

State of Louisiana Department of Health and Hospitals

DRUG UTILIZATION REVIEW ANNUAL REPORT

October 1, 2006 through September 30, 2007

Prepared by

UNISYS

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In conjunction with

**Medicaid Pharmacy Benefits Management Section of the
Louisiana Department of Health and Hospitals
Louisiana Medicaid Drug Utilization Review Board
Louisiana Medicaid Drug Utilization Review Committees
University of Louisiana-Monroe College of Pharmacy**

Contents

List of Appendices, Attachments and Figures	ii
Executive Summary	iii
<u>SECTION ONE – DRUG UTILIZATION REVIEW ANNUAL REPORT</u>	
Introduction	1
Budget and Expenditures	3
Education	4
Disease State Management Brochures	4
Educational Articles	4
Prospective Drug Utilization Review	5
Impact Report	7
Retrospective Drug Utilization Review (LADUR)	8
LADUR Process	8
Enhanced Disease Focus: Clinical Practice Guidelines	9
LADUR Clinical Criteria	10
Provider Response	10
Impact Report	15
LADUR Program Interventions and Analysis	17
Central nervous system disorders	
Sleep disorders	17
Behavioral disorders	18
Focused review: Zispraside bioavailability	18
Focused review: Attention-deficit/hyperactivity disorder	19
Pain disorders	20
Gastro-intestinal disorders	
Gastric acid reducing agents	22
Respiratory disorders	
Asthma management	23
Outcomes measures	24
Cardiovascular disorders	
Heart failure management	21
Outcomes measures	27
Hypertension management	28
Endocrine disorders	
Diabetes management	29
Outcomes measures	31
Louisiana Drug Utilization Review Board	32
Plans for 2007-2008	33

APPENDICES

Appendix A	Disease State Management Brochures	A-1
Appendix B	Educational Articles	A-2
Appendix C	Louisiana Drug Utilization Review Committee and Board Membership	A-3
Appendix D	Retrospective Drug Utilization Review Cost Avoidance: Therapeutic Classes Reviewed	A-4
Appendix E	Drug Classification System (GC3)	A-5
Appendix F	Outcomes Measurements for FFY 2005 and FFY 2006	A-6

FIGURES

Figure 1.	Drug Expenditures versus Total Expenditures	3
Figure 2.	Drug Budget as Percentage of Total Expenditures	3
Figure 3.	Prospective DUR Cost Avoidance Calculations	7
Figure 4.	Prospective DUR Cost Avoidance by Type of Alert	7
Figure 5a to 5d.	Provider Responses to LADUR Correspondence	11-14
Figure 6.	Retrospective LADUR Cost Avoidance Summary	15
Figure 7.	Retrospective LADUR Percentage Change in Drug Expenditure	16
Figure 8.	Retrospective LADUR Increase in Drug Expenditure Resulting from Disease Management Recommendations	16

SECTION TWO – FEDERAL ANNUAL REPORT INSTRUCTIONS**ATTACHMENTS**

Attachment 1	Louisiana Pharmacists' Compliance with Counseling Regulations	B-1
Attachment 2	Summary Report on Prospective Drug Utilization Review Screening	B-2
Attachment 3	Summary Report on Retrospective Drug Utilization Review Screening and Interventions	B-3
Attachment 4	Louisiana Drug Utilization Review Board Activities	B-4
Attachment 5	Statement on the Use of Therapeutically Equivalent Generic Drugs	B-5
Attachment 6	Program Evaluation / Cost Savings Estimates: Prospective DUR Program and Retrospective DUR Program	B-6

EXECUTIVE SUMMARY

This annual report represents a summary of the Louisiana Medicaid Pharmacy Benefits Management (LMPBM) program's activities under the direction of the Louisiana Department of Health and Hospitals (DHH). A commitment to improving the quality of patient health care was demonstrated during the federal fiscal year from October 1, 2006 through September 30, 2007.

Education

Under the direction of the DHH, the University of Louisiana at Monroe (ULM) College of Pharmacy compiles **disease state management (DSM)** materials for the recipient and provider populations.

- Brochures addressing quality of care issues relating to dyslipidemia were mailed to 4,249 recipients and 4,703 providers during this period (Appendix A).
- A series of **educational articles** are published in the *Provider Update* newsletters (Appendix B). This bimonthly newsletter is sent to every provider in the Louisiana Medicaid program.

Prospective DUR Interventions

Prospective drug utilization review (DUR) screening occurs every time a pharmacist processes a prescription, before the prescription is dispensed to the patient, to assure safe and medically necessary drug use.

- Clinical alerts and edits address current disease-focused categories such as behavioral health and pain disorders.
- **Pharmacy cost avoidance** attributed to the use of the prospective interventions during federal fiscal year 2007 is **\$33,714,600** (Figure 3 and Figure 4).

Retrospective DUR Interventions

Retrospective clinical interventions, in the form of mailings or phone-calls to prescribers and pharmacists, occur after prescriptions are dispensed.

- The Louisiana Drug Utilization Review (LADUR) program is outstanding and unique in that throughout the year important clinical interventions in eight disease-specific categories are made concerning the health care of individual recipients.
- These clinical interventions potentially improve the recipients' disease management and quality of life.
- **Pharmacy cost avoidance** attributed to LADUR interventions during federal fiscal year 2007 projected to **\$824,090** in the targeted drug classes (Figure 6).
 - Drug expenditure reductions averaged 11 percent in the drug classes in which discontinuation or reduction of drug use was recommended (Figure 7).
 - Drug expenditure increases were reflected for disease management drug initiation recommendations, indicating successful clinical interventions.
 - The cost analysis does not include potential savings in other categories such as hospitalizations or physician visits.
- LADUR program acceptance and approval by the provider community is evident by numerous positive responses along with a response rate of 44 percent.

The retrospective LADUR Program is increasingly deriving clinical interventions from nationally-recognized disease management principles, providing current pertinent information to the provider concerning his patient. Current LADUR clinical interventions address issues in the following categories:

Heart failure management
Hypertension management
Diabetes management
Asthma management

Pain disorders
Behavioral health
Sleep disorders
Gastrointestinal disorders

HIGHLIGHTS OF SUCCESSFUL CLINICAL INTERVENTION EXAMPLES IN THE RETROSPECTIVE LADUR PROGRAM

Successful clinical interventions in asthma management were demonstrated in federal fiscal year 2007. (Pages 23 - 24)

- It is known that good asthma management can reduce or halt the progression of the disease and improve symptoms and quality of life in patients with asthma.
- Nationally-recognized clinical guidelines for the management of asthma recommend routine use of a steroid inhaler for patients with persistent asthma.
- Following the LADUR intervention, 30 patients (36%) added steroid inhalers to their drug regimen.
- *Patients who initiated steroid inhalers (FFY06 DUR) also had decreased emergency room visits.*⁵

Successful clinical interventions were also demonstrated in diabetes management and heart failure management:

Diabetes management interventions (pages 29 - 31)

- 130 patients (41%) followed the recommendation to have A1C laboratory testing.
- 62 patients (26%) followed the recommendation to add an ACE inhibitor or AR blocking agent.
- 4 patients (31%) discontinued their thiazolidinedione or metformin prescription based on the precaution for patients with heart failure.

Heart failure management interventions (pages 25 - 27)

- 21 patients (21%) followed the recommendation to add beta-blocker therapy.
- 33 patients (29%) followed the recommendation to add ACE inhibitor therapy.
- 39 patients (63%) discontinued their non-steroidal anti-inflammatory agent based on the precaution for patients with heart failure.
- *Patients with heart failure interventions (FFY06 DUR) also had changes in hospital admissions, professional office visits and emergency room visits.*⁵

The Omnibus Budget Reconciliation Act of 1990 (OBRA '90) federal legislation requires all states to operate a drug utilization review program which includes prospective drug review, retrospective drug review, and an educational program. The Louisiana DUR program features prospective, retrospective and educational interventions which are summarized in this report, following this introduction, pharmacy program overview, and the budget and expenditures pages.

INTRODUCTION

This annual report summarizes the Louisiana Medicaid Pharmacy Benefits Management Section's (LMPBM) drug utilization review (DUR) activities during the federal fiscal year period of October 1, 2006 through September 30, 2007. Commitment to the quality of recipient health care was demonstrated during this period through continued educational programs and enhanced DUR interventions.

Pharmacy Program Overview

Operations

The LMPBM program is administered by the Louisiana Department of Health and Hospitals (DHH) and utilizes its state-owned and federally certified Medicaid Management Information System (MMIS). Clinical and technical support is provided through contracts with Unisys, the Louisiana Medicaid program's fiscal intermediary, and the University of Louisiana at Monroe (ULM) College of Pharmacy. Cost savings experienced in the pharmacy program are returned to the citizens of Louisiana through additional medical service benefits.

Drug coverage includes legend drugs and a limited number of over-the-counter drugs. Drug coverage is not permitted for:

- Anorexics with the exception of orlistat
- Compounded prescriptions (individual drugs are reimbursable)
- Cosmetic drugs
- Cough and cold preparations
- Drug Efficacy Study Implementation (DESI) Drugs
- Erectile dysfunction drugs
- Experimental drugs
- Fertility drugs when used for fertility treatment
- Narcotics prescribed only for narcotic addiction
- Most non-legend or OTC drugs or items with some exceptions
- Vaccines covered in other programs

Prescription refills are limited to a maximum of five refills within a six-month period. Maintenance drugs for long-term care residents should be dispensed in a 30-day supply after the initial prescription.

A sliding scale prescription co-pay policy was established in 1995. Exemptions from copay include:

- Pregnant women
- Recipients under age twenty-one
- Long-term care residents
- Emergency prescription services
- Family planning services and supplies

Lock-in Program

Recipients who have been identified as inappropriately utilizing prescription benefits may be restricted to the use of one pharmacy or to one pharmacy and one physician. Approximately 900 recipients are enrolled in the Lock-In Program. Using data collected from 1995, 1996, and 1998, a published study reported that the Louisiana Medicaid Lock-in Program has produced significant reductions in utilization and expenditures.¹

Pharmacy Prior Authorization (PA) program

The Pharmacy Prior Authorization (PA) program was established in June 2002. The PA is initiated upon prescriber request for one of a selected number of drugs (non-preferred) within specific therapeutic classes. This request is made to the Pharmacy PA operational desk of the ULM College of Pharmacy.

Prescription limits

An eight-prescription limit per recipient per calendar month was implemented in March 2003. Exempt from the limitation are persons under the age of twenty-one, long-term care residents, and pregnant women. Override provisions for medically necessary prescriptions are allowed with the prescriber's indication of an approved diagnosis.

Peer-Based Profiling (PBP) program

The Peer-Based Profiling (PBP) program was implemented in April 2003. This data-sharing program sends individual peer-based practitioner profiles comparing the practitioner's Medicaid prescribing practices to those of his/her peers.

Medicaid prescription benefits exclusion

Effective January 1, 2006, as a result of the Medicare Prescription Drug, Improvement and Modernization Act of 2003 (MMA), full benefit dual eligible Medicaid recipients no longer receive pharmacy benefits through the Louisiana Medicaid Pharmacy Program with the exception of some drugs excluded from the Part D benefit.

On-line clinical data

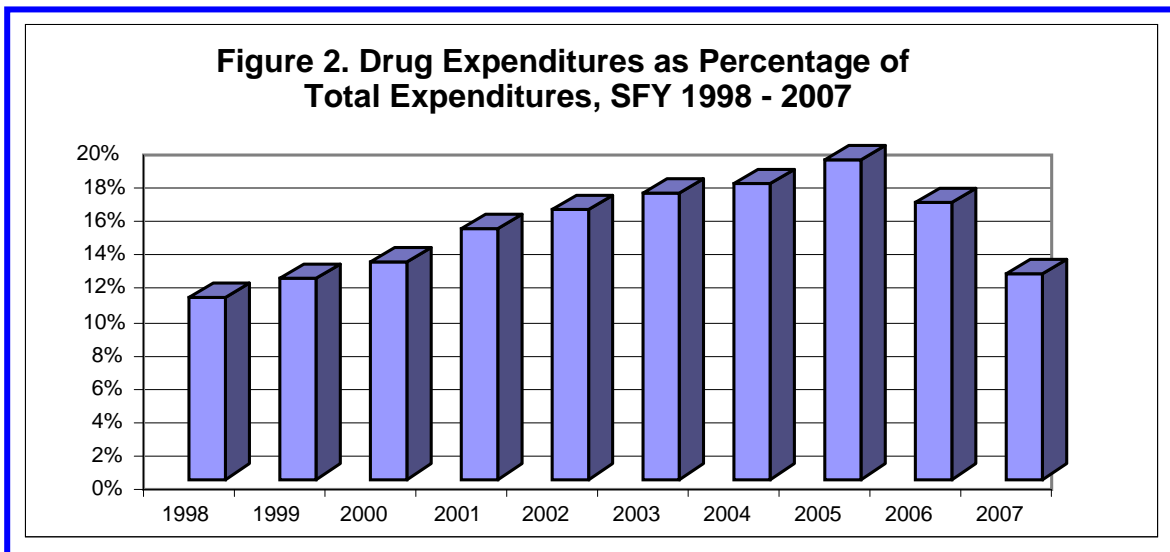
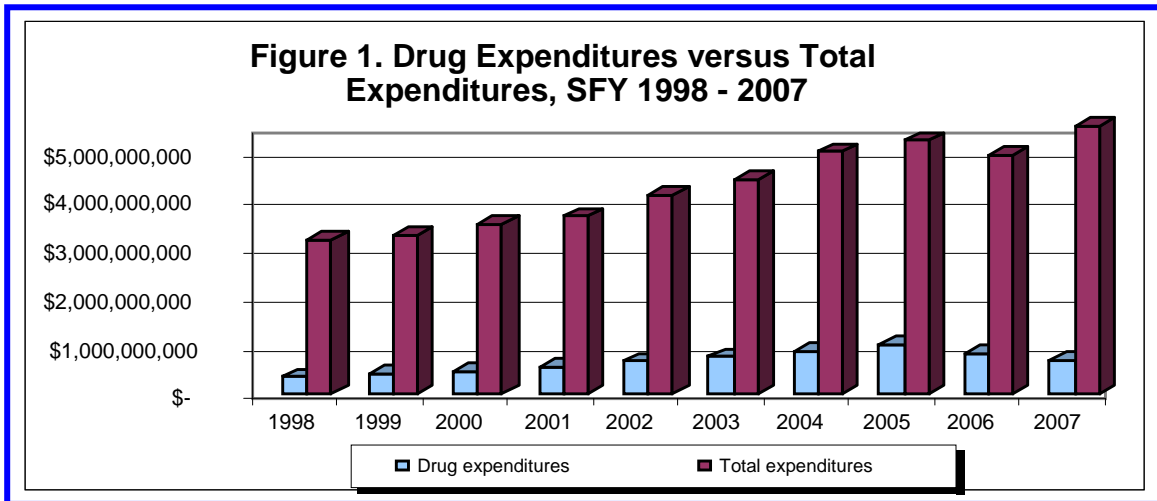
Providers may access the Louisiana Medicaid website (www.lamedicaid.com) for information, including the preferred and non-preferred drug lists, policies and procedures, and program information. Authorized providers may view recipient's essential clinical history information, the electronic Clinical Data Inquiry (e-CDI), on this website.

BUDGET AND EXPENDITURES

In **federal fiscal year 2007**, payments to pharmacy providers totaled \$740,766,070 for 10,316,500 prescriptions.² Of the 961,675 eligibles in the Louisiana Medicaid program³, 748,881 received prescription services⁴.

The Louisiana Medicaid budget in **state fiscal year 2007** was \$5.503 billion. Payments to pharmacists in **state fiscal year 2007** totaled \$675,075,194 for 9,485,853 prescriptions. The prescription benefits program accounted for 12 percent of the total expenditures.

Figure 1 and Figure 2 depict comparisons of total drug expenditures with the entire Louisiana Medicaid budget for the past ten state fiscal years.



The Omnibus Budget Reconciliation Act of 1990 (OBRA '90) federal legislation requires all states to operate an educational component of the DUR program.

EDUCATION

Continuing education, not only for the health-care provider, but also for the patient, has been identified as a critical factor for the enhancement of patient care.

Under direction of LMPBM, the ULM College of Pharmacy provides educational literature directed to both the recipient and provider populations. Disease-specific brochures addressing quality of care issues relating to **dyslipidemia** were mailed to 4,249 recipients and 4,703 providers in October 2006. The brochure may be found in Appendix A of this report.

A series of **educational articles** appear in the *Provider Update* newsletters. This bimonthly newsletter is sent to every provider in the Louisiana Medicaid program. Article content was developed by the ULM College of Pharmacy and approved by the DHH. The articles may be found in Appendix B of this report and include:

Issue Date	Article Title
2006 September / October	An Overview of Second-Generation Antihistamines
2007 January / February	Update on New Drugs of 2005 – 2006
March / April	Acetaminophen Overuse
May / June	Retrospective Drug Utilization Review: A Tool for Patient Care
July / August	Trends in HEDIS® Children's Measures for the Louisiana Medicaid Program

The Omnibus Budget Reconciliation Act of 1990 (OBRA '90) federal legislation requires all states to operate a prospective drug utilization review component of the DUR program.

PROSPECTIVE DRUG UTILIZATION REVIEW

Prospective drug utilization screening occurs every time a pharmacist processes a prescription, before the prescription is dispensed to the patient, to assure safe and medically necessary drug use. Features of the LMPBM's prospective DUR program include:

- Provider "help-desk" service
- Point-of-sale (POS) claim adjudication
- On-line prospective drug utilization review (UniDUR)

Prospective DUR screening

The DUR messages may be delivered as educational alerts or "deny" edits. The following categories of alerts and edits are utilized:

- Early refill
- Identical drug therapy
- Duration of therapy
- Therapeutic duplication
- COX2 overutilization
- Pregnancy precaution
- Drug interactions
- High dose
- Suspect duplicate
- Identical drug therapy & suspect duplicate denial
- Early refill and suspect duplicate denial

Prospective Clinical DUR edits

In addition to the prospective DUR screening, prospective clinical DUR edits have been developed to address special areas of concern. Recognizing the importance of coordinating prospective and retrospective DUR, emphasis is placed on developing prospective clinical criteria from analysis of the retrospective Drug Utilization Review (LADUR) experience. Listed are current prospective DUR edits and implementation dates:

- 1997 **Gastrointestinal disorders**
Prescriptions for acute dosages of gastric-acid reducing agents beyond sixteen weeks are payable only with the prescriber's indication of the diagnosis requiring the extended duration.
- 2001 **Duplication of drug therapy**
Prescriptions for therapeutic duplicates of drugs in these drug classes are payable only after discussion with and approval from the prescriber.
- Tricyclic antidepressants
 - Selective serotonin reuptake inhibitors
 - Calcium channel blockers
 - Potassium replacement products
 - Non-steroidal anti-inflammatory drugs
 - Second generation antihistamines and combination products

Pregnancy precaution

Prescriptions for drugs in FDA Pregnancy Category X are not paid for patients who are pregnant.

2005 **Pain disorders**

In an initiative to confirm appropriate drug use, prescriptions for COX-2 selective drugs are payable only when a valid ICD-9-CM code indicating the reason the prescription was written and a valid condition warranting COX-2 selective drug utilization is evident.

Initiatives for the safe and appropriate use of analgesics resulted in the implementation of prospective edits and address duplication of drug therapy and drug overutilization:

- Prescriptions for therapeutic duplicates of long-acting opiates are payable only after discussion and approval from the prescriber.
- Prescriptions for therapeutic duplicates of short-acting opiates are payable only after discussion and approval from the prescriber.
- Prescriptions for more than 20 tablets and five days for ketorolac are payable only after discussion and approval from the prescriber.
- Prescriptions for carisoprodol above 1,400mg daily are not permitted.

Behavioral health

A focus on behavioral health issues resulted in the implementation of prospective edits addressing appropriate drug use, polypharmacy and overutilization of antipsychotic agents:

- Prescriptions for antipsychotic agents are payable only when a valid ICD-9-CM code indicating the use of the drug is supplied.
- A prescription for a third antipsychotic agent is not permitted without discussion and approval from the prescriber. An emergency override provision is allowed for this edit.
- Prescriptions for antipsychotic agents prescribed above the maximum recommended dose are payable only after discussion and approval from the prescriber.
- Prescriptions for therapeutic duplicates of anti-anxiety agents are payable only after discussion and approval from the prescriber.

2006 **Pain disorders**

Prescriptions for aspirin products exceeding six grams daily and for acetaminophen products exceeding four grams daily are initially denied due to potential for toxicities at high doses. An override option is available after discussion and approval from the prescriber.

Prescription duplication

Additional prospective edits compliment the current rigorous system checks to reduce potential duplicate prescription payments.

Prospective DUR Impact Report

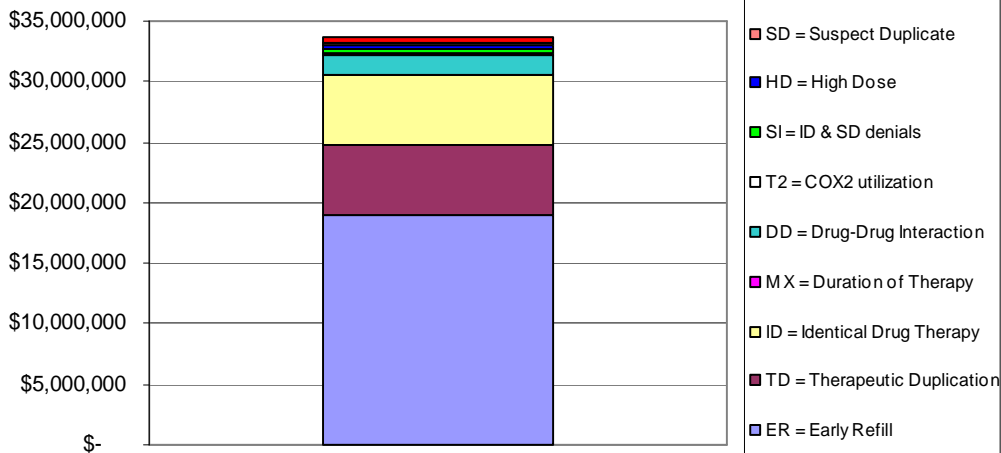
Prospective DUR cost avoidance calculations were derived from denied and reversed pharmacy claims (Figure 3). **Cost avoidance** attributed to the use of the prospective DUR edits and clinical alerts during federal fiscal year 2007 is \$33,714,600 (Figure 4).

Figure 3. Prospective DUR Cost Avoidance Calculations FFY 2007

	Cost Avoidance		Cost Deferred		
	Claims denied & never resubmitted	Claims reversed for educational alert	Claims first denied & subsequently paid		
ER	\$ 17,514,100		\$ 1,398,000	ER = Early Refill ID = Identical Drug Therapy MX = Duration of Therapy TD = Therapeutic Duplication T2 = COX2 Overutilization PG = Pregnancy Precaution DD = Drug-Drug Interaction HD = High Dose SD = Suspect Duplicate SI = ID & SD denials SE = ER & SD denials	
ID	\$ 5,657,800		\$ 232,700		
TD	\$ 2,640,500	\$ 3,002,700	\$ 57,300		
PG	\$ 2,500	\$ 8,900			
MX	\$ 1,634,100		\$ 31,100		
T2	\$ 166,300		\$ 5,400		
HD	\$ 240,400		\$ 27,600		
SI	\$ 449,700		\$ 13,400		
SE	\$ 106,300		\$ 1,500		
SD	\$ 56,100		\$ 1,000		
DD		\$ 467,200			
Total Cost Avoidance	\$ 28,467,800	\$ 3,478,800	\$ 1,768,000		\$ 33,714,600

Figure 4. Cost Avoidance by Type of Alert

October 1, 2006 through September 30, 2007
\$33,714,600



The Omnibus Budget Reconciliation Act of 1990 (OBRA '90) federal legislation requires all states to operate a retrospective drug utilization review component of the DUR program.

RETROSPECTIVE DRUG UTILIZATION REVIEW

The Louisiana Drug Utilization Review (LADUR) program is the state's retrospective DUR component. The LADUR program is outstanding and unique in that throughout the year important clinical interventions in nine disease-specific categories are made concerning the health care of individual recipients. These interventions potentially improve the recipients' disease management and quality of life.

Benefits of the LADUR program:

- Improve recipients' health care
- Prescription cost avoidance
- Identification of potential Lock-in Program enrollees
- Analysis of potential prospective clinical DUR edits
- Analysis of provider prescribing and dispensing patterns

LADUR Process

- On a monthly basis, system-generated individual recipient profiles meeting the clinical criteria are analyzed by Regional LADUR Committee members (Appendix C).
 - Criteria are based on clinical issues which could impact the recipient's disease state as determined and approved by the Louisiana Drug Utilization Review Board (Appendix C).
 - The four Regional LADUR Committees each consist of one physician and three pharmacists.
 - In the analysis process, LADUR Committee members are careful to select recipients in need of intervention regarding appropriate drug utilization.
 - Determination is made whether to initiate contact with the recipients' provider by means of clinical intervention mailings.
- Prescribers and pharmacists who serve as providers to these recipients receive the intervention mailings along with current individual recipient drug utilization profiles.
 - Access to current drug profiles enhances the provider's knowledge of the recipient's drug utilization patterns and aids the provider when making clinical decisions.
 - Providers are encouraged to send a response to the LADUR committees.
- Responses and outcomes are analyzed and presented to the DUR Board for continual criteria updating and program improvement.
- Periodically, as determined by LMPBM, pharmacists at ULM provide additional interventions by phone-calls to the providers.

Enhanced disease focus: Clinical Practice Guidelines

- The LADUR program has progressed beyond traditional retrospective DUR programs which provide interventions on drug-focused criteria such as duplication of therapy and overutilization.
- In an initiative to provide optimal management of the recipients' disease process, nationally recognized clinical practice guidelines are used to evaluate appropriate or inappropriate drug utilization and assure adequate monitoring.
- Therefore, interventions recommend not only the discontinuation of drug therapy when appropriate, but also the addition of drug therapy according to established clinical practice guidelines, resulting in enhanced recipient health care.

LADUR Clinical Criteria derived from Clinical Practice Guidelines

Examples of interventions recommending additional drug therapy

Asthma management

- Steroid inhaler recommendation for patients with persistent asthma (*Expert Panel Report 2-Guidelines for Diagnosis and Management of Asthma, NIH/NHLBI*)

Hypertension management

- Antihypertensive drug recommendation for patients with hypertension (*JNC 7 Guidelines, NHLBI*)

Heart failure management

- ACE inhibitor and beta-blocker recommendation for patients with heart failure (*American College of Cardiology/American Heart Association Task Force on Practice Guidelines*)

Diabetes management

- Hemoglobin A1C laboratory monitoring for patients with diabetes (*American Diabetes Association Standards of Medical Care in Diabetes, 2004*)
- Metformin recommendation for patients with diabetes (*American Diabetes Association and the European Association for the Study of Diabetes Consensus Statement, 2006*)
- ACE inhibitor or angiotension receptor blocker recommendation for patients with diabetes and hypertension (*American Diabetes Association Standards of Medical Care in Diabetes, 2004*)

LADUR Clinical Criteria for Federal Fiscal Year 2007										
Disease category	Disease subcategory	Meeting month	Issue							
			Overutilization	Underutilization	Therapeutic duplication	Duration of therapy	Undesired effect	Drug interaction	Drug-diagnosis precaution	Disease monitoring recommendation
CNS disorders	Sleep disorders	Dec-06	√		√	√	√	√		
	Behavioral health	Jan-07	√		√					
	ADD/ADHD	Feb-07, Mar-07	√							
	Pain disorders	Jul-07, Aug-07	√		√	√				
Gastrointestinal disorders	Peptic ulcer disease, GERD	Oct-06, Nov-06	√		√	√		√		
Respiratory disorders	Asthma management	May-07	√	√					√	
Cardiovascular disorders	Heart failure management	Apr-07		√						√
	Hypertension	Jun-07		√						
Endocrine disorders	Diabetes management	Sep-07		√					√	√

Providers' Responses to LADUR Clinical Intervention Mailings

A total of 4,422 LADUR clinical intervention mailings concerning 4,568 recipients were sent during federal fiscal year 2007. The rate of provider response to LADUR correspondence was **44 percent**. **33 percent** of the responders indicated that action would be taken based on the intervention. Positive responses suggest continued program acceptance and approval by the provider community.

A "Comments" area on the response form permits the prescriber to respond with additional information. The following pages of provider responses illustrate the range of additional specific recipient information received (Figures 5a, 5b, 5c, and 5d).

HYPERTENSION MANAGEMENT

CONSIDER DRUG THERAPY IF APPROPRIATE FOR THIS PATIENT WITH HYPERTENSION

148

PRODUCT NAME(S) 1) *Lisinopril 5mg PDS*
2) _____
3) _____
4) _____
5) _____

PROVIDER ID: _____
MEDICAID ID: _____
RX FILLED: _____

PROBLEM DESCRIPTION: REFERENCE NUMBER 40003 CYCLE DATE 200705
CONSIDER DRUG THERAPY IF APPROPRIATE FOR THIS PATIENT W/ HYPERTENSION
PLEASE CHECK YOUR RESPONSE AND COMMENT WHEN APPROPRIATE
 AWARE OF ISSUE / NO ACTION NECESSARY
 PLAN TO TAKE ACTION (D/C DRUG; CHANGE DOSE; ORDER LAB)
 PLAN CONSULTATION (W/PATIENT, RPH, OR MD)
 DATA ACCURACY (PATIENT, MD, OR DRUG HISTORY DATA)

COMMENTS: *Lisinopril 5mg po daily - new med.*

[Signature]

Lisinopril 5mg po daily - new med

Figure 5a. Provider Response to LADUR Correspondence

HEART FAILURE MANAGEMENT

- 1) MAY CONSIDER BETA-BLOCKER IF NOT CONTRAINDICATED
- 2) CAUTIOUS USE OF NSAID IN HEART FAILURE, INCREASED RISK OF SODIUM RETENTION

2a8

PROVIDER ID:
MEDICAID ID:
RX FILLED:

PRODUCT NAME(S) 1)
2)
3)
4)
5)

PROBLEM DESCRIPTION: REFERENCE NUMBER 36405 CYCLE DATE 200703
HEART FAILURE: MAY CONSIDER BETA-BLOCKER IF NOT CONTRAINDICATED
PLEASE CHECK YOUR RESPONSE AND COMMENT WHEN APPROPRIATE
 AWARE OF ISSUE / NO ACTION NECESSARY
 PLAN TO TAKE ACTION (D/C DRUG; CHANGE DOSE; ORDER LAB)
 PLAN CONSULTATION (W/PATIENT, RPH, OR MD)
 DATA ACCURACY (PATIENT, MD, OR DRUG HISTORY DATA)

Will start patient on Coreg CR 20mg once daily.

COMMENTS:
Will start patient on Coreg CR 20 q once daily

PRODUCT NAME(S) *1) MELOXICAM RX FILLED: 12/11/2006
*2) MELOXICAM 01/15/2007
*3) MELOXICAM 02/12/2007
*4) MELOXICAM 03/14/2007
5)

PROBLEM DESCRIPTION: REFERENCE NUMBER 36556 CYCLE DATE 200703
NSAID: CAUTIOUS USE IN HEART FAILURE, INCREASED RISK OF SODIUM RETENTION
PLEASE CHECK YOUR RESPONSE AND COMMENT WHEN APPROPRIATE
 AWARE OF ISSUE / NO ACTION NECESSARY
 PLAN TO TAKE ACTION (D/C DRUG; CHANGE DOSE; ORDER LAB)
 PLAN CONSULTATION (W/PATIENT, RPH, OR MD)
 DATA ACCURACY (PATIENT, MD, OR DRUG HISTORY DATA)

Will discontinue meloxicam.

COMMENTS:
Will discontinue meloxicam

Figure 5b. Provider Response to LADUR Correspondence

BEHAVIORAL HEALTH

CONCURRENT USE OF ANTIPSYCHOTIC AGENTS (OLANZAPINE AND RISPERIDONE)

148

PROVIDER ID:
 MEDICAID ID:
 RX FILLED: 10/20/2006
 11/29/2006
 10/20/2006
 11/29/2006

PRODUCT NAME(S) *1) RISPERIDONE
 *2) RISPERIDONE
 *3) OLANZAPINE
 *4) OLANZAPINE
 5)

PROBLEM DESCRIPTION: REFERENCE NUMBER 36193 CYCLE DATE 200612
 CONCURRENT USE OF ANTIPSYCHOTIC AGENTS (OLANZAPINE & RISPERIDONE)
 PLEASE CHECK YOUR RESPONSE AND COMMENT WHEN APPROPRIATE
 AWARE OF ISSUE / NO ACTION NECESSARY
 PLAN TO TAKE ACTION (D/C DRUG; CHANGE DOSE; ORDER LAB)
 PLAN CONSULTATION (W/PATIENT, RPH, OR MD)
 DATA ACCURACY (PATIENT, MD, OR DRUG HISTORY DATA)

COMMENTS:
 I WILL DISCUSS WITH PATIENT AND HIS MOTHER (CAREGIVER)
 OUR CONCERNS ABOUT POLYPHARMACY ON THEIR NEXT VISIT,
 AND POSSIBLY DISCONTINUE ONE ANTIPSYCHOTIC MEDICATION,
 I WILL ALSO ORDER LABS.

I will discuss with patient and his mother (caregiver) our concerns about polypharmacy on their next visit, and possibly discontinue one antipsychotic medication. I will also order labs.

04/13/07

Figure 5c. Provider Response to LADUR Correspondence

SLEEP DISORDERS

CONCURRENT CHOLINESTERASE INHIBITOR WITH ANTICHOLINERGIC AGENT (DIPHENHYDRAMINE)

PRODUCT NAME(S) *1) DONEPEZIL HCL
 *2) DIPHENHYDRAMINE HCL
 3)
 4)
 5)

PROVIDER ID:
 MEDICAID ID:
 RX FILLED: 11/01/2006
 11/06/2006

PROBLEM DESCRIPTION: REFERENCE NUMBER 36370 CYCLE DATE 200611
 CONCURRENT CHOLINESTERASE INHIBITOR W/ ANTICHOLINERGIC RX (DIPHENHYDRAMINE
 PLEASE CHECK YOUR RESPONSE AND COMMENT WHEN APPROPRIATE
 AWARE OF ISSUE / NO ACTION NECESSARY
 PLAN TO TAKE ACTION (D/C DRUG; CHANGE DOSE; ORDER LAB)
 PLAN CONSULTATION (W/PATIENT, RPH, OR MD)
 DATA ACCURACY (PATIENT, MD, OR DRUG HISTORY DATA)
 COMMENTS:

Will forward to the nursing home
 to log into the consultant RPh list.
 I also noticed the oxybutin which
 is has high anticholinergic properties also

[Handwritten signature]

Will forward to the nursing home to log into the consultant pharmacist list. I also noticed the oxybutin which has high anticholinergic properties also.

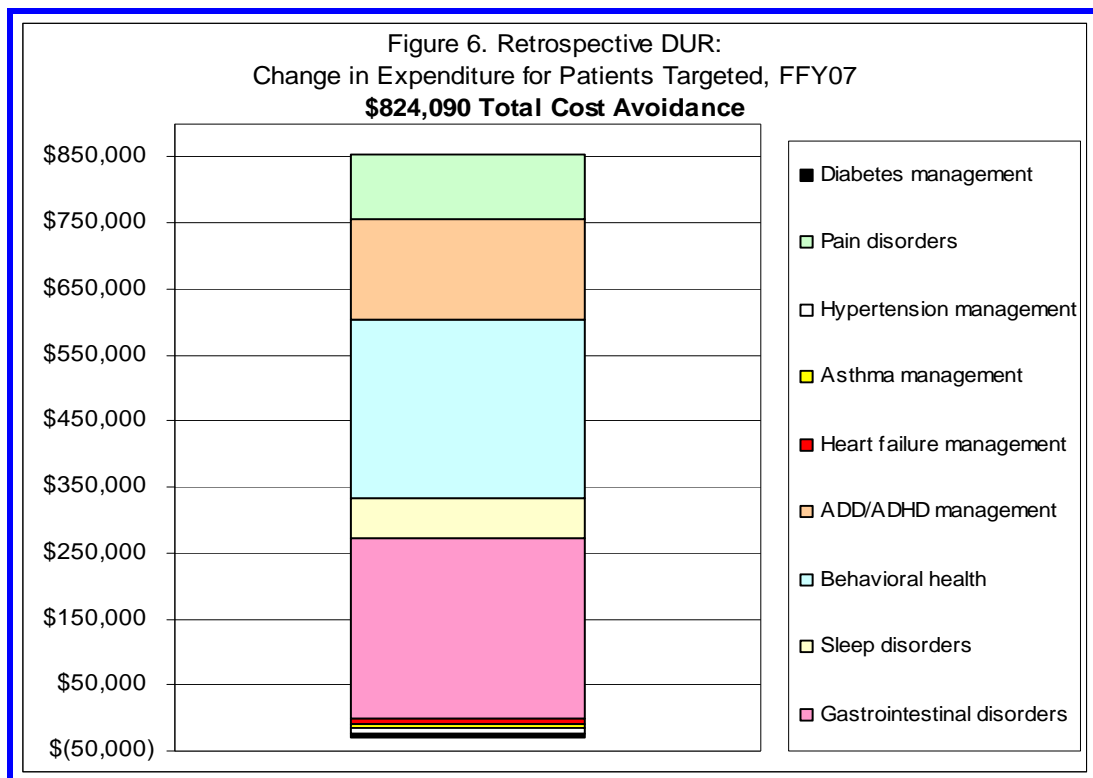
Figure 5d. Provider Response to LADUR Correspondence

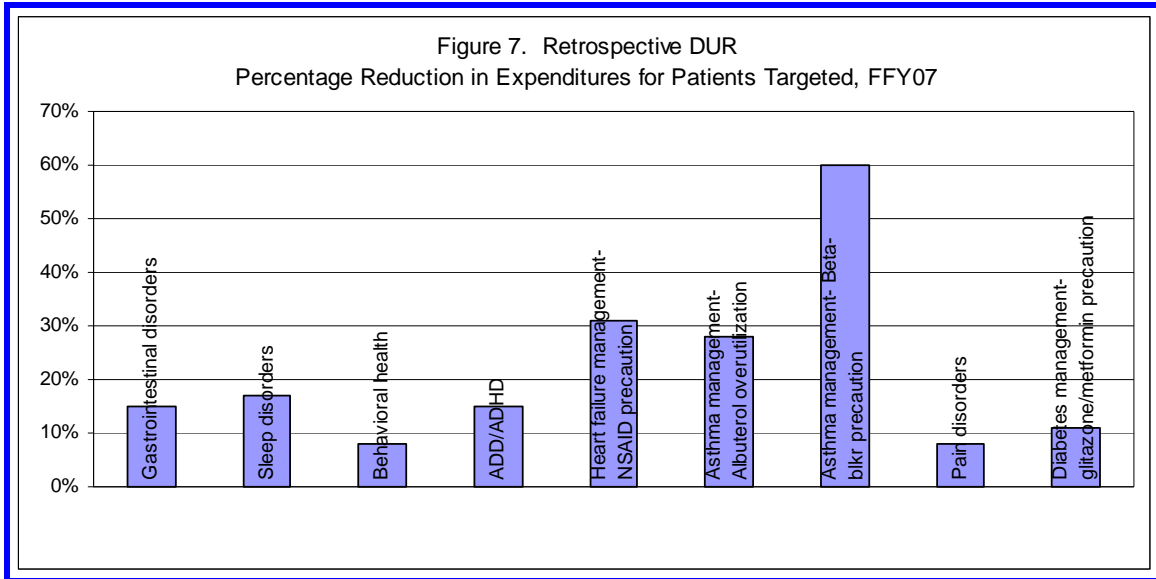
Retrospective DUR Impact Report

Cost Analysis Overview

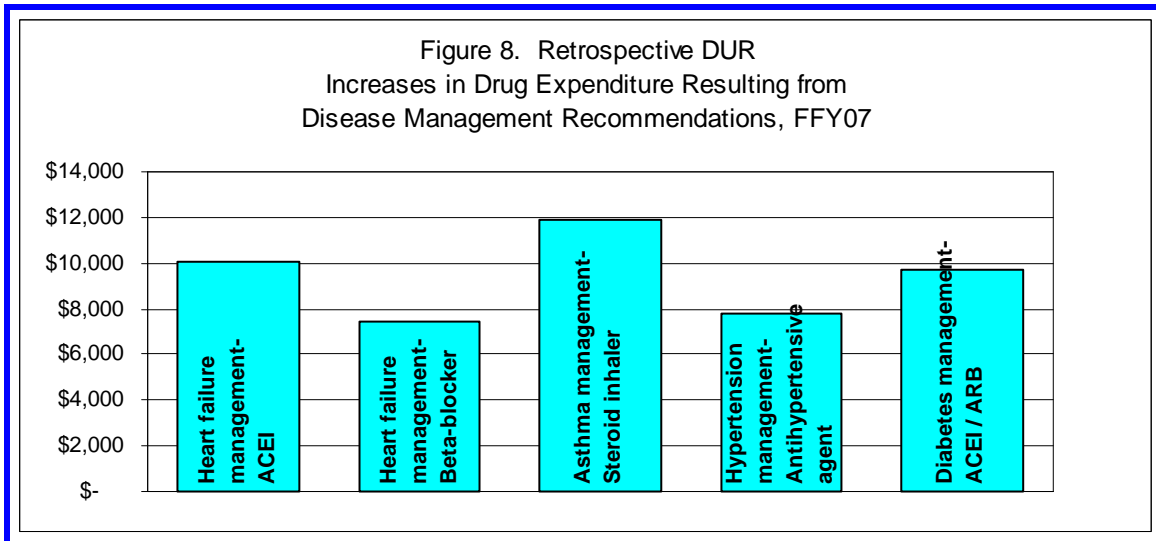
- Analysis of the impact of LADUR interventions traditionally focused on cost avoidance. However, as the LADUR program continues to implement clinical interventions based on disease management guidelines, it is expected that initial increases in pharmacy expenditures will result in overall cost avoidance through improved disease management.
 - For example, a LADUR intervention resulting in initiation of a steroid inhaler to a patient with uncontrolled asthma symptoms would be expected to increase pharmacy expenditures for this patient while decreasing emergency services (Page 24, Outcomes in Asthma Management).⁵
- Pharmacy expenditures have been increasing nation-wide due to many factors, including but not limited to newer drug therapies, the increasing costs of generic products and direct-to-consumer advertising. The LADUR program effectively assists in overall pharmacy cost containment.
- LADUR operational costs are included in the fixed price per paid claim to the Fiscal Intermediary (FI). LADUR procedures such as criteria evaluation, recipient profile processing and review, and provider correspondence are accomplished by the efforts of one full-time FI pharmacist, FI personnel, the Louisiana Drug Utilization Review Board, the Regional Drug Utilization Review Committees and DHH personnel.

Drug expenditures analysis was based on anticipated drug utilization modifications as a result of recipient-specific retrospective LADUR education and interventions (Section Two, CMS Instructions: Program Evaluation / Cost Savings Estimates, Attachment 6). **Cost avoidance** for federal fiscal year 2007 interventions projected to **\$824,090** in the therapeutic classes that created the LADUR exception criteria (Figure 6). Drug utilization reductions averaged **11 percent** for the targeted recipients in the drug classes reviewed (Figure 7 and Appendix D).





Initial increases in pharmacy expenditures (Figure 8) are expected to result in overall cost avoidance through improved disease management.



Summaries of outcomes measures evaluating the average number of physician office visits, emergency room visits and hospital admissions before and after LADUR interventions were implemented are included in the asthma management (page 24), heart failure management (page 27) and diabetes management (page 31) sections of this report.

LADUR Program Interventions and Analysis

This section provides a description of the LADUR program focus for each disease category and subcategory in federal fiscal year 2007, along with expenditure and cost avoidance analysis. The drug classification system is defined in Appendix E.

Sleep disorders**Sedative-hypnotic agents**

Sedative-hypnotic agent prescriptions (114,791) accounted for 1 percent (\$7,683,722) of the drug budget for federal fiscal year 2007. This class (H2E, H8B) was reviewed in the December 2006 meetings.

Adverse CNS effects and tolerance have been associated with the overutilization of sedative-hypnotic agents. The criteria focused on the appropriate use of these drugs and targeted the following:

- Prolonged, continuous use of sedative-hypnotic agents.
- Potential for additive adverse CNS effects when using sedative-hypnotic agents concurrently.
- Use of sedative-hypnotic agents above recommended elderly dosage guidelines.
- Possibility of stimulant-induced insomnia. Dose adjustment may be considered.
- Use of ramelteon with fluvoxamine.
- Use of diphenhydramine with cholinesterase inhibitors.

Educational information addressing potential withdrawal symptoms associated with abrupt discontinuation of these drugs was included in the provider mailing along with the criteria and recipient profile.

448 intervention mailings were sent to providers of patients with sleep disorders.

- Annual cost avoidance for this intervention is \$61,952. The average patient reduction in sedative-hypnotic agent expenditure is 17 percent (Figure 7).
- Reduction in stimulant utilization by patients targeted for stimulant-induced insomnia averaged 9%.

Behavioral disorders

Antipsychotic agents

Antipsychotic agent prescriptions (240,834) accounted for 8.5 percent (\$65,838,725) of the drug budget for federal fiscal year 2007. This class (H2G, H7O, H7P, H7R, H7S, H7T, H7U, H7X, H7Z) was reviewed in the January 2007 meetings.

The behavioral disorders review focused on the prescribing of multiple antipsychotic agents and agents used above the maximum recommended dose. The following issues were considered in the criteria development process:⁶

- Data on the safety and efficacy of using psychotropic drugs in combination is very limited.
- Combination therapies that are very complicated or produce intolerable side effects will often result in the patient disengaging from treatment.
- Complications and dangerous situations can arise when there are multiple practitioners prescribing for one patient.
- Monotherapy trials should be attempted before consideration of combination therapy.
- Monotherapy trial durations should be long enough to assess drug effectiveness before switching to another agent.
- If a monotherapy trial has been determined ineffective, a *temporary* cross-titration period or overlap and taper period is expected when switching to another agent.

511 intervention mailings were sent to providers regarding antipsychotic agent prescriptions.

- Annual cost avoidance for this intervention is \$269,480. The average patient reduction in antipsychotic agent expenditure is 8 percent (Figure 7).

Focused Review: Zispraside bioavailability

Zispraside utilization above the maximum dose recommendation initiated a focused review. Concern arose that higher doses may be prescribed to recipients who are not taking the drug with food. Food substantially increases the bioavailability of zispraside.

Phonecall interventions targeting 12 recipients recommended that prescribers and pharmacists re-educate their patients on the importance of taking zispraside with food and resulted in a 33% dose reduction and a 25% change in drug therapy.

Focused Review: Attention-deficit/hyperactivity disorder (ADHD)

Stimulant and amphetamine prescriptions (358,570) accounted for 5.3 percent (\$41,276,282) of the drug budget for federal fiscal year 2007. This class (H2A, H2V, H2Y, J5B) was reviewed in the February and March 2007 meetings.

A review of the diagnostic accuracy of ADHD in children under the age of six focused on the difficulties in diagnosis and treating young children. In February and March 2007, 1,245 intervention mailings were sent to physicians prescribing stimulants to children. The goal was to collect information related to comprehensive assessment, diagnostic accuracy and routine re-evaluation for these children.

Annual cost avoidance for this intervention is \$152,852. The average patient reduction in stimulant expenditure is 15 percent (Figure 7).

Pain disorders

Non-steroidal anti-inflammatory agents, Narcotic analgesics, Anti-anxiety drugs and Skeletal muscle relaxants

Non-steroidal anti-inflammatory agent prescriptions (285,791) accounted for 0.8 percent (\$6,031,229) of the drug budget for federal fiscal year 2007.

Narcotic analgesic prescriptions (619,931) accounted for 2.9 percent (\$22,523,201) of the drug budget for federal fiscal year 2007.

Anti-anxiety drugs (259,847) accounted for 0.6 percent (\$5,006,481) of the drug budget for federal fiscal year 2007.

Skeletal muscle relaxants (159,841) accounted for 0.7 percent (\$5,132,623) of the drug budget for federal fiscal year 2007.

These classes (H2F, H3A, H3B, H3D, H3N, H6H, S2B, S2D, S2E, S2P) were reviewed in the July and August 2007 meetings.

Toxicities associated with the use of non-steroidal anti-inflammatory agents have been well documented. Criteria targeted the following:

- Potential for additive adverse effects when using non-steroidal anti-inflammatory agents, including traditional non-steroidal anti-inflammatory agents, COX-2 selective agents and aspirin, concurrently.
- Use of non-steroidal anti-inflammatory agents above the recommended adult dose.
- Use of ketorolac beyond manufacturer-documented five-day duration of therapy.
- Use of COX-2 selective agents when a traditional non-steroidal anti-inflammatory agent could be safely and effectively used.

Discussions about the appropriate management of chronic pain have received much attention in recent years. The focus of the review was to provide information to prescribers regarding safe and appropriate use of drugs prescribed for pain disorders:

- Potential overutilization of narcotics, anxiolytics and / or muscle relaxants.
- Use of specified analgesics above recommended adult dose.
- Use of specified analgesics in children.

The overutilization criteria were also used to identify recipients that may have developed aberrant drug-taking behaviors or display "shopping" patterns for medications. Identified recipients were referred to the DHH with a recommendation that placement in the Lock-in Program may be beneficial.

It has been reported that continuous daily doses of over four grams of acetaminophen may result in hepatotoxicity. Prescribers of narcotic-acetaminophen combination products approaching or exceeding this dose were notified of this potential problem.

670 intervention mailings were sent to providers regarding prescription drug treatment of pain disorders.

- Annual cost avoidance for non-steroidal anti-inflammatory agents is \$39,059. The average patient reduction in non-steroidal anti-inflammatory agent expenditure is 56 percent (Figure 7).
- Annual cost avoidance for narcotic analgesics is \$26,307. The average patient reduction in narcotic analgesic expenditure is 3 percent (Figure 7).
- Annual cost avoidance for anti-anxiety drugs is \$4,304. The average patient reduction in anti-anxiety agent expenditure is 7 percent (Figure 7).
- Annual cost avoidance for muscle relaxants is \$29,345. The average patient reduction in muscle relaxant expenditure is 16 percent (Figure 7).

The reported cost avoidance figures do not include measurements of cost avoidance realized in the following categories:

- **203 patients** were referred to the Lock-in Program for potential enrollment.
 - It has been shown that recipients enrolled in the Lock-in Program experience a decrease in narcotic analgesic and total drug expenditures.
- Special intervention mailings were sent to prescribers of **16 patients** addressing potential acetaminophen toxicity.

Gastro-intestinal disorders

Gastric acid reducing agents

Gastric acid reducing agents prescriptions (277,382) accounted for 4.4 percent (\$34,465,385) of the drug budget for federal fiscal year 2007. This class (D4E, D4K, S2P) was reviewed in the October and November 2006 meetings.

The focus of the gastro-intestinal disorders criteria was the appropriate use of drugs used to treat PUD and GERD. The criteria targeted the following:

- Prescriptions for a combination of proton pump inhibitors (PPI), histamine-2 receptor antagonists (H2R), or sucralfate.
- Prescriptions for treatment-level doses of these agents for a period beyond the recommended duration of therapy for acute disorders.
- Prescriptions for these agents at doses above the maximum recommended for conditions other than Zollinger-Ellison syndrome or other pathological hypersecretory conditions.
- Prescriptions for ketoconazole, itraconazole, or indinavir concurrently with PPIs or H2Rs. These drugs require an acidic stomach environment for dissolution.

Along with the criteria and recipient profile, educational information to the provider was included describing the criteria in more detail.

1,128 intervention mailings were sent to providers regarding prescriptions for gastric acid reducing agents.

- Annual cost avoidance in this therapeutic class is \$271,076. The average patient reduction in gastric acid reducing agents expenditure is 15 percent (Figure 7).

Asthma management

Guidelines for appropriate treatment of asthma were reviewed in the May 2007 meetings.

Asthma management can reduce or halt the progression of the disease and improve symptoms and quality of life in patients with asthma. The LADUR Program utilized nationally recognized guidelines to provide valuable data regarding the management of patients with asthma.⁷ The criteria focused on the following:

- Prescribing a steroid inhaler for patients with persistent asthma.
- Recommending re-education of proper inhaler use with patients who are overutilizing albuterol inhalers.
 - These patients may require initiation or intensification of steroid inhaler.
- Precautions with use of non-selective beta-blockers for patients with asthma.

Educational information to the provider summarizing the criteria was included along with the recipient's profile.

A total of **121 intervention mailings** regarding asthma management were sent to providers.

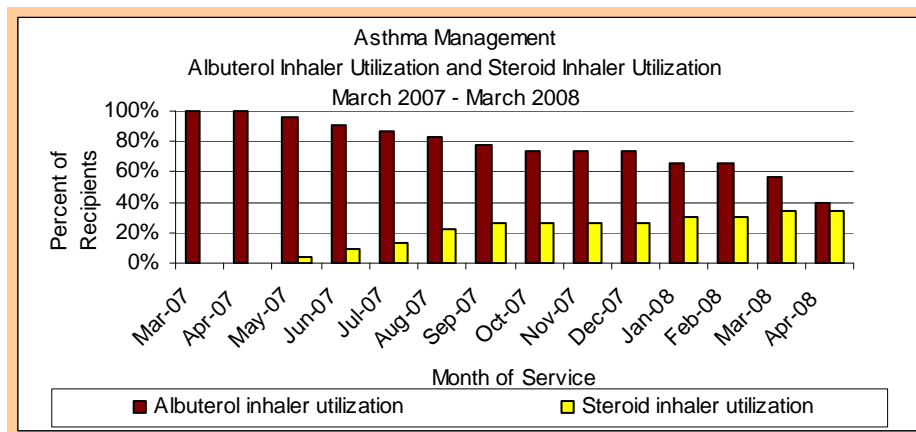
ASTHMA MANAGEMENT INTERVENTION RESULTS

Albuterol inhaler overutilization

Clinical intervention mailings were sent to the providers of 24 recipients with apparent uncontrolled asthma as identified by overutilization of albuterol inhalers. The intervention recommended initiation of steroid inhaler or intensification of existing steroid inhaler therapy. Also recommended was patient or caregiver education on proper inhaler use.

Additional phone-call interventions targeted 30 providers who did not respond to the initial intervention mailing.

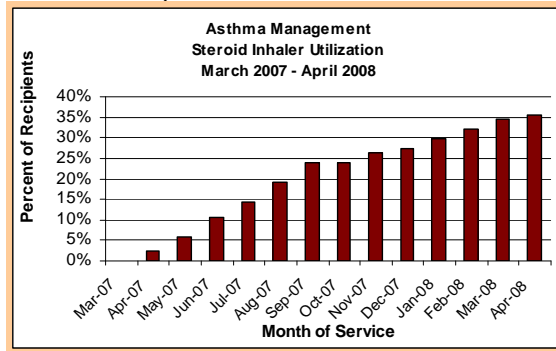
Of these 24 recipients, 23 remained Medicaid eligible in March 2008. Of the 23 recipients, 8 (35%) have an indication of a positive steroid inhaler intervention (initiation of steroid inhaler) and 14 (61%) have an indication of a positive albuterol intervention (reduction in albuterol inhaler utilization).



- **Annual cost avoidance for beta-agonist expenditure is \$4,291. The average patient reduction in beta-agonist expenditure is 28 percent (Figure 7).**

Steroid inhaler recommendation

Clinical intervention mailings recommending steroid inhalers were sent to the providers of 86 recipients with asthma. Of these 86 recipients, 84 remained Medicaid eligible in March 2008. Of the 84 recipients, 30 (36%) have an indication of a positive intervention (initiation of steroid inhaler).

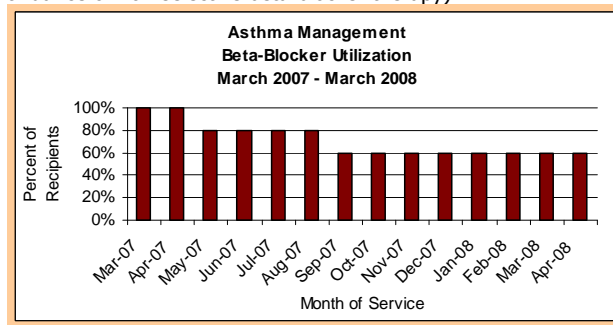


- **An increase in steroid inhaler prescription expenditure by \$11,921 (annualized) reflects acceptance of the clinical interventions (Figure 8).**

Beta-blocker precaution

Clinical intervention mailings recommending discontinuance of non-selective beta-blocker therapy were mailed to the providers of 6 recipients with asthma.

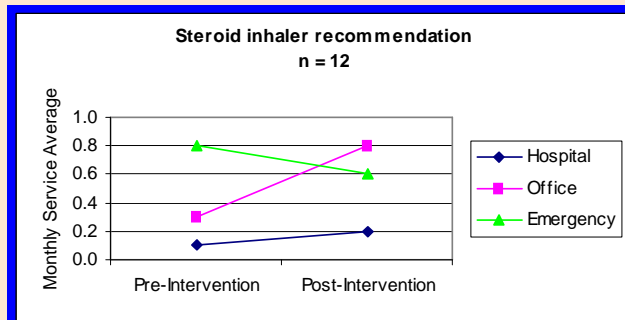
Of these 6 recipients, 5 remained Medicaid eligible in March 2008. Of these 5 recipients, 3 (60%) have an indication of a positive intervention (discontinuance of non-selective beta-blocker therapy).



- **Annual cost avoidance for beta-blocking agents is \$1,683. The average patient reduction in beta-blocking agent expenditure is 60 percent (Figure 7).**

OUTCOMES MEASUREMENTS IN ASTHMA MANAGEMENT

Using data from the asthma management review of April 2006, the following changes in average monthly professional services were observed:⁵



Heart failure management

Guidelines for appropriate treatment of heart failure were reviewed in the April 2007 meetings.

Heart failure management can reduce the progression of the disease and result in improved symptoms and quality of life. The LADUR program utilized nationally recognized guidelines to provide valuable data regarding the management of patients with heart failure.⁸

The criteria focused on the following:

- Prescribing an angiotensin converting enzyme inhibitor (ACEI) in patients with heart failure due to left ventricular systolic dysfunction unless a contraindication is present or the patient has been unable to tolerate drug treatment.
- Prescribing a beta-adrenergic blocking agent (beta-blocker) in patients with stable heart failure due to left ventricular systolic dysfunction unless a contraindication is present or the patient has been unable to tolerate drug treatment.
- Avoiding the use of non-steroidal anti-inflammatory agents (NSAID) in patients with heart failure.

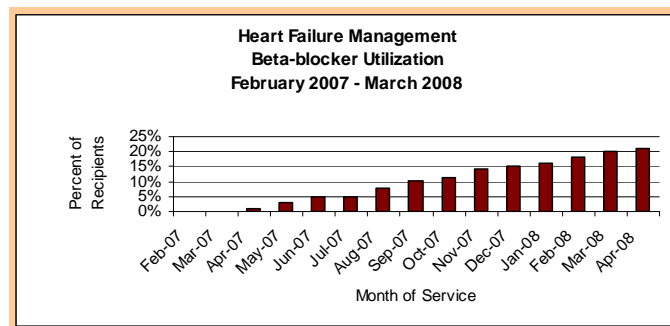
Along with the criteria and recipient profile, educational information to the provider was included addressing selected clinical issues regarding heart failure management.

A total of **282 intervention mailings** regarding heart failure management were sent to providers.

HEART FAILURE MANAGEMENT INTERVENTION RESULTS

Beta-blocker recommendation

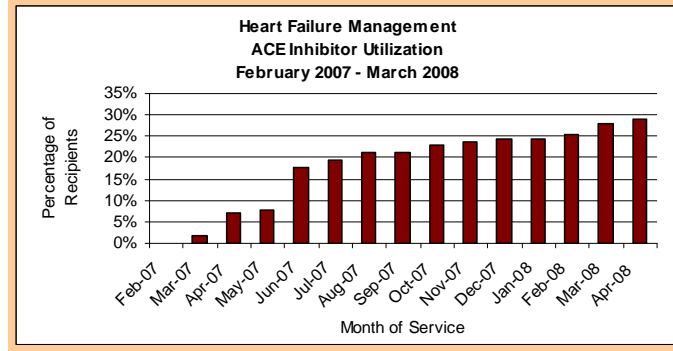
Clinical intervention mailings recommending initiation of beta-blocker therapy were sent to the providers of 123 recipients with heart failure. Of these 123 recipients, 99 remained Medicaid eligible in March 2008. Of the 99 recipients, 21 (21%) have an indication of a positive intervention (initiation of beta-blocker therapy).



- **An increase in beta-blocker prescription expenditure by \$7,406 (annualized) reflects acceptance of the clinical interventions (Figure 8).**

ACEI recommendation

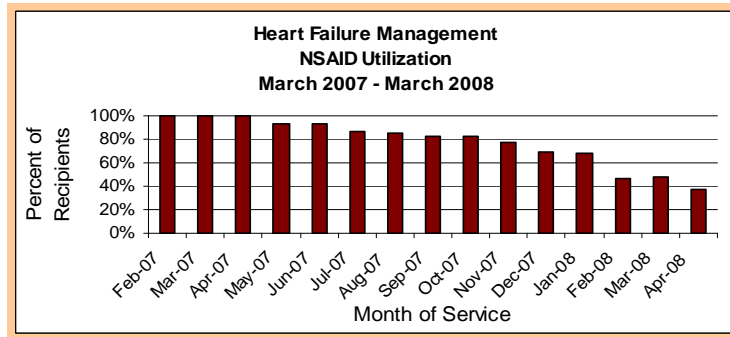
Clinical intervention mailings recommending initiation of ACEI therapy were sent to the providers of 133 recipients with heart failure. Of these 133 recipients, 114 remained Medicaid eligible in March 2008. Of the 114 recipients, 33 (29%) have an indication of a positive intervention (initiation of ACEI therapy).



- **An increase in ACEI prescription expenditure by \$10,095 (annualized) reflects acceptance of the clinical interventions (Figure 8).**

NSAID overutilization

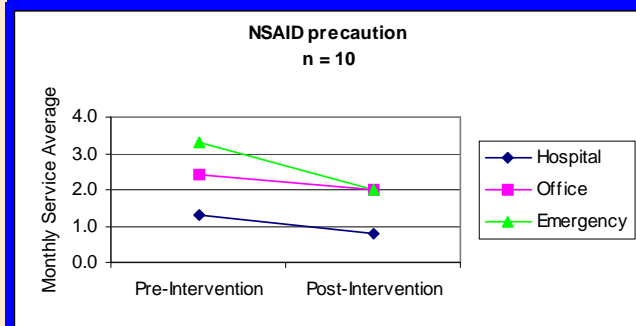
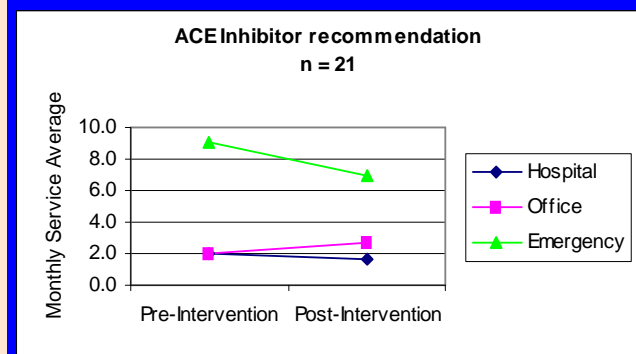
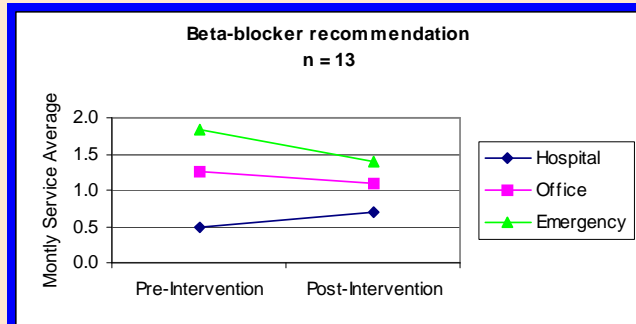
Clinical interventions recommending discontinuance of NSAID therapy were sent to the providers of 73 recipients with heart failure. Of these 73 recipients, 62 remained Medicaid eligible in March 2008. Of the 62 recipients, 39 (63%) have an indication of a positive intervention (discontinuance of NSAID therapy).



- **Annual cost avoidance for NSAID agents is \$7,877. The average patient reduction in non-steroidal anti-inflammatory agent expenditure is 31 percent (Figure 7).**

OUTCOMES MEASUREMENTS IN HEART FAILURE MANAGEMENT

Using data from the heart failure management review of July 2006, the following changes in average monthly professional services were observed:⁵



Hypertension management

Guidelines for appropriate treatment of hypertension were reviewed in the June 2007 meetings.

Uncontrolled hypertension is a major risk factor for serious cardiovascular and renal disease. The LADUR Program utilized nationally recognized guidelines to provide valuable data regarding the management of patients with hypertension.⁹ Guidelines suggest that treatment for patients with Stage 1 and Stage 2 hypertension include an antihypertensive agent and lifestyle modifications.

The intervention targeted patients with hypertension untreated by pharmacological agents and **recommended initiation of an antihypertensive agent, along with lifestyle modifications.**

A summary of the national guidelines for the treatment of hypertension was included along with the criteria and recipient profile.

141 intervention mailings regarding hypertension management were sent to providers.

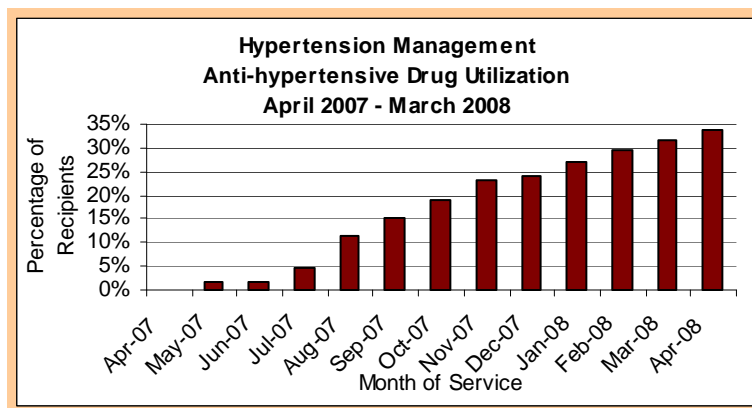
HYPERTENSION MANAGEMENT INTERVENTION RESULTS

Anti-hypertensive drug recommendation

Clinical intervention mailings recommending initiation of anti-hypertensive drug therapy were sent to the providers of 141 recipients with hypertension.

Additional phone-call interventions targeted 55 Medicaid providers who did not respond to the initial intervention mailing.

Of these 141 recipients, 133 remained Medicaid eligible in March 2008. Of the 133 recipients, 45 (34%) have an indication of a positive intervention (initiation of anti-hypertensive drug therapy).



- **An increase in anti-hypertension agent expenditure by \$7,772 (annualized) reflects acceptance of the clinical interventions (Figure 8).**

Outcomes studies evaluating overall patient care resulting from the hypertension management interventions are in progress.

Diabetes management

Guidelines for appropriate treatment of diabetes were reviewed in the September 2007 meetings.

Unmanaged diabetes contributes to stroke, blindness, cardiac and renal disease, amputation and nerve damage. The LADUR Program utilized nationally recognized guidelines to provide valuable data regarding the management of patients with diabetes¹⁰ and focused on the following:

- Recommendation for glycosolated hemoglobin (A1C) testing in patients with diabetes.
- Prescribing for metformin for diabetes management if not contraindicated.
- Prescribing an angiotensin converting enzyme inhibitor (ACEI) or angiotensin 2 receptor blocker (ARB) for patients with hypertension and diabetes unless a contraindication is present or the patient has been unable to tolerate treatment.
- Precautions with use of thiazolidinediones and metformin for patients with heart failure.

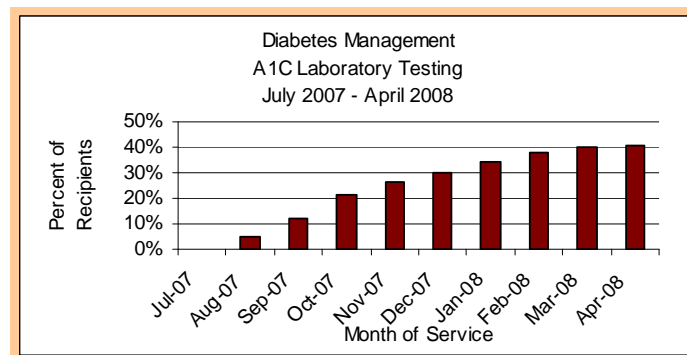
Along with the criteria and recipient profile, educational information to the provider was included addressing selected issues regarding diabetes management.

A total of **378 intervention mailings** regarding diabetes management were sent to providers.

DIABETES MANAGEMENT INTERVENTION RESULTS

A1C Monitoring Recommendation

Clinical intervention mailings recommending A1C monitoring were sent to the providers of 358 recipients with diabetes. Of these 358 recipients, 320 remained Medicaid eligible in April 2008. Of the 320 recipients, 130 (41%) have an indication of a positive intervention (A1C laboratory testing).

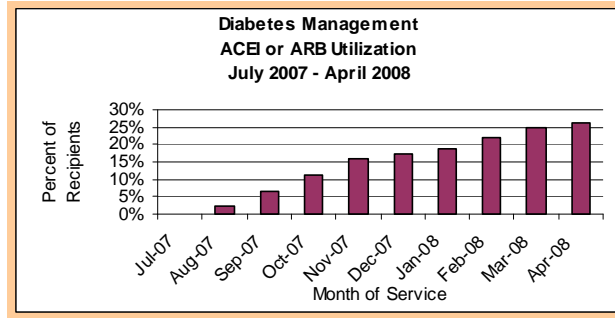


ACEI or ARB recommendation

Clinical intervention mailings recommending initiation of ACEI or ARB therapy were sent to the providers of 262 recipients with hypertension and diabetes.

Additional phone-call interventions targeted 42 Medicaid providers who did not respond to the initial intervention mailing.

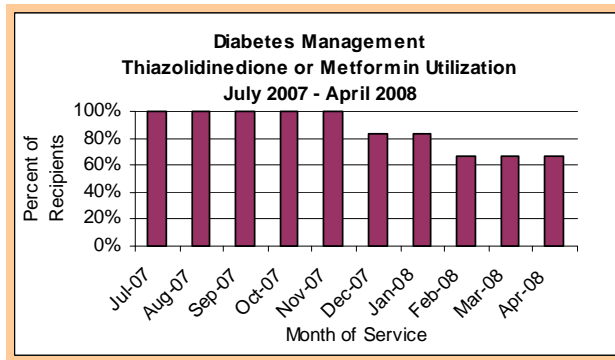
Of these 262 recipients, 235 remained Medicaid eligible in April 2008. Of the 235 recipients, 62 (26%) have an indication of a positive intervention (initiation of ACE-inhibitor or AR blocker therapy).



- **An increase in ACEI and ARB prescription expenditure by \$9,723 (annualized) reflects acceptance of the clinical interventions (Figure 8).**

Thiazolidinedione and Metformin overutilization

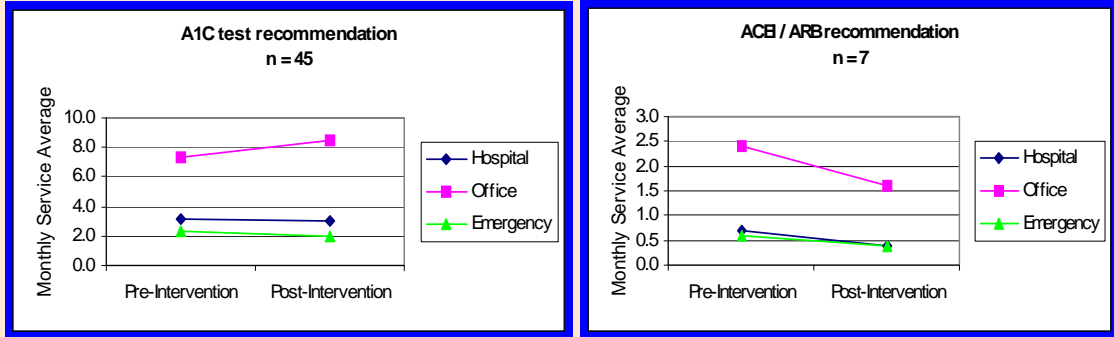
Clinical interventions recommending discontinuance of thiazolidinedione or metformin therapy were sent to the providers of 30 recipients with heart failure. Of these 30 recipients, 12 remained Medicaid eligible in April 2008. Of the 12 recipients, 4 (31%) have an indication of a positive intervention (discontinuance of thiazolidinedione or metformin therapy).



- **Annual cost avoidance for thiazolidinedione and metformin prescriptions is \$2,783. The average patient reduction in these drug classes is 11% (Figure 7).**

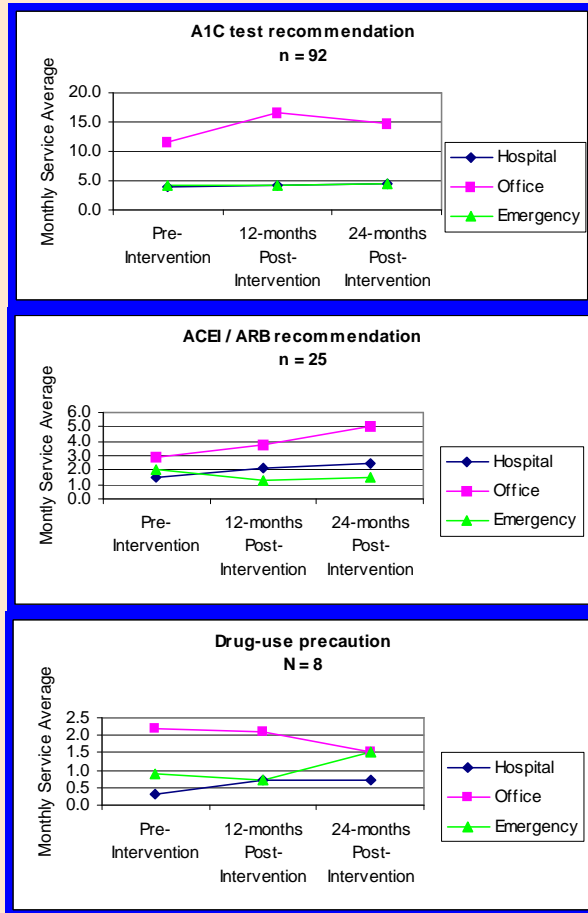
OUTCOMES MEASUREMENTS IN DIABETES MANAGEMENT

Using data from the diabetes management reviews of August 2006, the following changes in average monthly professional services were observed:⁵



OUTCOMES MEASUREMENTS IN DIABETES MANAGEMENT

Using data from the diabetes management reviews of August and September 2005, the following changes in average monthly professional services were observed:⁵



LOUISIANA DRUG UTILIZATION REVIEW (DUR) BOARD

The criteria used in the prospective DUR and retrospective LADUR programs are reviewed and approved by the **Louisiana Drug Utilization Review Board**. This DHH-appointed board is composed of three physicians, four pharmacists, and one representative of the pharmaceutical manufacturing industry (Appendix C).

The Louisiana Drug Utilization Review Board held three meetings during federal fiscal year 2007. The retrospective DUR (LADUR) programming capabilities have been enhanced, which allows for re-directed focus from a drug therapy approach to a disease management approach. Continual improvement and updating of the programs were observed through implementation of additional diabetes management and hypertension management criteria.

The activities of the Regional LADUR Committees were presented and discussed. New prospective DUR edits were approved in the pain disorders, gastrointestinal disorders and behavioral health categories. Retrospective criteria updates were approved for drugs in the behavioral health and gastrointestinal disorders categories.

Additional clinical interventions in the hypertension management and asthma management categories were approved and implemented. These alternative approaches involved phone calls to providers addressing non-responders to the initial clinical interventions. In the behavioral health category, phone call interventions were made to providers to assure proper zispradone administration.

Meeting minutes for this period and the Louisiana DUR Board By Laws may be found in Section Two, CMS Instructions: Louisiana Drug Utilization Review Board Activities, Attachment 4.

PLANS FOR 2007-2008

Education

- Continue to provide educational Disease State Management publications.
- Continue to publish Educational Articles in the Provider Update Newsletter.
- Promote the use of the electronic Clinical Data Inquiry (e-CDI) feature of the Louisiana Medicaid website (www.lamedicaid.com).

Prospective Drug Utilization Review

- Continue to develop prospective clinical edits based on retrospective DUR experience.
- Implement additional prospective clinical edits as recommended by the Drug Utilization Review Board.

Retrospective Drug Utilization Review

- Evaluate outcomes measurements of overall patient care resulting from disease-focused drug utilization review interventions.
- Continue to develop criteria based on disease management principles.
- Explore new therapeutic classes for DUR criteria based upon clinical issues of concern.
- Update current DUR criteria with new drugs and current clinical practice guidelines.
- Explore alternative methods of reaching targeted recipients and providers.
- Test and implement major programming enhancements allowing additional criteria flexibility and reporting capabilities.

Lock-in Program

- Investigate options in implementing a Medication Therapy Management (MTM) initiative within the Lock-in Program.

¹ Blake, Sandra. A Look at the Louisiana Medicaid Lock-in Program: Its Effect on Health Services Utilization. Louisiana Medicaid *Provider Update* Newsletter. August 1999.

² Med-Vendor Report

³ MW-M-01

⁴ Data Warehouse

⁵ Outcomes analyses for 2005 and 2006 DUR interventions are subject to the following limitations:

- Only disease-specific hospital admissions, professional office visits and emergency room visits, with a primary or secondary diagnosis of the disease-specific and relevant ICD-9-CM codes, were measured.
- Only recipients with Medicaid eligibility in all but two months from the cycle date through March 2008 and remaining eligible in March 2008 were included in the analysis.
 - As a result of the Medicare Prescription Drug, Improvement and Modernization Act, effective January 1, 2006, full benefit dual eligible Medicaid recipients no longer received pharmacy benefits and were excluded from this outcomes measurement report.
- Only recipients with an address in a non-disaster-identified parish were included.
 - Therefore, recipients directly affected by hurricane disasters of 2005 were excluded from this outcomes measurement report.
- The resulting population is small; therefore individual recipient variations can profoundly affect outcomes measures.
- Only claims processed through the data extraction month of April 2008 were included in the analysis.
- These are one-group pre-post analysis with no control group. While data may suggest certain outcomes of DUR interventions, other causal factors may have been present and cannot be ruled out.

⁶ Paraxel, Polypharmacy of psychotropic drugs: A critical discussion. *Mental Health Issues Today*, 2003,6(3)

⁷ Expert Panel Report 2- Guidelines for Diagnosis and Management of Asthma (NIH/NHLBI)

⁸ Hunt SA, Baker DW, Chin MH, Cinquegrani MP, Feldman AM, Francis GS, Ganiats TG, Goldstein S, Gregoratos G, Jessup MI, Noble RJ, Packer M, Silver MA, Stevenson LW. ACC/AHA guidelines for the evaluation and management of chronic heart failure in the adult: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee to Revise the 1995 Guidelines for the Evaluation and Management of Heart Failure). 2001.

⁹ <http://www.nhlbi.nih.gov/guidelines/index.htm>

¹⁰ American Diabetes Association: Standards of Medical Care in Diabetes. *Diabetes Care*, Volume 27, Supplement 1, January 2004- http://care.diabetesjournals.org/cgi/content/full/27/suppl_1/s15

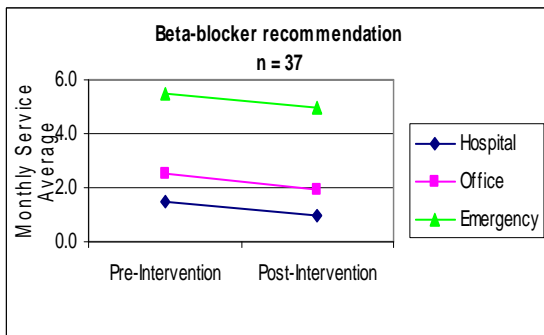
Appendix F Outcomes Measurements for FFY 2005 and FFY 2006

Outcomes analyses for 2005 and 2006 DUR interventions are subject to the following limitations:

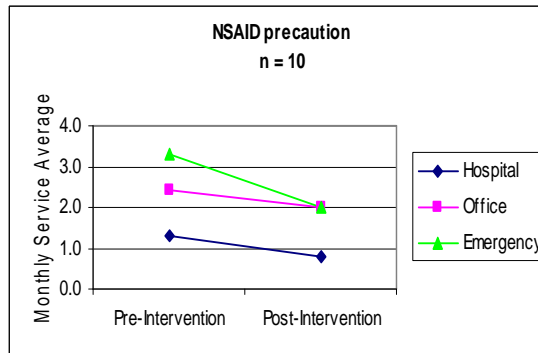
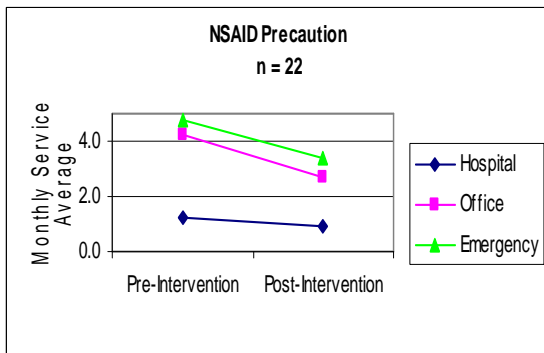
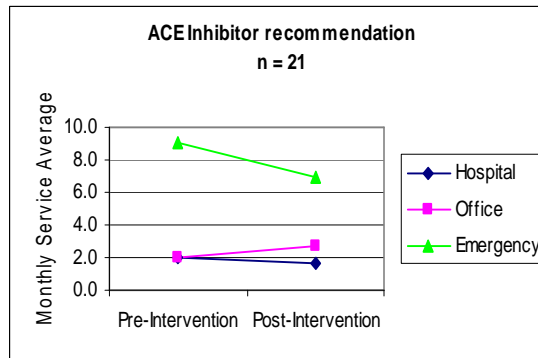
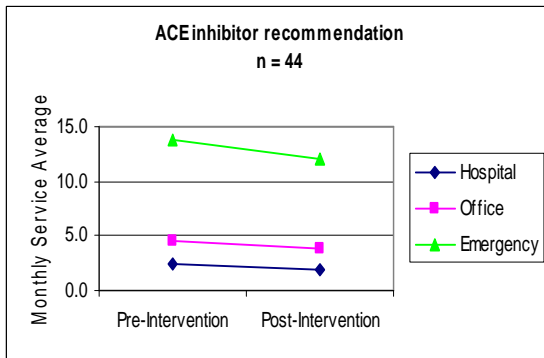
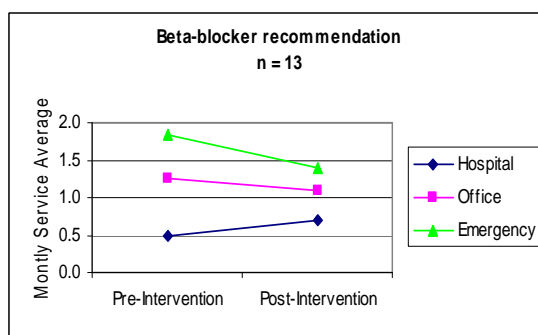
- Only disease-specific hospital admissions, professional office visits and emergency room visits, with a primary or secondary diagnosis of the disease-specific and relevant ICD-9-CM codes, were measured.
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- Only claims processed through the data extraction month of April 2008 were included in the analysis.
- These are one-group pre-post analysis with no control group. While data may suggest certain outcomes of DUR interventions, other causal factors may have been present and cannot be ruled out.

HEART FAILURE MANAGEMENT, CYCLE DATE JUNE 2006

All patients with intervention mailing



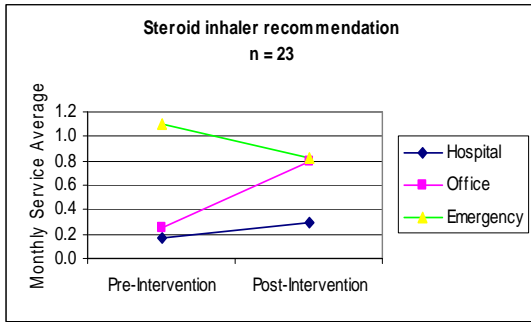
Only patients with positive interventions



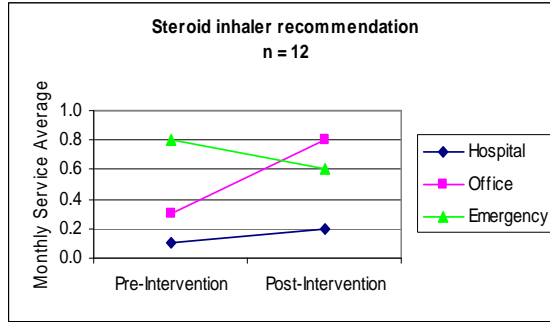
**Appendix F
Outcomes Measurements for FFY 2005 and FFY 2006**

ASTHMA MANAGEMENT, CYCLE DATE MARCH 2006

All patients with intervention mailing

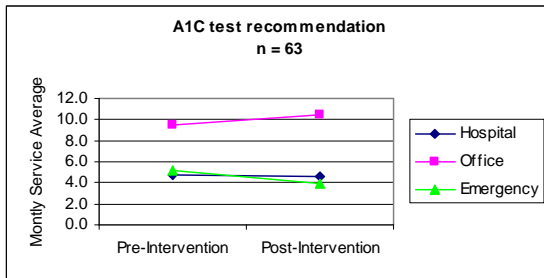


Only patients with positive interventions

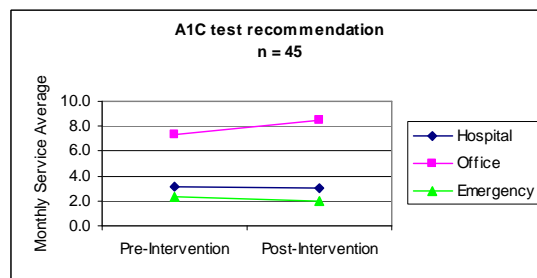


DIABETES MANAGEMENT, CYCLE DATE JULY 2006

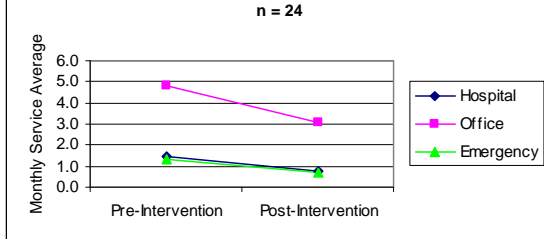
All patients with intervention mailing



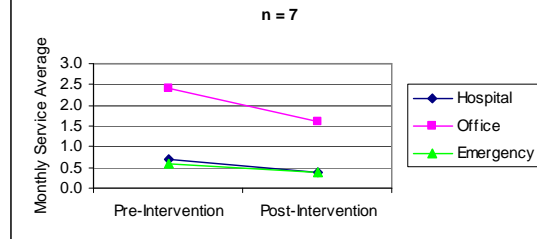
Only patients with positive interventions



All patients with intervention mailing



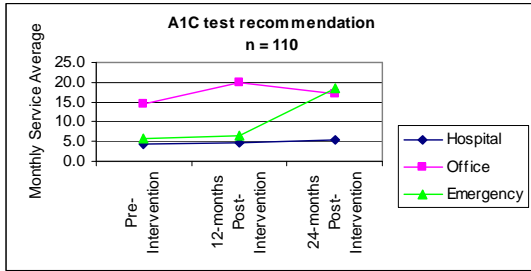
Only patients with positive interventions



**Appendix F
Outcomes Measurements for FFY 2005 and FFY 2006**

DIABETES MANAGEMENT, CYCLE DATE JULY & AUGUST 2005

All patients with intervention mailing



Only patients with positive interventions

