



Utah Department of Health and University of Utah College of Pharmacy:
UTAH MEDICAID DRUG REGIMEN REVIEW CENTER

ANNUAL REPORT:
JULY 2011 - JUNE 2012

The Utah Medicaid Drug
Regimen Review Center
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INTRODUCTION

The College of Pharmacy at the University of Utah began operating its Drug Regimen Review Center (DRRC) in May 2002 to fulfill the terms of a contract with the Utah State Department of Health. The contract supports the Utah Medicaid prescription drug program and its drug utilization review process. The emphasis of the program is to improve drug use in Medicaid patients, reduce the number of prescriptions and drug costs in high utilizers of the Medicaid drug program, and educate the medical professionals who prescribe to high utilizers of the program.

Each month, a group of patients is selected for review by a team of clinically trained pharmacists. These reviews result in recommendations made to prescribers, which are described later in this report. Recommendations are sent, primarily via fax, to all prescribers of medications related to identified drug therapy problems, and include a list of drugs dispensed during the month of review. The DRRC also provides information and consultation by telephone with prescribers and pharmacists.

STAFF

The DRRC utilizes a staff of professionals to run the program including:

Pharmacists

Melissa Archer, Pharm.D.
Joanne LaFleur, Pharm.D., MSPH
Joanita Lake, B.Pharm., M.Sc. EBHC (Oxon)
Bryan Larson, Pharm.D., BCPS
CarrieAnn Madden, Pharm.D., BCPS
Gary M. Oderda, Pharm.D., MPH
Carin Steinvoot, Pharm.D.

Data Management

Lisa Angelos
Brian Oberg, MBA
David Servatius
Ruby Talataina

MISSION

The two primary missions of the DRRC are:

- 1) To support the Utah Medicaid Drug Utilization Review (DUR) Board and Pharmacy & Therapeutics (PT) Committee by researching and reviewing targeted drug classes and individual agents, and
- 2) To review the drug therapy of Medicaid patients who are high utilizers of the Medicaid prescription drug program, or who are otherwise determined to be at high risk for drug related problems and high medical costs, and to work with the individual prescribers to provide the safest, highest quality pharmacotherapy at the lowest cost possible.

REVIEW METHODOLOGY

From the program's inception in 2002 through October 2008, the criteria for patient selection for review was relatively simple and straightforward. Patients who exceeded seven prescriptions per month were ranked by the number of prescriptions they received in that month, and the top 300 were selected after excluding children and patients who had been reviewed in the previous 12 months.

In 2008 the method of patient selection was modified significantly.

The number of patients selected for review each month was reduced from 300 to 150, and three distinct rules for selection were implemented. Each of these new rules was used to selected about 50 patients per month:

1. Prescription Drug Counts

An average 50 patients per month selected on the basis of the number of prescriptions per month. This is the same mechanism that had been used in the past. In each month, patients who received any prescription are ranked according to the number of prescriptions they received in that month, and those with the highest number of prescriptions who had not been reviewed in the previous 12 months are selected.

2. RxRisk[®] Comorbidity Scores

An average 50 patients per month selected on the basis of RxRisk[®] comorbidity scores. RxRisk[®] is an instrument used for risk adjustment based on degree of comorbidity. It is based on prescriptions filled by patients in the entire 1-year period prior to the month of the review. The RxRisk[®] comorbidity scale is validated to identify patients at risk of having high medical expenditures in the subsequent year.

3. RxRisk[®] Chronic Diseases

An average 50 patients per month selected on the basis of the sum of chronic diseases they had, according to the RxRisk[®] comorbidity scale. Patients are ranked according to the number of comorbid conditions they had, and those with the highest count who had not been reviewed in the previous 12 months were selected.

In 2011 the method of patient selection was modified again.

The RxRisk[®] Chronic Diseases rule was eliminated and an average 50 of the 150 patients have been selected each month since that time using a variable rule, created by the team of pharmacists, designed to target and address specific and prevalent problems seen in the general Medicaid population.

Table 3 summarizes the variable rules that have been used each month *during the current reporting period*.

Table 3 – Criteria Used For Targeted Patient Interventions Between July 2011 and June 2012

JUL 11

DEFINITION	Patients who were continuously eligible for benefits during the prior 12 months, and who received prescriptions for Lexapro, Invega (excluding Invega Sustenna), Vyvanse or Pristiq in the month of review without having tried citalopram, risperidone, dextroamphetamine or venlafaxine, respectively, in the prior 12 months.
PURPOSE	To identify patients who are receiving brand-name prescriptions for psychiatric medications for which similar molecules are available as a generic, without having received prior treatment with the generic similar molecule.

AUG 11

DEFINITION	Patients who were continuously eligible for benefits during the prior 12 months, and who received prescriptions for Lexapro, Invega (excluding Invega Sustenna), Vyvanse Pristiq, Kapvay or Intuniv in the month of review without having tried citalopram, risperidone, dextroamphetamine, venlafaxine, clonidine or guanfacine, respectively, in the prior 12 months.
PURPOSE	To identify patients who are receiving brand-name prescriptions for psychiatric medications for which similar molecules are available as a generic, without having received prior treatment with the generic similar molecule.

SEP 11

DEFINITION	Patients who were continuously eligible for benefits during the prior 12 months and, within the most recent 4 month period, [filled an SSRI between two separate SNRI fills and filled an SNRI between two separate SSRI fills] OR [filled an SSRI1 between two separate SSRI2 fills and filled an SSRI2 between two separate SSRI1 fills] OR [filled an SNRI1 between two separate SNRI2 fills and filled an SNRI2 between two separate SNRI1 fills].
PURPOSE	To identify patients who are receiving regular treatment with two SSRI antidepressants or two SNRI antidepressants or with both an SSRI and a SNRI antidepressant, which are not rational combinations and represent duplicative drug therapy.

OCT 11

DEFINITION	Patients who were continuously eligible for benefits during the prior 12 months and, within the most recent 4 month period, [filled an SSRI between two separate SNRI fills and filled an SNRI between two separate SSRI fills] OR [filled an SSRI1 between two separate SSRI2 fills and filled an SSRI2 between two separate SSRI1 fills] OR [filled an SNRI1 between two separate SNRI2 fills and filled an SNRI2 between two separate SNRI1 fills].
PURPOSE	To identify patients who are receiving regular treatment with two SSRI antidepressants or two SNRI antidepressants or with both an SSRI and a SNRI antidepressant, which are not rational combinations and represent duplicative drug therapy.

NOV 11

DEFINITION	Patients who are receiving a prescription for long-term, daily metoclopramide.
PURPOSE	To identify patients who are receiving long-term treatment with metoclopramide which is not recommended. A black-box warning attached to metoclopramide states that metoclopramide should not be used for longer than three months due to the risk of tardive dyskinesia with long-term therapy.

DEC 11

DEFINITION	Patients who received prescriptions from 6 or more prescribers during the month of the review.
PURPOSE	To identify patients who are receiving prescriptions from more than 5 prescribers from different clinics in any given month.

JAN 12

DEFINITION	Patients who received prescriptions from 6 or more prescribers during the month of the review.
PURPOSE	To identify patients who are receiving prescriptions from more than 5 prescribers from different clinics in any given month.

FEB 12

DEFINITION	Patients who received prescriptions from 6 or more prescribers during the month of the review.
PURPOSE	To identify patients who are receiving prescriptions from more than 5 prescribers from different clinics in any given month.

MAR 12

DEFINITION	Patients receiving citalopram doses above the FDA new guidelines for age, certain diagnoses or drug interactions.
PURPOSE	To identify patients at risk for QT prologation based on newly release FDA information and prescribing information.

APR 12

DEFINITION	Patients receiving citalopram doses above the FDA new guidelines for age, certain diagnoses or drug interactions. Patients who have cardiovascular disease and who received prescriptions for at least two of the following drugs: amiodarone, chlorpromazine, citalopram, methadone, haloperidol, sotalol and thioridazine during the month of review.
PURPOSE	To identify patients at risk for QT prologation based on newly release FDA and prescribing information, and patients who are at increased risk for QT prolongation and serious life-threatening arrhythmias or cardiovascular effects.

MAY 12

DEFINITION	Patients who are receiving a prescription for long-term, daily proton pump inhibitor (PPI).
PURPOSE	To identify patients who are receiving long-term treatment with a PPI which is not recommended. Long-term PPI therapy is associated with increased risk of Clostridium Difficile and osteoporosis-related bone fractures. A black-box warning attached to PPIs states proton pump inhibitor use should be limited to the lowest dose and shortest duration of PPI therapy appropriate for the condition being treated.

JUN 12

DEFINITION	Patients who are receiving a prescription for long-term, daily proton pump inhibitor (PPI).
PURPOSE	To identify patients who are receiving long-term treatment with a PPI which is not recommended. Long-term PPI therapy is associated with increased risk of Clostridium Difficile and osteoporosis-related bone fractures. A black-box warning attached to PPIs states proton pump inhibitor use should be limited to the lowest dose and shortest duration of PPI therapy appropriate for the condition being treated.

The patients who are selected using the targeted intervention criteria each month undergo a six month re-evaluation to determine if the targeted drug related problems are still prevalent.

To date, using all methods of patient selection, the Drug Regimen Review Center has mailed or faxed 51,088 reports to 15,313 prescribers, with recommendations concerning 18,168 Medicaid patients.

PRESENTATIONS AND REPORTS

Tables 1 and 2 summarize the research done for DUR Board presentations and Pharmacy & Therapeutics (PT) Committee reports between July 2011 and June 2012.

Table 1 – Drug Utilization Review (DUR) Board Presentations Produced by the Utah Medicaid Drug Regimen Review Center

Month	Topic	Description
JUL 11	Extended Release Gabapentin and Gabapentin Abuse	Assisted the DUR Board in deciding whether a prior authorization on high-dose gabapentin is warranted. Provided information on two new extended-release gabapentin products -- Galrise and Horizant -- and information regarding the abuse potential of gabapentin.

AUG 11	Cholinergic Agonists for Treatment of Dry Mouth	Assisted the DUR board in determining whether the cholinergic agonists indicated for treatment of dry mouth -- pilocarpine tablets and cevimeline oral tablets -- should be placed on prior authorization. Utah Medicaid patients are treated for dry mouth using oral tablets rather than pilocarpine ophthalmic oral solution, a much cheaper option.
SEP 11	High-Dose Simvastatin	Assisted the DUR Board in deciding whether the simvastatin 80 mg dose should be placed on prior authorization. Provided information on the June 2011 FDA recommendation that the highest dose simvastatin be avoided due to the risk of myopathy and rhabdomyolysis.
OCT 11	Pro-Drugs and Active Metabolites	Assisted the DUR board in deciding whether active metabolites and pro-drugs of already existing drugs offer a therapeutic advantage over the original products.
FEB 12	New Salts	Assisted the DUR board in deciding whether these types of follow-on drugs should be placed on prior authorization as they come to market going forward. Reviewed the evidence as to whether active metabolites and pro-drugs of already existing drugs offer a therapeutic advantage over the original products. Explored cost issues associated with new salt forms.
MAR 12	Metoclopramide	Assisted the DUR board in deciding whether metoclopramide use extending beyond three months should require a prior authorization. Metoclopramide carries a black box warning concerning the risk of tardive dyskinesia and other movement disorders resulting from long-term or high-dose use of this drug.
APR 12	Potent Opioids Prescribed to Opioid-Naïve Patients	Assisted the DUR board in deciding whether transmucosal fentanyl products should require a prior authorization. Life threatening respiratory depression can occur in patients who are not opioid-tolerant. These products should not to be used for acute or postoperative pain.
MAY 12	Tablet Limits for Common Once-Daily Drugs	Assisted the DUR board in determining whether dosage consolidation by using tablet limitations would be a tool worth using in the Utah Medicaid population to improve patient compliance, to prevent exceeding safe dosages and to reduce cost.

Table 2 – Pharmacy & Therapeutics (PT) Committee Reports Produced by the Utah Medicaid Drug Regimen Review Center

MONTH	Topic	Agents	Documents Provided
AUG 11	Topical and Oral Non-Absorbable Antifungal Agents	Butenafine, Butoconazole, Ciclopirox, Clotrimazole, Econazole, Ketoconazole, Miconazole, Naftifine, Nystatin, Oxiconazole, Sertaconazole, Sulconazole, Sulfanilamide, Terbinafine, Terconazole, Tioconazole, Undecylenic Acid Derivatives	Class review and list of available agents and dosage forms.
SEP 11	Platelet Aggregation Inhibitors	Aspirin, Clopidogrel, Cilostazol, Prasugrel, Ticagrelor, Ticlopidine	Oregon 2007 class review, updated review and list of available agents and dosage forms.

OCT 11	Androgens	Danazol, Fluoxymesterone, Methyltestosterone, Oxandrolone, Testosterone	Class review and list of available agents and dosage forms.
NOV 11	Pulmonary Antihypertensive Agents and Endothelin Antagonists	Ambrisentan, Bosentan Phosphodiesterase-5 Enzyme Inhibitors, Sildenafil, Tadalafil, Prostacyclins, Epoprostenol, Iloprost, Treprostinil	Class review and list of available agents and dosage forms.
DEC 11	Ophthalmic Antibiotics	Azithromycin, Bacitracin, Ciprofloxacin, Erythromycin, Gatifloxacin, Gentamicin, Levofloxacin, Moxifloxacin, Natamycin, Neomycin, Ofloxacin, Sulfacetamide, Tobramycin, Trimethoprim	Class review and list of available agents and dosage forms.
JAN 12	Ophthalmic Anti-Inflammatory Drugs	Bacitracin, Bromfenac, Dexamethasone, Diclofenac, Difluprednate, Fluocinolone, Fluorometholone, Flurbiprofen, Ketorolac, Loteprednol, Neomycin, Nepafenac, PrednisolONE, Rimexolone, Triamcinolone	Class review and list of available agents and dosage forms.
FEB 12	Antivirals for Herpes Simplex Virus and Influenza	Acyclovir, Famciclovir, Valacyclovir, Amantadine, Oseltamivir, Rimantadine, Zanamivir	Class review and list of available agents and dosage forms.
MAR 12	H2 Antagonists	Cimetidine, Famotidine, Nizatidine, Ranitidine	Class review and list of available agents and dosage forms.
APR 12	Prenatal Vitamin Agents	A-Free Prenatal, CitraNatal, Concept, Duet, Femecal; Folcaps, Foltabs, Gesticare, KPN Prenatal, Mini-Prenatal, Multi-Nate 30, NataFort, Néevo, One A Day Women's Prenatal, OptiNate, Paire, PreCare, Prefera, Prenatabs, Prenatal, Prenate, PreNexa Premier; PrimaCare One; Select OB; Stuart Prenatal, Tandem, TriCare, Vinacal, Vinate Care, Vitafof, VitaPhil	Class review and list of available agents and dosage forms.
MAY 12	Sedative Hypnotics: Non-Benzodiazepine Oral Hypnotic Agents, Oral Benzodiazepines and Oral Barbiturates in Insomnia	estazolam, flurazepam, quazepam, temazepam, triazolam, Lunesta, Rozerem, Sonata, Ambien, Somnote, butarbital, phenobarbital, secobarbital	Class review for benzodiazepines, summary of Oregon Report for the new sedative hypnotics, summary of chloral hydrate in insomnia and list of available agents and dosage forms for all drug classes.

PROGRAM BACKGROUND

Utah Medicaid drug claim costs had been increasing dramatically during the first half of the past decade. The total increase in these costs from January 2002 to January 2006, when the Medicare Part D prescription drug benefit went into effect, had been approximately 75.8%. In January 2006 these costs dropped sharply, but have been creeping upward again since that time.

Recently, the total number of claims increased from 202,535 to 222,118 per month (9.67%) during the period from July 2011 to June 2012. Drug costs also increased from \$13,967,045 to \$14,928,388 per month (6.88%) during this same period.

Figures 1 and 2 show the total number of Medicaid pharmacy claims and the total cost of these claims for each month during the reporting period from July 2011 to June 2012, and Figure 3 shows the trend in total drug claim costs during the entire project period from January 2002 to June 2012.

Figure 1 – Total Medicaid Drug Claims by Month from July 2011 to June 2012

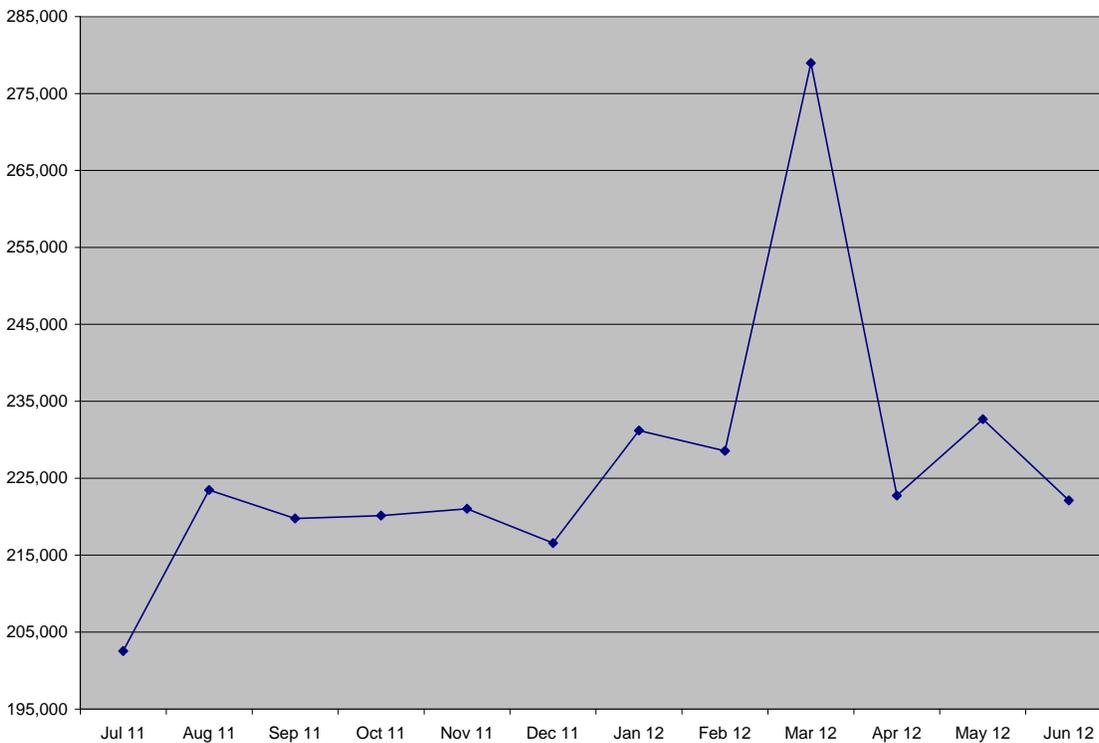


Figure 2 – Total Medicaid Drug Claim Costs by Month from July 2011 to June 2012

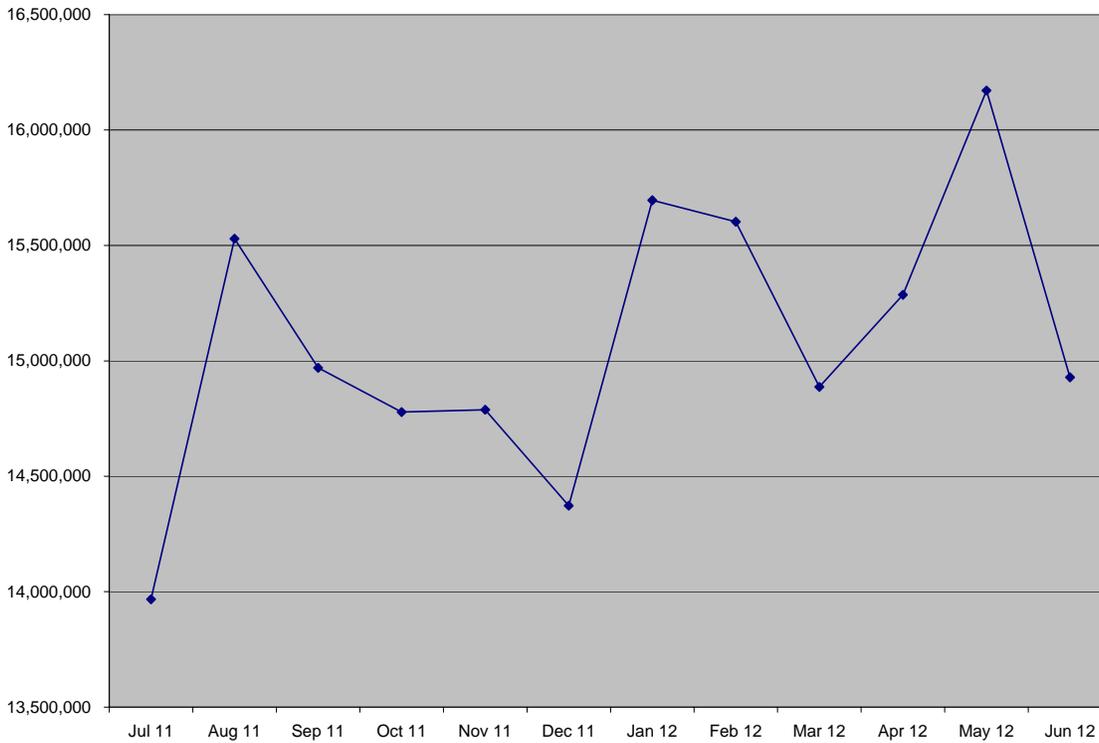
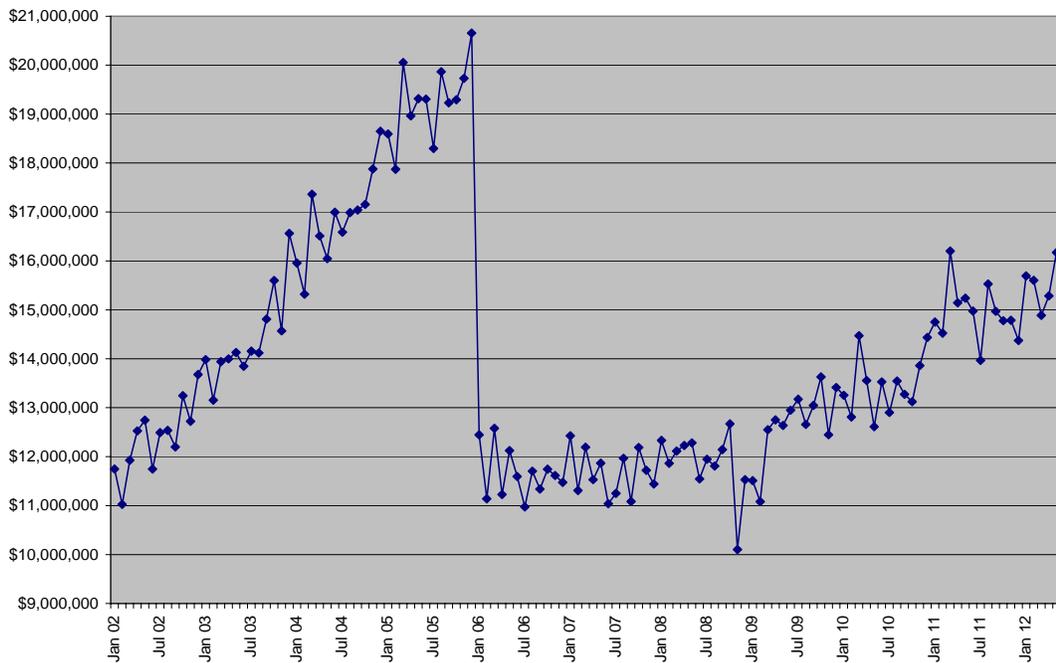


Figure 3 – Total Medicaid Drug Program Costs from January 2002 to June 2012



Increases in total drug spend during the past four fiscal years have been 8.4% (July 2008 to June 2009), 2.7% (July 2009 to June 2010), 16.1% (July 2010 to June 2011) and, recently, 6.9% (July 2011 to June 2012). Several factors are responsible for increased costs, including an increase in Medicaid enrollment.

PROGRAM SUMMARY

Table 4 and Figure 4 summarize the drug related problems identified in the letters sent to prescribers between July 2011 and June 2012.

Total Letters Sent: **2,744**

Total Identified Drug Related Problems (DRP): **3,254**

Table 4 – Drug Related Problems Identified and Reported Between July 2011 to June 2012

Untreated Indication	459
Therapeutic Duplication	452
Medication Over-Utilization	408
Additive Toxicity	401
Consider Alternative	328
Drug-Drug Interact	299
Coordinate Care	285
Streamline	138
Drug-Disease Interact	130
Adherence	126
Dose Excessive	109
SubTher Dose	42
Treatment No Indication	41
Other	26
Brand Dispensed	10

Figure 4 – Drug Related Problems Identified and Reported: Between July 2011 to June 2012

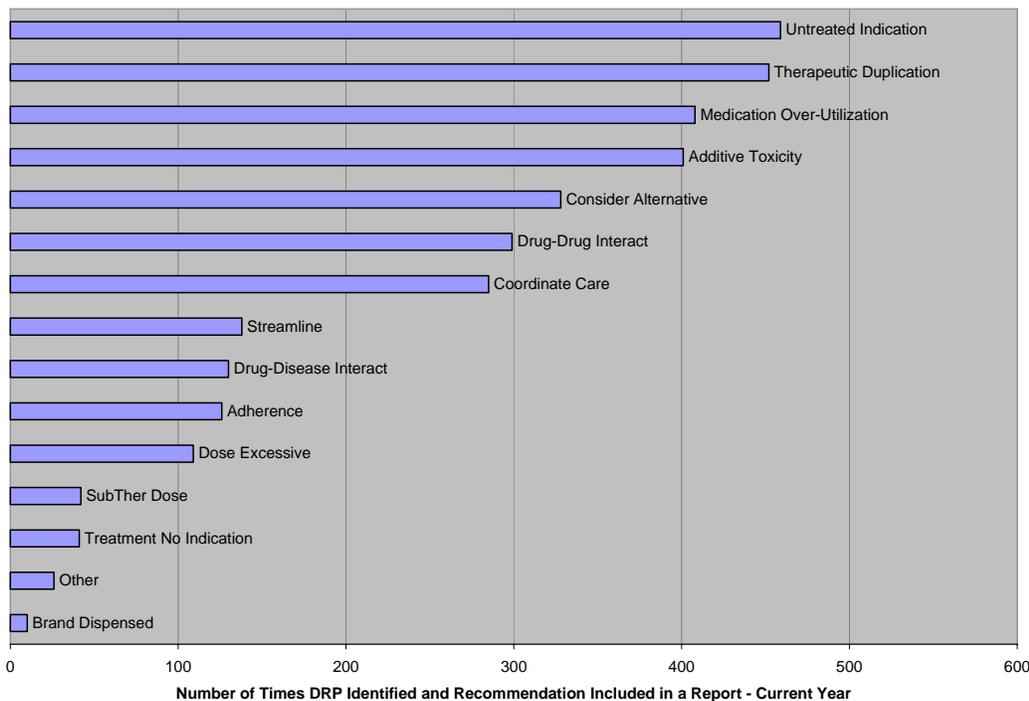
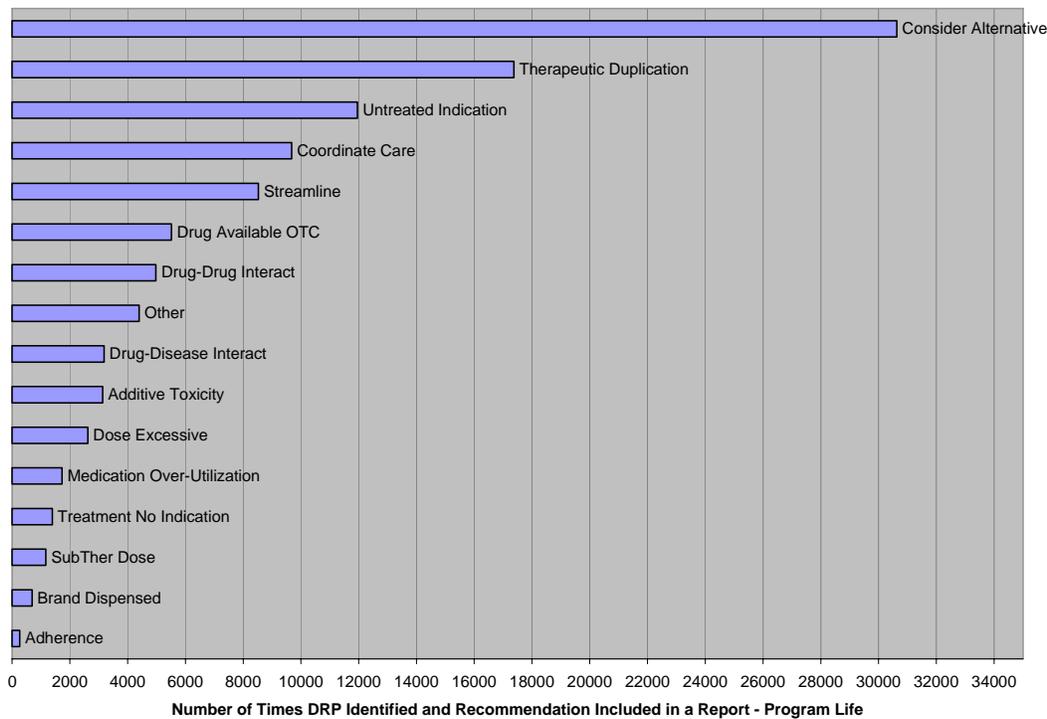


Figure 5 summarizes the drug related problems identified in the letters that have been sent to prescribers since the inception of the program in May 2002.

Figure 5 – Drug Related Problems Identified and Reported: Program Life



Recommendation categories outlined above are self-explanatory, although the top categories do deserve further description.

The most common recommendation made to prescribers since the beginning of the program has been to consider alternative therapy. This recommendation would have been made for a number of reasons, including considering a less costly alternative.

The most common drug therapy problem identified in the current reporting year was an untreated indication, or the absence of a medication that appeared to be needed based on usual best practice or guidelines.

Therapeutic duplication recommendations were made when the patient was taking multiple therapeutic agents for the same indication when there was generally no reason to include therapy with more than one agent, and coordinate care relates to situations where multiple prescribers were ordering therapy for what appeared to be the same illness.

Streamline therapy refers to considering changes in therapy to eliminate some of the drugs dispensed or to decrease the number of doses, where appropriate.

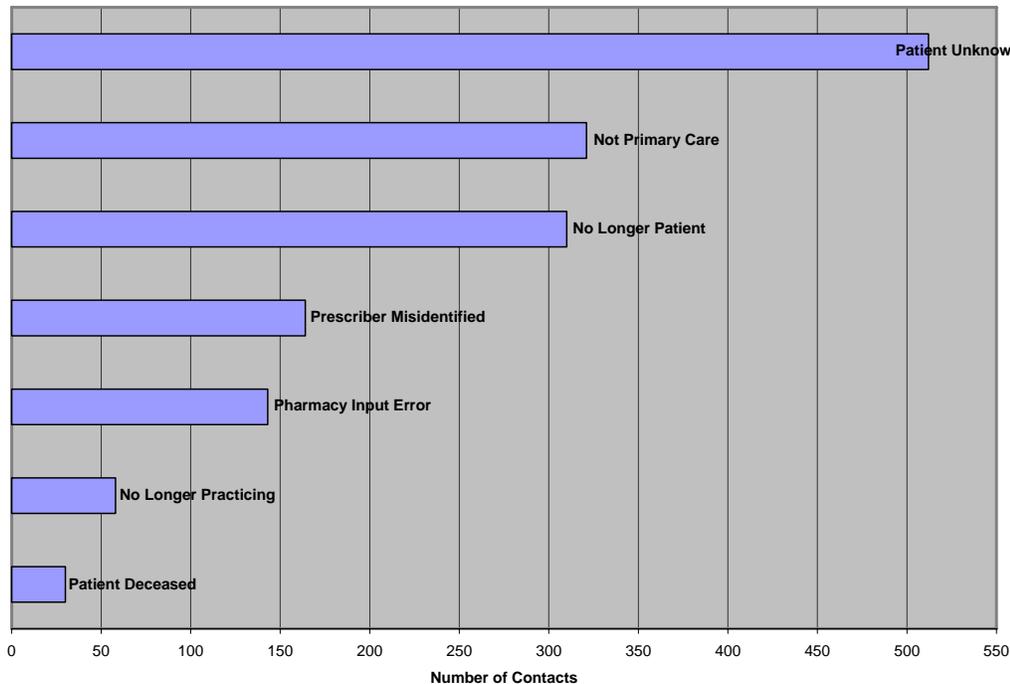
PROGRAM FEEDBACK

Logistical Feedback

When the Utah Medicaid Drug Regimen Review Center began operating in May 2002, administrative efforts were focused primarily on soliciting logistical feedback from the prescribers we contacted – information on incorrectly identified patients and drugs, changes of practice, pharmacy input errors, incorrect addresses on file and patients not being treated by the prescriber identified.

Figure 6 summarizes the responses of the 1,538 individuals who have contacted the DRRC about one of these logistical issues after receiving an intervention letter since the program's inception in May 2002.

Figure 6 – Summary of Logistical Feedback Received from Prescribers



Using this feedback, the DRRC implemented a variety of verification procedures, made necessary adjustments to patient selection and prescriber identification processes and began compiling a propriety database of personally verified information on doctors who prescribe drugs to Utah Medicaid patients.

This propriety database now contains accurate contact, practice, background and prescribing information for 10,334 prescribers.

Quality Feedback

By the end of 2009, these administrative efforts had reduced the incidence of these types of logistical issues to practically none and the program began to focus on quality feedback.

Beginning in October 2009, every recommendation sent to a prescriber in a patient report has included a section asking that prescriber to provide his or her opinion about the general usefulness of the recommendation and the likelihood of implementation into the patient's existing drug regimen.

Following is an example of the feedback solicitation included with every pharmacist recommendation:

ADHERENCE--HYPERTENSION AND HYPERLIPIDEMIA

ASSESSMENT: This patient has diagnoses of hypertension and hyperlipidemia but appears to be poorly adherent to the prescribed medications. In the past six months she has refilled prescriptions for a statin three times (once in Aug. '09 and twice in Jan '10) and lisinopril once (Jan '10).

RECOMMENDATION: Consider non-adherence as a factor if treatment failure occurs. You may wish to encourage adherence to the medication regimen at her next appointment.

	Not at all		Very			Comment
How useful did you find this information?	1	2	3	4	5	_____
How likely are you to implement this recommendation	1	2	3	4	5	_____

This recommendation does not apply to my experience with the patient.

The average rating received since October 2009 on the general usefulness of pharmacist recommendations has been 3.9 on a scale of 1 to 5.

The average rating received since October 2009 on the likelihood of implementation into the patient's existing drug regimen has been 3.2 on a scale of 1 to 5.

All feedback and prescriber comments are compiled into a report for the DRRC pharmacists to review at monthly Quality Assurance meetings, where specific recommendations and general intervention protocols are reviewed and revised as needed.

DEMOGRAPHICS

Patients were selected for review based on three different criteria: Risk score, total number of fills and a variable rule used each month to target commonly recurring drug therapy issues seen in the general Medicaid population. These rules were described in detail in Table 3 above.

Table 5 – Patient Selection Between July 2011 and June 2012

	Total	Fill Value	Fill Count	Score Value	Rx Risk [®] Score	Variable Rule
Jul 11	106	18	59	17	28	24
Aug 11	178	19	54	16	59	71
Sep 11	125	19	32	16	51	47
Oct 11	138	18	73	16	49	22
Nov 11	150	18	56	16	47	44
Dec 11	182	18	69	16	39	84
Jan 12	183	17	86	16	37	71
Feb 12	227	19	29	15	164	38
Mar 12	147	19	56	18	20	84
Apr 12	135	19	38	17	36	69
May 12	116	20	39	17	41	41
Jun 12	95	20	28	16	46	22
TOTAL	1782		619		617	617

The first column shows the total number of patients selected for review by all three methods for the month. The total of 1,782 is less than the total of each of the selection methods because some patients fell under selection criteria for more than one of the methods.

The next five columns show:

- The minimum fill count set for the month at which a patient qualified for review.
- The number of patients who met or exceeded the fill count minimum and were selected for review.
- The minimum risk score set for the month at which a patient qualified for review.
- The number of patients who met or exceeded the risk score minimum and were selected for review.
- The number of patients who flagged using targeted intervention criteria and were selected for review.

The variability seen each month in the number of patients reviewed occurs primarily because the criteria for selection are set at a specific threshold each month and *all* patients who exceed that threshold are reviewed.

The 1,782 patients reviewed from July 2011 to June 2012 were separated into cohorts based on the month they were reviewed. Figures 7a and 7b summarize and categorize the number of patients reviewed each month during this period. The average was 149 patients reviewed per month.

Figure 7a – Summary of Patients Reviewed Each Month from July 2011 to June 2012

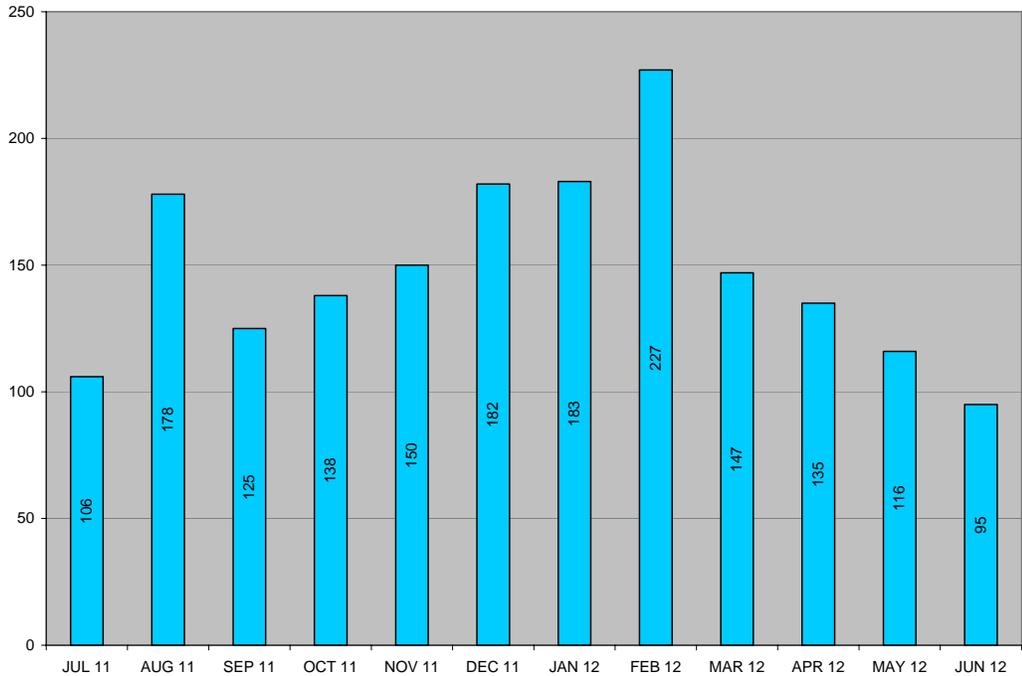
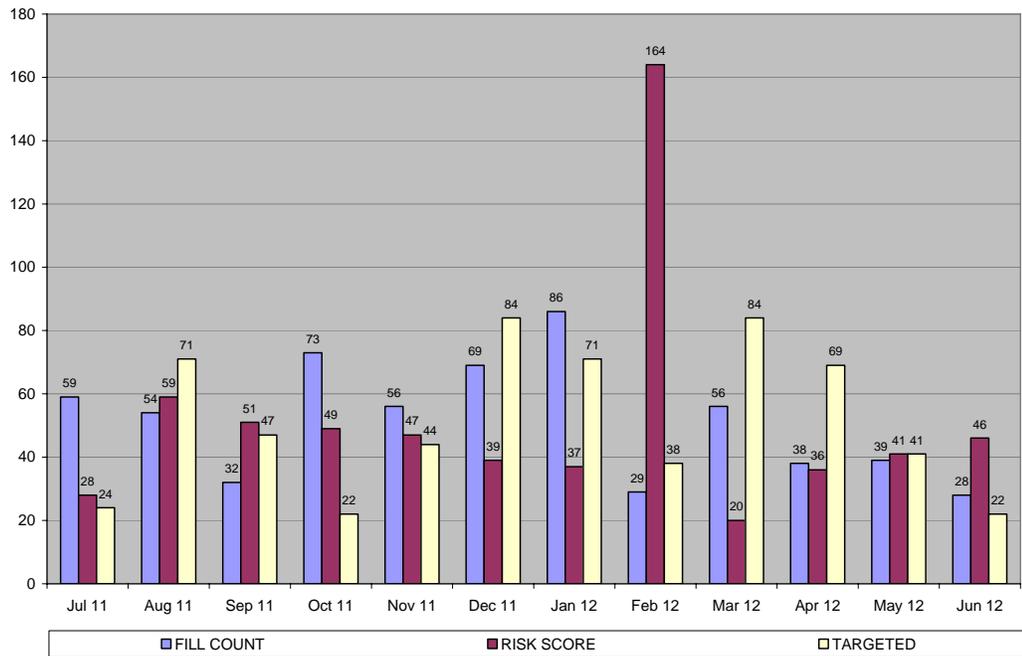


Figure 7b – Patients Reviewed by Selection Method Between July 2011 and June 2012



Demographics for all review cohorts are displayed in Table 6 and include gender, average age, and the average number of prescriptions dispensed. Nursing home patients are not included in these tables.

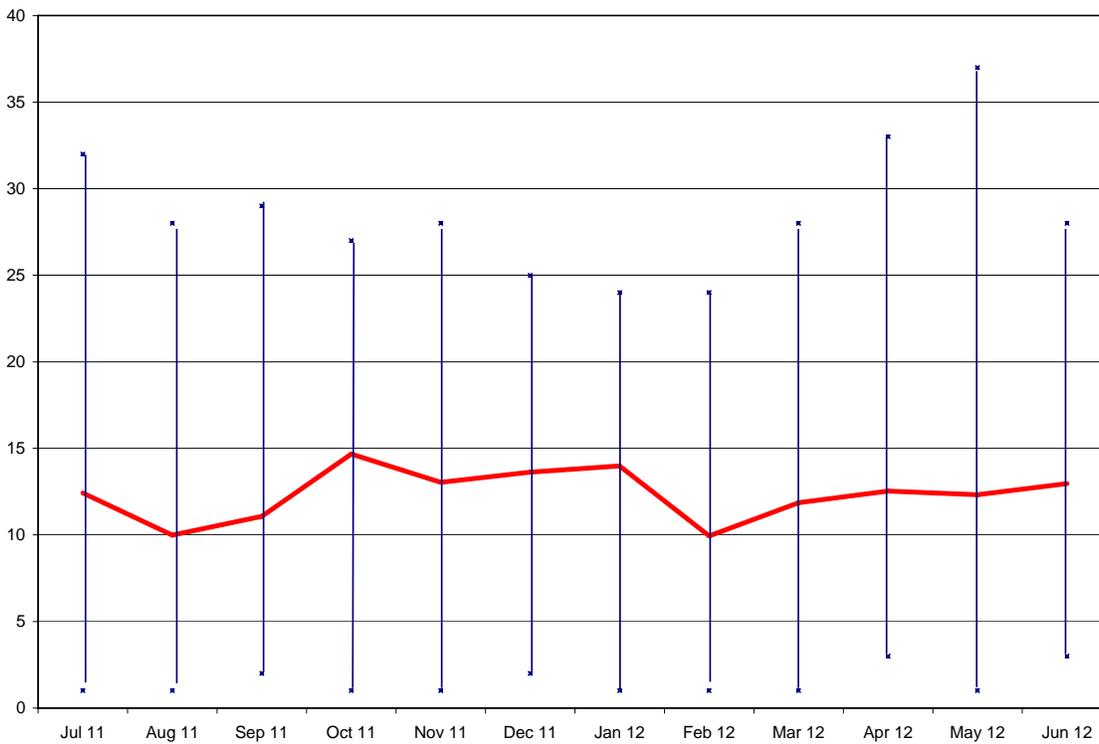
Reviewed ambulatory patients during the reporting period were predominantly females in their mid-40s who filled 11 to 14 prescriptions per month.

Table 6 – Cohort Demographics: All Reviewed Patients

MONTH	Females				Males			
	Percent	Mean Age	Mean # Rx	Mean Cost Per RX	Percent	Mean Age	Mean # Rx	Mean Cost Per RX
Jul 11	65.7	44.8	15.6	82.38	34.3	29.7	10.6	92.72
Aug 11	55.8	44.7	13.1	72.52	44.2	26.7	10.2	107.20
Sep 11	68.4	42.3	11.9	73.14	31.6	42.4	10.4	114.58
Oct 11	73.6	46.8	14.1	62.11	26.4	47.9	13.6	49.99
Nov 11	69.1	45.8	13.5	70.16	30.1	42.2	11.1	85.52
Dec 11	73.9	43.6	13.4	76.17	26.1	44.8	13.8	79.24
Jan 12	74.4	42.9	13.6	77.49	25.6	42.6	13.8	68.56
Feb 12	69.4	45.6	10.9	67.31	30.4	44.7	10.1	85.44
Mar 12	71.4	44.6	10.4	84.29	28.6	45.8	12.6	69.31
Apr 12	77.8	50.1	12.7	65.40	22.2	47.1	12.4	98.73
May 12	74.1	47.1	14.1	86.83	25.9	41.9	10.6	60.69
Jun 12	61.1	48.6	13.1	73.42	38.9	44.1	11.7	82.01
ALL	69.9	45.6	13.0	74.27	30.1	41.9	11.2	83.83

Figure 8 shows the average and range of the number of prescriptions for each of the reviewed cohorts. The mean number of prescriptions for a patient selected for review generally ranged from 10 to 15, while the maximum number of prescriptions for a reviewed patient exceeded 35.

Figure 8 – Average, Minimum and Maximum Number of Prescriptions: All Reviewed Patients



PROGRAM EFFECTIVENESS: PATIENTS

The DRRC's two major goals are to improve pharmacotherapy for Medicaid patients and to reduce health care costs by decreasing the number of prescriptions and prescription costs. As the review process has matured, we have increased the number of telephone calls to providers to discuss drug related problems. Because of that, we have more information on the impact of our reviews.

The following patient presentations are representative examples of the types of patients being reviewed and the outcomes of those reviews:

PATIENT 1

A 47-year-old female with diagnoses for depression, bipolar disease and migraines was flagged for review with a drug regimen consisting of 16 regularly scheduled medications from 6 prescribers scattered across the Salt Lake valley. Four of her medications were antidepressants, three were antipsychotics and three were for migraine. The DRRC intervention made each of her prescribers aware of the others, and requested that they all work co-ordinate her care more efficiently.

At follow up nine months later, the patient was taking only eight regularly schedules medications - two antidepressants, a single antipsychotic and a single migraine medication - and working with just three prescribers.

The changes not only had a tremendous impact on cost, they also made the patient's drug regimen more manageable, which decreases the risk of potential drug interactions, increases the likelihood of compliance and provides for the general wellbeing of the patient.

PATIENT 2

A 63-year-old male had been filling prescriptions for 100 insulin syringes every month, with no history of short acting insulin use. He received Lantus prescriptions occasionally, but Lantus is dosed just once daily, meaning he would need no more than about 30 syringes per month.

This behavior was a warning that the patient was either using his insulin incorrectly, or that he was diverting the syringes for drug abuse. The DRRC intervention suggested that the prescriber discuss the behavior with the patient.

At follow up, the patient's syringe use had dropped sharply while his Lantus fills had become more consistent.

PATIENT 3

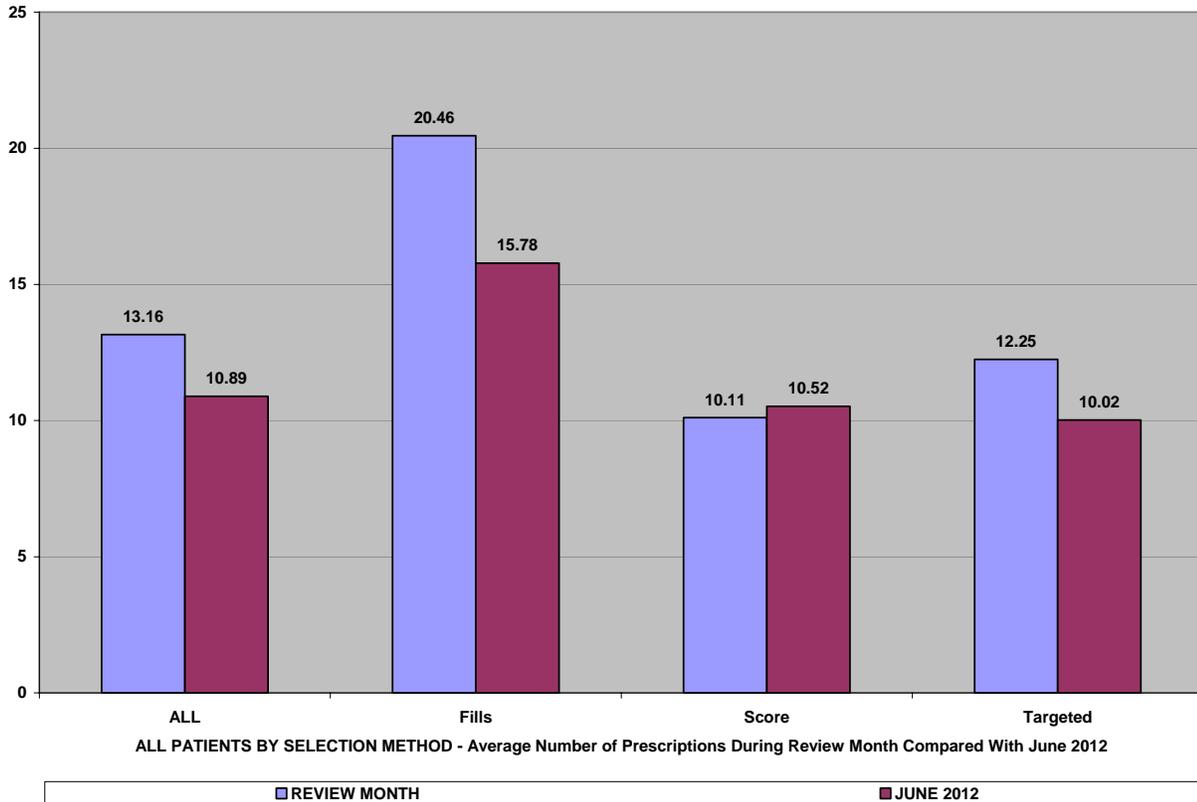
A 31-year-old female was flagged for review when a clear pattern of doctor shopping and drug abuse behavior was detected through her prescription fill history. The DRRC intervention in this case bypassed the prescribing physicians and instructed the state's Medicaid program to immediately place the patient on restricted status.

At follow up, the patient had been re-classified as restricted and the patterns indicative of abuse were no longer present.

PROGRAM EFFECTIVENESS: PRESCRIPTIONS

Figure 9 shows the average number of prescriptions per reviewed patient, by selection method, from July 2011 to June 2012, compared to the average number of prescriptions for those same patients in June 2012, the most recent month with data available.

Figure 9 – Average Fills during Review Month Compared with June 2012



The largest reduction in the average number of monthly prescription fills was seen in patients selected on the basis of fill count. Among all patients, a substantial reduction in the average number of monthly prescription fills was seen.

Figures 10 and 10b show the average number of prescriptions per reviewed patient for each month from July 2011 to June 2012, compared to the average number of prescriptions filled by the same patients in June 2012, the most recent month with data available.

Figure 10 – Average Fills during Review Month Compared with June 2012 for All Reviewed Patients

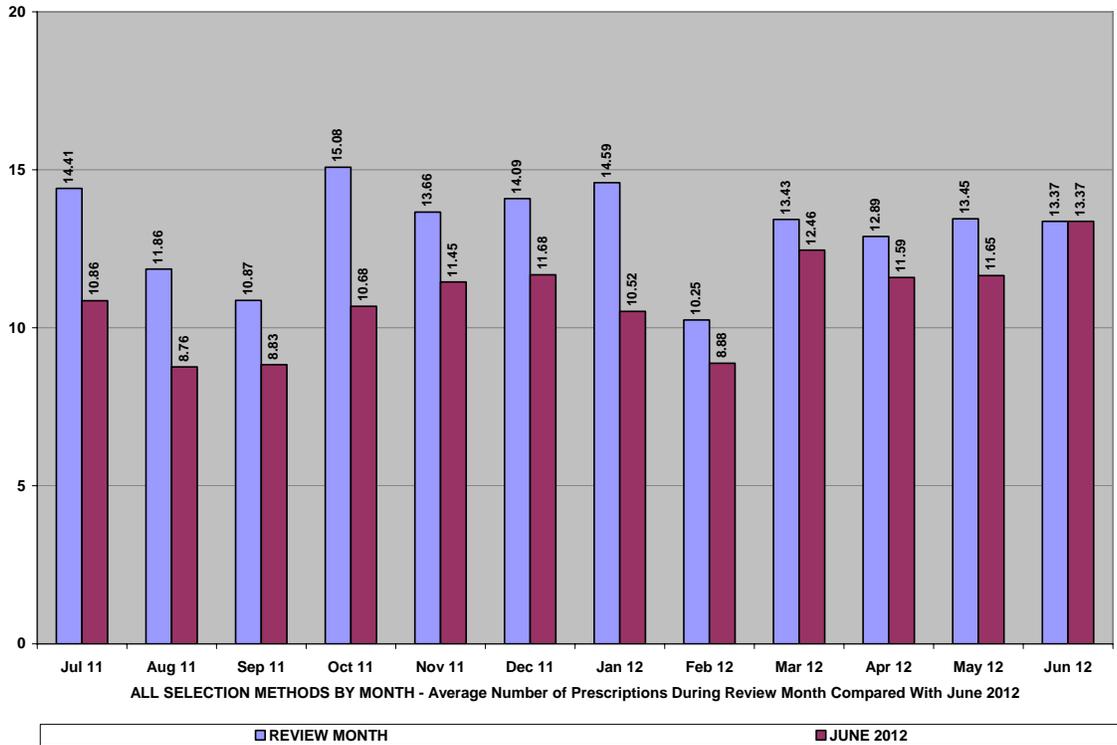
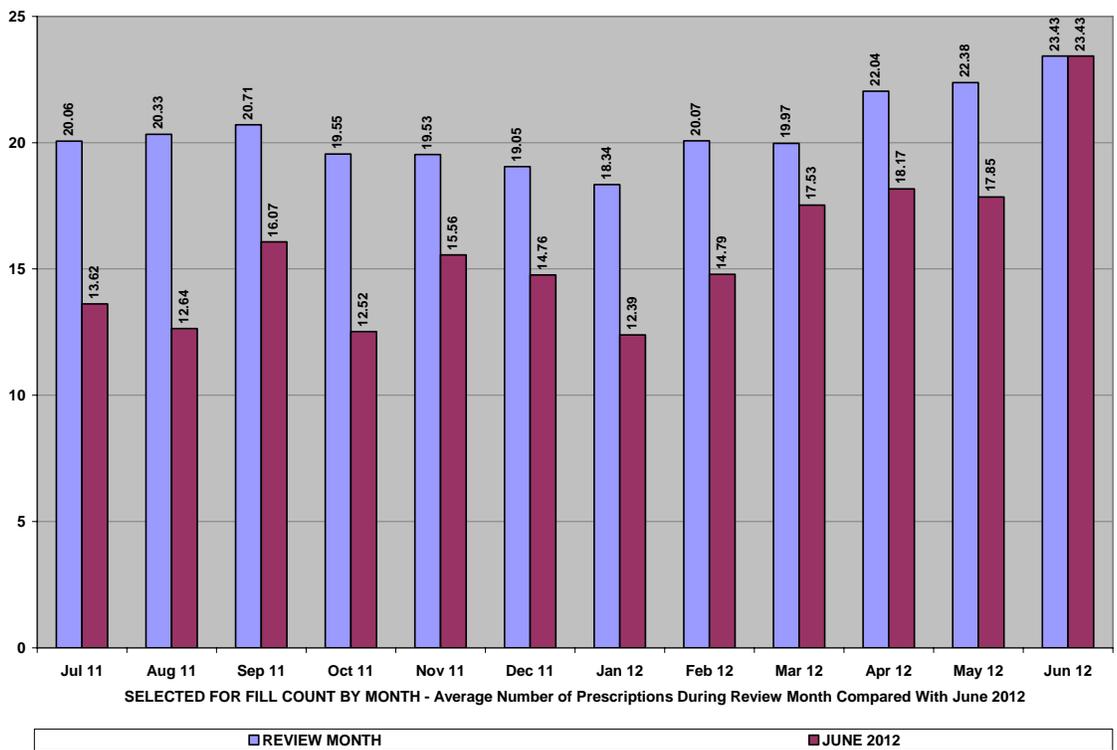


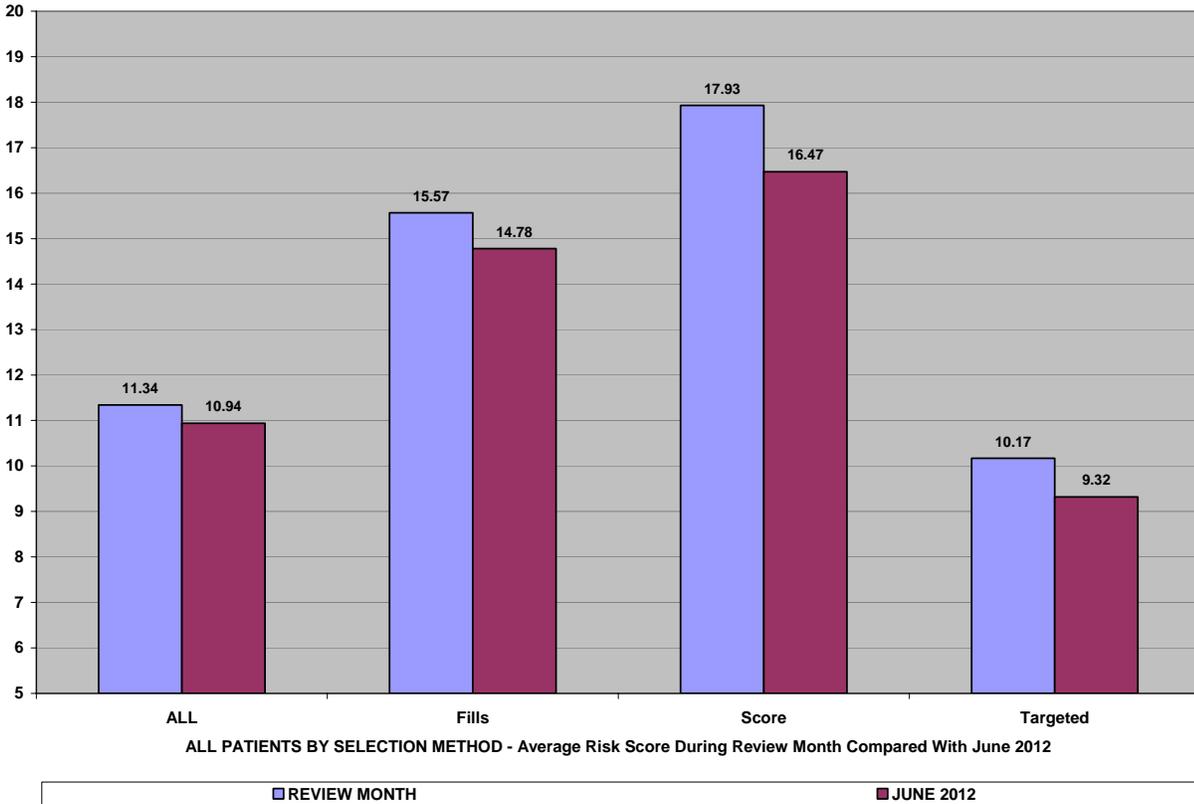
Figure 10b – Average Fills during Review Month Compared with June 2012 for Patients Selected by Fill Count



PROGRAM EFFECTIVENESS: RISK

Figure 11 shows the average risk score per reviewed patient, by selection method, from July 2011 to June 2012, compared to the average risk score for those same patients in June 2012, the most recent month with data available. The largest reduction in risk scores was seen in patients selected on the basis of risk score. Among all patients, a reduction in risk score was seen.

Figure 11 – Average Risk Score during Review Month Compared with June 2012 for All Patients by Selection Method



Figures 12 and 12b show the average risk score per reviewed patient for each month from July 2011 to June 2012, compared to the average risk score for the same patients in June 2012, the most recent month with data available.

Figure 12 – Average Risk Score during Review Month Compared with June 2012 for All Reviewed Patients

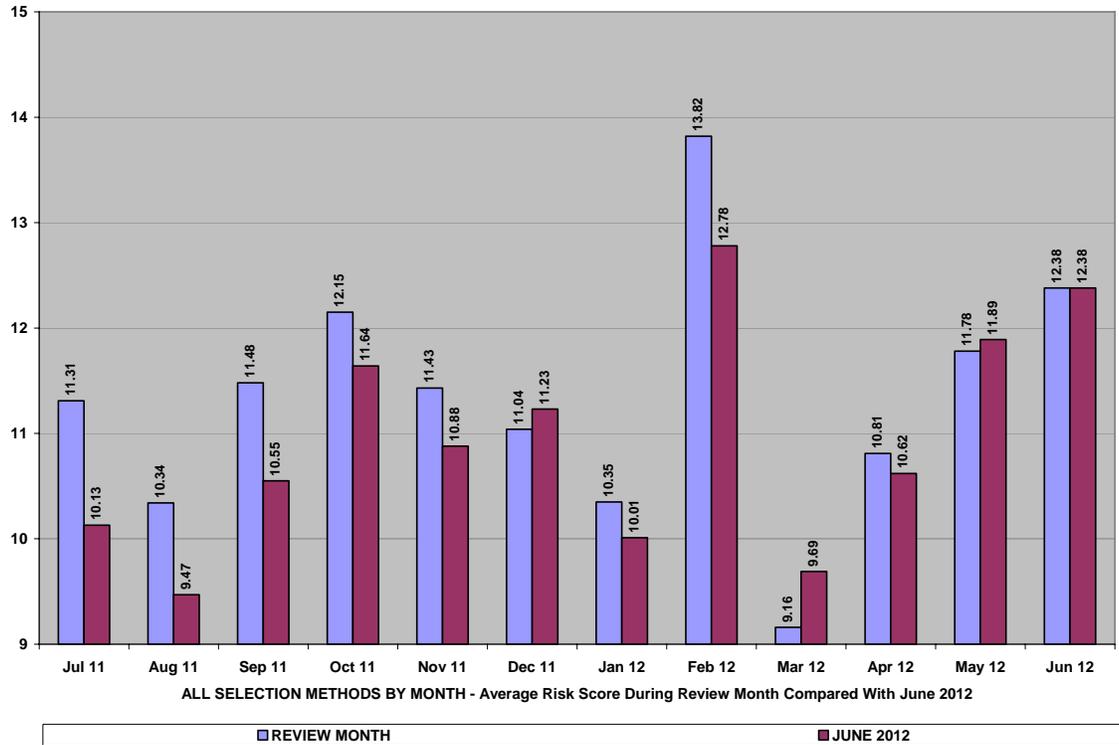
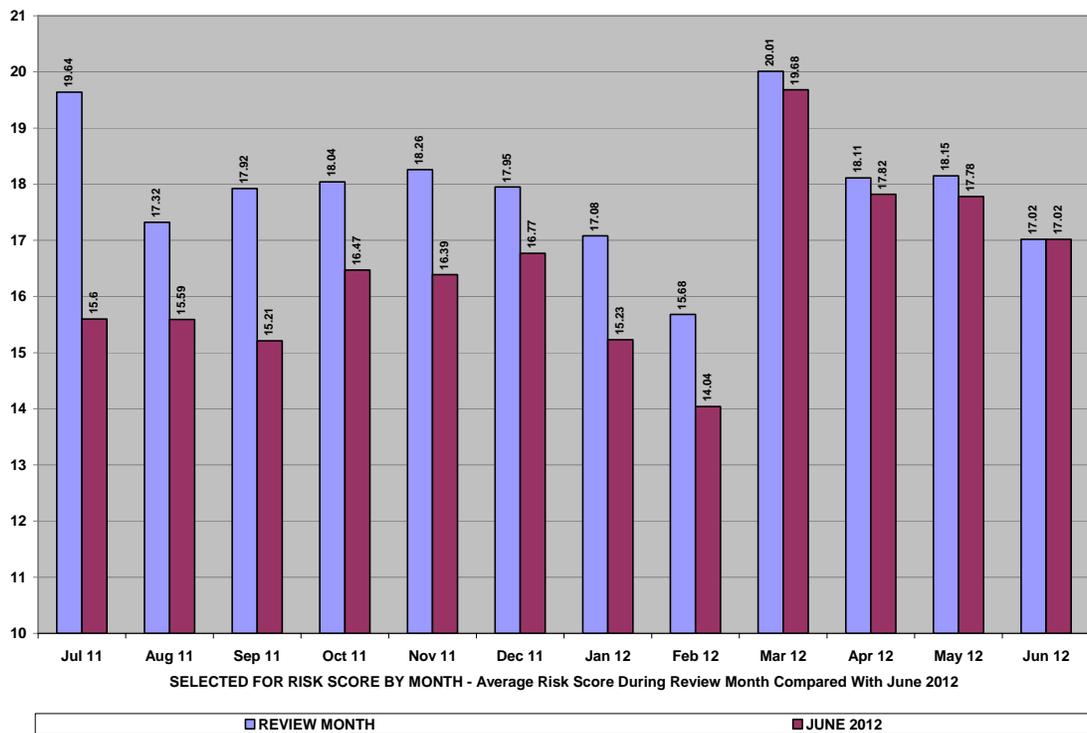


Figure 12b – Average Risk Score during Review Month Compared with June 2012 for Patients Selected by RX Risk Score



PROGRAM EFFECTIVENESS: COST

Tracking Drug Costs of Reviewed Utilizers per Month

We have tracked drug cost reimbursements to review cohorts selected using all mechanisms for the remainder of the reporting period following the month they were reviewed. We have only tracked costs for patients within each review cohort who remained eligible during the entire reporting period and accessed their drug benefit at least one time during each of the months in the reporting period. Decreases in drug costs for these selected patients were seen, some significant. Because we eliminated patients who did not receive subsequent prescriptions, these estimates are conservative.

For each patient reviewed between July 2011 and June 2012, total drug cost during the review month was used as the baseline amount for comparison. Costs of these baseline amounts were compared with the drug costs for each subsequent month up until June 2012. For example, costs in February 2012 were compared with costs in March 2012, April 2012, May 2012 and June 2012 for those patients reviewed during February 2012. Additional cost savings for patients reviewed before July 2011 are not included, nor are additional savings that would be expected after June 2012 for patients included in this report.

Assuming total Medicaid drug costs that remain constant after the month of review, drug costs for reviewed patients from July 2011 through June 2012 decreased by \$958,108.

In considering this information it is important to understand that we cannot determine what the reviewed patients' drug costs would have been if they had not been reviewed. It is possible that without a review their costs would have increased, remained the same or declined. To effectively address this we would need to compare changes in prescription drug costs over the same period with a suitable control group. This is not possible with our current patient selection process.

Almost all of the decrease in prescription costs were seen in patients selected based on the number of filled prescriptions. Although only modest changes were seen in patients selected by risk score, it is important to consider that a decrease in risk score is associated with less risk and lower medical costs, including the costs of hospital admissions.

SEE APPENDIX A

APPENDIX A

TOTAL FOR ALL REVIEWED PATIENTS ELIGIBLE AND UTILIZING RX BENEFITS ENTIRE REPORTING PERIOD - NO INCREASE IN COSTS ASSUMED

	Jul 11	Aug 11	Sep 11	Oct 11	Nov 11	Dec 11	Jan 12	Feb 12	Mar 12	Apr 12	May 12	Jun 12	TOTAL	PROJECTED	SAVINGS
Jul 11	91,561	85,120	85,154	87,657	88,827	83,530	71,508	80,211	80,944	63,323	126,652	73,250	1,017,736	1,098,728	80,992
Aug 11		103,612	103,636	109,737	101,076	118,632	141,558	94,530	79,257	81,532	93,764	83,587	1,110,920	1,139,731	28,812
Sep 11			73,250	83,717	75,386	70,204	71,507	80,390	74,138	71,366	78,688	69,638	748,284	732,500	-15,784
Oct 11				96,342	80,883	73,209	79,173	69,529	67,980	72,226	65,602	80,689	685,633	867,080	181,447
Nov 11					115,200	107,354	106,338	104,639	82,042	90,446	96,351	91,621	793,990	921,600	127,609
Dec 11						122,025	123,732	109,968	84,618	102,084	94,361	93,572	730,361	854,172	123,811
Jan 12							158,357	112,677	98,832	127,051	115,847	105,052	717,816	950,142	232,326
Feb 12								122,655	105,971	114,159	118,676	105,312	566,774	613,277	46,503
Mar 12									113,130	80,914	75,303	72,473	341,819	452,519	110,700
Apr 12										105,940	102,043	96,401	304,384	317,821	13,437
May 12											125,106	96,852	221,957	250,211	28,254
Jun 12												76,595			
													7,239,674	8,197,782	958,108

PATIENTS

61	97	78	81	81	98	106	114	137	81	102	90	65
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*Total number from each monthly review cohort remaining eligible for AND utilizing prescription drug benefits during the entire 12 month reporting period.

AVERAGE PER PATIENT

	Jul 11	Aug 11	Sep 11	Oct 11	Nov 11	Dec 11	Jan 12	Feb 12	Mar 12	Apr 12	May 12	Jun 12	TOTAL	PROJECTED	SAVINGS
Jul 11	1,501	1,395	1,396	1,437	1,456	1,369	1,172	1,315	1,327	1,038	2,076	1,201	16,684	18,012	1,328
Aug 11		1,068	1,068	1,131	1,042	1,223	1,459	975	817	841	967	862	11,453	11,750	297
Sep 11			939	1,073	966	900	917	1,031	950	915	1,009	893	9,593	9,391	-202
Oct 11				1,189	999	904	977	858	839	892	810	996	8,465	10,705	2,240
Nov 11					1,176	1,013	933	764	1,013	887	1,071	1,410	8,265	9,404	1,140
Dec 11						1,151	1,167	1,037	798	963	890	883	6,890	8,058	1,168
Jan 12							1,389	988	867	1,114	1,016	922	6,297	8,335	2,038
Feb 12								895	774	833	866	769	4,137	4,476	339
Mar 12									1,397	999	930	895	4,220	5,587	1,367
Apr 12										1,039	1,000	945	2,984	3,116	132
May 12											1,390	1,076	2,466	2,780	314
Jun 12												1,178			