

UNIVERSITY OF ARKANSAS
FOR MEDICAL SCIENCES
COLLEGE OF PHARMACY

ARKANSAS MEDICAID EVIDENCE-BASED PRESCRIPTION DRUG PROGRAM (EBR_x)

QUARTERLY REPORT – SECOND QUARTER 2008



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INTRODUCTION

OVERVIEW OF THE EVIDENCE-BASED PRESCRIPTION DRUG PROGRAM

The Evidence-Based Prescription Drug Program (EBRx) came into existence in November 2004. The program is a collaboration between the University of Arkansas for Medical Sciences (UAMS) College of Pharmacy and the Arkansas Department of Health and Human Services (DHHS) Medicaid Program, with the support and input of the Arkansas Medical Society and the Arkansas Pharmacist's Association. The primary role of EBRx for DHHS is to facilitate development of an Evidence-based Preferred Drug List and provide related Prior Authorization review services for Medicaid and ARKids recipients.

Medicaid is an entitlement program for individuals and families with low-income or disabilities. Prior to January 1, 2006, the Medicaid program provided prescription benefits for qualifying elderly patients whose primary insurance was through the Federal Medicare program. With the availability of Medicare Part D prescription drug coverage, the Arkansas Medicaid enrollee population is now predominantly children. In fact Arkansas' Medicaid and ARKids programs are estimated to provide healthcare coverage to approximately half of all Arkansas children.

In the years before development of the Evidence-based Preferred Drug List, medication cost growth was a major contributor to increased costs of the Arkansas Medicaid program. In the nine years before EBRx began, Medicaid prescription drug spending grew at a compound annual growth rate exceeding 16 percent. This growth was due to increases in the costs of medications as well as increases in the numbers of enrollees. The largest contributor to the increase in total medication expenditures was increases in average medication costs. The rate of medication cost growth far exceeds state revenue growth, and jeopardizes continuation of the optional Medicaid drug benefit, or other benefits at current levels.

The goals of the EBRx program are to: identify differences between medication options; recommend inclusion on the PDL of superior medications, if they exist; enhance predictability and reduce costs of medications whenever possible; and to provide access to medications not on the PDL through Prior Authorization Call Center activities. These efforts are hoped to ensure the continued ability of the state to provide appropriate medical coverage for Arkansas' Medicaid and ARKids recipients.

Preferred Drug List Summary

PDL CATEGORIES, SELECTIONS, RATIONALE, AND SPECIAL CONSIDERATIONS

Medication Class	Medicaid Preferred Agents (Brand Name Agents in Bold)	Drug Review Committee Recommendation Summary	Special Considerations
Less Sedating Antihistamines	loratadine	No difference in patient total symptom scores	Patients under age 2 years
Proton Pump Inhibitors	omeprazole capsules Nexium capsules *Prevacid Solutabs Prevacid capsules (removed after re-review effective 4/1/08)	No difference in outcomes with equipotent dosing	*Patients under age 7 years, Patients with feeding tubes
HMG-CoA Reductase Inhibitors (statins)	Zocor (generic now available) pravastatin	Two of the three agents that have both primary and secondary outcome data should be available	Need for more potent agent
Calcium Channel Blockers	diltiazem ER capsules (equiv to Dilacor XR) Dynacirc CR Norvasc nifedipine ER tablets verapamil SR tablets	Diltiazem, verapamil, amlodipine and at least one other dihydropyridine should be available.	Dosage strengths of extended release diltiazem not available as Dilacor XR
Beta Blockers	atenolol metoprolol tartrate propranolol IR bisoprolol (only for CHF) Toprol XL (only for CHF) (generic now available) carvedilol (only for CHF)	No significant differences among the agents for most indications although there are differences in approved indications and data supporting use of specific products in specific conditions. 3 agents superior for treatment of congestive heart failure.	Diagnosis of Congestive Heart Failure
Long-Acting Opioids	methadone morphine sulfate ER tablets	No clinical advantage for one agent over another for treatment of chronic pain.	Terminal cancer diagnosis, Patients with long-term care eligibility, Patients unable to swallow pills
Angiotensin-Converting Enzyme (ACE) Inhibitors	Altace (generic now available) benazepril lisinopril captopril benazepril/amlodipine	No significant differences among the agents for most indications although there are differences in approved indications and data supporting use of specific products in specific conditions.	Patients under age 18 years

Medication Class	Medicaid Preferred Agents (Brand Name Agents in Bold)	Drug Review Committee Recommendation Summary	Special Considerations
Serotonin 5-HT1 Receptor Agonists (triptans)	Maxalt Maxalt MLT Imitrex tablets, nasal spray, injection Trexima	No significant difference among the agents that any one agent is clinically superior to another, different dosage forms should be available	Criteria in place for injectable formulation
Angiotensin II Receptor Blockers	Cozaar, Hyzaar Diovan, Diovan HCT	No significant advantage or disadvantage among the agents.	Congestive Heart Failure
Skeletal Muscle Relaxants	chlorzoxazone cyclobenzaprine 10mg methocarbamol baclofen (spasticity only) tizanidine (spasticity only)	Muscle spasms and spasticity disorders have different preferred agents, no advantage of one product over another.	None
Systemic Estrogens	estradiol 0.5mg, 1mg, 2mg estropipate	No difference in the products at equipotent doses. At least one oral and one topical product should be available	None
Non-Benzodiazepine Sedative Hypnotics	Ambien CR Rozerem Sonata zolpidem	No significant differences among the agents.	None
Targeted Immune Modulators	Enbrel Humira Raptiva	No significant differences among the agents for most indications although there are differences in approved indications and data supporting use of specific products in specific conditions.	Subject to DUR clinical edits
Inhaled Corticosteroids	Asmanex Azmacort (removed after contract terminated) Flovent (only to age 12)	No significant differences among the products at equipotent doses	Patients under age of 12 years
Anticholinergics for Overactive Bladder	Detrol LA oxybutinin syrup, 5mg tablet Vesicare	No significant differences among the products at equipotent doses. None particularly effective	Patients under age of 18 years with spina bifida diagnosis
Antiemetics 5-HT3 and NK1 Receptor Antagonists	ondansetron	No significant differences among the products at equipotent doses.	None
Nasal Corticosteroids	Nasacort AQ Nasonex	No significant differences among the agents.	None

Medication Class	Medicaid Preferred Agents (Brand Name Agents in Bold)	Drug Review Committee Recommendation Summary	Special Considerations
Antidiabetics-meglitinides	Starlix	At least one agent from each of the sub-classes of antidiabetics should be included. No significant differences in efficacy among the agents.	None
Antidiabetics-First Generation Sulfonylureas	chlorpropamide tolazamide		
Antidiabetics-Second Generation Sulfonylureas	glimepiride glipizide glyburide glyburide micronized metformin metformin/glipizide metformin/glyburide		
Antidiabetics-Thiazoladinediones	Actos 30mg, 45mg Actosplus Met Avandamet Avandaryl Avandia		
Antidepressants	bupropion regular release citalopram fluoxetine 10mg,20mg caps, 20mg/5ml solution Lexapro 10mg,20mg mirtazapine 15mg,30mg,45mg paroxetine Pexeva sertraline venlafaxine regular release Wellbutrin XL (generic now available)	No significant differences in efficacy among the agents but at least 3 should be available due to high initial failure rates. Fluoxetine should be available to those<18yo	Patients stable and compliant on non-preferred agents.
Beta ₂ Agonists	<u>Short Acting</u> albuterol 90mcg inhaler albuterol 5mg/ml solution albuterol 0.83mg/ml solution Maxair Autohaler Proair HFA Ventolin HFA <u>Long Acting</u> Serevent Diskus	No significant differences among the agents in regards to efficacy or safety.	Long acting agents still subject to DUR clinical criteria edits.

Medication Class	Medicaid Preferred Agents (Brand Name Agents in Bold)	Drug Review Committee Recommendation Summary	Special Considerations
NSAIDs	ibuprofen suspension and strengths above 200mg indomethacin 25mg ketoprofen 50mg,75mg ketorolac meloxicam 7.5,15mg naproxen 250mg,375mg,500mg naproxen sodium 275mg,550mg naproxen 375mg, 550mg enteric coated tablets piroxicam salsalate	No significant differences exist among the agents in regards to safety or efficacy. At least 3 agents should be available.	None.
ADD/ADHD	amphetamine salts Adderall XR Focalin Focalin XR Concerta Daytrana methylphenidate tablets	At least 1 IR and SR methylphenidate and amphetamine preparation should be available. Absent some co-morbidities, methylphenidate and amphetamines are more likely to be appropriate initial choices than atomoxetine.	Patients compliant on non-preferred agents.
Neuropathic Pain Agents	amitriptyline nortriptyline carbamazepine IR and chew tablets gabapentin 600mg, 800mg tablets and all capsules Lyrica venlafaxine IR tabs	At least 2 antiepileptics, 1 SNRI, 2 TCAD and 1 topical lidocaine preparations should be available.	Patients taking these medications for uses other than neuropathic pain.

FINANCIAL IMPACT OF PDL SELECTIONS

COST SAVINGS TO THE STATE RESULTING FROM THE PDL

METHOD OF ESTIMATING COSTS AVOIDED/SAVINGS

Products placed on the Preferred Drug List (PDL) represent therapies with proven advantages over other alternatives, or cost-effective selections in categories where no important differences between products can be found. Even though the foundation of the PDL is clinical, it has impacted the net medication costs for Arkansas Medicaid. Estimates of the cost impact of PDL selections are presented in this section. The costs for a medication category could be either increased or decreased as a consequence of the PDL.

Several factors make it likely that medication costs in a drug category will decrease after preferred agents are selected. First, manufacturers of patent-protected, single source products offer supplemental rebates to Arkansas Medicaid in consideration of inclusion on the Preferred Drug List. Selection as a preferred agent has significant impact on product sales and market share, and manufacturers often generate higher sales from Arkansas Medicaid if their products are selected as preferred agents. These supplemental rebate offers ensure Arkansas Medicaid lower net costs than without the PDL. Second, there are situations where no important clinical differences exist among the medications in a category. In many cases there are less expensive, equally effective generic medications available at lower costs than single source agents in a drug category. Where there is the opportunity to gain all important clinical benefits offered by a group of drugs, while using a lower cost agent, these agents are selected for the PDL.

These estimates of medication costs avoided are calculated with estimates of the Medicaid net cost per prescription. Two estimates of net costs are made. One value is based on the weighted average net cost per prescription in a drug category immediately prior to the preferred drug selection. This average net cost per prescription represents the expected Medicaid net cost which would have been incurred without the PDL. It is important to remember that the estimated expected Medicaid net cost is not adjusted for price increases imposed after the PDL effective date for the category. Multiplying the expected net cost per prescription by the total number of prescriptions dispensed in the current period yields the Estimated Expected Costs. The second estimate is based on current Medicaid net costs for preferred agents. These costs are multiplied by the prescription volumes for each preferred drug. The total net costs estimated for each of the non-preferred drugs currently used is added to this result. This estimate is called the Post-PDL Net Cost Estimate. The difference between the Estimated Expected Costs and the Post-PDL Net Cost Estimate is our estimate of costs avoided (or incurred) as a consequence of the PDL.

The reported savings or costs avoided do not consider the impact of PDL decisions on total care costs. There may be either increases or decreases in others categories of Medicaid spending as a result of the PDL. There may also be shifts to or from particular drug categories as a consequence of the PDL recommendations. Along with the EBRx staff, UAMS' College of Pharmacy, Pharmaceutical Evaluation and Policy Division conducts ongoing analyses and reviews of the impact of the PDL on total Medicaid costs.

OVERALL RESULTS

The first PDL selection became effective March 25, 2005. By the end of June, 2008 preferred drugs had been selected and implemented in twenty three drug classes. Since the first PDL selection, EBRx estimates that the PDL process has yielded potential savings/excess costs avoided of at least \$64 million. Table 1 shows implementation dates, and costs avoided or incurred for each category reviewed.

TABLE 1 – Summary of Estimated Prescription Costs Avoided to Date by Category

Drug Category	PDL Effective Date	Costs Avoided/Potential Savings or Costs Incurred Estimates		
		State Fiscal Year 06	State Fiscal Year 07	State Fiscal Year 08
Less Sedating Antihistamines	3/25/05	\$ 2,340,000	\$ 2,400,000	\$ 2,490,000
Proton Pump Inhibitors	5/18/05	\$ 8,540,000	\$ 6,560,000	\$ 4,840,000
“Statin” Cholesterol Agents	6/8/05	\$ 1,940,000	\$ 40,000	\$ 1,690,000
Calcium Channel Blockers	7/12/05	\$ 580,000	\$ 490,000	\$ 190,000
Beta Blockers	10/5/05	\$ 650,000	\$ 510,000	\$ 220,000
Long-Acting Opioids	10/26/05	\$ 1,240,000	\$ 1,520,000	\$ 930,000
ACE Inhibitors	11/16/05	\$ 290,000	\$ 250,000	\$ (140,000)
“Triptan” Antimigraine Agents	2/7/06	\$ 120,000	\$ 280,000	\$ 200,000
Angiotensin Receptor Blockers	2/21/06	\$ 140,000	\$ 300,000	\$ 730,000
Skeletal Muscle Relaxers	3/20/06	\$ 100,000	\$ 370,000	\$ 730,000
Estrogens	4/17/06	\$ 20,000	\$ 100,000	\$ 720,000
Sedative Hypnotics (Sleep Aids)	5/9/06	\$ 100,000	\$ 3,220,000	\$ 1,320,000
Targeted Immune Modulators	6/13/06	\$ (20,000)	\$ 90,000	\$ 60,000
Inhaled Corticosteroids	7/11/06	\$ -	\$ 1,810,000	\$ 2,410,000
Overactive Bladder Agents	8/15/06	\$ -	\$ 180,000	\$ 430,000
Newer Antiemetics	10/10/06	\$ -	\$ (130,000)	\$ 130,000
Oral Diabetes Agents	11/28/06	\$ -	\$ 300,000	\$ (150,000)
Nasal Steroids	11/28/06	\$ -	\$ 890,000	\$ 1,530,000
Antidepressants	4/10/07	\$-	\$ 700,000	\$ 2,240,000
Beta ₂ Agonists	5/29/07	\$-	\$ 120,000	\$ 1,210,000
NSAIDs	6/18/07	\$-	\$ 5,000	\$ 590,000
ADD/ADHD	7/10/07	\$-	\$-	\$ 5,690,000
Grand Total		\$ 16,030,000	\$ 20,000,000	\$ 28,080,000

MARKET SHARE IMPACT OF PDL RECOMMENDATIONS

The success of the PDL depends in large part on participation by prescribers with the recommendations of the Drug Review and Drug Utilization and Cost Committees. Prescribing compliance with the Preferred Drug List is monitored by EBRx. The following table presents data on the percentage of prescriptions that were filled for preferred product(s) in each of the therapeutic categories reviewed and implemented to date. This percentage is commonly called market share in the pharmaceutical industry. Outcomes and cost savings are maximized as market share approaches 100 percent compliance with the Preferred Drug List recommendations. However, it should be noted that complete compliance with the Preferred Drug List is unlikely as there remains individual variation in response to any medicine.

Percent Market Share of PDL Preferred Agents by Drug Class and Month

	Q107	Q207	Q307	Q407	Q108	Q208
Less Sedating Antihistamines	84	83	83	83	86	83
Proton Pump Inhibitors	100	99	99	100	99	89
Statins	98	98	98	98	99	98
Calcium Channel Blockers	83	87	88	94	94	94
Beta Blockers	91	91	91	91	83	81
Long-acting Opioids	79	75	76	75	75	74
ACE Inhibitors	77	76	75	75	79	79
Triptans	92	93	93	99	99	100
ARBs	99	99	99	99	99	99
Skeletal Muscle Relaxers	99	99	99	100	100	99
Estrogens	90	88	88	87	89	87
Newer Sleep Aids	99	99	99	100	100	100
Targeted Immune Modulators	66	63	57	81	81	82
Inhaled Corticosteroids	66	67	68	68	68	68
Overactive Bladder Agents	89	90	89	90	89	90
Newer Antiemetics	96	97	97	98	99	98
Oral Diabetes Agents	98	97	96	95	94	94
Nasal Steroids	100	100	100	100	100	100
Antidepressants	-	83	86	87	88	88
Beta₂ Agonists	-	87	97	96	96	97
NSAIDs	-	-	99	99	100	100
ADD/ADHD	-	-	85	88	90	91

Prior Authorization Call Center Statistics

P.A. CALL CENTER OPERATIONS AS A RESULT OF THE PDL

“Non-preferred” medications continue to be available to Medicaid recipients, but require prior authorization. Two processes are in place to provide prior authorization. The first is a computer-based system called Smart-PA. If the patient meets predetermined authorization guidelines, Smart-PA can grant an instantaneous prior authorization at the pharmacy counter with no additional effort by the provider or pharmacist. This occurs as a prescription claim is processed at the pharmacy

The second prior authorization process is the PDL Call Center. This center approves or denies prior authorization requests from physicians for products that have been placed in non-preferred status. The approval, denial, and appeal of denials are handled by the clinical pharmacists and medical directors of the EBRx Program. The statistics below represent the call center’s activity for FY 2008.

PA Call Center Statistics	3Q 2007	4Q 2007	1Q 2008	2Q 2008	FY 2008
Incoming Calls from Healthcare Professionals	8441	7029	6297	6742	28,509
Number of SmartPA Tickets Created	5766	4382	4915	4865	19,928
Total Number of P.A. Requests at the Call Center	5362	4017	3439	3404	16,222
Total Number of P.A. Requests Approved at the Call Center	3888	2944	2429	2268	11,529
Call Center P.A. Approval Percentage	73%	73%	71%	67%	71%
Point of Sale SmartPA Requests	161,037	170,859	172,815	173,862	678,573
Point of Sale SmartPA Approvals	126,153	140,288	144,884	144,104	555,429
Point of Sale SmartPA Approval Percentage	78%	82%	84%	83%	82%
Average Call Duration	2 min 35 sec	2 min 16 sec	2 min 26 sec	2 min 38 sec	2 min 29 sec

Budget Update

A GENERAL OVERVIEW OF THE PROGRAM BUDGET

The Arkansas Medicaid Evidence-based Prescription Drug Program budget and expenditures to date are presented below. There remain a number of personnel positions initially budgeted but not filled. If needs for additional program personnel arise, the program will work within the existing budget to ensure that service obligations are met. For FY2008, the program was approximately \$2,206,000 under budget.

	SFY08 Budget	SFY08 Expenditures
Personnel –(Salary and Fringes, includes DRC stipends)	\$2,496,381	\$1,193,397
Miscellaneous – (Supplies, Travel, etc)	\$150,750	\$28,988
Equipment – (computers, phones, furniture, renovation)	\$13,000	\$1,220
Indirect Costs	\$1,429,451	\$660,088
TOTAL	\$4,089,582	\$1,883,693

Data Evaluation

TRACKING OUTCOMES OF THE PDL DECISIONS

PEP Division Activities

One of the most important aspects of the EBRx program is the evaluation of Medicaid data to determine what the long term ramifications of the PDL decisions are. Through the College of Pharmacy's Pharmaceutical Evaluation and Policy (PEP) Division, the Medicaid claims database is analyzed to determine impacts to the Medicaid program, beyond potential changes in medication costs. Two analyses of the PDL policies have been recently completed and are described in abstract form below. The first policy analysis is for the PDL on inhaled corticosteroids implemented on July 11, 2006 and the analysis indicates that the combined Advair ICS PDL resulted in a savings of approximately \$900,000 in the first year without any permanent reduction in utilization of ICS products, though a small transient decrease was observed shortly after the policy. The second evaluation assessed the impact of the Opioid PDL and found that over the 18 month post policy period, Medicaid achieved a \$1.77 million dollar savings over the 22 months after the policy. The primary utilization endpoint in the opioid PDL policy evaluation was standardized morphine equivalents (MEq) which would capture the cumulative effect of changes in dose, quantity, and days supply. The policy did increase the short acting CII agent MEqs and non-significant decreases in LANA opioid MEq were observed. None of the policies were associated with any permanent changes in the use of substitute drugs.

The Impact of an Inhaled Corticosteroid Preferred Drug List on Utilization and Costs in Arkansas Medicaid

Kejal Parikh, B.Pharm; Bradley C. Martin, Pharm.D., Ph.D.; Mark Helm MD, MBA; Chenghui Li Ph.D.

ABSTRACT

BACKGROUND: Preferred drug lists (PDL) are gaining popularity as a cost-containment measure among state Medicaid programs. The rationale behind implementing a PDL is to get the patients to switch to more efficacious drugs with better evidence or to equally efficacious drugs at lower costs. On July 11th, 2006 Arkansas Medicaid implemented an inhaled corticosteroid (ICS) PDL and approximately a month prior implemented a policy requiring a prior authorization (PA) for Advair. There is limited experience and empirical evidence that assesses the impact of preferred drug lists on low-income individuals.

OBJECTIVE: To assess the impact of the ICS-PDL and the Advair PA policies on the prescription utilization and Medicaid prescription costs of the ICS, Advair and substitute drugs that included inhaled long-acting-beta2-antagonists, methyl xanthenes, leukotriene modifiers, cromolyn sodium, short-acting-beta2-agonists, anticholinergics, and systemic corticosteroids.

METHODS: This study used time series panel design of Arkansas Medicaid claims data using the prescription enrollment records from July 1, 2003 to June 30, 2007. To be included in the study subjects were

required to be eligible for full prescription benefits for at least one month of the study period. Medicare qualified beneficiaries and individuals qualified for family planning benefits were excluded. Advair was treated as a non-preferred drug as a PA was required for it to be prescribed. Outcome measures included monthly aggregates of the prescription counts, standardized days supplied, net costs adjusted for the CMS price rebates for the ICS, and paid amounts for the substitute drugs. To capture the potential impact of the policies on ICS dose and quantity a standardized days supplied was operationally defined as the quantity of canisters dispensed times the canister size (puffs/canister), divided by the average dosage (puffs/day). Expenditures were defined as the net cost to Arkansas Medicaid based on the amount paid for the prescriptions and adjusted for the CMS price rebates (relative price = CMS unit price / Medicaid paid unit price) available for the ICS. Autoregressive integrated moving average (ARIMA) time series models were estimated utilizing the 3 year pre-policy data and forecasts were made for a one year period after the policy implementation to estimate the likely trends in the monthly measures of utilization and cost. The difference between the actual and the forecasted measures were used to estimate the impact of the policy. In an attempt to analyze the impact of the ICS-PDL alone, a sensitivity analysis was conducted excluding the recipients on Advair. Additionally, a sensitivity analysis was done by converting the aggregate outcome measures into a per-member-per-month (PMPM) basis.

RESULTS: A total of 719,947 Medicaid enrollees were eligible for the study of which 13,938 recipients were on one or more ICS. The ICS-PDL and the Advair-PA policies resulted in a transient decrease of 3.2% (95%CI: -17.5% - 17.5%) in the number of prescriptions and a 7.4 % (95%CI: -20.7% - 12.7%) reduction in the number of standardized days supplied after the first six months of the implementation of the policies with almost no changes in the later 6 months for these two outcomes. The policies were also associated with a significant reduction in the net paid amount for the first 6 months resulting in an estimated savings of \$900,000 to Arkansas Medicaid. The policies were associated with a sporadic increase in the prescription counts and the days supplied for the substitute products, however no difference in the estimated and the forecasted expenditures was observed for the substitutes. The actual preferred drug utilization was higher by 31.0% (95%CI: 22.8%- 79.6%) than the pre-policy trend. The sensitivity analysis to indicate the pure effect of the ICS-PDL policy showed no differences in the estimated and the forecasted prescription counts, days supplied and expenditures.

CONCLUSION: The ICS-PDL and the Advair-PA policies resulted in transient cost reductions to Arkansas Medicaid. Total ICS utilization also showed a transient decrease with no significant difference after 6 months of the policy implementation suggesting that the policy did not affect access to ICS products.

KEYWORDS: pulmonary, preferred drug list, Medicaid, Inhaled Corticosteroid, Advair

A NATURAL EXPERIMENT TO ESTIMATE THE IMPACT OF A PREFERRED DRUG LIST POLICY FOR LONG ACTING NARCOTIC ANALGESICS ON COSTS AND UTILIZATION

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OBJECTIVES: On October 26, 2005, Arkansas Medicaid implemented a preferred drug list (PDL) policy for long acting narcotic analgesics (LANA) where only generic long-acting morphine and methadone could be obtained without prior-approval. The objective was to determine the impact of the PDL on net costs and utilization of LANA, total narcotic analgesics, and non-narcotic substitute drugs. **METHODS:** We obtained Arkansas Medicaid claims data from January 2003 to July 2007. Net costs based on CMS-rebates and mg of morphine equivalents (MEq) obtained from standardized conversion tables were the primary outcome variables. Autoregressive-integrated-moving-average ARIMA time series models of monthly measures were estimated. Interrupted OLS time series models were estimated to capture the impact of the policy on the shifts in trend and intercept. **RESULTS:** There were 709,791 Medicaid eligibles, of which 3,227 used a LANA whom had an average age of 44.65 years, 39.36% male, and 80.54% white. The PDL was associated with a \$1.40 million (95%CI: \$0.37-\$2.43million) and a \$1.77 million (95%CI: \$0.48-\$3.05million) cost reduction for LANA and total narcotic analgesics over the 22-month post-policy period. Total narcotic utilization was not significantly different than trend utilization for 18 months of the post-policy period. The PDL was associated with a significant increase in C-II short-acting narcotic utilization of 310,973 (95%CI: 121,354-500,591) MEq and non-significant decreases in C-II LANA and CIII-V narcotic utilization. A sensitivity analysis with a term to capture the effect of generic fentanyl availability yielded more conservative cost saving estimates. There was no PDL-related increase in the utilization of benzodiazepines, migraine agents, NSAIDs, muscle-relaxants, or antidepressants, however, utilization of selected anticonvulsants increased ($p < 0.001$). **CONCLUSIONS:** The PDL resulted in significant cost savings for narcotic analgesics. The policy did not consistently affect the overall level of narcotic analgesia prescribed, however, the policy may have steered patients toward shorter acting narcotics.

Other EBRx Activities

Work continues on the grant project funded by the Attorney General Consumer and Prescriber Grant Program. This program was funded from the settlement paid by Pfizer/Pharmacia relating to illegal promotion of Neurontin (gabapentin) for uses not approved by the FDA. UAMS College of Pharmacy was awarded \$370,000 over two years to study approaches to influence prescribers of medications for uses which are not approved by the Food and Drug Administration.

The project will focus on uses of antidepressants in Arkansas children. An outline of the educational curriculum has been prepared, and in coming months will be further developed with the assistance of the Arkansas Foundation for Medical Care. The Quality Improvement Organization will also assist in delivering the educational curriculum to Arkansas providers, as a subcontractor to the grant program

Drug Review Committee

Activities

Date: April 17, 2008

Subject: DRC Recommendations to DCC and DHS

To: DHS, DCC, Dean's Office

From: Henry F. Simmons, Jr., MD, Ph.D.
Chairman DRC

At its 04/17/08 meeting, the Drug Review Committee considered the potential toxicities and therapeutic roles of selected estrogens for use by perimenopausal women and those with natural or surgical menopause.

Agents under consideration

1. Oral estrogens

17-beta estradiol: (generic estradiol and Estrace)

Estradiol acetate: (Femtrace)

Esterified estrogens: (Menest, Neo-Estrone)

Estropipate: (generic estropipate, Ogen, Ortho-est)

Conjugated equine estrogen (CEE): (Premarin)

Synthetic conjugated estrogen: (Cenestin, Enjuva, C.E.S., Congest, PMS-Conjugated)

2. Oral combination agents

CEE, medroxyprogesterone: (Prempro, Premplus, Premphase)

17-beta estradiol, norgestimate; (Ortho-Prefest)

17-beta estradiol, norethindrone acetate: (Activella)

17-beta estradiol, drospirenone: (Angeliq)

Ethinyl estradiol, norethindrone acetate; (FemHRT)

3. Transdermal estrogens

17-beta estradiol matrix patch: (Alora, Climara, Esclim, Vivelle, Vivelle-Dot, Menostar, Estradot, Oesclim, generic 17-beta estradiol)

17-beta estradiol reservoir patch: (Estraderm)

17-beta estradiol transdermal gel: (EstroGel, Elestrin, Divigel)

4. Transdermal combination agents

17-beta estradiol, norethindrone acetate patch: (Combi-Patch, Estalis, Estalis Sequi, Estracomb)

17-beta estradiol, levonogesterel: patch (Climara Pro)

Estradiol hemihydrate topical emulsion (Estrasorb)

5. Topical Mucosal Products

17-beta estradiol vaginal cream: (Estrace vaginal cream)

CEE cream: (Premarin vaginal cream)

Esterified estrogen cream: (Neo-Estrone vaginal cream)

17-beta estradiol intravaginal ring: (Femring, Estring)

Estradiol hemihydrate vaginal tablet: (Vagifem)

Indications under consideration

Hot flashes/flushes

Sleep disturbance/night sweats

Mood changes

Urogenital symptoms/sexual dysfunction

Quality of life issues

Prevention of osteoporosis and its complications

Based upon the bulk of the best available evidence pertaining to the aforementioned agents the Committee concluded the following:

The agents do not differ in terms of either safety considerations or frequency of adverse events during either short or long term use to the extent that one or more should be excluded from consideration.

The agents do not differ significantly in efficacy when used in equipotent doses.

At least one transdermal preparation, one intra-vaginal preparation, one oral estrogen preparation and one oral estrogen/progestin preparation should be available.

At least one combination product should be available for women with intact uteri.

None of the agents appear to be associated with either special benefits or special risks on the basis of demographics.

Ultra low-dose, transdermal preparations have not been shown superior to placebo.

Date: June 19, 2008

Subject: DRC Recommendations to DCC and DHS

To: DHS, DCC, Dean's Office

From: Henry F. Simmons, Jr., MD, Ph.D.
Chairman DRC

At its 06/19/08 meeting, the Drug Review Committee considered the potential toxicity and therapeutic roles of the long acting opioids in the management of adults with chronic pain of non-cancer origin.

Based upon the bulk of the best available evidence concerning fentanyl, methadone, morphine, oxymorphone, and oxycodone the Committee concluded the following:

There is insufficient evidence to conclude in general that any of the agents differ sufficiently in terms of either safety or adverse effects to the extent that it should be stricken from consideration.

There is sufficient evidence to conclude in general that all five agents are efficacious.

In head to head comparisons, there is insufficient evidence to conclude one or more of the long acting opioids are generally superior to the others in reducing pain and improving functional outcomes.

There is insufficient evidence to conclude in general that one agent is more efficacious based upon demographics, comorbidities or adverse drug interactions.

A transdermal preparation should be available to those who cannot ingest their medications.

At least two different oral agents should be available in addition to a transdermal agent.