measure was calculated as the number of days from the first prescription date to the end of the study period (30th June, 2013) or death. The numerator for the PDC measure was calculated as the days the patient was covered by at least one drug in the class based on the prescription fill date and days' supply. If prescriptions for the same drug overlapped, the prescription start date was adjusted to be the day after the previous fill had ended. The numerator divided by the denominator multiplied by 100 gave the percent PDC for non-warfarin oral anti-coagulants in the Medicaid population. Finally, the PQA measure was calculated as the number of patients who had PDC greater than 80% (threshold) divided by the total number of eligible patients.

RESULTS

Table 1 provides the distribution of non-warfarin oral anticoagulant use among fee for service (FFS) Medicaid patients in the measurement period.

Table 1. Distribution of non-warfarin oral anticoagulant prescriptions

Drug	Approval year	Drug ID	Frequency (N=80)*	Percentage
Dabigatran	2010	d07137	67	83.75
Rivaroxaban	2011	d07356	13	16.25
Apixaban	2012	d07804	0	0

N=Number of prescriptions.
*The total sums to 80 because each patient might have received more than one drug.

The measure was computed separately for FFS patients and those enrolled in Medicaid managed care. A total of 10 FFS patients and 10 managed care patients satisfied the inclusion criteria. The PDC values for FFS patients ranged from 36.92% to 100%, while those for managed care patients ranged from 31.11% to 91.41%. A total of 5 patients in the FFS group and 2 patients in the managed care group met the PDC threshold of 80% during the measurement period. Thus, the percentage of patients who met the PDC threshold of 80 percent during the measurement period was 50% for FFS patients and 20% for managed care patients. The sample size of this study was too small to make any statistical conclusions regarding adherence to these agents between the plans.

RECOMMENDATIONS

Given the clinical outcomes of these drugs, it is important that appropriate steps are taken to improve adherence to non-warfarin oral anti-coagulants in the Mississippi Medicaid population. MS-DUR recommends that adherence to these agents are monitored according to the PQA measure specification and that targeted provider education be initiated for those providers with patients found to be non-adherent to their anticoagulant therapy.

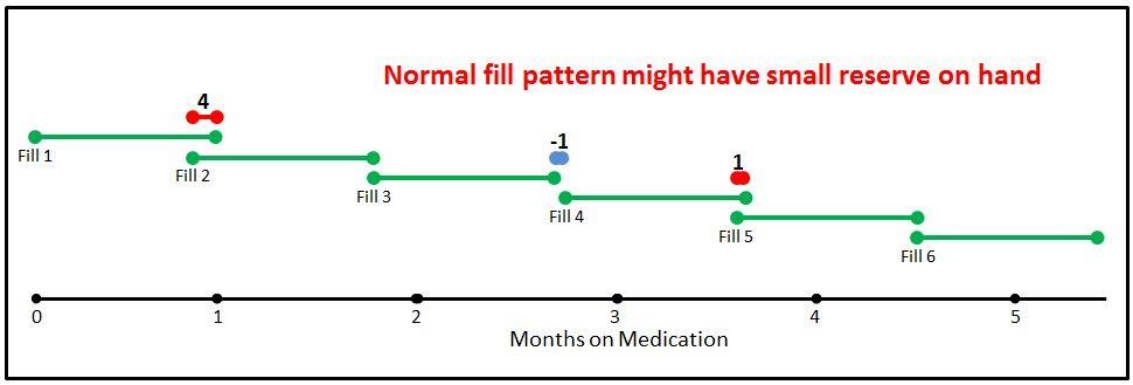
EARLY REFILLS FOR CONTROLLED SUBSTANCES IN THE MISSISSIPPI MEDICAID FEE-FOR-SERVICE POPULATION

BACKGROUND

In a prior report, MS-DUR examined the extent of inappropriate use of controlled substance pain medications among Mississippi Medicaid fee-for-service enrollees. The report concluded that the proportion of beneficiaries with cumulative controlled substances use greater than 30 days decreased from 26.8% in 2010 to 22.6% in 2011, and increased to 23.9% in 2012. Comparable results were obtained for proportion of beneficiaries with cumulative controlled substances use greater than 90 days.

Currently, Mississippi Medicaid beneficiaries can obtain a refill on controlled substances when 85% or more of the prior fill of the same medication has been completed. Figure 1 illustrates what would be expected to be a normal refill pattern for long-term use of a medication. An adherent beneficiary normally would get a refill early the first time in order to avoid running out of the medication and then would refill approximately every 30 days (assuming a 30 day supply dispensed). Occasionally the beneficiary would refill a day or two early or a day or two late, but would think about refilling as their supply on hand reached a level of approximately 4-5 doses.

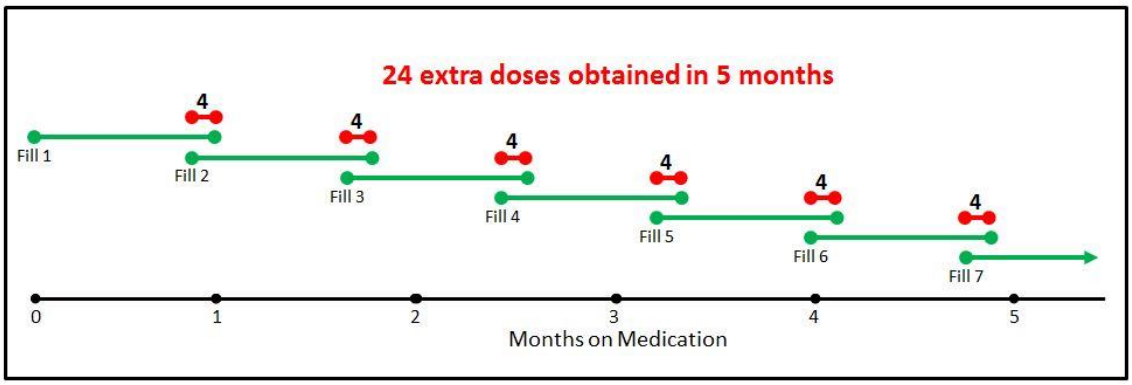
FIGURE 1: Normal refill pattern and accumulation of product



The current early refill screening criteria allows for a refill after 85% of the days last supplied have past. If a beneficiary wanted to take more medication than prescribed, accumulate excess medication, or obtain extra medication for diversion, this can easily be done under the current criteria.

Figure 2 illustrates what could happen when a beneficiary consistently obtains early refills. By repeatedly refilling at 85% of days supply previously dispensed, a beneficiary could obtain an additional 24 doses of a medication in 5 months. This is not a desired behavior with any medication, but is especially problematic with controlled substances.

FIGURE 2: Consistent early refill and accumulation of product



MS-DUR conducted an analysis to determine how prevalent repeated early refilling is for controlled substances and to examine the effects of a possible new criterion for reducing this behavior.

METHODS

A retrospective analysis was conducted using Mississippi Medicaid medical claims data for January 2012 – June 2013. Prescription fills for controlled substances were identified using the CSA_SCHEDULE variable obtained from the Cerner-Multum database. Prescription fills for the same beneficiary and medication were processed sequentially to compute the cumulative product on hand at the time each prescription was filled. Only prescriptions for controlled substances taken for more than 90 days, with 3 or more fills and an oral route of administration were included in the analyses.

RESULTS

A total of 52,666 treatment regimens were included in the analyses. Of these 3,026 (6%) were found to have a cumulative stock on hand greater than 4 at the time of the last fill. A description of these 3,026 regimens is provided in Table 1. Although most of the regimens had a cumulative extra dose supply of 10 or less, 37% of the regimens were associated with an average monthly increase of more than 2 extra doses.

TABLE 1: Descriptives for Treatment Regimens With >4 Cummulative Extra Doses at Last Fill

		Tx Regimens	
		#	%
# Cummulative Extra Doses at Last Fill	10 or less	1,785	59%
	11 - 20	872	29%
	21 or more	369	12%
Average # Extra Doses Accumulated Each Month	< 1	738	24%
	1.0 - 1.9	1,175	39%
	2.0 - 2.9	749	25%
	3.0 or more	364	12%

It is assumed that it is not unusual for a beneficiary to have up to 4 extra doses on hand at the time they refill a prescription. This cushion is needed to be sure they get their refill before they run out. However,

the cumulative extra doses on hand at the time of the last fill for the prescriptions analyzed included 23,961 doses for controlled substances beyond what would be expected for a refill cushion.

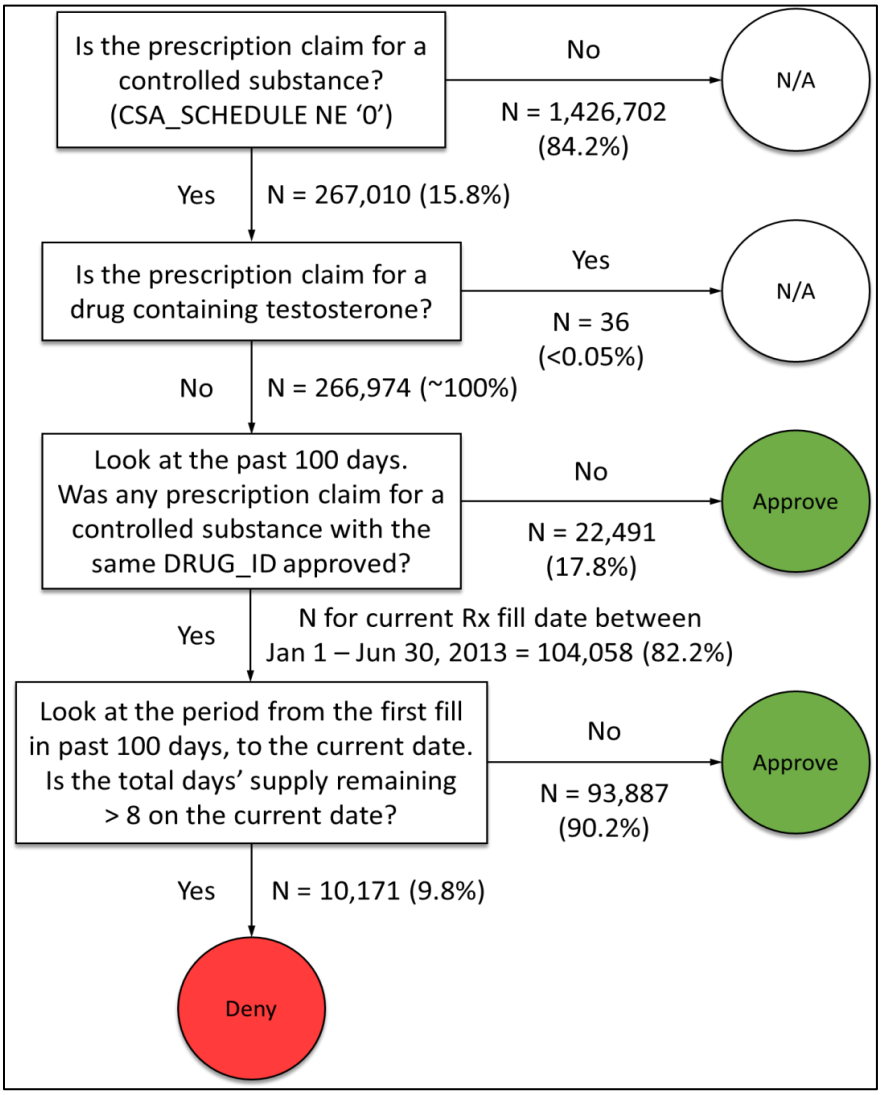
During the last DUR Board Meeting, MS-DUR discussed with the Board the idea of testing a new clinical rule that would restrict refills based on cumulative doses on hand rather than the current rule based on a percentage of the days supply previously dispensed. For purposes of discussion, MS-DUR tested the following potential rule:

> A prescription for a controlled substance may not be filled unless the cumulative days of therapy for the same medication already in possession of the beneficiary is less than 8 days.

Since the electronic prior authorization (PA) process cannot do a "look back" for an indefinite period of time, the rule was operationalized do be the cumulative days of therapy on hand based on all prescriptions for the medication filled during the prior 100 days. 8 days was selected to minimize denials due to early fills for vacations, etc.

One test MS-DUR performed to evaluate the impact of this potential edit was to examine all controlled substance prescriptions during the period January 1, 2013 – June 30, 2013 to determine how many would have been rejected at the time of refill. The results of this analysis are illustrated in Figure 3. As shown in the figure, a total of 10,171 prescriptions for controlled substances would have been rejected if this new edit were implemented. It should be pointed out, however, that these would have been rejected for early refill and a message could be provided informing the pharmacy how many days were needed before the prescription could be refilled. It is unlikely that many of these rejections would result in manual PAs requesting early fills.

FIGURE 3: Estimate of Prescriptions That Would Be Affected by New Potential Edit



MS-DUR also simulated what would have happened to the prescriptions submitted during the period January 1, 2012 – June 30, 2012 if this new edit were implemented and the early fills were delayed until the cumulative days supply on hand was below 8. As previously reported, during the 18-month period analyzed, the current 85% rule resulted in 23,961 extra doses being dispensed beyond what would have been had all beneficiaries had only 4 doses on hand when the last prescription was filled. A total of 12,049,507 doses for oral controlled substances were paid for during this period for beneficiaries receiving more than 90 days of therapy. When the new potential rule was simulated and early refills were delayed until the cumulative on hand supply was less than 8, the total number of doses dropped to 12,026,720. Although this reduction of 22,787 doses is a very small decrease from a cost stand point, it may be a significant reduction in the potential overuse or abuse of these agents.

CONCLUSIONS

These analyses indicate that some beneficiaries routinely refill controlled substances early, thus either taking more medication than prescribed, stockpiling the medication, or diverting the medication to others. Both the real-world and simulated data analyses demonstrated that a meaningful reduction in this behavior can be achieved with a potential new clinical rule limiting the cumulative extra days supply of these substances at the time of refill.

RECOMMENDATION

These results favor the implementation of the new criterion for early refills of controlled substances, allowing for cumulative additional 8 days supply over a 100 day period. DOM is seeking discussion from the DUR Board regarding this potential edit and a directive from the DUR Board with respect to implementing a new edit of this nature, with the final programming specifications to be determined by DOM and Xerox.

DRUG UTILIZATION REVIEW:
ANTINEOPLASTIC AGENTS – SELECTED SYSTEMIC ENZYME INHIBITORS

BACKGROUND

The Mississippi Medicaid P&T Committee will review a new class of drugs - Antineoplastics - selected systemic enzyme inhibitors, at their August 13th meeting. The purpose of this review is to bring awareness of the trends associated with utilization patterns, costs, and approved indications. All reviewed drugs will initially be placed on the PDL with preferred status. Preferred brands will not count toward the two brand monthly prescription limit. There is no intent to manage this category with "fail first" or "step edit" requirements like with other categories. This strategy may change over time, however, for the purposes of the August P&T meeting, this will be the extent of the review. The Division of Medicaid requested MS-DUR to conduct a broad drug utilization review on this class of drugs to examine the extent of utilization of these agents in the fee-for-service (FFS) population.

METHODS

An analysis was conducted to examine the utilization of drugs in the antineoplastics therapeutic class, Selected Systemic Enzyme Inhibitors, among FFS Medicaid beneficiaries. Pharmacy claims in 2012 and 2013 (until 2nd quarter) were extracted for the anti-neoplastic agents listed in Table 1. Also provided are the number of claims and amount reimbursed for beneficiaries who moved to managed care in 2013. Drug utilization by brand name was provided for FFS users only.

The following drugs were included in this utilization review:

Table 1 – Antineoplastic agents used in the analysis

Antineoplastics – Selected Systemic Enzyme Inhibitors	
AFINITOR (everolimus)	SPRYCEL (dasatinib)
BOSULIF (bosutinib)	STIVARGA (regorafenib)
CAPRELSA (vandetanib)	SUTENT (sunitinib)
COMTRIQ (cabozantinib)	TARCEVA (erlotinib)
GLEEVEC (imatinib mesylate)	TASIGNA (nilotinib)
ICLUSIG (ponatinib)	TORISEL (temsirolimus)
INLYTA (axitinib)	TYKERB (lapatinib ditosylate)
IRESSA (gefitinib)	VELCADE (bortezomib)
JAKAFI (ruxolitinib)	VOTRIENT (pazopanib)
KYPROLIS (carfilzomib)	XALKORI (crizotinib)
NEXAVAR (sorafenib)	ZELBORAF (vemurafenib)

RESULTS

Figure 1: Number of Pharmacy Claims

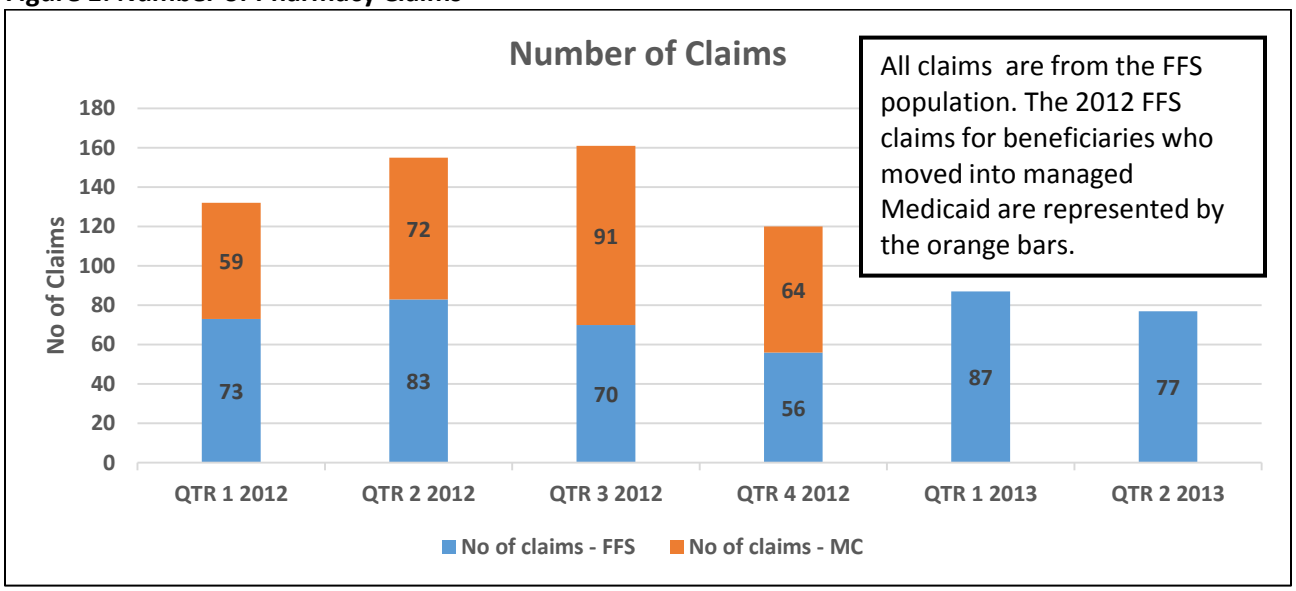
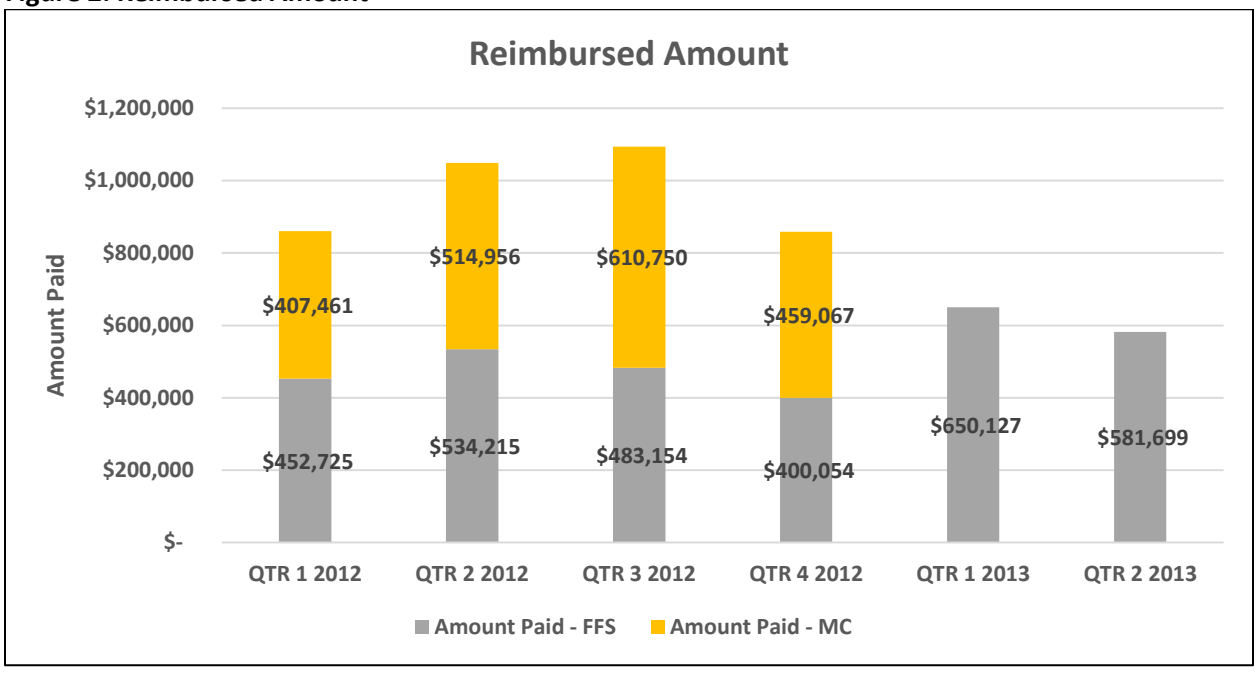


Figure 2: Reimbursed Amount



The number of claims and amount reimbursed to pharmacies was calculated for FFS beneficiaries. The claims for beneficiaries who moved into one of the managed Medicaid plans in December 2012 were flagged and reported separately in Figures 1 and 2.

Table 2: Number of claims and amount reimbursed by drug (FFS pharmacy claims only)

Drug		2012				2013		Total
		QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	
AFINITOR (everolimus)	Claims	6	10	9	7	20	23	75
	Paid	$45,615	$78,663	$69,943	$55,329	$171,668	$180,213	$601,431
BOSULIF (bosutinib)	Claims	0	0	0	1	1	2	4
	Paid	$0	$0	$0	$8,640	$8,640	$17,280	$34,560
GLEEVEC (imatinib)	Claims	6	9	10	4	15	8	52
	Paid	$36,875	$55,312	$61,458	$24,583	$102,316	$62,754	$343,298
JAKAFI (ruxolitinib)	Claims	2	3	4	0	0	0	9
	Paid	$7,394	$11,091	$29,572	$0	$0	$0	$48,056
NEXAVAR (sorafenib)	Claims	2	4	1	0	0	7	14
	Paid	$4,350	$8,850	$2,213	$0	$0	$31,518	$46,931
SPRYCEL (dasatinib)	Claims	5	3	2	3	2	3	18
	Paid	$42,569	$25,921	$17,281	$25,921	$18,127	$27,191	$157,010
SUTENT (sunitinib)	Claims	5	6	4	7	9	10	41
	Paid	$43,674	$39,707	$39,705	$69,735	$98,043	$99,004	$389,869
TARCEVA (erlotinib)	Claims	25	21	20	23	26	9	124
	Paid	$126,680	$110,209	$108,244	$127,243	$141,293	$51,943	$665,612
TASIGNA (nilontinib)	Claims	4	8	6	6	3	3	30
	Paid	$32,258	$64,516	$48,387	$48,782	$25,379	$25,379	$244,700
TYKERB (lapatinib)	Claims	9	6	3	1	4	7	30
	Paid	$35,801	$23,178	$13,306	$4,507	$18,177	$33,049	$128,018
VELCADE (bortezomib)	Claims	1	3	4	0	0	0	8
	Paid	$6,214	$18,643	$25,301	$0	$0	$0	$50,159
VOTRIENT (pazopanib)	Claims	2	2	2	2	3	1	12
	Paid	$9,418	$13,040	$13,692	$13,692	$22,592	$7,531	$79,965
XALKORI (crizotinib)	Claims	3	2	0	0	0	0	5
	Paid	$30,328	$20,219	$0	$0	$0	$0	$50,547
ZELBORAF (vemurafenib)	Claims	3	6	5	2	4	4	24
	Paid	$31,549	$64,865	$54,054	$21,622	$43,892	$45,837	$261,818

* Utilization numbers correspond to FFS claims only

No utilization was found during the review period (January 2012 – June 2013) for the following drugs:

CAPRELSA (vandetanib)
COMTRIQ (cabozantinib)
ICLUSIG (ponatinib)
INLYTA (axitinib)
IRESSA (gefitinib)
KYPROLIS (carfilzomib)
STIVARGA (regorafenib)
TORISEL (temsirolimus)

CONCLUSIONS

No specific action is being requested of the DUR Board at this time. The Division of Medicaid requested this drug utilization review to familiarize the DUR Board with the agents being reviewed at the August P&T meeting.

Exceptions Monitoring Criteria Recommendations

MISSISSIPPI MEDICAID
RETROSPECTIVE DRUG UTILIZATION REVIEW
EXCEPTIONS MONITORING CRITERIA RECOMMENDATIONS

Criteria Recommendations

1. **Pradaxa (dabigatran) discontinuation without adequate anticoagulation**
   Message: In April 2013, the FDA updated the labeling for Pradaxa (dabigatran) to include a boxed warning stating that discontinuing Pradaxa in patient without adequate continuous anticoagulation increases the risk of stroke.

   Exception Type: APU - Gaps in therapy

Field 1	Field 2
dabigatran	warfarin therapeutic class: direct thrombin inhibitors therapeutic class: heparins

   References:
   FDA Drug Safety Labeling Changes. May 2013. Available at:
   http://www.fda.gov/Safety/MedWatch/SafetyInformation/ucm250657.htm

2. **Codeine sulfate contraindicated in postoperative tonsillectomy and/or adenoidectomy**
   Message: In May 2013, the FDA updated the labeling for products containing codeine sulfate to include a contraindication for postoperative pain management in children who have undergone tonsillectomy and/or adenoidectomy.

   Exception Type: DDC - Drug-disease contraindication

Field 1	Field 2	Field 3
codeine sulfate	tonsillectomy adenoidectomy	Age <=6 years

   References:
   FDA Drug Safety Labeling Changes. May 2013. Available at:
   http://www.fda.gov/Safety/MedWatch/SafetyInformation/ucm356221.htm

3. Spironolactone use contraindicated in individuals with hyperkalemia

Message: In June 2013, the FDA updated the labeling of spironolactone-containing products to include a contraindication with Addison's disease or other conditions associated with hyperkalemia, and with concomitant use of eplerenone.

Exception Type: DDC - Drug-disease contraindication

Field 1	Field 2
spironolactone	Addison's disease

References:
FDA Drug Safety Labeling Changes. June 2013. Available at:
http://www.fda.gov/Safety/MedWatch/SafetyInformation/ucm360045.htm

4. Spironolactone use contraindicated with eplerenone

Message: In June 2013, the FDA updated the labeling of spironolactone-containing products to include a contraindication with Addison's disease or other conditions associated with hyperkalemia, and with concomitant use of eplerenone.

Exception Type: DDI - Drug-drug interaction

Field 1	Field 2
spironolactone	eplerenone

References:
FDA Drug Safety Labeling Changes. June 2013. Available at:
http://www.fda.gov/Safety/MedWatch/SafetyInformation/ucm360045.htm

5. Valproate boxed warning in pregnant women

Message: In June 2013, the FDA updated the labeling of valproate-containing products to include a boxed warning. The warning stated that valproate can cause major congenital malformations, particularly neural tube defects (e.g., spina bifida). In addition, valproate can cause decreased IQ scores following in utero exposure. Valproate is therefore contraindicated in pregnant women treated for prophylaxis of migraine. Valproate should only be used to treat pregnant women with epilepsy or bipolar disorder if other medications have failed to control their symptoms or are otherwise unacceptable.

Exception Type: DDC - Drug-disease contraindication

Field 1	Field 2
valproate	pregnancy

References:
FDA Drug Safety Labeling Changes. June 2013. Available at:
http://www.fda.gov/Safety/MedWatch/SafetyInformation/ucm360487.htm

Appendix

FDA Drug Safety Communication: FDA limits usage of Nizoral (ketoconazole) oral tablets due to potentially fatal liver injury and risk of drug interactions and adrenal gland problems

Safety Announcement

[7-26-2013] The U.S. Food and Drug Administration (FDA) is taking several actions related to Nizoral (ketoconazole) oral tablets, including limiting the drug's use, warning that it can cause severe liver injuries and adrenal gland problems and advising that it can lead to harmful drug interactions with other medications. FDA has approved label changes and added a new Medication Guide to address these safety issues. As a result, Nizoral oral tablets should not be a first-line treatment for any fungal infection. Nizoral should be used for the treatment of certain fungal infections, known as endemic mycoses, only when alternative antifungal therapies are not available or tolerated.

The topical formulations of Nizoral have not been associated with liver damage, adrenal problems, or drug interactions. These formulations include creams, shampoos, foams, and gels applied to the skin, unlike the Nizoral tablets, which are taken by mouth.

Liver Injury (Hepatotoxicity)

Nizoral tablets can cause liver injury, which may potentially result in liver transplantation or death. FDA has revised the Boxed Warning, added a strong recommendation against its use (contraindication) in patients with liver disease, and included new recommendations for assessing and monitoring patients for liver toxicity (see Additional Information sections).

Serious liver damage has occurred in patients receiving high doses of Nizoral for short periods of time as well as those receiving low doses for long periods. Some of these patients had no obvious risk factors for liver disease. The liver injury is sometimes reversible upon stopping the drug, but that is not always possible.

Adrenal Gland Problems (Adrenal Insufficiency)

Nizoral tablets may cause adrenal insufficiency by decreasing the body's production of hormones called corticosteroids. Corticosteroids are produced by the adrenal glands, which are small glands located on top of each kidney. Corticosteroids affect the body's balance of water and salts and minerals (electrolytes). Health care professionals should monitor adrenal function in patients taking Nizoral tablets who have existing adrenal problems or in patients who are under prolonged periods of stress such as those who have had a recent major surgery or who are under intensive care in the hospital.

Drug Interactions

Nizoral tablets may interact with other drugs a patient is taking and can result in serious and potentially life-threatening outcomes, such as heart rhythm problems. All medications that a patient is currently taking should be assessed for possible interactions with Nizoral tablets.

In summary, the drug label for Nizoral tablets has been updated to include the following information:

- Limitation of the usage of Nizoral tablets by removing indications in which the risk outweighs the benefits. The use of ketoconazole tablets in *Candida* and dermatophyte infections is no longer indicated. Nizoral tablets should be used only when other antifungal drugs are not available or tolerated by the patient. (*Boxed Warning, Warnings, Precautions*, and *Indications and Usage* sections)

- Nizoral tablets are indicated only for the treatment of the following fungal infections: blastomycosis, coccidioidomycosis, histoplasmosis, chromomycosis, and paracoccidioidomycosis in patients in whom other treatments have failed or who are intolerant to other therapies (*Indications and Usage* section).

- Nizoral tablets are not indicated for the treatment of fungal infections of the skin or nails.

- A new contraindication that Nizoral tablets should not be used in patients with acute or chronic liver disease (*Contraindications* section).

- Updated information on the risk of liver injury, or hepatotoxicity, with new assessment and monitoring recommendations (*Boxed Warning, Warnings,* and *Precautions* sections).

- Updated information on drug interactions (*Precautions* section).

- A warning regarding adrenal insufficiency with recommendations for monitoring populations at risk (*Warnings* section).

FDA has also approved a new patient Medication Guide containing information on the potential risks associated with Nizoral tablets, which must be dispensed with every prescription for the drug.

On July 26, 2013, the Committee for Medicinal Products for Human Use (CHMP) of the European Medicines Agency (EMA) announced their negative risk-benefit assessment for oral ketoconazole-containing medicines used to treat infections caused by dermatophytes and yeasts and recommended suspensions of these medicines throughout the European Union (EU). The EMA public announcement of the recommendation to suspend the marketing authorizations of ketoconazole for oral use as antifungal treatment is available at http://www.ema.europa.eu/docs/en_GB/document_library/Press_release/2013/07/WC500146613.pdf.

In addition to the indications for treatment of infections caused by dermatophytes and Candida, the previous US drug label also included indications for the following serious fungal infections: blastomycosis, coccidioidomycosis, histoplasmosis, chromomycosis, and paracoccidioidomycosis. In the

revised US drug label, indications for dermatophyte and Candida infections have been removed and the indications for treatment of blastomycosis, coccidioidomycosis, histoplasmosis, chromomycosis, and paracoccidioidomycosis have been retained only for patients in whom other antifungal treatments have failed or are not tolerated.

FDA will continue to evaluate the safety of Nizoral tablets and will communicate with the public again if additional information becomes available.

Facts about Nizoral (ketoconazole) tablets

- Antifungal drug indicated for the treatment of the following fungal infections when alternatives are not available or not tolerated: blastomycosis, coccidioidomycosis, histoplasmosis, chromomycosis, and paracoccidioidomycosis. Nizoral tablets should not be used for fungal meningitis because it penetrates poorly into the cerebrospinal fluid.
- During 2012, approximately 5.2 million ketoconazole prescriptions were dispensed, of which 609,000 (12%) were for the tablet formulation.[1]
- The most common diagnoses associated with the use of oral ketoconazole tablets in outpatient settings over recent years have included superficial skin and nail fungal infections as reported by office-based physicians.[2]

Additional Information for Patients

- Nizoral tablets may cause liver problems, including life-threatening liver failure or death.
- Nizoral tablets can cause problems with the usual production of corticosteroid hormones and may interact negatively with other medications.
- Contact your health care professional right away if you take Nizoral tablets and experience any of these signs and symptoms of liver problems:
    - Loss of appetite, nausea, vomiting, or abdominal discomfort
    - Fever, feeling unwell, or unusual tiredness
    - Yellowing of the skin or the whites of the eyes (jaundice)
    - Unusual darkening of the urine or lightening of the stools
    - Pain or discomfort in the right upper abdomen, where the liver is located
- Contact your health care professional if you are taking Nizoral tablets for any non-life-threatening infection or if you are unsure, or if you have liver or adrenal problems.
- If you take other medications besides Nizoral tablets, it is important to discuss these medications with your health care professionals, including the prescriber and the pharmacist.

- Your health care professional may order laboratory tests to monitor how your liver is working while you are taking Nizoral tablets and if you develop signs and symptoms of liver problems.
- Do not drink alcohol or use drugs or medications (e.g., acetaminophen) that can cause liver problems while taking Nizoral tablets.
- Carefully read the patient Medication Guide that comes with your ketoconazole prescription.
- Discuss any questions or concerns about Nizoral tablets with your health care professional.
- Report any side effects that you experience to your health care professional and the FDA MedWatch program, using the information in the Contact FDA box at the bottom of the page.

Additional Information for Health Care Professionals

- Nizoral tablets should be used only for the treatment of certain life-threatening mycoses when the potential benefits outweigh the risks and alternative therapeutic options are not available or tolerated.
- Prompt recognition of liver injury is essential.
    - Assess the liver status of the patient before starting oral ketoconazole, with baseline laboratory tests including alanine aminotransferase (ALT), aspartate aminotransferase (AST), total bilirubin, alkaline phosphatase, prothrombin time, and international normalized ratio (INR).
    - While the patient is taking oral ketoconazole, serum ALT should be monitored weekly for the duration of treatment. If ALT values increase to a level above the upper limit of normal or 30 percent above baseline, or if the patient develops symptoms of abnormal liver function, ketoconazole treatment should be interrupted and a full set of liver tests should be obtained. Liver tests should be repeated to ensure normalization of values.
    - Hepatotoxicity has been reported with restarting of oral ketoconazole.
- Do not use Nizoral tablets in patients with underlying liver disease.
- Other hepatotoxic drugs and alcohol should be avoided while taking Nizoral tablets.
- Review all concomitant medications for the potential for drug interactions with Nizoral tablets.
- Adrenal function should be monitored in patients with adrenal insufficiency or with borderline adrenal function and in patients under prolonged periods of stress (major surgery, intensive care, etc.)
- Report adverse events involving Nizoral tablets to the FDA MedWatch program, using the information in the Contact FDA box at the bottom of the page.

Data Summary

FDA conducted a comprehensive benefit-risk assessment of the safety and efficacy of Nizoral (ketoconazole) tablets in the context of the drug's labeled indications for the treatment of superficial and systemic fungal infections, which resulted in the changes to the drug's label.

Hepatotoxicity

Serious hepatic injury was identified as the major toxicity for Nizoral tablets and was noted to be unrelated to dose, duration, or indication for treatment. In conducting the benefit-risk assessment, spontaneous adverse event reports of ketoconazole-induced liver injury, including fatalities and liver transplantations, retrieved from the FDA Adverse Event Reporting System (AERS) were assessed independently by a hepatology expert in FDA. The overall risk for ketoconazole-induced serious liver injury appeared higher than that associated with other azole antifungal drugs as assessed from pharmacoepidemiologic studies.

One published study in the U.K. General Practice Research Database suggested a risk of acute liver injury (defined as patients presenting with symptoms of liver disorder: nausea, vomiting, abdominal pain and/or jaundice requiring referral to a specialist or hospitalization and free of history of liver disease and other chronic illnesses in the past 5 years) of approximately 1 in 500 patients, and analysis of liver transplantation data indicates that hepatotoxicity from ketoconazole accounted for proportionately more liver transplants than hepatotoxicity from other antifungal drugs[3]. However, in view of various methodological limitations, there was uncertainty in quantifying precise estimates of the risk of acute liver injury for Nizoral tablets compared to other marketed oral azole antifungals.

Adrenal Insufficiency

Through its inhibition of the cytochrome P450 isoenzyme system, ketoconazole can block production of adrenal steroids. This accounts for clinically important endocrinologic abnormalities observed in some patients (particularly when the drug is administered at high dosages), including gynecomastia in men and menstrual irregularities in women.

Drug Interactions

Ketoconazole is one of the most potent inhibitors of the cytochrome P450 3A4 isoenzyme (CYP3A4). The clearance of other co-administered drugs that are metabolized by CYP3A4 is decreased by ketoconazole and can result in increased drug concentrations in plasma, which can predispose patients to potentially serious adverse reactions including QT prolongation. Thus, the co-administration of ketoconazole with some other drugs is restricted or contraindicated in the drug labels.

In conclusion, ketoconazole should not be a first-line treatment for any fungal infection. Ketoconazole is not recommended for the treatment of any form of candidiasis or any superficial fungal infection. Ketoconazole may be considered in the treatment of certain life-threatening systemic mycoses in patients for whom alternate antifungal drugs are not available or cannot be tolerated.

References

1. IMS Health, Vector One®: National. Data extracted June 2013
2. Encuity Research, LLC., Treatment Answers™. Data extracted June 2012
3. Garcia Rodriguez, Duque A, Castellsaque J, et al., A cohort study on the risk of acute liver injury among users of ketoconazole and other antifungal drugs. Br J Clin Pharmacol 1999 Dec.; 48(6):847-852.