DRUG UTILIZATION REVIEW (DUR) ANNUAL REPORT FEDERAL FISCAL YEAR 2007 EXECUTIVE SUMMARY

BACKGROUND

The Omnibus Budget Reconciliation Act (OBRA) of 1990 requires that, effective January 1, 1993, each State establish a Medicaid Drug Utilization Review (DUR) Program. The program must include both prospective and retrospective DUR to assure that prescriptions are appropriate, medically necessary, and are not likely to result in adverse medical results. To accomplish this objective, the law requires Medicaid DUR programs to screen, based upon explicit criteria, for therapeutic problems specified in the law (for example, drug-drug interactions, incorrect dosage and duration of therapy, therapeutic duplication), to develop and implement interventions to change drug use behavior, and to assess the outcome of the intervention.

ANNUAL REPORT

The law [Section 1927(g)(3)(D) of the Social Security Act] also requires State Medicaid agencies to prepare and submit, on an annual basis, a specified report to the Secretary of Health and Human Services that includes the following information:

- (1) A description of the nature and scope of the prospective and retrospective drug utilization review program;
- (2) A summary of the educational interventions used and an assessment of the effect of these educational interventions on the quality of care;
- (3) An estimate of the cost savings generated as a result of the DUR program. This report must identify costs of DUR and savings to the Medicaid drug program attributable to prospective and retrospective DUR.

The attached report fulfills that requirement for the Wisconsin Medicaid program.

HISTORY OF WISCONSIN MEDICAID DRUG UTILIZATION REVIEW PROGRAM

The state agency in the Wisconsin Department of Health and Family Services responsible for benefits administration is the Division of Health Care Access and Accountability (DHCAA). The DHCAA established a Medicaid Evaluation and Decision Support Drug Utilization Review (DUR) Project. Since September 1994, the Wisconsin Medicaid DUR Project has been administered by APS Healthcare in partnership with Health Information Designs, Inc. under a subcontract. Since September 1996, the primary contractor is Electronic Data Systems (EDS).

SUMMARY OF PROSPECTIVE AND RETROSPECTIVE DUR ACTIVITIES

Prospective DUR

The State of Wisconsin utilizes an on-line prospective DUR program that began in the second quarter of FFY 2002. Prior to this time, the Medicaid Program relied on pharmacists to provide these services. A summary of prospective DUR interventions for FFY 2007 is attached as Table 1.

Retrospective DUR

Retrospective DUR activities are performed by APS Healthcare (APS) utilizing software supplied by Health Information Designs, Inc. (HID), both of whom are subcontractors to EDS. Monthly DUR reviews are performed following receipt of paid claims tapes from EDS. Interrogation of drug claims against DUR Board-approved criteria generate patient profiles that are individually reviewed for clinical significance by the pharmacy staff of APS Healthcare. Criteria are developed jointly by APS and HID and are reviewed and approved by the DUR Board and recommended to DHCAA for approval. If a potential drug problem is discovered, intervention letters are sent to all providers who prescribed a drug relevant to the identified problem. Retrospective DUR criteria are tabulated in Table 2 of the report.

During FFY 2007, 6272 individual patient drug profiles were reviewed. Intervention letters and referrals were sent to 2728 prescribers concerning potential drug therapy problems involving 1935 patients. The number of cases reviewed and the interventions per month are illustrated in Appendix B.

DUR Board Activities

The current DUR Board is composed of nine members; three physicians, five pharmacists, and one nurse practitioner. In FFY 2007, James Vavra of the DHCAA served as chair of the board. A list of the 2007 DUR Board members appears as Appendix A.

The DUR Board meets four times annually. Additional materials are sent to Board members between meetings for review and action. Activities of the DUR Board included review and approval of DUR criteria, review and approval of educational material and interventions, and other recommendations to the DHCAA on drug-related issues.

Cost Savings

A cost savings analysis of drug costs associated with a recipient before and after a retrospective DUR letter intervention was prepared for FFY 2007. Payments for drugs were aggregated for six months before a DUR letter intervention and, after a 14-day wash out period, six months post intervention. Thus, the savings reflect a comparison of the amount paid for drugs before the intervention with those after the intervention. A comparison group of eligible recipients who have never received an intervention is used as a comparison group. The number of patients randomly selected equals the number of patients for whom an intervention was sent. Costs pre-

and post intervention are calculated from this group. The total cost difference from this group is subtracted from any cost savings in the intervention group to generate the final cost savings estimates. Appendix C includes each month's interventions separately. The total savings for this six-month comparison is \$755,624.

This analysis relies on completed claims data and reflects actual not projected savings. Also, the analysis does not project additional savings that may be realized greater than six months after the intervention.

Additional analyses were conducted to determine the cost savings resulting from prospective DUR alerts. These analyses looked for instances when a prescription was not filled as a result of a DUR alert. The claims database was queried to see whether a prescription was filled after a DUR alert was sent. For all alerts except early refill, the database was queried for one week following an alert. If the prescription was not filled within a week after the alert, it was considered not to have been filled and cost savings was calculated. For early refill alerts, cost savings was calculated only if the prescription was not filled within a calculated time period. This time period equals the days supply plus 25% of the days supply. (Thus, a prescription with an early refill alert for a 30 days supply would look to see if a claim for the drug was filled less than 38 days from the alert. If the prescription was not filled in that time frame, cost savings was calculated.) A summary of a typical week of cost savings is attached in Appendix C. Annualized savings is estimated at \$9.1 million.

Conclusion

The State of Wisconsin is in compliance with the DUR requirements specified in OBRA '90. Programs administered by the state provide direct cost savings to the overall Medicaid program.

The monthly retrospective DUR intervention cycle, the prospective DUR alerts, and the additional targeted DUR interventions provide a clinical oversight of the fee-for service Medicaid and SeniorCare recipients and provide the State of Wisconsin with significant cost savings.

Alert Volume for Prospective DUR

Pharmacy claims processed in 7 days	Total distinct ICN alerted	Actual response	% of all alerts	% claims receiving an alert
Sep-07	Sep-07	Sep-07	Sep-07	Sep-07
149004	93326			
AT Primary	20194	10114	21.64%	6.79%
DC/MC Primary	182	81	0.20%	0.05%
DD Primary	7071	3398	7.58%	2.28%
ER Primary	7371	1909	7.90%	1.28%
LR Primary	7166	3350	7.68%	2.25%
NS Primary	35769	17266	38.33%	11.59%
PA Primary	497	257	0.53%	0.17%
PG Primary	559	282	0.60%	0.19%
SR Primary	6955	3480	7.45%	2.34%
TD Primary	7562	3011	8.10%	2.02%

AT	Additive Toxicity	NS	Insufficient quantity
DC/MC	Inferred disease contraindication	PA	Patient age contraindication
DD	Drug/drug interaction	PG	Pregnancy alert
ER	Early refill	SR	Suboptimal regimen
LR	Late refill	TD	Therapeutic duplication

Prospective DUR Pharmacist's action

Alert/Response	AT	DC/MC	DD	ER	LR	NS	PA	PG	SR	TD
MR-Medication review	36.1%	38.3%	34.5%	26.2%	32.2%	33.5%	27.6%	26.6%	33.6%	34.1%
R0-RPh consulted other source	13.4%	8.6%	13.7%	14.4%	11.8%	13.8%	18.7%	20.6%	13.4%	13.4%
M0-Prescriber consulted	12.3%	12.3%	14.1%	13.0%	8.4%	9.1%	18.3%	13.5%	11.5%	15.5%
AS-Patient assessment	11.7%	16.0%	11.5%	12.4%	12.6%	11.7%	17.1%	22.0%	12.1%	10.7%
00-No intervention	10.5%	3.7%	10.9%	11.2%	12.0%	14.9%	8.2%	5.7%	12.1%	9.8%
P0-Patient consulted	6.0%	8.6%	6.0%	10.6%	12.8%	8.3%	7.4%	8.2%	9.3%	6.0%
PH-Patient Medication HX	3.4%	4.9%	3.9%	2.4%	2.3%	2.6%	1.2%	0.7%	2.2%	3.5%
CC-Coordination of care	3.2%	1.2%	2.9%	5.0%	2.3%	3.1%	0.4%	0.4%	3.2%	3.6%
PE-Patient education	2.1%	6.2%	1.7%	3.8%	5.0%	1.9%	0.8%	2.1%	2.0%	2.0%
PM-Patient Monitoring	0.7%		0.4%	0.3%	0.3%	0.3%	0.4%		0.1%	0.8%
All others	0.7%		0.5%	0.7%	0.3%	0.8%		0.3%	0.7%	0.6%

Prospective DUR Pharmacists's action

Alert/Response	AT	DC/MC	DD	ER	LR	NS	PA	PG	SR	TD
1B-Filled as is	86.4%	87.7%	87.3%	82.2%	87.0%	87.9%	88.3%	87.2%	87.6%	84.5%
1G-Filled with prescriber approval	5.1%	2.5%	5.4%	4.9%	3.6%	3.2%	5.1%	3.2%	4.7%	5.8%
00-Not specified	2.7%	1.2%	2.3%	2.9%	3.4%	3.6%	1.6%	2.1%	3.0%	2.8%
1A-Filled as is, False positive	2.6%	3.7%	2.4%	3.2%	2.4%	2.3%	3.9%	5.3%	2.0%	2.2%
3F-Therapy changed-cost increase	1.0%									
3K-Instructions understood	0.8%	1.2%	0.8%	1.0%	1.6%	0.7%		1.4%	0.5%	1.3%
1D-Filled with different directions	0.5%		0.1%	2.5%	0.1%	0.1%				0.2%
1C-Filled, different dose	0.2%	1.2%	0.1%	1.4%	0.1%	0.1%		0.4%	0.1%	1.0%
3N-Medication adiministered	0.2%		0.2%	0.4%	0.1%	0.1%			0.1%	0.1%
3B-Recommendation not accepted	0.1%		0.2%	0.2%	0.3%	0.8%	0.4%		0.8%	0.1%
1F-Filled, different quantity	0.1%		0.0%	0.1%	0.0%	0.6%			0.1%	
3A-Recommendation accepted	0.1%	2.5%	0.3%	0.4%	0.4%	0.1%			0.1%	0.1%
1E-Filled, different drug	0.0%		0.0%			0.0%				0.8%
3C-Discontinued drug	0.0%									0.0%
3D-Regimen changed	0.0%			0.3%						
3E-Therapy changed	0.0%			0.2%						0.2%
3G-Drug Therapy unchanged	0.0%		0.8%	0.3%	1.0%	0.0%	0.8%	0.4%	0.9%	0.9%
1K-Filled with different dosage form					0.1%					0.0%
3M-Compliance aid developed				0.1%		0.6%				

Calendar Year 2007 Retrospective DUR Interventions Ranked by Volume

B5 NARCOTIC AGENTS	Criteria #	Utilization Category A	Utilization Category B		Total reviews	Total cases	Letters generated	Letters sent
Sei ANTIPSYCHOTICS - ALL DIABETES DIB A43 39 84 58 138 SEROTONIN REUPTAKE INHIBITORS TO 393 40 77 71 115 SECITALOPRAM HD 300 112 112 112 112 122 249 STIMULANTS HYPERTENSION DC 231 42 87 75 1110 CYCLOBENIZAPRINE ER 201 81 84 79 79 79 79 79 79 79 7	85	NARCOTIC AGENTS		ER	471	53		132
2210 ATYPICAL NEUROLEPTICS DIABETES DIABETES DIABETES DIABETES DIABETES DIABETES TO 393 40 77 71 1155 ESCITALOPRAM HD 300 112 112 112 112 2499 STIMULANTS HYPERTENSION DC 231 42 87 75 75 75 75 75 75 75	2494	SEROTONIN REUPTAKE INHIBITORS	CYCLIC ANTIDEPRESSANT AGENTS	DD	454	49	89	66
2210 ATYPICAL NEUROLEPTICS DIABETES DIAB 403 133 225 168 138 EROTONIN REUPTAKE INHIBITORS TO 393 40 77 71 1155 ESCITALOPRAM HD 300 112 112 112 112 249 STIMULANTS HYPERTENSION DC 231 42 87 75 75 75 75 75 75 75	561	ANTIPSYCHOTICS - ALL		TD	443	39	84	58
1136 SEROTONIN REUPTAKE INHIBITORS	2810	ATYPICAL NEUROLEPTICS	DIABETES					
1155 ESCITALOPRAM	136	SEROTONIN REUPTAKE INHIBITORS	-					
2499 STIMULANTS	1155	ESCITALOPRAM			300	112	112	112
1119 CYCLOBENZAPRINE	2499	STIMULANTS	HYPERTENSION	DC	231	42	87	75
535 NSAIDS	1119	CYCLOBENZAPRINE		ER		81	84	
1156 ESCITALOPRAM	535	NSAIDS			190	51	97	
197 ANXIOLYTIC AGENTS	1156	ESCITALOPRAM		TA	190	79	79	
185 BENZO SEDATIVES	167	ANXIOLYTIC AGENTS		_	188	40	85	
185 BENZO SEDATIVES	474	ZOLPIDEM		HD	186	116	121	93
605 ANALGESIC MIGRAINE MEDS MIGRAINE TA	165	BENZO SEDATIVES					7	
799 ACETAMINOPHEN HD 126 72 133 132 88 ANXIOLYTIC AGENTS ER 124 24 47 46 1537 CARDIOVASCULAR DRUGS CORONARY HEART DISEASE INDICATORS TA 123 55 59 54 2335 ATYPICAL NEUROLEPTICS TA 123 62 65 44 1073 ANTHISTAMINES (ALL) TD 120 22 43 36 2382 TUSSIONEX ER 120 43 58 49 684 BETIA-AGONISTS (INHALED) ER 111 20 26 17 16 INSAIDS WARFARIN DD 108 22 45 41 135 CYCLIC ANTIDEPRESSANT AGENTS TD 103 13 27 27 1350 CITALOPRAM 20MG ER 96 35 35 34 1860 DOXEPIN TA 90 61 61 41 8	605	ANALGESIC MIGRAINE MEDS	MIGRAINE			34	45	43
799 ACETAMINOPHEN HD 126 72 133 132 88 ANXIOLYTIC AGENTS ER 124 24 47 46 1537 CARDIOVASCULAR DRUGS CORONARY HEART DISEASE INDICATORS TA 123 55 59 54 2335 ATYPICAL NEUROLEPTICS TA 123 62 65 44 1073 ANTHISTAMINES (ALL) TD 120 22 43 36 2382 TUSSIONEX ER 120 43 58 49 684 BETIA-AGONISTS (INHALED) ER 111 20 26 17 16 INSAIDS WARFARIN DD 108 22 45 41 135 CYCLIC ANTIDEPRESSANT AGENTS TD 103 13 27 27 1350 CITALOPRAM 20MG ER 96 35 35 34 1860 DOXEPIN TA 90 61 61 41 8	1886	OXYBUTYNIN			130	88	88	
1537 CARDIOVASCULAR DRUGS CORONARY HEART DISEASE INDICATORS TA 123 55 59 54	799	ACETAMINOPHEN		HD	126	72	133	132
2335 ATYPICAL NEUROLEPTICS TA 123 62 65 44 1073 ANTIHISTAMINES (ALL) TD 120 22 43 36 2382 TUSSIONEX ER 120 43 58 49 684 BETA-AGONISTS (INHALED) ER 111 20 26 17 16 NSAIDS WARFARIN DD 108 22 45 41 135 CYCLIC ANTIDEPRESSANT AGENTS TD 103 13 27 27 1350 CITALOPRAM 20MG ER 96 35 35 35 34 1860 DOXEPIN TA 90 61 61 41 86 STIMULANTS ER 87 8 16 15 95 ACE INHIBITORS/K+SPARING DIURETICS POTASSIUM SUPPLEMENTS DD 81 20 41 26 65 ANTIDEPRESSANT AGENTS ANTICHOLINERGIC AGENTS DD 79 11 23 20 454 ANTIPSYCHOTICS-ATYPICAL TD 69 4 9 9 564 AMBIEN/SONATA/LUNESTA ER 68 9 9 2 566 SONATA AND AMBIEN HD 66 46 47 27 74 ACEI TD 58 13 23 13 2497 ANTIDEPRESSANTS PREGNANCY (WI ONLY) PG 57 17 36 12 3	88	ANXIOLYTIC AGENTS		ER	124	24	47	46
2335 ATYPICAL NEUROLEPTICS	1537	CARDIOVASCULAR DRUGS	CORONARY HEART DISEASE INDICATORS	TA	123	55	59	54
TUSSIONEX	2335	ATYPICAL NEUROLEPTICS		TA	123	62	65	
TUSSIONEX								
16 NSAIDS WARFARIN DD 108 22 45 41 135 CYCLIC ANTIDEPRESSANT AGENTS TD 103 13 27 27 1350 CITALOPRAM 20MG ER 96 35 35 34 1860 DOXEPIN TA 90 61 61 41 86 STIMULANTS ER 87 8 16 15 95 ACE INHIBITORS/K+SPARING DIURETICS POTASSIUM SUPPLEMENTS DD 82 17 31 26 65 ANTIDEPRESSANT AGENTS ANTICHOLINERGIC AGENTS DD 81 20 41 26 65 ANTIDEPRESSANT AGENTS ANTICHOLINERGIC AGENTS DD 81 20 41 26 2 AMIODARONE WARFARIN DD 79 11 23 20 454 ANTIDEPRESSANTA AGENTS MARFARIN DD 79 11 23 20 4564 ANBIEN/SONATA/LUNESTA ER	2382	TUSSIONEX		ER	120	43	58	49
135 CYCLIC ANTIDEPRESSANT AGENTS TD 103 13 27 27 27 1350 CITALOPRAM 20MG ER 96 35 35 34 1860 DOXEPIN TA 90 61 61 41 86 STIMULANTS ER 87 8 16 15 8 8 16 15 8 8 8 16 15 8 8 8 8 8 8 8 8 8	684	BETA-AGONISTS (INHALED)		ER	111	20	26	17
1350 CITALOPRAM 20MG	16	NSAIDS	WARFARIN	DD	108	22	45	41
1860 DOXEPIN TA 90 61 61 41 86 STIMULANTS ER 87 8 16 15 15 15 15 16 16 15 15	135	CYCLIC ANTIDEPRESSANT AGENTS		TD	103	13	27	27
86 STIMULANTS ER 87 8 16 15 95 ACE INHIBITORS/K+SPARING DIURETICS POTASSIUM SUPPLEMENTS DD 82 17 31 26 65 ANTIDEPRESSANT AGENTS ANTICHOLINERGIC AGENTS DD 81 20 41 26 2 AMIODARONE WARFARIN DD 79 11 23 20 454 ANTIPSYCHOTICS-ATYPICAL TD 69 4 9 9 564 AMBIEN/SONATA/LUNESTA ER 68 9 9 2 566 SONATA AND AMBIEN HD 66 46 47 27 1352 VENLAFAXINE XR 75MG ER 62 17 17 11 74 ACEI TD 58 13 23 13 2497 ANTIDEPRESSANTS PREGNANCY (WI ONLY) PG 57 17 36 12 1364 OMEPRAZOLE 20MG ER 52 33 33 33<	1350	CITALOPRAM 20MG		ER	96	35	35	34
95 ACE INHIBITORS/K+SPARING DIURETICS POTASSIUM SUPPLEMENTS DD 82 17 31 26 65 ANTIDEPRESSANT AGENTS ANTICHOLINERGIC AGENTS DD 81 20 41 26 2 AMIODARONE WARFARIN DD 79 11 23 20 454 ANTIPSYCHOTICS-ATYPICAL TD 69 4 9 9 9 564 AMBIEN/SONATA/LUNESTA ER 68 9 9 9 2 2 566 SONATA AND AMBIEN HD 66 46 47 27 1352 VENLAFAXINE XR 75MG ER 62 17 17 11 11 74 ACEI TD 58 13 23 13 23 13 2497 ANTIDEPRESSANTS PREGNANCY (WI ONLY) PG 57 17 36 12 1364 OMEPRAZOLE 20MG ER 52 33 33 33 1178 AMITRIPTYLINE HD 47 24 26 26 3 AMIODARONE CARDIAC GLYCOSIDES DD 40 7 14 13 1356 ESOMEPRAZOLE 20MG ER 37 30 30 30 2496 SEDATIVE AGENTS PREGNANCY (WI ONLY) PG 36 24 48 44	1860	DOXEPIN		TA	90	61	61	41
65 ANTIDEPRESSANT AGENTS ANTICHOLINERGIC AGENTS DD 81 20 41 26 2 AMIODARONE WARFARIN DD 79 11 23 20 454 ANTIPSYCHOTICS-ATYPICAL TD 69 4 9 9 564 AMBIEN/SONATA/LUNESTA ER 68 9 9 2 566 SONATA AND AMBIEN HD 66 46 47 27 1352 VENLAFAXINE XR 75MG ER 62 17 17 11 74 ACEI TD 58 13 23 13 2497 ANTIDEPRESSANTS PREGNANCY (WI ONLY) PG 57 17 36 12 1364 OMEPRAZOLE 20MG ER 52 33 33 33 1178 AMITCHIPTYLINE HD 47 24 26 26 3 AMIODARONE CARDIAC GLYCOSIDES DD 40 7 14 13 <tr< td=""><td>86</td><td>STIMULANTS</td><td></td><td>ER</td><td>87</td><td>8</td><td>16</td><td>15</td></tr<>	86	STIMULANTS		ER	87	8	16	15
65 ANTIDEPRESSANT AGENTS ANTICHOLINERGIC AGENTS DD 81 20 41 26 2 AMIODARONE WARFARIN DD 79 11 23 20 454 ANTIPSYCHOTICS-ATYPICAL TD 69 4 9 9 564 AMBIEN/SONATA/LUNESTA ER 68 9 9 2 566 SONATA AND AMBIEN HD 66 46 47 27 1352 VENLAFAXINE XR 75MG ER 62 17 17 11 74 ACEI TD 58 13 23 13 2497 ANTIDEPRESSANTS PREGNANCY (WI ONLY) PG 57 17 36 12 1364 OMEPRAZOLE 20MG ER 52 33 33 33 1178 AMITCHIPTYLINE HD 47 24 26 26 3 AMIODARONE CARDIAC GLYCOSIDES DD 40 7 14 13 <tr< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr<>								
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454 ANTIPSYCHOTICS-ATYPICAL TD 69 4 9 9 564 AMBIEN/SONATA/LUNESTA ER 68 9 9 2 566 SONATA AND AMBIEN HD 66 46 47 27 1352 VENLAFAXINE XR 75MG ER 62 17 17 11 74 ACEI TD 58 13 23 13 2497 ANTIDEPRESSANTS PREGNANCY (WI ONLY) PG 57 17 36 12 1364 OMEPRAZOLE 20MG ER 52 33 33 33 1178 AMITRIPTYLINE HD 47 24 26 26 3 AMIODARONE CARDIAC GLYCOSIDES DD 40 7 14 13 1356 ESOMEPRAZOLE 20MG ER 37 30 30 30 2496 SEDATIVE AGENTS PREGNANCY (WI ONLY) PG 36 24 48 44	65	ANTIDEPRESSANT AGENTS	ANTICHOLINERGIC AGENTS	DD	81	20	41	26
564 AMBIEN/SONATA/LUNESTA ER 68 9 9 2 566 SONATA AND AMBIEN HD 66 46 47 27 1352 VENLAFAXINE XR 75MG ER 62 17 17 11 74 ACEI TD 58 13 23 13 2497 ANTIDEPRESSANTS PREGNANCY (WI ONLY) PG 57 17 36 12 1364 OMEPRAZOLE 20MG ER 52 33 33 33 1178 AMITRIPTYLINE HD 47 24 26 26 3 AMIODARONE CARDIAC GLYCOSIDES DD 40 7 14 13 1356 ESOMEPRAZOLE 20MG ER 37 30 30 30 2496 SEDATIVE AGENTS PREGNANCY (WI ONLY) PG 36 24 48 44	2	AMIODARONE	WARFARIN	DD	79	11	23	20
566 SONATA AND AMBIEN HD 66 46 47 27 1352 VENLAFAXINE XR 75MG ER 62 17 17 11 74 ACEI TD 58 13 23 13 2497 ANTIDEPRESSANTS PREGNANCY (WI ONLY) PG 57 17 36 12 1364 OMEPRAZOLE 20MG ER 52 33 33 33 1178 AMITRIPTYLINE HD 47 24 26 26 3 AMIODARONE CARDIAC GLYCOSIDES DD 40 7 14 13 1356 ESOMEPRAZOLE 20MG ER 37 30 30 30 2496 SEDATIVE AGENTS PREGNANCY (WI ONLY) PG 36 24 48 44	454	ANTIPSYCHOTICS-ATYPICAL		TD	69	4	9	9
1352 VENLAFAXINE XR 75MG ER 62 17 17 11 74 ACEI TD 58 13 23 13 2497 ANTIDEPRESSANTS PREGNANCY (WI ONLY) PG 57 17 36 12 1364 OMEPRAZOLE 20MG ER 52 33 33 33 1178 AMITRIPTYLINE HD 47 24 26 26 3 AMIODARONE CARDIAC GLYCOSIDES DD 40 7 14 13 1356 ESOMEPRAZOLE 20MG ER 37 30 30 30 2496 SEDATIVE AGENTS PREGNANCY (WI ONLY) PG 36 24 48 44	564	AMBIEN/SONATA/LUNESTA		ER	68	9	9	2
74 ACEI TD 58 13 23 13 2497 ANTIDEPRESSANTS PREGNANCY (WI ONLY) PG 57 17 36 12 1364 OMEPRAZOLE 20MG ER 52 33 33 33 1178 AMITRIPTYLINE HD 47 24 26 26 3 AMIODARONE CARDIAC GLYCOSIDES DD 40 7 14 13 1356 ESOMEPRAZOLE 20MG ER 37 30 30 30 2496 SEDATIVE AGENTS PREGNANCY (WI ONLY) PG 36 24 48 44	566	SONATA AND AMBIEN		HD	66	46	47	27
2497 ANTIDEPRESSANTS PREGNANCY (WI ONLY) PG 57 17 36 12 1364 OMEPRAZOLE 20MG ER 52 33 33 33 1178 AMITRIPTYLINE HD 47 24 26 26 3 AMIODARONE CARDIAC GLYCOSIDES DD 40 7 14 13 1356 ESOMEPRAZOLE 20MG ER 37 30 30 30 2496 SEDATIVE AGENTS PREGNANCY (WI ONLY) PG 36 24 48 44	1352	VENLAFAXINE XR 75MG		ER	62	17	17	11
1364 OMEPRAZOLE 20MG ER 52 33 33 33 1178 AMITRIPTYLINE HD 47 24 26 26 3 AMIODARONE CARDIAC GLYCOSIDES DD 40 7 14 13 1356 ESOMEPRAZOLE 20MG ER 37 30 30 30 2496 SEDATIVE AGENTS PREGNANCY (WI ONLY) PG 36 24 48 44	74	ACEI		TD	58	13	23	13
1178 AMITRIPTYLINE HD 47 24 26 26 3 AMIODARONE CARDIAC GLYCOSIDES DD 40 7 14 13 1356 ESOMEPRAZOLE 20MG ER 37 30 30 30 2496 SEDATIVE AGENTS PREGNANCY (WI ONLY) PG 36 24 48 44	2497	ANTIDEPRESSANTS	PREGNANCY (WI ONLY)	PG	57	17	36	12
3 AMIODARONE CARDIAC GLYCOSIDES DD 40 7 14 13 1356 ESOMEPRAZOLE 20MG ER 37 30 30 30 2496 SEDATIVE AGENTS PREGNANCY (WI ONLY) PG 36 24 48 44	1364	OMEPRAZOLE 20MG		ER	52	33	33	33
1356 ESOMEPRAZOLE 20MG ER 37 30 30 30 2496 SEDATIVE AGENTS PREGNANCY (WI ONLY) PG 36 24 48 44	1178	AMITRIPTYLINE		HD	47	24	26	26
2496 SEDATIVE AGENTS PREGNANCY (WI ONLY) PG 36 24 48 44	3	AMIODARONE	CARDIAC GLYCOSIDES	DD	40	7	14	13
	1356	ESOMEPRAZOLE 20MG		ER	37	30	30	30
1358 PAROXETINE 20MG ER 35 27 27 27	2496	SEDATIVE AGENTS	PREGNANCY (WI ONLY)	PG	36	24	48	44
	1358	PAROXETINE 20MG		ER	35	27	27	27

Calendar Year 2007 Retrospective DUR Interventions Ranked by Volume

2493 ACEI	NSAID'S		DD	35	4	8	8
1120 CYCLOBENZAPRINE	140/110/0		HD	33	17	19	13
1306 ZOLPIDEM			HD	29	3	3	3
1557 SERTRALINE 50MG			ER	29	15	15	15
1362 LANSOPRAZOLE 15MG	3		ER	28	24	24	23
1334 DIURETICS		IVE HEART FAILURE	MC	25	18	19	14
CERTAIN ANTIHISTAM		172 1127 (1 1 1 7 (128) (2		20		10	
1820 ANTICHOLINERGICS			TA	25	11	11	10
185 NSAIDS	LITHIUM		DD	24	12	25	24
1871 TICLOPIDINE			TA	22	20	20	12
713 TRAMADOL			ER	15	11	11	8
1351 VENLAFAXINE XR 37.5	iMG		ER	14	9	9	9
544 BETA AGONIST	ASTHMA		TA	13	7	8	8
1372 FLUVOXAMINE 50MG			ER	13	8	8	8
1864 ALPRAZOLAM-DOSE			HD	12	11	12	10
2334 LONG-ACTING ADD/AD	OHD MEDS		TD	12	2	4	4
2472 HORMONE REPLACEM		DEMBOLIC DISORDERS/DRUGS	DB	12	7	11	6
1625 ROSUVASTATIN-DOSE			ER	11	8	8	8
1164 CARDIO POST MI DRU		OCARDIAL INFARCTION	TA	9	8	8	8
1349 CITALOPRAM 10MG			ER	9	4	4	4
2495 NSAIDS	PREGNAN	CY (WI ONLY)	PG	9	4	9	0
2426 ANTICHOLINERGICS		,	TD	8	1	2	2
20 THIAZIDES	LITHIUM		DD	5	3	6	4
99 ANTIPSYCHOTIC AGE	NTS ANTICON\	/ULSANTS	DB	5	2	3	3
1357 PAROXETINE 10MG			ER	4	4	4	4
1869 DIPHENHYDRAMINE			TA	4	3	3	3
2492 BARBITURATES	ANTICOAC	BULANT AGENTS	DD	4	3	7	5
1369 SIMVASTATIN 20MG			ER	3	3	3	3
1556 SERTRALINE 25MG			ER	3	2	2	2
1818 LORAZEPAM-DOSE			HD	3	2	2	1
1361 PRAVASTATIN 40MG			ER	2	2	2	2
2498 ACEI	PREGNAN	CY (WI ONLY)	PG	2	1	2	1
49 CIMETIDINE	WARFARII	N	DD	1	1	2	2
75 CALCIUM CHANNEL BI			TD	1	1	2	2
1354 ATORVASTATIN 20MG			ER	1	1	1	1
1363 OMEPRAZOLE 10MG			ER	1	1	1	1
1368 SIMVASTATIN 10MG			ER	1	1	1	1

DB - DRUG-DRUG MARKER AND/OR DIAGNOSIS

DC - INFERRED DRUG DISEASE PRECAUTION

DD - DRUG-DRUG INTERACTIONS

HD - HIGH DOSE ALERT

MC - DRUG (ACTUAL) DISEASE PRECAUTION

PG - DRUG PREGNANCY ALERT

TA - THERAPEUTIC APPROPRIATENESS

TD - THERAPEUTIC DUPLICATION

Calendar Year 2007 Retrospective DUR Interventions Ranked by Yield

Criteria #	Utilization Category A	Utilization Category B		Total reviews	Total cases	Letters generated	Letters sent	Yield	Letters per case
	PAROXETINE 10MG	Offilization Category B	ER	10tai reviews	4	Letters generated 4			1.0
	SIMVASTATIN 20MG		ER	3	3	3		100.0%	1.0
	PRAVASTATIN 40MG		ER	2	2	2		100.0%	1.0
	CIMETIDINE	WARFARIN	DD	1	1	2			2.0
	CALCIUM CHANNEL BLOCKERS		TD	1	1	2			2.0
	ATORVASTATIN 20MG		ER	1	1	1			1.0
1363	OMEPRAZOLE 10MG		ER	1	1	1			1.0
	SIMVASTATIN 10MG		ER	1	1	1			1.0
	ALPRAZOLAM-DOSE		HD	12	11	12	10		0.9
	TICLOPIDINE		TA	22	20	20			0.6
	CARDIO POST MI DRUGS	POST MYOCARDIAL INFARCTION	TA	9	8	8			1.0
1362	LANSOPRAZOLE 15MG		ER	28	24	24	23	85.7%	1.0
1356	ESOMEPRAZOLE 20MG		ER	37	30	30	30	81.1%	1.0
1358	PAROXETINE 20MG		ER	35	27	27	27	77.1%	1.0
1869	DIPHENHYDRAMINE		TA	4	3	3	3	75.0%	1.0
2492	BARBITURATES	ANTICOAGULANT AGENTS	DD	4	3	7	5	75.0%	1.7
713	TRAMADOL		ER	15	11	11	8	73.3%	0.7
1625	ROSUVASTATIN-DOSE		ER	11	8	8	8	72.7%	1.0
1334	DIURETICS	CONGESTIVE HEART FAILURE	MC	25	18	19	14	72.0%	0.8
566	SONATA AND AMBIEN		HD	66	46	47	27	69.7%	0.6
1860	DOXEPIN		TA	90	61	61	41	67.8%	0.7
1886	OXYBUTYNIN		TA	130	88	88	79	67.7%	0.9
2496	SEDATIVE AGENTS	PREGNANCY (WI ONLY)	PG	36	24	48	44	66.7%	1.8
1556	SERTRALINE 25MG		ER	3	2	2	2	66.7%	1.0
	LORAZEPAM-DOSE		HD	3	2	2			0.5
	VENLAFAXINE XR 37.5MG		ER	14	9	9	9	64.3%	1.0
1364	OMEPRAZOLE 20MG		ER	52	33	33	33	63.5%	1.0
474	ZOLPIDEM		HD	186	116	121	93	62.4%	0.8
	FLUVOXAMINE 50MG		ER	13	8	8	8	61.5%	1.0
20	THIAZIDES	LITHIUM	DD	5	3	6	4	60.0%	1.3
		THROMBOEMBOLIC							
	HORMONE REPLACEMENT THERAPY	DISORDERS/DRUGS	DB	12	7	11	-	58.3%	0.9
799	ACETAMINOPHEN		HD	126	72	133		57.1%	1.8
	BETA AGONIST	ASTHMA	TA	13	7	8	-		1.1
	SERTRALINE 50MG		ER	29	15	15			1.0
	CYCLOBENZAPRINE		HD	33	17	19			0.8
	AMITRIPTYLINE		HD	47	24	26		51.1%	1.1
	ATYPICAL NEUROLEPTICS		TA	123	62	65		50.4%	0.7
	NSAIDS	LITHIUM	DD	24	12	25		50.0%	2.0
2498	ACEI	PREGNANCY (WI ONLY)	PG	2	1	2	1	50.0%	1.0
1537	CARDIOVASCULAR DRUGS	CORONARY HEART DISEASE INDICATORS	ТА	123	55	59	54	44.7%	1.0

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1349	CITALOPRAM 10MG		ER	9	4	4	4	44.4%	1.0
2495	NSAIDS	PREGNANCY (WI ONLY)	PG	9	4	9	0	44.4%	0.0
	CERTAIN ANTIHISTAMINES &	,							
1820	ANTICHOLINERGICS		TA	25	11	11	10	44.0%	0.9
1156	ESCITALOPRAM		TA	190	79	79		41.6%	1.0
1119	CYCLOBENZAPRINE		ER	201	81	84	79	40.3%	1.0
99	ANTIPSYCHOTIC AGENTS	ANTICONVULSANTS	DB	5	2	3	3	40.0%	1.5
1155	ESCITALOPRAM		HD	300	112	112	112	37.3%	1.0
1350	CITALOPRAM 20MG		ER	96	35	35	34	36.5%	1.0
2382	TUSSIONEX		ER	120	43	58	49	35.8%	1.1
2810	ATYPICAL NEUROLEPTICS	DIABETES	DB	403	133	225	168	33.0%	1.3
2497	ANTIDEPRESSANTS	PREGNANCY (WI ONLY)	PG	57	17	36	12	29.8%	0.7
1352	VENLAFAXINE XR 75MG		ER	62	17	17	11	27.4%	0.6
535	NSAIDS		TD	190	51	97	85	26.8%	1.7
	ANTIDEPRESSANT AGENTS	ANTICHOLINERGIC AGENTS	DD	81	20	41	26	24.7%	1.3
605	ANALGESIC MIGRAINE MEDS	MIGRAINE	TA	138	34	45	43	24.6%	1.3
74	ACEI		TD	58	13	23	13	22.4%	1.0
167	ANXIOLYTIC AGENTS		TD	188	40	85	77	21.3%	1.9
95	ACE INHIBITORS/K+SPARING DIURETICS	POTASSIUM SUPPLEMENTS	DD	82	17	31	26	20.7%	1.5
	NSAIDS	WARFARIN	DD	108	22	45	41	20.4%	1.9
	ANXIOLYTIC AGENTS		ER	124	24	47	46	19.4%	1.9
	ANTIHISTAMINES (ALL)		TD	120	22	43		18.3%	1.6
	STIMULANTS	HYPERTENSION	DC	231	42	87	75	18.2%	1.8
	BETA-AGONISTS (INHALED)		ER	111	20	26		18.0%	0.9
	AMIODARONE	CARDIAC GLYCOSIDES	DD	40	7	14	13	17.5%	1.9
	LONG-ACTING ADD/ADHD MEDS		TD	12	2	4	4	16.7%	2.0
	AMIODARONE	WARFARIN	DD	79	11	23		13.9%	1.8
	AMBIEN/SONATA/LUNESTA		ER	68	9	9		13.2%	0.2
	CYCLIC ANTIDEPRESSANT AGENTS		TD	103	13	27	27	12.6%	2.1
	ANTICHOLINERGICS		TD	8	1	2	2	12.5%	2.0
	ACEI	NSAID'S	DD	35	4	8	_	11.4%	2.0
85	NARCOTIC AGENTS		ER	471	53	139	132	11.3%	2.5
2494	SEROTONIN REUPTAKE INHIBITORS	CYCLIC ANTIDEPRESSANT AGENTS	DD	454	49	89	66	10.8%	1.3
	ZOLPIDEM		HD	29	3	3		10.3%	1.0
	SEROTONIN REUPTAKE INHIBITORS		TD	393	40	77	71	10.3%	1.8
	STIMULANTS		ER	87	8	16		9.2%	1.9
	ANTIPSYCHOTICS - ALL		TD	443	39	84		8.8%	1.5
	ANTIPSYCHOTICS-ATYPICAL		TD	69	4	9		5.8%	2.3
	BENZO SEDATIVES		ER	170	6	7		3.5%	1.0

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