The Industry Claims Information System (ICIS) currently encompasses transaction-level data on more than 2.5 million California workers' compensation claims contributed by large and midsize national and regional insurers and self-insured employers for claims with dates of injury from 1993 through 2004. The data warehouse was built to meet the changing and expanding research and analysis requirements of the workers' compensation industry and CWCI members.

The value of data depends on its practical applications. The Institute often relies on ICIS to generate "hard numbers" that can be used to advance the public policy debate on a wide variety of workers' compensation issues and concerns. The following ICIS Says Report looks at changes in utilization, average payments, and accessibility of prescription drugs in California workers' compensation following the introduction of reforms that took effect in 2004.

November 7, 2005

ICIS SAYS: *Early Returns on Workers' Comp Medical Reforms: Part 4*

Changes in Prescription Drug Utilization, Reimbursement and Accessibility Following Adoption of the California Workers' Compensation Pharmacy Fee Schedule

by

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Background

Since the mid-1990s, payments for pharmaceuticals have represented one of the fastest growing medical costs in California workers' compensation. A prior study, published in 2000, estimated that California workers' compensation prescription pharmaceutical costs, which had totaled $114 million in 1996, could rise to $212 million per year in 2000 and to $374 million in 2005[1]. Subsequent estimates from the Insurance Rating Bureau data showed insurer pharmacy payments for prescription drugs and other equipment used to treat injured workers continued to climb from that point, rising from $206 million in 2000 to $478 million in 2004 – a 132 percent increase.[2]

Most of that huge cost increase took place under a regulatory system that remained in place until 2003. Under that system, workers' compensation pharmacy fees were governed by formulae

[1] Neuhauser, F., Swedlow, A., Gardner, L., Edelstein, E. A Study of the Cost of Pharmaceuticals in Workers' Compensation. *A Special Report for the State of California*, Commission on Health and Safety and Workers' Compensation, May 2000.

[2] WCIRB Reports on California Workers' Compensation Losses and Expenses 2000 and 2004. These are payments to pharmacies for drugs and other equipment for 2000 and 2004 regardless of date of injury or date of service.

included in the General Instructions of the Official Medical Fee Schedule (OMFS). OMFS maximum reasonable fees for generic medications were set at 140 percent of the average wholesale price (AWP) plus a $7.50 dispensing fee, and for brand name pharmaceuticals, maximums were set at 110 percent of the average wholesale price plus a $4 dispensing fee.

Recognizing that costs were soaring out of control under this reimbursement system, in 2002 state lawmakers enacted the first of several reforms that were designed to modify the delivery of pharmacy benefits in workers' compensation and rein in prescription drug costs. These reforms included the following mandates:

- Create a pharmacy fee schedule by July 1, 2003
- Channel injured employees to contracted pharmacy networks
- Require pharmacies (but not doctor's offices, clinics or hospitals) to substitute generic drugs for brand drugs unless the physician specified in writing that no substitution should be made
- Cap maximum reimbursement for pharmacy services at 100% of the maximum Medi-Cal allowance for equivalent pharmaceuticals
- Adopt a fee schedule for drugs not covered by Medi-Cal

Effective January 1, 2004, the state set maximum reasonable allowances for pharmacy services at the Medi-Cal rates. Medi-Cal 2004 rates for pharmaceuticals were approximately 10 percent below the AWP. For drugs or pharmaceutical services not covered by Medi-Cal (e.g. repackaged drugs dispensed in a physician's office), however, maximum reasonable fees are still governed by the OMFS that was in effect in 2003, which allows significantly higher fees than the Medi-Cal rates of 140 and 110 percent above the AWP for generic and brand name drugs.

Research Goal:

The goal of this ICIS Says analysis was to measure changes in the utilization, reimbursement and accessibility of prescription drugs in California workers' compensation following the revisions to the pharmacy fee schedule.

Data:

Pharmacy data was compiled from the Institute's Industry Claims Information System (ICIS) database, with additional fee schedule pricing information obtained from Medi-Cal, First

DataBank and the DWC websites.[3] To control for differences due to changes in the mix of drugs dispensed across the 3-year span of the study, the Institute adjusted the 2002 and 2003 pharmacy data to match the mix of drugs dispensed in 2004.

The pharmacy database contained 1.2 million prescriptions within 10,789 unique national drug classification (NDC) codes. The study:

- Compared the payments for generic and brand-name prescriptions.
- Determined adjusted average unit payments for more than 90 percent of all prescriptions in the 2002 and 2003 samples and compared them to the average unit payments for 2004, then calculated the percentage change in the average unit payment for each NDC drug.
- Measured the use and cost of repackaged drugs.
- Analyzed changes in injured worker proximity to pharmacies and access to pharmaceuticals.

Results:

The following tables show three summary views of the California workers' compensation pharmacy data. Table 1 gives a breakdown of generic vs. brand name drug payments (percent of total dollars paid for prescription drugs) across the three years of the study; Table 2 shows aggregated adjusted average unit payments for the top 200 workers' compensation prescriptions from 2002 to 2004 when the data are examined under two different classification systems; and Table 3 shows repackaged drugs as a proportion of the total number of pharmacy prescriptions, total prescription dollars billed and total prescription dollars paid for 2002, 2003 and 2004.

Table 1. California Workers' Comp Pharmacy Payments – Generic v. Brand 2002-2004

	PERCENT OF PAYMENTS BY TYPE			**PERCENT CHANGE**		
Drug Type	**2002**	**2003**	**2004**	**2002 - 2003**	**2003 - 2004**	**2002 - 2004**
Generic	42.2%	38.3%	29.8%	-9.2%	-22.2%	-29.4%
Brand	57.8%	61.7%	70.2%	6.7%	13.8%	21.5%
Grand Total	100.%	100.%	100.%			

[3] For more information: Medi-Cal In-Patient Hospital Fee Schedule
http://www.dir.ca.gov/dwc/pharmfeesched/pfsInstr.htm
Pharmacy Fee Schedule Labor Code Section 5307.1; Pharmacy Fee Schedule California Code of Regulations 9789.40

Table 1 shows the breakdown of brand and generic drug payments by year, and reveals a significant shift toward brand name drugs[4]. Reimbursements for brand name drugs grew from 57.8 percent of California workers' compensation prescription payments in the 2002 sample to 70.2 percent in the 2004 sample -- a 21.5 percent relative increase – while reimbursements for less expensive generic drugs fell from 42.2 percent to 29.8 percent of workers' compensation prescription payments – a relative decrease of 29.4 percent.

The first row in Table 2 shows the adjusted average unit cost based on the combined average for the top 200 National Drug Codes (NDC). NDCs are unique identifiers for each drug based on a combination of variables including active ingredient, dose strength, and manufacturer. The top 200 ranking was based on the total amount paid for each NDC drug. The second row in Table 2 notes the percentage change in the average unit price based on an aggregated figure for the top 200 GCN Sequence Numbers (GCNs). GCNs provide another pharmacy cataloguing system that groups drugs together based on their similar clinical formulations. The adjusted average price per unit paid controls for the different mix of drugs in 2002 and 2003 by weighting the average unit cost of a particular drug in a given year against the proportion of that drug's usage in 2004. The dispensing fee also was factored into the final average payment per unit for each prescription in the sample. In addition, the Institute applied a medical inflation factor to adjust the 2002 and 2003 unit prices to 2004 dollars.

Table 2. Average Unit Payment for the TOP 200 NDCs & GCNs

	Average Unit Payment			Percent Change		
Pharmaceutical Group	**2002**	**2003**	**2004**	**2002 - 2003**	**2003 - 2004**	**2002 - 2004**
NDC Adjusted (62% of 2004 prescriptions)	$1.41	$1.57	$1.39	11.3%	-11.5%	-1.4%
GCN Adjusted (92% of 2004 prescriptions)	$1.77	$1.84	$1.60	4.0%	-13.0%	-9.6%

The top 200 NDC drugs accounted for more than 62 percent of the total dollar amount paid for workers' compensation prescriptions filled in 2004. The $1.39 average unit payment in 2004 was down 11.5 percent from the adjusted average unit payment of $1.57 in 2003, but down a modest 1.4 percent from $1.41 rate in 2002. The top 200 GCN categories represent a more complete picture of all prescriptions and payments as they capture 92 percent of all payments in the 2004 sample. For the top 200 GCN categories, the adjusted average unit payment in 2004 was $1.60, down 13.0 percent from the 2003 average of $1.84, and 9.6 percent lower than the 2002 average of $1.77.

[4] A generic price indicator was used distinguish a particular drug as generic or brand name.

Repackaged Drugs

The current debate on rising pharmacy costs in workers' compensation includes discussions about the use of repackaged drugs. Senate Bill 292, sponsored by Senator Jackie Speier, sought to realign the cost of repackaged drugs to comparable pharmacy-dispensed levels. That bill has been tabled until 2006.

Repackaging drugs started in the late 1980s. Repackaging companies purchase bulk drugs in the wholesale market, repackage them into smaller individual quantities and provide them to physician offices for resale. Repackaged drugs are dispensed in physicians' offices as an alternative to obtaining drugs at a pharmacy. Proponents of repackaged drugs cite the convenience factor as well as higher patient compliance rates. On the other hand, critics question the value of paying significantly higher prices for repackaged drugs when the same drug can be readily obtained at a pharmacy at a much lower cost. In addition, critics question whether the profit incentive may lead to over-prescribing of repackaged drugs and a higher likelihood of prescription error and adverse drug interactions. Because they are not subject to Medi-Cal rates, reimbursements for physician-dispensed repackaged drugs are significantly higher than reimbursements for the identical drugs dispensed by a pharmacy, which are subject to the Medi-Cal rates.

Table 3 displays summary data on the use and system cost of repackaged drugs in 2004 in the California workers' compensation system.

Table 3. Repackaged Drug Utilization and Cost in 2004

	Percent of Total		
Drug Type	**Scripts**	**Total Billed**	**Total Paid**
Pharmacy-Based	69.5%	57.0%	48.5%
Repackaged	30.5%	43.1%	51.5%

Repackaged drugs play a significant role in pharmacy utilization and cost. In 2004, repackaged drugs represented 30.5 percent of all prescriptions, but 43.1 percent of the prescription dollars billed and 51.5 cents out of every dollar paid for workers' compensation prescriptions. Additional studies are underway to further analyze the utilization of repackaged drugs in the California workers' compensation system[5].

[5] CWCI is currently working with researchers from RAND and U.C. Berkeley to measure utilization, cost and access issues relating to repackaged drugs in the California workers' compensation system. The study, sponsored in part by the Commission on Health and Safety and Workers' Compensation, will be published later this year. In addition, CWCI has initiated a study on the potential effects of formularies as utilization and cost control mechanism for workers' compensation.

Appendix A of this report lists the top 50 drugs dispensed in the California workers' compensation system in 2004 by NDC number. Each NDC notes whether the drug is repackaged or pharmacy based. The listings also show the percentage of prescription dollars billed and paid for each drug. Within the 2004 sample, these top 50 NDC drugs comprised 43 percent of all prescriptions, 45 percent of the total prescription dollars billed, and 50 percent of the total prescription dollars paid.

Accessibility of Pharmacies for Injured Workers

In March 2000, CWCI published a study on the accessibility of pharmacies to injured workers. At that time, some stakeholders speculated that fee schedule changes in the reimbursement level of pharmaceuticals would lead to fewer pharmacies participating in the workers' compensation system. This potential "exodus" of pharmacies, it was argued, would create an access problem for injured workers. CWCI researchers' analyzed the proximity of 1.5 million injured workers against a database of pharmacies that were accepting workers' compensation prescriptions. The results showed that at the time, California injured workers had to travel an average of about 2.0 miles from their home to the closest pharmacy, with an average of 5 pharmacies within a 4-1/2 mile radius of their homes. It was noted that these estimates were conservative, as hospitals, clinics, physician offices and other facilities that also dispense drugs were not included in the analysis.

Given the adoption of the new fee schedule with its significant reduction in fee schedule reimbursement levels from the prior fee schedule, the question of access has reemerged. Some of the same stakeholders who previously speculated that fee schedule adjustments would compromise injured workers' access to medications again have voiced concern over a potential reluctance of California's pharmacies to continue to support the workers' compensation system.

In order to revisit the access issue, the Institute updated the original access analysis with current data. The new analysis uses data on more than 1 million injured workers and a revised list of pharmacies that accepted workers' compensation prescriptions in 2004. The results are displayed in the chart below, with comparative results summarized in Table 4.

Chart 1. Access Standard Comparison between Injured Workers' and Pharmacies

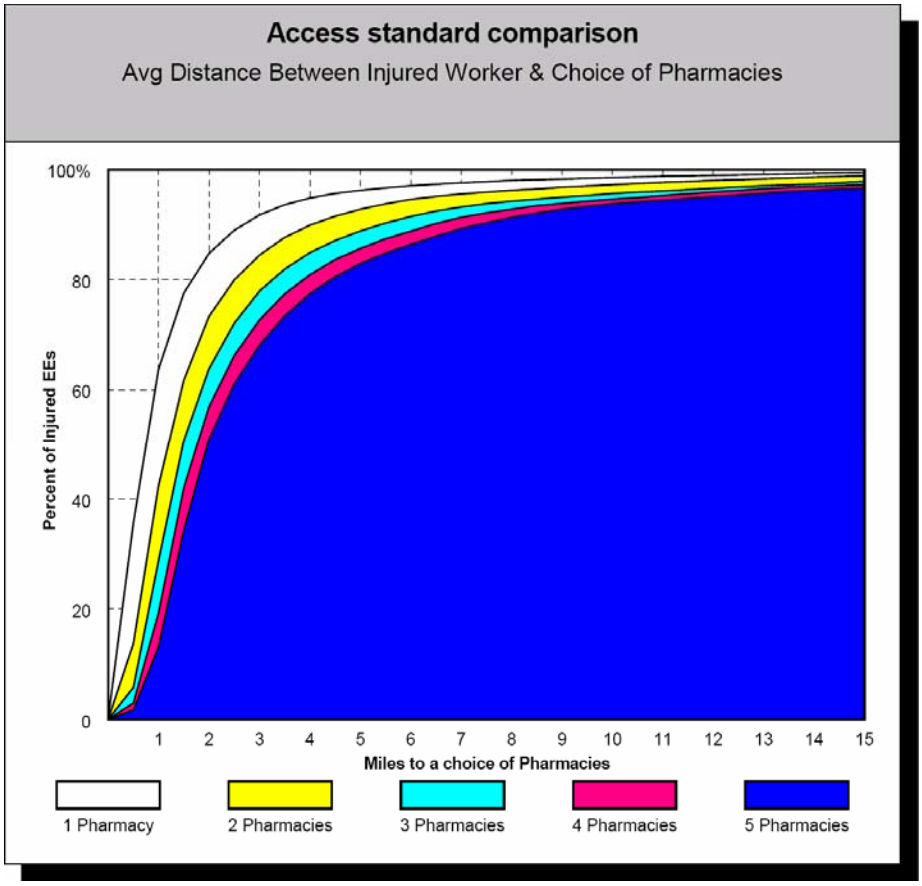

Chart 1 shows that more than 80 percent of California's injured workers have a pharmacy that fills workers' compensation prescriptions within 2 miles of their home. Almost 95 percent of injured workers have a pharmacy within 4 miles.

Table 4 compares the results of the prior 2000 analysis against the current revised and updated injured worker and pharmacy location data.

Table 4. Average Distance between Injured Worker & Choice of Pharmacies

	Avg # of Miles Between Injured Worker Residence & WC Pharmacies				
Study Group	**1 Pharmacy**	**1 to 2 Pharmacies**	**1 to 3 Pharmacies**	**1 to 4 Pharmacies**	**1 to 5 Pharmacies**
Initial Study (Pre-04 Schedule)	2.0	2.7	3.4	3.9	4.5
Follow-up Study (04 Schedule)	1.2	2.0	2.5	3.0	3.5
Percent Difference	-40.0%	-25.9%	-26.5%	-23.1%	-22.2%

The new data shows that in 2004, injured workers lived an average of 1.2 miles from a pharmacy that fills workers' compensation prescriptions – a 40 percent reduction from the average of 2 miles noted in the 2000 study. Furthermore, the new study shows that on average, injured

workers now have a choice of up to 5 pharmacies within 3.5 miles of their homes, compared to 4.5 miles in the 2000 study – a 22 percent reduction in the average distance they would need to travel to find 5 workers' compensation pharmacies. This significant improvement in access is due in part to an increase in the number of pharmacies in California. The original sample contained a total of approximately 3,500 pharmacies that dispense workers' compensation prescriptions. The current sample includes over 6,100 pharmacies, an increase of nearly 75 percent. It should be noted that these estimates may be more conservative than those in the prior study, due to the increased availability of prescriptions via the internet, mail-order and physician's use of repackaged drugs.

Discussion

Pharmacy-related expenses have become one of the fastest growing areas of medical care in the California workers' compensation system. During the reform debates of 2004, the Workers' Compensation Insurance Rating Bureau estimated that the new pharmacy fee schedule would generate savings as high as 37 percent off pre-reform levels. This analysis shows more modest savings, with average unit payments for prescription drugs in California workers' compensation (top 200 GCNs) down less than 10 percent from 2002 levels. There are several contributing factors that have limited the anticipated savings. To begin with, the average wholesale price which forms the basis of the reimbursement level is set by the drug manufacturer and the price for any drug can change several times per year. In addition, this study reveals that reimbursements for brand-name drugs, which are typically much more expensive than generic equivalents, increased from 57.8 percent of workers' compensation prescription payments in 2002 to 70.2 percent in 2004 – a relative increase of 21.5 percent. Furthermore, the study found that in 2004, repackaged drugs, which are not subject to Medi-Cal pricing, accounted for 30 percent of California workers' compensation prescriptions, 43 percent of the total amount billed, and more than half of the total dollar amount paid for prescription drugs. The growing rate of brand-name drug use may reflect the increased choice of new drugs entering the market as well as direct-to-consumer advertising on television, radio and print media. The high use of repackaged drugs may be attributed to patient convenience and the lucrative incentive that repackaging offers.

Stakeholders have identified several strategies to address unrealized savings in pharmacy costs:

- Legislation – passage of a bill or series of bills to redefine reimbursement levels for all drugs, including repackaged drugs;
- Regulation – new rules and regulations to implement a comprehensive pharmacy fee schedule and to facilitate the use of Pharmacy Benefit Management (PBM) programs;
- Private Sector contractual solutions such as MPN agreements with PBMs and physicians.

Another important finding is that despite the move to a reimbursement schedule associated with below average wholesale pricing, injured workers have improved access to pharmacies willing to fill their prescriptions. There does not appear to be any trade-off between lower fee schedule levels and pharmacies willing to accept workers' compensation prescriptions. Due to the critical and controversial nature of workers' compensation reforms and overall access to care, the Institute will continue its analysis by studying other aspects of access between injured workers to medical services.

The Research Series: Early Returns on Workers' Comp Medical Reforms – Changes in Medical Cost & Utilization

This analysis is the fourth in a six-part series in which the Institute is tracking the cost and utilization of medical services following implementation of fee schedules, utilization review, and other workers' compensation medical cost containment strategies included in the 2002–2004 legislative reforms. The series will cover the following topics:

Part 1. Outpatient Surgery Fee Schedule
Part 2. Physical Therapy and Chiropractic Manipulation Cost and Utilization
Part 3. Physician Services Fee Schedule
Part 4. Pharmacy Fee Schedule Changes
Part 5. Utilization of Medical Services
Part 6. Inpatient Hospital Fee Schedule Changes

As noted above, the next report in the series will examine the changing nature of utilization of medical service cost drivers in the California Workers' Compensation Industry.

Appendix A. The Top 50 NDC drugs in 2004

	National Drug Code & Description	(R)epackage or (P)harmacy	Percent of 2004 Sample		
			Scripts	Billed	Paid
1	00603388128 - Hydrocodone/Apap 5/500 Tab	P	2.5%	0.6%	0.3%
2	00025152531 - Celebrex 200 Mg Capsule	P	2.4%	3.0%	3.3%
3	00406035705 - Hydrocodone/Apap 5/500 Tab	P	2.1%	0.2%	0.2%
4	58016034560 - Ranitidine 150 Mg Tablet	R	1.6%	3.3%	4.1%
5	00025198031 - Bextra 20 Mg Tablet	P	1.5%	1.6%	1.8%
6	00406036005 - Hydrocodone/Apap 7.5/750 Tb	P	1.4%	0.3%	0.2%
7	00591034905 - Hydrocodone/Apap 5/500 Tab	P	1.4%	0.5%	0.2%
8	00006011068 - Vioxx 25 Mg Tablet	P	1.3%	1.2%	1.4%
9	00591034901 - Hydrocodone/Apap 5/500 Tab	P	1.3%	0.3%	0.1%
10	00024542131 - Ambien 10 Mg Tablet	P	1.3%	1.3%	1.4%
11	58016026160 - Carisoprodol 350 Mg Tablet	R	1.2%	2.1%	2.6%
12	58016034502 - Ranitidine 150 Mg Tablet	R	1.1%	4.5%	5.5%
13	00045065060 - Ultracet Tablet	P	1.1%	0.8%	0.9%
14	58016027660 - Hydrocodone/Apap 5/500 Tab	R	1.1%	0.5%	0.6%
15	00603388728 - Hydrocodone/Apap 10/325 Tab	P	1.1%	0.6%	0.7%
16	58016026102 - Carisoprodol 350 Mg Tablet	R	1.1%	3.8%	4.6%
17	63481068706 - Lidoderm 5% Patch	P	1.0%	2.9%	2.6%
18	58016028990 - Naproxen 500 Mg Tablet	R	0.9%	1.4%	1.7%
19	00071080524 - Neurontin 300 Mg Capsule	P	0.9%	1.3%	1.4%
20	58016026190 - Carisoprodol 350 Mg Tablet	R	0.9%	2.6%	3.1%
21	49884077905 - Ibuprofen 800 Mg Tablet	P	0.9%	0.2%	0.1%
22	00603258228 - Carisoprodol 350 Mg Tablet	P	0.8%	0.3%	0.3%
23	58016070802 - Tramadol Hcl 50 Mg Tablet	R	0.7%	0.9%	1.1%
24	50111056303 - Cyclobenzaprine 10 Mg Tablet	P	0.7%	0.3%	0.1%
25	58016034590 - Ranitidine 150 Mg Tablet	R	0.7%	2.0%	2.5%
26	58016021260 - Propoxy-N/Apap 100-650 Tab	R	0.7%	0.3%	0.4%
27	58016034580 - Ranitidine 150 Mg Tablet	R	0.6%	1.6%	1.9%
28	00603546728 - Propoxy-N/Apap 100-650 Tab	P	0.6%	0.2%	0.1%
29	00406036701 - Hydrocodone/Apap 10/325 Tab	P	0.6%	0.2%	0.3%
30	00591085301 - Hydrocodone/Apap 10/325 Tab	P	0.6%	0.4%	0.4%
31	60793013601 - Skelaxin 800 Mg Tablet	P	0.5%	0.6%	0.7%
32	00591213705 - Ibuprofen 800 Mg Tablet	P	0.5%	0.1%	0.1%
33	58016075860 - Hydrocodone/Apap 7.5/750 Tb	R	0.5%	0.2%	0.3%
34	58016028902 - Naproxen 500 Mg Tablet	R	0.5%	1.0%	1.3%
35	00591038705 - Hydrocodone/Apap 7.5/750 Tb	P	0.5%	0.2%	0.1%
36	00025197531 - Bextra 10 Mg Tablet	P	0.5%	0.7%	0.7%
37	58016028960 - Naproxen 500 Mg Tablet	R	0.5%	0.5%	0.6%
38	00591551301 - Carisoprodol 350 Mg Tablet	P	0.5%	0.2%	0.1%
39	00591038701 - Hydrocodone/Apap 7.5/750 Tb	P	0.5%	0.2%	0.1%
40	53489011001 - Carisoprodol 350 Mg Tablet	P	0.5%	0.1%	0.1%
41	58016024360 - Ibuprofen 800 Mg Tablet	R	0.5%	0.2%	0.2%
42	00006011031 - Vioxx 25 Mg Tablet	P	0.5%	0.5%	0.6%
43	49884077805 - Ibuprofen 600 Mg Tablet	P	0.4%	0.1%	0.0%
44	00093314705 - Cephalexin 500 Mg Capsule	P	0.4%	0.2%	0.1%
45	58016024390 - Ibuprofen 800 Mg Tablet	R	0.4%	0.2%	0.2%
46	00378045105 - Naproxen 500 Mg Tablet	P	0.4%	0.3%	0.1%
47	58016070860 - Tramadol Hcl 50 Mg Tablet	R	0.3%	0.2%	0.3%
48	49884077901 - Ibuprofen 800 Mg Tablet	P	0.3%	0.1%	0.0%
49	58016027160 - Acetaminophen/Cod #3 Tablet	R	0.3%	0.1%	0.2%
50	58016070800 - Tramadol Hcl 50 Mg Tablet	R	0.3%	0.4%	0.4%
	Sub-total of 2004 Sample:		43.3%	45.4%	50.2%