



# **PRESCRIPTION BENCHMARKS FOR FLORIDA**

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# 1

## INTRODUCTION

### PURPOSE

This study compares the cost, price, and use of pharmaceuticals in Florida with 15 other medium-size and larger states,<sup>1</sup> using data from approximately 160,000 claims representing over 900,000 prescriptions. These comparisons, along with two earlier WCRI reports on pharmaceuticals in workers' compensation,<sup>2</sup> may provide useful information for policymakers concerning many different workers' compensation public policy debates, for example, regarding:

- pharmacy fee schedules,
- physician prescribing patterns,
- medical cost drivers,
- laws that mandate the use of generics when available, and
- laws that regulate physician dispensing of prescription drugs at the office.

### SUMMARY OF MAJOR FINDINGS

- The average payment per claim for prescription drugs in Florida was \$565—38 percent higher than the median of the 16 states in our study.
- The main reason that Florida was higher: some physicians wrote prescriptions and dispensed them directly to the patient at their offices. When physicians dispensed, they often were paid much more than pharmacies for the same prescription. Some physicians also wrote prescriptions for certain drugs that were especially profitable, but not prescribed as often by physicians in other states.
- Half of all injured workers in Florida (with more than seven days of lost time) received medications directly from the physician. Physician dispensing accounted for 30 percent of all prescriptions in Florida and physician-dispensers averaged \$427 in prescription revenue per claim.
- Prices paid to Florida pharmacies were similar to the prices paid to pharmacies in the median state. The Florida pharmacy fee schedule is set at levels that are typical of many states.

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<sup>1</sup> The states include California, Iowa, Illinois, Indiana, Louisiana, Maryland, Massachusetts, Michigan, New Jersey, New York, North Carolina, Pennsylvania, Tennessee, Texas, and Wisconsin.

<sup>2</sup> Victor, R., and P. Petrova (2006a and 2006b).  
[http://www.wcrinet.org/studies/public/abstracts/pharmacy\\_policymaker\\_guide-ab.html](http://www.wcrinet.org/studies/public/abstracts/pharmacy_policymaker_guide-ab.html);  
[http://www.wcrinet.org/studies/public/abstracts/pharmacy\\_state\\_policies-ab.html](http://www.wcrinet.org/studies/public/abstracts/pharmacy_state_policies-ab.html)

## SCOPE AND LIMITATIONS OF THE STUDY

This is the first in an annual series of studies that benchmarks the cost, price, and utilization of pharmaceuticals in workers' compensation. The measures presented include:

### COST METRICS

- average payment for prescriptions per claim with prescriptions

### PRICE METRICS

- average price per pill
- average price per prescription

### UTILIZATION METRICS

- average number of pills per claim with prescriptions
- average number of prescriptions per claim with prescriptions
- average number of visits to a dispensing point (e.g., pharmacy) at which the patient obtained prescription drugs
- average number of prescriptions filled per visit
- average number of pills per prescription

By prescription, we mean either a new prescription or a refill of an existing prescription. We excluded prescription medications dispensed at a hospital. We also excluded prescription medications that were administered (rather than dispensed e.g., injections received at the physician's office).

We present these metrics for all of the claims in the state that had prescriptions that were paid for by a workers' compensation payor and where the worker had more than seven days of lost time. We also examine important subsets of prescriptions:

- By dispensing point:
  - those dispensed at a pharmacy<sup>3</sup>
  - those dispensed at a physician's office
- By therapeutic class of drug:
  - pain medications
  - gastrointestinal agents
  - muscle relaxants
  - sleep inducing, antidepressant, and antianxiety medications
  - anti-infectives
- By generic or brand name drug
- For some of the most common drugs prescribed for injured workers in Florida<sup>4</sup>

<sup>3</sup> Mail-order prescriptions are currently included as pharmacy-dispensed prescriptions. We may be able to identify mail order as a separate subcategory in the future editions of the prescription benchmarks.

<sup>4</sup> See the *Technical Appendix* for a description of how the most common drugs were identified.

In this first edition, we examine an important, but limited snapshot of prescribing patterns:

- Prescriptions for claims that arose between October 1, 2005, and September 30, 2006. It captures all prescriptions filled through March 31, 2007, and paid for by workers' compensation payors. This is an average of 12 months' experience, and includes both closed and open cases. Future editions will examine more mature snapshots of these and subsequent cases. This is important since the nature of medical care delivered, especially for prescriptions, can be very different for cases that resolve within 12 months after the injury compared to cases where the worker's care continues through 24 or 36 months after injury.
- The study makes interstate comparisons at a single point in time. Future editions will examine trends in prescription costs, prices, and utilization.
- We focus on claims where the worker had at least seven days of lost time from work.
- Compared to data on other medical services, the data on workers' compensation prescriptions are less complete and less likely to be captured in a consistent manner across data sources and states. We have seen the data completeness improve over the past several years and expect continued improvement to occur naturally, just as it did for data on other medical services. Because of these limitations, the reader should distinguish these comparisons from the WCRI CompScope™ benchmarks in several ways:
  - The interstate comparisons in this study do not make certain statistical adjustments to improve interstate comparability. Hence, some of the interstate variation seen here may be due to interstate differences in injury mix or industry mix.
  - The data are not necessarily representative of the population of cases in each state. Our data cover the voluntary market, the self-insured market, and state funds where they exist, but do not cover the residual market in states with distinct residual markets. Fortunately, the residual markets were relatively small in these states in the years studied. Also, because of a concern about data completeness, these metrics are based on a smaller number of data sources than in CompScope™. Our data represent 26–51 percent of all cases in each state.

## **ORGANIZATION OF THIS STUDY**

This study provides five additional sections with increasing amounts of detail. Readers can choose the section with the amount of detail that best fits their information needs.

The next section summarizes the data and methods used. The third section provides a narrative that summarizes the major findings for Florida. In the fourth section, a slide presentation reviews the major findings and the empirical support for each. Following that is a set of detailed reference tables that present all the benchmarks for the 16 states. The last section, the *Technical Appendix*, details the methods and limitations of the study. For the readers who are less familiar with some terminologies used in the report, we provide a glossary at the end of the report.

# 2

## DATA AND METHODS

### IDENTIFYING PRESCRIPTION DRUGS

The data come from various bill review and payment systems of payors and their pharmacy benefit managers. The data for each prescription typically contain the amounts charged and paid, the number of pills, the date of service, and a code that identifies the transaction as a prescription. These codes could be a National Drug Code (NDC), Current Procedure Terminology (CPT) code, or a data source specific code for prescription medications.

The NDC is used to identify the medication, its strength, and the manufacturer or repackaging firm of the medication. For the prescriptions dispensed at retail pharmacies, the NDC was quite complete—95–99 percent of the prescriptions had a NDC in almost all states. However, the NDC was less complete for the prescriptions dispensed in physicians’ offices and the completeness varied by state—70–90 percent in many states but approximately 50–60 percent in Florida, Indiana, and Louisiana. When the NDC was missing, we were unable to determine the name of the medication and strength. Metrics that rely on this information do not contain data from these prescriptions (see Table TA.5).

One challenge was to distinguish prescription drugs in databases from prescriptions that were written for other medical services or products. We used the NDC, CPT, and sometimes a data source specific code to accomplish this. NDCs are assigned to prescription drugs, supplies, vitamin supplements, and a variety of other items used to treat injured workers. We identified the NDCs that were not for prescription drugs and removed them from the prescription analysis data.

### ASSIGNING EACH PRESCRIPTION TO A THERAPEUTIC GROUP

To analyze prescribing practices in different states, we assign each prescription with an NDC to a “therapeutic group” described in the previous section. To accomplish this, we used the coding system developed by Medi-Span and further grouped the detailed therapeutic categories into five broader groups that are commonly prescribed for injured workers.<sup>1</sup> Some prescriptions are for drugs that do not fit within these five groups. These were assigned to “other medications.”

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<sup>1</sup> Medi-Span 2005. *Master Drug Data Base (MDDB®) v2.5: Documentation Manual*. Published by Wolters Kluwer Health, Inc.

**LIMITATIONS AND CAVEATS**

We briefly discuss certain limitations in this section and provide caveats for the reader. These are discussed in more detail in the *Technical Appendix*.

The most significant caveat is: the percent of claims (with more than seven days of lost time) that have prescriptions varied significantly from state to state (Table 2.1). It is not surprising that physician prescribing practices vary from state to state. The WCRI CompScope™ Medical Benchmarks identify large variations in other types of medical practice patterns (e.g., surgery rates, use of diagnostics, frequency, and timing of pain management).

However, we expected that most cases in which the worker lost more than seven days from work would be sufficiently serious to warrant a prescription. Here we discuss two questions: (1) what explains the variance from expectations; and (2) how does this affect the interstate comparisons presented in this study?

**Table 2.1 Percentage of Claims with at Least One Prescription**  
**% of Claims with > 7 Days of Lost Time That Had at Least One Rx**

	% of Claims with > 7 Days of Lost Time That Had at Least One Rx
Florida	80%
California <sup>a</sup>	80%
Tennessee	78%
Indiana	76%
Texas	74%
Louisiana	71%
Michigan	69%
North Carolina	67%
Iowa	65%
Pennsylvania	64%
Illinois	61%
Maryland	60%
Wisconsin	54%
New Jersey	52%
New York <sup>a</sup>	43%
Massachusetts	42%

*Note:* The underlying data include claims with > 7 days of lost time that had injuries arising from October 2005 to September 2006 and prescriptions filled through March 2007.

<sup>a</sup> Data for California and New York include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements.

Key: Rx = prescriptions.

Why are there, in some states, fewer claims with at least one prescription than expected? There may be several reasons. As noted above, we expected to see an interstate variation in physician practice patterns. Chiropractors in some states more often provide care as the sole treating provider. Since chiropractors do not prescribe, interstate variation in the level of involvement of chiropractors as treating providers is part of the explanation. In addition, some prescription transactions may not be captured in our data. For example, some injured workers may have paid for their prescriptions out of pocket and received reimbursement subsequently from a workers' compensation payor, but the reimbursement may not be identified as a prescription.

Finally, some prescriptions may be paid for by non-workers' compensation payors. Part of the reason for this is that pharmacies may be submitting some prescriptions to other payors—especially for workers who have prescription coverage in their non-occupational health insurance. This is consistent with a study of workers' compensation cases of New York State employees,<sup>2</sup> all of whom were covered by group health insurance that included prescription coverage (Stapleton et al., 2001). By combining the records of the state fund and the group health insurers' interviews with workers, the study found that 21 percent of all drug expenditures for those injured workers were paid by the state fund, 69 percent by health insurers, and nine percent by the worker without reimbursement. We also inferred this possible cost shift based on the following observations:

- When most people take a prescription to their “regular” pharmacy, they are not often asked if the prescription should be billed under workers' compensation. As a result, it would not be surprising that some claims that have prescriptions do not have any prescriptions paid for by the workers' compensation payor.
- This type of cost shifting should be seen more often in states with a higher percentage of the population covered by health insurance. In fact, we find that states with higher health insurance coverage are often (but not always) states that had a lower percent of cases with prescriptions in workers' compensation data.<sup>3</sup>
- The states with the lowest percent of claims with prescriptions have the longest time from injury to the first prescription paid by workers' compensation. This suggests that part of the explanation is that early prescriptions are more likely to be missing from our data.
- To test for problems with data completeness, we identified 50 claims that had no prescriptions in the database but were expected to have a prescription—cases that either had surgery or at least 10 office visits. We asked the data sources to review their records for those cases to see if there were any prescriptions that they paid but were missing from our data. Of these 50 claims, we found few cases for which the data source found some prescriptions paid under workers' compensation.

It is possible that part of the interstate differences in the benchmark metrics that are shown as “per claim” (e.g., the average number of prescriptions per claim with prescriptions) is due to missing prescriptions that are paid by non-workers' compensation payors. We tested the magnitude of this bias and found that this was unlikely to be material in how states are characterized in this analysis as low, medium, or high.

At a minimum, the benchmark metrics in this study should be thought of as measuring interstate differences in the costs, prices, and utilization of prescription drugs paid by workers' compensation. The

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<sup>2</sup> The New York State Insurance Fund handles the workers' compensation claims of state employees.

<sup>3</sup> See the *Technical Appendix* for some empirical evidence supporting this. See Table TA.4.

sensitivity analysis suggests that these results are likely to be reasonable measures for characterizing the interstate differences in all prescriptions received by the average patient. We did not focus on the frequency of claims that ever received prescriptions for the above reasons.<sup>4</sup>

There are three additional caveats worth noting. First, the best metrics of price are those for specific drugs. When aggregated across different types of drugs, the average price per pill reflects both the unit price of a pill and the mix of drugs that are prescribed. For example, the unit prices for specific drugs may be similar between two states, but one state has a higher percentage of prescriptions for brand name drugs. As a result, the average price per pill paid would be higher in the state with more frequent use of brand names even when the unit prices are similar between the two states. The analyses of prices in this study focus on the prices for specific drugs.

Second, to measure utilization, we focus on the average number of pills per claim with prescriptions. This measure has certain advantages over the number of prescriptions per claim by capturing any differences in the number of pills per prescription. Nonetheless, it does not perfectly measure utilization. To illustrate, physicians may prescribe 30 pills at 100mg or 60 pills at 50mg. Both represent the same amount of the medication. For several drugs, we examined whether differences in the number of pills per claim were due to different strengths. In these analyses, we saw little evidence that this should be a concern.

Third, New York and California made changes to their pharmacy fee schedules after the period covered by these data. We include both states for comparison and as baselines for evaluating the policy changes. New York adopted a pharmacy fee schedule for the first time in 2008. California changed the rules about reimbursements for physician-dispensed drugs in 2007. In each table and figure, we mark the two states with a footnote and indicate that the data predate changes to the fee schedules.

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<sup>4</sup> Also see the *Technical Appendix* for a more detailed discussion of the related issue.

# 3

## SUMMARY OF MAJOR FINDINGS FOR FLORIDA

Among claims with prescriptions paid under workers' compensation, the average payment per claim for prescription drugs in Florida was \$565, 38 percent higher than the median of the 16 states in our study. The main reason for higher than average prescription costs in Florida was that some physicians wrote prescriptions and dispensed them directly to the patient at their offices. When physicians dispensed, they often were paid much more than pharmacies for the same prescription. Some physicians also wrote prescriptions for certain drugs that were especially profitable, but not used as often as in other states. This helps explain why Florida had higher utilization of prescriptions. Prices paid to Florida pharmacies were similar to the prices paid to pharmacies in the median state, largely due to Florida's pharmacy fee schedule that is set at levels that are typical of many states.

Physician dispensing was common in Florida. We observed that California physicians engaged in similar practices. In 2007, the California legislature took actions to equalize the prices paid for physician-dispensed and pharmacy-dispensed prescriptions.

Advocates for physician dispensing note its advantages. First, for some patients, it may mean greater compliance with the doctors' instructions to take the medications prescribed, since not all prescriptions get filled by patients. Second, it saves the patient time—especially for patients who live in remote areas that are long distances from the nearest pharmacy. Finally, it maximizes the benefit of prompt treatment, since some medications (e.g., antibiotics in some cases) should be taken as soon as possible. The public policy question is what premium should be paid in order to realize these benefits and in what types of cases.

### PHYSICIAN DISPENSING IN FLORIDA WAS COMMON

Physicians in Florida dispensed prescription drugs in 51 percent of claims with any prescriptions, representing 30 percent of all prescriptions paid under workers' compensation over the study period (Table 3.1). When physicians dispensed prescription drugs, they received an average of \$427 per claim for those prescriptions.

**Table 3.1 Percentage of All Prescriptions That Were Dispensed by Physicians**

TX <sup>a</sup>	NY <sup>a, b</sup>	MA <sup>a</sup>	WI	NC	LA	IA	TN	NJ	IN	PA	IL	MD	MI	FL	CA <sup>c</sup>
0%	0%	0%	7%	9%	9%	9%	11%	14%	14%	15%	22%	24%	27%	30%	60%

Note: The underlying data include claims with > 7 days of lost time that had injuries arising from October 2005 to September 2006 and prescriptions filled through March 2007. See the Data and Methods and the *Technical Appendix* for more details.

<sup>a</sup> Physician dispensing was not permitted in Massachusetts, New York, and Texas over the study period.

<sup>b</sup> Data for New York include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements.

<sup>c</sup> In 2007, the legislature in California enacted reforms specially aimed at reducing the unusual amount of physician dispensing. Data for California include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements.

Key: Rx = prescriptions.

### PHYSICIANS WERE PAID HIGHER PRICES THAN PHARMACIES FOR THE SAME PRESCRIPTION

When physicians dispensed prescription drugs at their offices, the average price paid per pill was often much higher than that for the same prescriptions filled at retail pharmacies. Table 3.2 compares the average prices paid per pill between physician- and pharmacy-dispensed prescriptions for specific medications that were commonly used in treating injured workers in Florida. As can be seen, the prices paid to physicians were often much higher for common drugs. The most striking examples are Ranitidine HCL (more than double what pharmacies were paid),<sup>1</sup> Carisoprodol (five times higher), Hydrocodone-Acetaminophen (double what the pharmacy was paid), and Oxycodone-Acetaminophen (one and a half times higher). For most of the other common drugs, physicians were paid 35–60 percent more than pharmacies for the same prescription.

<sup>1</sup> It is interesting to note that on Walgreens.com, the price for the same medication without a prescription was 35 cents (Zantac® 150mg, bottle of 24 pills, October 28, 2009).

**Table 3.2 Comparing Prices Paid for Same Drugs between Physician- and Pharmacy-Dispensed Prescriptions in Florida**

Drug Name (Brand Name)	% of Claims with Rx That Had Specific Drug	% of Rx for the Drug That Was Dispensed by Physicians	Average Price Paid per Pill		
			Physician-Dispensed Rx	Pharmacy-Dispensed Rx	% Difference
Hydrocodone-Acetaminophen (Vicodin®)	48%	12%	\$0.96	\$0.46	109%
Ibuprofen (Motrin®)	29%	47%	\$0.49	\$0.34	44%
Oxycodone w/Acetaminophen (Percocet®)	27%	4%	\$2.22	\$0.87	155%
Tramadol HCL (Ultram®)	23%	56%	\$1.25	\$1.25	0%
Cyclobenzaprine HCL (Flexeril®)	21%	33%	\$1.33	\$1.19	12%
Naproxen (Aleve®)	21%	49%	\$1.58	\$1.17	35%
Propoxyphene-N w/APAP (Darvocet-N®)	18%	19%	\$1.00	\$0.63	59%
Carisoprodol (Soma®)	11%	54%	\$3.05	\$0.62	392%
Ranitidine HCL (Zantac®) <sup>a</sup>	7%	95%	\$3.15	\$1.46	116%

Note: The underlying data include claims with > 7 days of lost time that had injuries arising from October 2005 to September 2006 and prescriptions filled through March 2007. See the Data and Methods and the *Technical Appendix* for more details.

<sup>a</sup> This drug is also available over-the-counter at the pharmacy for 35 cents per pill (Source: Walgreens.com, October 28, 2009, bottle of 24 pills of Zantac® 150mg).

Key: Rx = prescriptions.

### PHYSICIAN DISPENSING: HIGHER UTILIZATION OF CERTAIN DRUGS

On average, Florida physicians wrote more prescriptions for more pills per claim than physicians in the median state. The average number of prescriptions per claim in Florida was 17 percent higher than in the median state. Similar results can be seen on the average number of pills per claim.

This was largely due to the use of certain medications that were often dispensed by physicians in Florida and that physicians in other states prescribed much less frequently. Among the most common drugs used for Florida injured workers, the leading examples include Carisoprodol (i.e., Soma® a muscle relaxant) and Ranitidine HCL (i.e., Zantac® for acid reflux). Carisoprodol was much more commonly used in states where physician dispensing was common. As Table 3.3 shows, about 1 in 10 injured workers received this drug in Florida and Louisiana,<sup>2</sup> but only about 1 in 20 or fewer in most other states studied.

The average injured worker with prescriptions for Carisoprodol filled (or refilled) their prescriptions 2.9 times for 173 pills per claim in Florida, compared to 2.7 times for 124 pills per claim in the median state (Table 3.4).

Ranitidine HCL was also much more commonly used in states where physician dispensing was common. As Table 3.5 shows, seven percent of injured workers received this drug in Florida (six percent in Maryland and 14 percent in California) while in most states, the number was only one percent or less.

<sup>2</sup> One in five injured workers also received this drug in California before the most recent change that addressed the issue of physician dispensing.

**Table 3.3 Percentage of Claims with Rx That Had Rx for Carisoprodol**

WI	IA	NJ	MI	IL	NY <sup>a, b</sup>	PA	NC	MA <sup>a</sup>	IN	TN	MD	TX <sup>a</sup>	FL	LA	CA <sup>c</sup>
1%	1%	2%	2%	3%	3%	4%	4%	4%	5%	6%	8%	8%	11%	12%	21%

Note: The underlying data include claims with > 7 days of lost time that had injuries arising from October 2005 to September 2006 and prescriptions filled through March 2007. See the Data and Methods and the *Technical Appendix* for more details.

<sup>a</sup> Physician dispensing was not permitted in Massachusetts, New York, and Texas over the study period.

<sup>b</sup> Data for New York include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements.

<sup>c</sup> In 2007, the legislature in California enacted reforms specially aimed at reducing the unusual amount of physician dispensing. Data for California include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements.

Key: Rx = prescriptions.

**Table 3.4 Utilization of Most Common Medications: Comparing Florida to the Median State**

Drug Name (Brand Name)	% of Claims with Rx That Had Specific Drug	Average Number of Pills for Specific Drug per Claim with the Drug			Average Number of Rx for Specific Drug per Claim with the Drug		
		Florida	16-State Median	% Difference	Florida	16-State Median	% Difference
Hydrocodone-Acetaminophen (Vicodin®)	48%	125	132	-5%	3.2	3.3	-2%
Ibuprofen (Motrin®)	29%	77	84	-9%	1.9	1.8	3%
Oxycodone w/Acetaminophen (Percocet®)	27%	103	107	-3%	2.3	2.3	0%
Tramadol HCL (Ultram®)	23%	118	105	12%	2.4	2.1	11%
Cyclobenzaprine HCL (Flexeril®)	21%	71	67	6%	2.1	2.0	4%
Naproxen (Aleve®)	21%	71	74	-4%	1.9	1.8	4%
Propoxyphene-N w/APAP (Darvocet-N®)	18%	75	76	-1%	2.0	2.0	0%
Carisoprodol (Soma®)	11%	173	124	40%	2.9	2.7	7%
Ranitidine HCL (Zantac®)	7%	141	74	91%	2.6	1.5	71%

Note: The underlying data include claims with > 7 days of lost time that had injuries arising from October 2005 to September 2006 and prescriptions filled through March 2007. See the Data and Methods and the *Technical Appendix* for more details.

Key: Rx = prescriptions.

The average injured worker with prescriptions for Ranitidine HCL filled (or refilled) the prescriptions 2.6 times for 141 pills per claim in Florida, compared to 1.5 times for 74 pills per claim in the median state (Table 3.4).

**Table 3.5 Percentage of Claims with Rx That Had Rx for Ranitidine HCL**

IA	TX <sup>a</sup>	WI	IN	LA	NY <sup>a,b</sup>	NC	MI	MA <sup>a</sup>	PA	TN	IL	NJ	MD	FL	CA <sup>c</sup>
n/a	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%	6%	7%	14%

Note: The underlying data include claims with > 7 days of lost time that had injuries arising from October 2005 to September 2006 and prescriptions filled through March 2007. See the Data and Methods and the *Technical Appendix* for more details.

<sup>a</sup> Physician dispensing was not permitted in Massachusetts, New York, and Texas over the study period.

<sup>b</sup> Data for New York include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements.

<sup>c</sup> In 2007, the legislature in California enacted reforms specially aimed at reducing the unusual amount of physician dispensing. Data for California include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements.

Key: n/a = not available; Rx = prescriptions.

### PRICES PAID TO FLORIDA PHARMACIES WERE SIMILAR TO THE MEDIAN STATE

The average price per pill paid to pharmacies in Florida was at the median of the 16 states (\$1.16 per pill on average). We see typical prices paid for almost all medications that were commonly used in treating injured workers in Florida (Table 3.6). Florida has a pharmacy fee schedule which is set at the level of the Average Wholesale Price—typical of many states. This typical pharmacy fee schedule explains why the prices paid to pharmacies were typical in Florida.

**Table 3.6 Prices Paid to Pharmacies for Most Common Drugs: Comparing Florida to the Median State**

Drug Name (Brand Name)	% of Claims with Rx That Had Specific Drug			Average Price Paid per Pill, Pharmacy-Dispensed Rx		
	Florida	16-State Median	% Point Difference	Florida	16-State Median	% Difference
Hydrocodone-Acetaminophen (Vicodin <sup>®</sup> )	48%	53%	-5%	\$0.46	\$0.49	-6%
Ibuprofen (Motrin <sup>®</sup> )	29%	27%	2%	\$0.34	\$0.35	-3%
Oxycodone w/Acetaminophen (Percocet <sup>®</sup> )	27%	23%	4%	\$0.87	\$0.88	-1%
Tramadol HCL (Ultram <sup>®</sup> )	23%	14%	9%	\$1.25	\$1.24	1%
Cyclobenzaprine HCL (Flexeril <sup>®</sup> )	21%	20%	1%	\$1.19	\$1.20	< 1%
Naproxen (Aleve <sup>®</sup> )	21%	16%	5%	\$1.17	\$1.19	-1%
Propoxyphene-N w/APAP (Darvocet-N <sup>®</sup> )	18%	16%	2%	\$0.63	\$0.66	-4%
Carisoprodol (Soma <sup>®</sup> )	11%	4%	7%	\$0.62	\$0.68	-9%
Ranitidine HCL (Zantac <sup>®</sup> ) <sup>a</sup>	7%	0%	7%	\$1.46	\$1.46	0%

Note: The underlying data include claims with > 7 days of lost time that had injuries arising from October 2005 to September 2006 and prescriptions filled through March 2007. See the Data and Methods and the *Technical Appendix* for more details.

<sup>a</sup> This drug is also available over-the-counter at the pharmacy for 35 cents per pill (Source: Walgreens.com, October 28, 2009, bottle of 24 pills of Zantac<sup>®</sup> 150mg).

Key: Rx = prescriptions.

sensitivity analysis suggests that these results are likely to be reasonable measures for characterizing the interstate differences in all prescriptions received by the average patient. We did not focus on the frequency of claims that ever received prescriptions for the above reasons.<sup>4</sup>

There are three additional caveats worth noting. First, the best metrics of price are those for specific drugs. When aggregated across different types of drugs, the average price per pill reflects both the unit price of a pill and the mix of drugs that are prescribed. For example, the unit prices for specific drugs may be similar between two states, but one state has a higher percentage of prescriptions for brand name drugs. As a result, the average price per pill paid would be higher in the state with more frequent use of brand names even when the unit prices are similar between the two states. The analyses of prices in this study focus on the prices for specific drugs.

Second, to measure utilization, we focus on the average number of pills per claim with prescriptions. This measure has certain advantages over the number of prescriptions per claim by capturing any differences in the number of pills per prescription. Nonetheless, it does not perfectly measure utilization. To illustrate, physicians may prescribe 30 pills at 100mg or 60 pills at 50mg. Both represent the same amount of the medication. For several drugs, we examined whether differences in the number of pills per claim were due to different strengths. In these analyses, we saw little evidence that this should be a concern.

Third, New York and California made changes to their pharmacy fee schedules after the period covered by these data. We include both states for comparison and as baselines for evaluating the policy changes. New York adopted a pharmacy fee schedule for the first time in 2007. California changed the rules about reimbursements for physician-dispensed drugs in 2007. In each table and figure, we mark the two states with a footnote and indicate that the data predate changes to the fee schedules.


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<sup>4</sup> Also see the *Technical Appendix* for a more detailed discussion of the related issue.

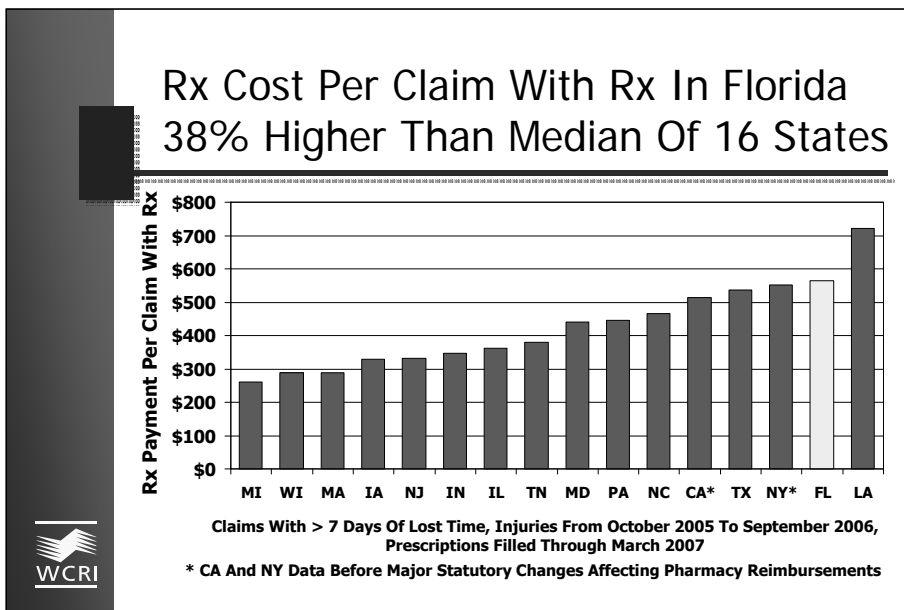
# 4

## **SLIDE PRESENTATION**

# Prescription Drug Benchmarks For Florida



The following pages are a slide discussion of the major findings for Florida from the WCRI Prescription Benchmarks. The Data and Methods section in the accompanying narrative provides the reader with caveats for using and interpreting the benchmark results. A more detailed discussion of key technical and methodological issues can be found in the *Technical Appendix*.



Key: **Rx** = Prescriptions.



## Higher Rx Costs Driven By Higher Priced Physician Dispensing

- Some physicians in Florida dispensed Rx drugs at their offices
- When dispensing, physicians were paid much higher prices than pharmacies for same prescription
- Florida physician-dispensers used certain drugs more often than Florida and non-Florida physicians who did not dispense
- By contrast, prices paid to pharmacies were similar to median state

Key: **Rx** = Prescriptions.



## Physicians In Florida Dispensed Different Mix Of Prescription Drugs

Top Pharmacy-Dispensed Drugs In Florida	% Of Pharmacy Rx	Top Physician-Dispensed Drugs In Florida	% Of Physician Rx
Hydrocodone-Acetamin	24.4%	Tramadol HCL	12.8%
Oxycodone-Acetamin	9.9%	Ibuprofen	9.0%
Cyclobenzaprine HCL	5.5%	Hydrocodone-Acetamin	8.6%
Propoxyphen-N w/APAP	5.2%	Etodolac	7.8%
Ibuprofen	4.7%	Naproxen	7.4%
Tramadol HCL	3.5%	Ranitidine HCL	7.2%
Naproxen	3.3%	Carisoprodol	7.1%
Celecoxib	3.3%	Cyclobenzaprine HCL	6.3%

Key: **Rx** = Prescriptions.

Provided in the parentheses are the most common brand names:

Carisoprodol (Soma®)

Celecoxib (Celebrex®)

Cyclobenzaprine (Flexeril®)

Etodolac (Lodine®)

Hydrocodone-Acetamin (Vicodin®)

Ibuprofen (Motrin®)

Naproxen (Aleve®)

Oxycodone-Acetamin (Percocet®)

Propoxyphen-N w/APAP (Darvocet-N®)

Ranitidine HCL (Zantac®)

Tramadol HCL (Ultram®)



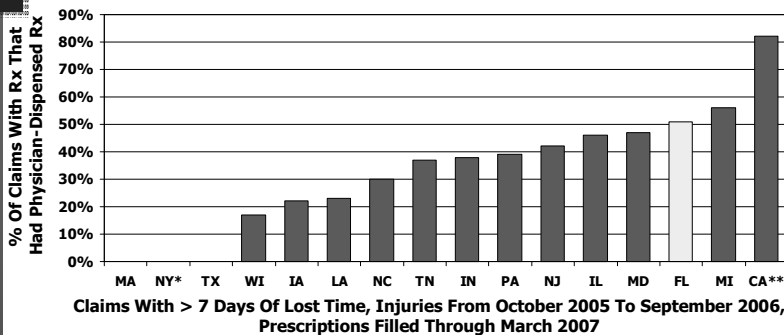
## How Important Was Physician Dispensing In Florida?

Measure	Florida
% Of Claims With Rx That Had Physician-Dispensed Rx	51%
% Of All Rx Dispensed By Physicians	30%
% Of Rx Costs Paid For Physician-Dispensed Rx	39%
Average Revenue Per Claim For Physician-Dispensers	\$427

Key: **Rx** = Prescriptions.



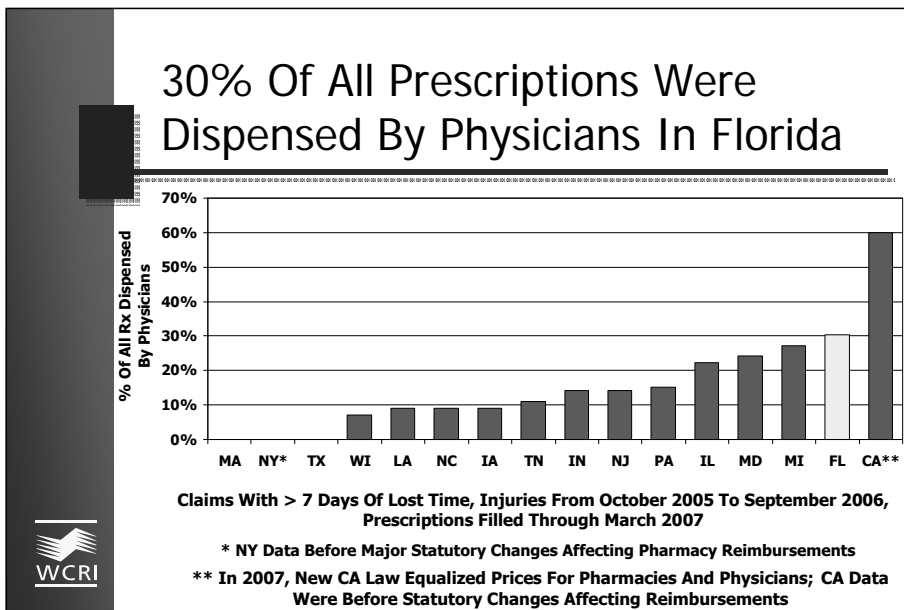
## Half Of All Florida Workers Had Physician-Dispensed Rx



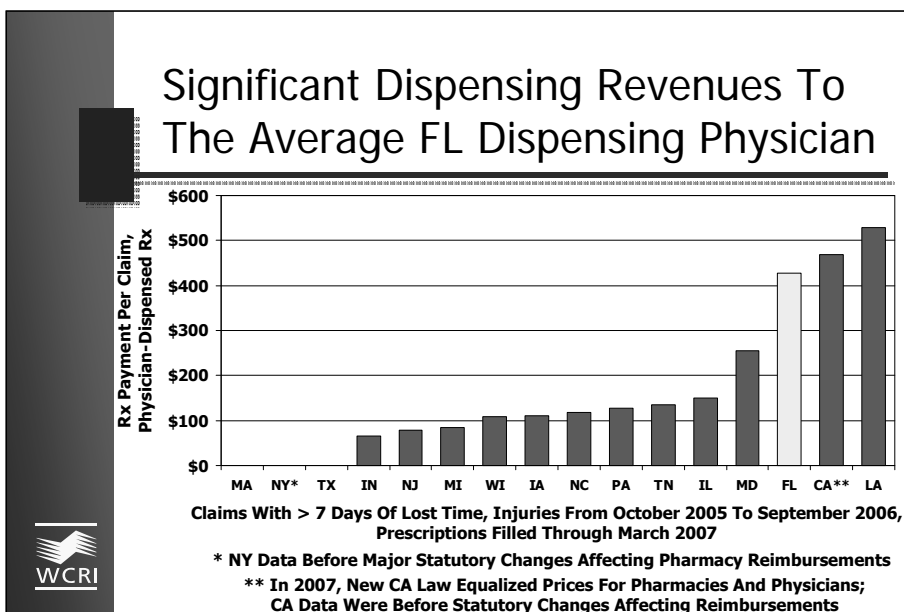
\* NY Data Before Major Statutory Changes Affecting Pharmacy Reimbursements

\*\* In 2007, New CA Law Equalized Prices For Pharmacies And Physicians; CA Data Were Before Statutory Changes Affecting Reimbursements

Key: **Rx** = Prescriptions.



Key: Rx = Prescriptions.



Key: Rx = Prescriptions.





## Higher Rx Costs Driven By Higher Priced Physician Dispensing

- Some physicians in Florida dispensed Rx drugs at their offices
- ➔ When dispensing, physicians were paid much higher prices than pharmacies for the same prescription
- ➔ Florida physician-dispensers used certain drugs more often than Florida and non-Florida physicians who did not dispense
- By contrast, prices paid to pharmacies were similar to median state

Key: **Rx** = Prescriptions.



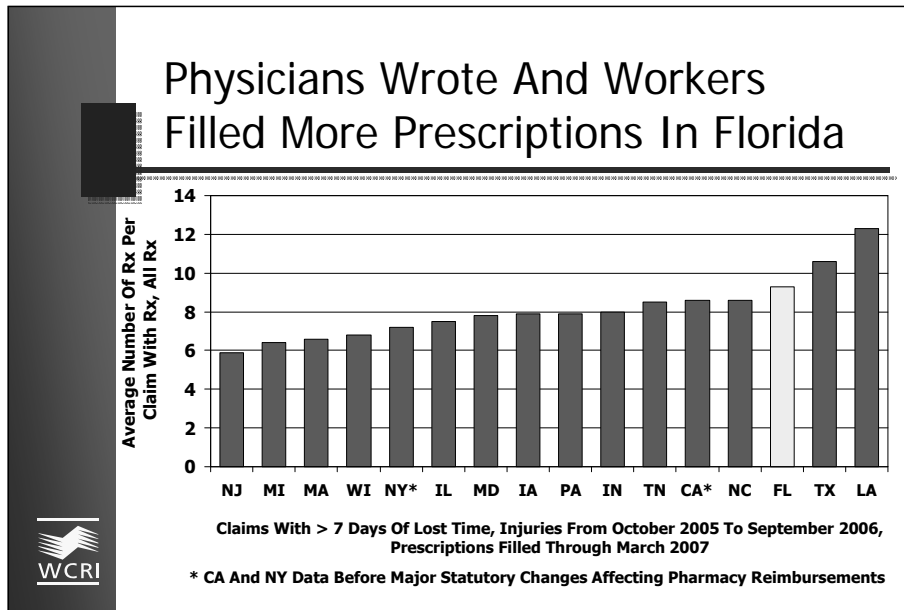
## When Dispensing, Physicians Paid Much Higher Than Pharmacies For Same Rx

Top 9 Drugs (54% of all Rx in Florida)	% Of Rx Dispensed By Physicians	Price Paid Per Pill In Florida		% Diff.
		Physician	Pharmacy	
Hydrocodone-Acetaminophen (Vicodin®)	12%	\$0.96	\$0.46	+109%
Ibuprofen (Motrin®)	47%	\$0.49	\$0.34	+44%
Oxycodone w/Acetaminophen (Percocet®)	4%	\$2.22	\$0.87	+155%
Tramadol HCL (Ultram®)	56%	\$1.25	\$1.25	0%
Cyclobenzaprine HCL (Flexeril®)	33%	\$1.33	\$1.19	+12%
Naproxen (Aleve®)	49%	\$1.58	\$1.17	+35%
Propoxyphene-N w/APAP (Darvocet-N®)	19%	\$1.00	\$0.63	+59%
Carisoprodol (Soma®)	54%	\$3.05	\$0.62	+392%
Ranitidine HCL* (Zantac®)	95%	\$3.15	\$1.46	+116%

\* This drug is also available over-the-counter at the pharmacy for 35 cents per pill (Source: Walgreens.com, October 28, 2009, bottle of 24 pills of Zantac® 150mg).

Key: **Rx** = Prescriptions.

Key: **Rx** = Prescriptions.



Key: **Rx** = Prescriptions.

### FL Physicians Prescribed More For Muscle Relaxants And Gastrointestinal Agents

<i>% Of Claims With Rx That Had ...</i>	Florida	16-State Median	% Point Difference
Pain Medication	96%	96%	0%
Muscle Relaxant	39%	31%	+8%
Gastrointestinal Agent	11%	4%	+7%
SIDA*	11%	12%	-1%
Anti-Infective	22%	16%	+6%
Other Medication	24%	20%	+4%

\* Sleep Inducing, Antidepressant, And Antianxiety Medications



## Florida Workers Filled More Rx For More Pills Per Claim

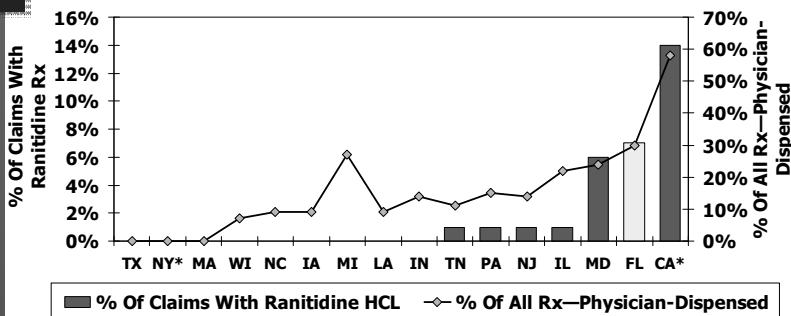
Top 9 Drugs (54% of all Rx in Florida)	% Of Rx Dispensed By Physicians	Average # Of Pills Per Claim with Drug		Average # Of Rx Per Claim	
		Florida	Median State	Florida	Median State
Hydrocodone-Acetaminophen (Vicodin®)	12%	125	132	3.2	3.3
Ibuprofen (Motrin®)	47%	77	84	1.9	1.8
Oxycodone w/Acetaminophen (Percocet®)	4%	103	107	2.3	2.3
Tramadol HCL (Ultram®)	56%	118	105	2.4	2.1
Cyclobenzaprine HCL (Flexeril®)	33%	71	67	2.1	2.0
Naproxen (Aleve®)	49%	71	74	1.9	1.8
Propoxyphene-N w/APAP (Darvocet-N®)	19%	75	76	2.0	2.0
Carisoprodol (Soma®)	54%	173	124	2.9	2.7
Ranitidine HCL* (Zantac®)	95%	141	74	2.5	1.5

\* This drug is also available over-the-counter at the pharmacy for 35 cents per pill (Source: Walgreens.com, October 28, 2009, bottle of 24 pills of Zantac® 150mg).

Key: Rx = Prescriptions.



## Ranitidine Rarely Prescribed In States Where Physician Dispensing Was Not Common



Claims With > 7 Days Of Lost Time, Injuries From October 2005 To September 2006, Prescriptions Filled Through March 2007

\* CA And NY Data Before Major Statutory Changes Affecting Pharmacy Reimbursements

Key: Rx = Prescriptions.





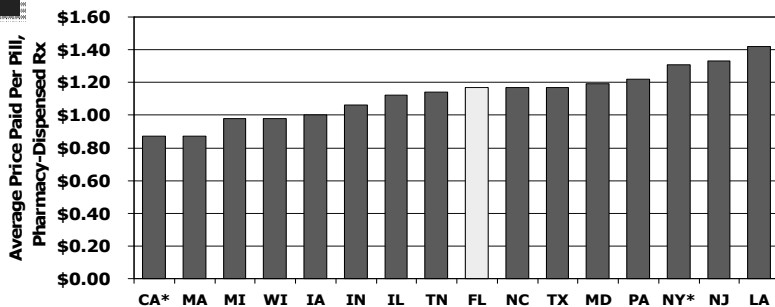
## Higher Rx Costs Driven By Higher Priced Physician Dispensing

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- ➔ By contrast, prices paid to pharmacies were similar to median state

Key: **Rx** = Prescriptions.



## Average Price Paid To Pharmacies Was Typical—Fee Schedule Typical



Claims With > 7 Days Of Lost Time, Injuries From October 2005 To September 2006, Prescriptions Filled Through March 2007

\* CA And NY Data Before Major Statutory Changes Affecting Pharmacy Reimbursements

The pharmacy fee schedule in Florida was at the level of the Average Wholesale Price, plus a dispensing fee of \$4.

Key: **Rx** = Prescriptions.

## Prices Paid To Pharmacies In Florida Were Typical For Most Common Drugs

Top 9 Drugs (54% of all Rx in Florida)	% Of Claims With Rx	Price Per Pill Paid To Pharmacies		% Diff.
		Florida	16-State Median	
Hydrocodone-Acetaminophen (Vicodin®)	48%	\$0.46	\$0.49	-6%
Ibuprofen (Motrin®)	29%	\$0.34	\$0.35	-3%
Oxycodone w/Acetaminophen (Percocet®)	27%	\$0.87	\$0.88	-1%
Tramadol HCL (Ultram®)	23%	\$1.25	\$1.24	+1%
Cyclobenzaprine HCL (Flexeril®)	21%	\$1.19	\$1.20	0%
Naproxen (Aleve®)	21%	\$1.17	\$1.19	-1%
Propoxyphene-N w/APAP (Darvocet-N®)	18%	\$0.63	\$0.66	-4%
Carisoprodol (Soma®)	11%	\$0.62	\$0.68	-9%
Ranitidine HCL* (Zantac®)	7%	\$1.46	\$1.46	0%



\* This drug is also available over-the-counter at the pharmacy for 35 cents per pill (Source: Walgreens.com, October 28, 2009, bottle of 24 pills of Zantac® 150mg).

Key: **Rx** = Prescriptions.

## Higher Rx Costs Driven By Higher Priced Physician Dispensing

- Some physicians in Florida dispensed Rx drugs at their offices more frequently
- When dispensing, physicians were paid much higher prices than pharmacies for same prescription
- Florida physician-dispensers used certain drugs more often than Florida and non-Florida physicians who did not dispense
- By contrast, prices paid to pharmacies were similar to median state



Key: **Rx** = Prescriptions.

## 5

**LIST OF PRESCRIPTION BENCHMARK TABLES**

<a href="#"><u>Table R1</u></a>	<a href="#"><u>Frequency, Costs, Price, and Utilization of Prescription Drugs, All Prescriptions</u></a>
<a href="#"><u>Table R1A</u></a>	<a href="#"><u>Frequency, Costs, Price, and Utilization of Prescription Drugs. By Dispensing Point</u></a>
<a href="#"><u>Table R2</u></a>	<a href="#"><u>Frequency and Use of Brand Name Prescriptions, All Prescriptions</u></a>
<a href="#"><u>Table R3</u></a>	<a href="#"><u>Frequency and Cost of Prescription Drugs, by Type of Medication</u></a>
<a href="#"><u>Table R3A</u></a>	<a href="#"><u>Average Price per Prescription, by Type of Medication</u></a>
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<a href="#"><u>Table R3C</u></a>	<a href="#"><u>Average Number of Pills per Claim for Specific Type of Medication, among Claims with the Type of Medication</u></a>
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<a href="#"><u>Table R4</u></a>	<a href="#"><u>Percentage of Claims with Prescriptions that Had the Common Drug, All Prescriptions</u></a>
<a href="#"><u>Table R5</u></a>	<a href="#"><u>Percentage of All Prescriptions by Common Drug, All Prescriptions</u></a>
<a href="#"><u>Table R6</u></a>	<a href="#"><u>Average Number of Pills per Claim for Common drugs, All Prescriptions</u></a>
<a href="#"><u>Table R7</u></a>	<a href="#"><u>Average Number of Prescriptions per Claim for Common Drugs, All Prescriptions</u></a>
<a href="#"><u>Table R8</u></a>	<a href="#"><u>Percentage of Physician-Dispensed Prescriptions by Common Drug</u></a>
<a href="#"><u>Table R9</u></a>	<a href="#"><u>Average Price Paid per Pill for Common Drugs, Comparing Prices Paid to Physicians to Prices Paid to Pharmacies in Same State</u></a>

**Table R1 Frequency, Costs, Price, and Utilization of Prescription Drugs, All Prescriptions <sup>a</sup>**

	CA <sup>b</sup>	FL	IA	IL	IN	LA	MA	MD	MI	NC	NJ	NY <sup>b</sup>	PA	TN	TX	WI	Median
% of medical costs that were paid for prescription drugs	6%	5%	2%	1%	2%	4%	2%	3%	2%	3%	1%	5%	3%	3%	4%	1%	3%
% of all claims that had at least one Rx	80%	80%	65%	61%	76%	71%	42%	60%	69%	67%	52%	43%	64%	78%	74%	54%	66%
Average Rx payment per claim with Rx	\$513	\$565	\$328	\$361	\$347	\$721	\$289	\$441	\$261	\$467	\$332	\$553	\$445	\$381	\$536	\$288	\$411
Average price per Rx	\$66	\$61	\$41	\$48	\$43	\$60	\$44	\$57	\$40	\$54	\$56	\$76	\$56	\$45	\$49	\$43	\$52
Average price per pill	\$1.51	\$1.36	\$1.00	\$1.12	\$1.04	\$1.32	\$0.87	\$1.27	\$0.99	\$1.18	\$1.30	\$1.31	\$1.19	\$1.15	\$1.17	\$0.98	\$1.18
Average number of pills per claim with Rx	385	378	313	306	310	516	277	333	256	363	234	370	327	315	451	282	321
Average number of Rx per claim with Rx	8.6	9.3	7.9	7.5	8.0	12.3	6.6	7.8	6.4	8.6	5.9	7.2	7.9	8.5	10.6	6.8	7.9
Average number of pills per Rx	45	41	39	41	39	42	42	43	40	42	40	51	41	37	43	41	41
Average number of visits to fill a Rx, per claim with Rx	4.9	5.3	5.1	4.7	5.4	7.4	4.6	4.8	3.9	5.7	3.9	4.7	5.2	5.4	5.4	4.5	5.0
Average number of Rx per visit with Rx	1.8	1.8	1.6	1.6	1.5	1.7	1.5	1.7	1.7	1.6	1.5	1.6	1.5	1.6	1.9	1.6	1.6

*Note:* The underlying data include claims with > 7 days of lost time that had injuries arising from October 2005 to September 2006 and prescriptions filled through March 2007. See the Data and Methods and the *Technical Appendix* for more details.

<sup>a</sup> All prescriptions are those that were paid under workers' compensation, regardless of dispensing point. We excluded prescription drugs that were administered (e.g., injectibles) or dispensed by a hospital. See the Data and Methods and the *Technical Appendix* for a more detailed description of how we identified prescriptions.

<sup>b</sup> Data for California and New York include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements.

Key: Rx = prescriptions.

**Table R1A Frequency, Costs, Price, and Utilization of Prescription Drugs, by Dispensing Point**

	CA <sup>a</sup>	FL	IA	IL	IN	LA	MA <sup>b</sup>	MD	MI	NC	NJ	NY <sup>b,c</sup>	PA	TN	TX <sup>b</sup>	WI	Median
<b>Rx dispensed at physicians' offices (MDRx)</b>																	
% of total Rx payment that were paid for MDRx	73%	39%	6%	17%	6%	15%	n/a	27%	16%	6%	8%	n/a	10%	10%	n/a	5%	10%
% of all Rx that were MDRx	60%	30%	9%	22%	14%	9%	n/a	24%	27%	9%	14%	n/a	15%	11%	n/a	7%	14%
% of claims with Rx that had MDRx	82%	51%	22%	46%	38%	23%	n/a	47%	56%	30%	42%	n/a	39%	37%	n/a	17%	39%
Average payment for MDRx per claim with MDRx	\$469	\$427	\$110	\$150	\$65	\$528	n/a	\$255	\$84	\$119	\$79	n/a	\$128	\$135	n/a	\$109	\$128
Average price per Rx for MDRx	\$76	\$77	\$29	\$37	\$20	\$94	n/a	\$54	\$24	\$37	\$32	n/a	\$35	\$39	n/a	\$29	\$37
Average price per pill for MDRx	\$1.83	\$1.82	\$1.04	\$1.25	\$0.86	\$1.77	n/a	\$1.71	\$1.04	\$1.24	\$1.30	n/a	\$1.30	\$1.29	n/a	\$0.90	\$1.29
Average number of pills per claim for MDRx, among claims with MDRx	297	242	105	135	77	272	n/a	183	93	85	65	n/a	94	103	n/a	115	105
Average number of MDRx per claim with MDRx	6.7	5.5	3.8	4.1	3.2	5.6	n/a	4.7	3.6	3.2	2.5	n/a	3.7	3.4	n/a	3.8	3.8
Average number of pills per MDRx	44	44	28	33	24	48	n/a	39	26	27	26	n/a	25	30	n/a	30	30
Average number of visits to fill a MDRx, per claim with MDRx	3.7	2.8	2.5	2.3	2.1	3.0	n/a	2.6	2.0	2.0	1.7	n/a	2.4	2.3	n/a	2.4	2.4
Average number of MDRx per visit with MDRx	1.7	1.9	1.6	1.7	1.5	1.8	n/a	1.8	1.7	1.6	1.5	n/a	1.4	1.5	n/a	1.7	1.7
<b>Rx dispensed at pharmacies (PDRx)</b>																	
% of total Rx payment that were paid for PDRx	26%	60%	93%	82%	93%	85%	100%	73%	84%	93%	91%	100%	89%	90%	100%	94%	91%
% of all Rx that were PDRx	39%	69%	91%	78%	86%	91%	100%	76%	73%	91%	86%	100%	85%	89%	100%	93%	87%
% of claims with Rx that had PDRx	46%	77%	89%	74%	84%	90%	100%	72%	74%	87%	75%	100%	79%	91%	100%	92%	85%
Average payment for PDRx per claim with PDRx	\$332	\$435	\$340	\$398	\$385	\$676	\$289	\$445	\$328	\$503	\$403	\$555	\$500	\$381	\$532	\$292	\$400
Average price per Rx for PDRx	\$47	\$53	\$43	\$52	\$47	\$57	\$44	\$57	\$47	\$56	\$61	\$76	\$61	\$46	\$49	\$44	\$51
Average price per pill for PDRx	\$0.87	\$1.17	\$1.00	\$1.12	\$1.06	\$1.42	\$0.87	\$1.19	\$0.98	\$1.17	\$1.33	\$1.31	\$1.22	\$1.14	\$1.17	\$0.98	\$1.16
Average number of pills per claim for PDRx, among claims with PDRx	316	328	320	323	324	511	280	344	306	388	276	371	361	315	448	280	324
Average number of PDRx per claim with PDRx	7.0	8.2	7.9	7.6	8.1	12.3	6.6	7.8	7.0	9.0	6.6	7.3	8.3	8.4	10.5	6.6	7.8
Average number of pills per PDRx	45	40	40	42	40	42	42	44	44	43	41	51	44	38	43	42	42
Average number of visits to fill a PDRx, per claim with PDRx	4.3	5.1	5.1	4.9	5.5	7.4	4.6	5.1	4.4	5.9	4.3	4.7	5.4	5.3	5.4	4.4	5.1
Average number of PDRx per visit with PDRx	1.7	1.7	1.6	1.6	1.5	1.7	1.5	1.6	1.6	1.6	1.6	1.6	1.5	1.6	1.9	1.5	1.6

Note: The underlying data include claims with > 7 days of lost time that had injuries arising from October 2005 to September 2006 and prescriptions filled through March 2007. See the Data and Methods and the *Technical Appendix* for more details.

<sup>a</sup> Data for California include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements. In 2007, a new California law equalized prices for pharmacies and physicians.

<sup>b</sup> In Massachusetts, New York, and Texas, physician dispensing is not allowed.

<sup>c</sup> Data for New York include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements.

Key: n/a = not applicable; Rx = prescriptions.

**Table R2 Frequency and Use of Brand Name Prescriptions, All Prescriptions<sup>a</sup>**

	CA <sup>b</sup>	FL	IA	IL	IN	LA	MA	MD	MI	NC	NJ	NY <sup>b</sup>	PA	TN	TX	WI	16-State Median
<b>Brand name Rx regardless of whether generic versions were available</b>																	
% of claims with Rx that had brand name Rx	19%	38%	29%	30%	33%	45%	22%	28%	26%	36%	34%	37%	31%	37%	43%	22%	32%
% of all Rx that were brand name Rx	9%	15%	13%	15%	13%	21%	12%	13%	14%	15%	20%	21%	18%	14%	20%	11%	15%
% of total Rx payment that were paid for brand name Rx	14%	28%	30%	36%	34%	41%	30%	23%	34%	36%	43%	47%	40%	35%	44%	28%	35%
Average number of brand name Rx per claim with brand name Rx	3.9	3.7	3.3	3.8	3.1	5.2	3.7	3.5	3.3	3.7	3.4	4.1	4.5	3.1	4.3	2.9	3.7
<b>Brand name Rx where generic equivalents were available</b>																	
% of all Rx that were for brand names where generic equivalents were available	1.1%	1.6%	1.2%	2.2%	2.3%	2.2%	1.1%	2.3%	1.5%	1.7%	4.8%	1.7%	3.0%	1.4%	1.3%	0.8%	1.7%
<b>Brand name Rx where generic equivalents were not available, but generic alternatives were available</b>																	
% of all Rx that were for brand names where generic alternatives were available	7%	13%	11%	13%	11%	19%	11%	10%	12%	14%	16%	19%	15%	13%	18%	10%	13.1%

Note: The underlying data include claims with > 7 days of lost time that had injuries arising from October 2005 to September 2006 and prescriptions filled through March 2007. See the Data and Methods and the *Technical Appendix* for more details.

<sup>a</sup> All prescriptions are those that were paid under workers' compensation, regardless of dispensing point. We excluded prescription drugs that were administered (e.g., injectibles) or dispensed by a hospital. See the Data and Methods and the *Technical Appendix* for a more detailed description of how we identified prescriptions.

<sup>b</sup> Data for California and New York include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements.

Key: Rx = prescriptions.

**Table R3 Frequency and Cost of Prescription Drugs, by Type of Medication**

	CA <sup>a</sup>	FL	IA	IL	IN	LA	MA <sup>b</sup>	MD	MI	NC	NJ	NY <sup>b,c</sup>	PA	TN	TX <sup>b</sup>	WI	Median
<b>All prescriptions<sup>d</sup></b>																	
<i>% of claims with Rx that had Rx for the type of medication</i>																	
Pain medications	97%	96%	96%	96%	96%	95%	94%	96%	96%	96%	94%	94%	96%	98%	97%	95%	96%
Muscle relaxants	37%	39%	25%	26%	28%	40%	31%	38%	31%	33%	30%	32%	30%	35%	36%	27%	31%
Gastrointestinal agents	18%	11%	4%	5%	4%	5%	4%	7%	3%	4%	4%	4%	4%	3%	3%	4%	4%
SIDA medications	11%	11%	14%	11%	12%	22%	14%	11%	10%	15%	9%	11%	11%	12%	14%	13%	12%
Anti-infective medications	17%	22%	18%	18%	20%	22%	13%	12%	16%	20%	15%	12%	16%	16%	24%	14%	16%
Other medications	16%	24%	17%	19%	24%	29%	14%	20%	18%	28%	18%	19%	21%	32%	24%	16%	20%
<i>% of all Rx, by type of medication (column % = 100%)<sup>e</sup></i>																	
Pain medications	63%	62%	65%	66%	68%	59%	67%	64%	64%	66%	67%	64%	66%	68%	62%	69%	66%
Muscle relaxants	12%	13%	8%	9%	10%	13%	11%	14%	11%	10%	10%	12%	11%	10%	14%	8%	11%
Gastrointestinal agents	5%	3%	1%	2%	1%	2%	2%	3%	1%	2%	1%	2%	2%	1%	1%	2%	2%
SIDA medications	4%	4%	6%	5%	5%	8%	7%	4%	4%	5%	4%	5%	6%	4%	6%	6%	5%
Anti-infective medications	3%	4%	5%	4%	4%	4%	3%	2%	4%	4%	4%	3%	3%	4%	4%	4%	4%
Other medications	13%	14%	15%	14%	11%	14%	10%	13%	17%	14%	14%	15%	13%	13%	13%	12%	14%
<i>% of Rx payment for the type of medication (column % = 100%)<sup>e</sup></i>																	
Pain medications	50%	52%	54%	58%	60%	54%	60%	60%	56%	59%	61%	54%	58%	60%	55%	63%	58%
Muscle relaxants	20%	17%	10%	13%	12%	15%	13%	16%	14%	13%	12%	16%	13%	12%	17%	11%	13%
Gastrointestinal agents	14%	8%	2%	3%	1%	2%	3%	6%	3%	2%	2%	2%	3%	2%	2%	1%	2%
SIDA medications	4%	5%	9%	6%	8%	11%	6%	5%	6%	7%	5%	6%	8%	7%	8%	7%	7%
Anti-infective medications	4%	5%	9%	6%	7%	6%	4%	3%	6%	5%	5%	2%	4%	6%	5%	5%	5%
Other medications	8%	13%	16%	14%	12%	11%	14%	10%	16%	13%	16%	20%	14%	13%	13%	13%	13%
<i>Average payment per claim for the type of medication, among claims with the medication</i>																	
Pain medications	\$258	\$300	\$183	\$214	\$197	\$378	\$187	\$257	\$148	\$286	\$191	\$318	\$257	\$235	\$296	\$186	\$246
Muscle relaxants	\$270	\$253	\$141	\$171	\$140	\$263	\$117	\$168	\$113	\$187	\$122	\$258	\$185	\$145	\$234	\$121	\$170
Gastrointestinal agents	\$444	\$428	\$149	\$227	\$120	\$275	\$197	\$352	\$373	\$218	\$134	\$271	\$359	\$241	\$238	\$121	\$239
SIDA medications	\$187	\$248	\$197	\$178	\$200	\$332	\$119	\$185	\$158	\$210	\$158	\$286	\$304	\$210	\$265	\$150	\$199
Anti-infective medications	\$119	\$136	\$160	\$126	\$111	\$202	\$76	\$113	\$105	\$124	\$92	\$103	\$113	\$141	\$121	\$92	\$116
Other medications	\$258	\$292	\$313	\$260	\$155	\$268	\$267	\$202	\$243	\$207	\$267	\$540	\$290	\$152	\$283	\$227	\$263

Key: Rx = prescriptions; SIDA = sleep inducing, antidepressant, and antianxiety medications.

continued

**Table R3 Frequency and Cost of Prescription Drugs, by Type of Medication (continued)**

	CA <sup>a</sup>	FL	IA	IL	IN	LA	MA <sup>b</sup>	MD	MI	NC	NJ	NY <sup>b,c</sup>	PA	TN	TX <sup>b</sup>	WI	Median
<b>Rx dispensed at physicians' offices (MDRx)</b>																	
<i>% of claims with Rx that had MDRx for the type of medication</i>																	
Pain medications	78%	40%	20%	36%	27%	20%	n/a	51%	51%	25%	38%	n/a	36%	32%	n/a	15%	36%
Muscle relaxants	32%	18%	6%	11%	10%	7%	n/a	23%	18%	10%	16%	n/a	14%	12%	n/a	5%	12%
Gastrointestinal agents	15%	8%	0%	1%	0%	0%	n/a	6%	0%	0%	1%	n/a	1%	1%	n/a	0%	1%
SIDA medications	6%	2%	0%	1%	0%	2%	n/a	1%	1%	0%	0%	n/a	1%	0%	n/a	1%	1%
Anti-infective medications	10%	5%	1%	4%	2%	3%	n/a	3%	3%	2%	3%	n/a	2%	1%	n/a	1%	3%
Other medications	9%	6%	2%	5%	4%	4%	n/a	7%	6%	3%	4%	n/a	4%	7%	n/a	2%	4%
<i>% of MDRx, by type of medication (column % = 100%)<sup>e</sup></i>																	
Pain medications	66%	61%	75%	65%	69%	68%	n/a	60%	64%	69%	63%	n/a	69%	73%	n/a	71%	68%
Muscle relaxants	14%	19%	14%	15%	19%	19%	n/a	21%	17%	20%	21%	n/a	20%	16%	n/a	12%	19%
Gastrointestinal agents	6%	8%	0%	2%	0%	0%	n/a	6%	0%	0%	1%	n/a	1%	1%	n/a	0%	1%
SIDA medications	2%	1%	0%	1%	0%	5%	n/a	0%	1%	0%	0%	n/a	1%	1%	n/a	2%	1%
Anti-infective medications	3%	3%	1%	3%	3%	2%	n/a	2%	2%	3%	3%	n/a	2%	1%	n/a	2%	2%
Other medications	9%	8%	10%	14%	10%	6%	n/a	10%	15%	7%	12%	n/a	8%	8%	n/a	12%	10%
<i>% of MDRx payment for the type of medication (column % = 100%)<sup>e</sup></i>																	
Pain medications	51%	50%	73%	57%	62%	64%	n/a	53%	58%	59%	56%	n/a	61%	70%	n/a	67%	59%
Muscle relaxants	25%	23%	20%	28%	28%	29%	n/a	26%	28%	33%	31%	n/a	28%	19%	n/a	16%	28%
Gastrointestinal agents	18%	17%	0%	4%	0%	0%	n/a	15%	0%	1%	2%	n/a	2%	3%	n/a	1%	2%
SIDA medications	2%	2%	0%	0%	0%	5%	n/a	0%	1%	0%	0%	n/a	1%	1%	n/a	1%	1%
Anti-infective medications	3%	3%	3%	5%	3%	2%	n/a	2%	8%	6%	7%	n/a	4%	2%	n/a	4%	3%
Other medications	2%	5%	4%	5%	6%	1%	n/a	2%	5%	2%	4%	n/a	5%	5%	n/a	11%	5%
<i>Average payment per claim for the type of medication, among claims with the medication dispensed by physician</i>																	
Pain medications	\$238	\$245	\$72	\$83	\$47	\$421	n/a	\$152	\$49	\$63	\$45	n/a	\$80	\$100	n/a	\$69	\$80
Muscle relaxants	\$291	\$262	\$65	\$129	\$55	\$500	n/a	\$164	\$67	\$92	\$62	n/a	\$95	\$73	n/a	\$55	\$92
Gastrointestinal agents	\$501	\$436	nd	\$197	\$17	nd	n/a	\$389	\$17	\$73	\$52	n/a	\$167	\$199	n/a	\$56	\$167
SIDA medications	\$122	\$202	\$8	\$30	\$36	\$336	n/a	\$99	\$39	\$23	\$15	n/a	\$87	\$73	n/a	\$28	\$39
Anti-infective medications	\$125	\$117	\$55	\$76	\$34	\$85	n/a	\$100	\$110	\$74	\$83	n/a	\$95	\$79	n/a	\$47	\$83
Other medications	\$91	\$159	\$52	\$50	\$29	\$30	n/a	\$44	\$40	\$21	\$29	n/a	\$58	\$32	n/a	\$89	\$44

Key: n/a = not applicable; nd = no data available; Rx = prescriptions; SIDA = sleep inducing, antidepressant, and antianxiety medications.

continued

**Table R3 Frequency and Cost of Prescription Drugs, by Type of Medication (continued)**

	CA <sup>a</sup>	FL	IA	IL	IN	LA	MA <sup>b</sup>	MD	MI	NC	NJ	NY <sup>b,c</sup>	PA	TN	TX <sup>b</sup>	WI	Median
<b>Rx dispensed at retail pharmacies (PDRx)</b>																	
<i>% of claims with Rx that had PDRx for the type of medication</i>																	
Pain medications	48%	79%	89%	78%	87%	88%	100%	78%	77%	86%	76%	100%	80%	92%	100%	89%	87%
Muscle relaxants	30%	67%	82%	67%	77%	89%	100%	65%	63%	81%	63%	100%	69%	84%	100%	85%	79%
Gastrointestinal agents	25%	36%	96%	74%	95%	95%	100%	45%	90%	93%	82%	100%	88%	89%	100%	92%	91%
SIDA medications	63%	86%	95%	92%	96%	92%	100%	96%	95%	95%	94%	100%	93%	96%	100%	93%	95%
Anti-infective medications	51%	81%	92%	83%	91%	90%	100%	85%	87%	90%	85%	100%	90%	94%	100%	90%	90%
Other medications	53%	78%	91%	77%	87%	88%	100%	79%	81%	91%	80%	100%	86%	88%	100%	89%	87%
<i>% of PDRx by type of medication (column % = 100%)<sup>e</sup></i>																	
Pain medications	59%	61%	65%	65%	71%	58%	67%	66%	65%	65%	65%	64%	65%	67%	62%	69%	65%
Muscle relaxants	8%	11%	7%	8%	8%	14%	11%	9%	8%	9%	8%	12%	9%	10%	14%	8%	9%
Gastrointestinal agents	3%	2%	1%	2%	1%	2%	2%	1%	2%	2%	2%	2%	2%	1%	1%	2%	2%
SIDA medications	7%	5%	6%	6%	5%	9%	7%	8%	6%	6%	5%	5%	6%	5%	6%	6%	6%
Anti-infective medications	4%	4%	5%	4%	5%	3%	3%	3%	4%	4%	4%	3%	4%	4%	4%	4%	4%
Other medications	19%	17%	16%	16%	11%	15%	10%	13%	15%	14%	17%	15%	14%	13%	13%	12%	15%
<i>% of PDRx payment for the type of medication (column % = 100%)<sup>e</sup></i>																	
Pain medications	51%	52%	54%	58%	62%	52%	60%	62%	55%	59%	56%	54%	57%	59%	55%	62%	57%
Muscle relaxants	8%	13%	9%	10%	10%	16%	13%	10%	12%	12%	10%	16%	12%	11%	17%	11%	12%
Gastrointestinal agents	4%	3%	2%	3%	2%	2%	3%	2%	3%	2%	3%	2%	3%	2%	2%	3%	3%
SIDA medications	10%	7%	9%	6%	7%	11%	6%	7%	7%	7%	6%	6%	8%	7%	8%	7%	7%
Anti-infective medications	5%	6%	9%	6%	7%	7%	4%	4%	6%	5%	5%	2%	4%	7%	5%	5%	5%
Other medications	22%	18%	17%	17%	12%	11%	14%	14%	16%	14%	21%	20%	16%	13%	13%	13%	15%
<i>Average payment per claim for the type of medication, among claims with the medication dispensed at retail pharmacies</i>																	
Pain medications	\$173	\$230	\$186	\$238	\$246	\$410	\$187	\$284	\$187	\$305	\$235	\$317	\$294	\$230	\$294	\$187	\$237
Muscle relaxants	\$115	\$175	\$149	\$187	\$173	\$305	\$118	\$160	\$159	\$197	\$161	\$260	\$232	\$147	\$232	\$128	\$167
Gastrointestinal agents	\$146	\$290	\$149	\$218	\$148	\$283	\$197	\$275	\$317	\$222	\$215	\$270	\$390	\$243	\$235	\$218	\$228
SIDA medications	\$218	\$239	\$199	\$173	\$198	\$353	\$120	\$197	\$172	\$211	\$196	\$287	\$287	\$210	\$263	\$141	\$205
Anti-infective medications	\$96	\$128	\$160	\$125	\$113	\$253	\$77	\$115	\$113	\$127	\$101	\$103	\$113	\$142	\$121	\$88	\$114
Other medications	\$401	\$330	\$328	\$337	\$194	\$304	\$267	\$305	\$303	\$216	\$410	\$536	\$348	\$167	\$279	\$224	\$304

Key: Rx = prescriptions; SIDA = sleep inducing, antidepressant, and antianxiety medications.

continued

**Table R3 Frequency and Cost of Prescription Drugs, by Type of Medication (continued)**

*Note:* The underlying data include claims with > 7 days of lost time that had injuries arising from October 2005 to September 2006 and prescriptions filled through March 2007. See the Data and Methods and the *Technical Appendix* for more details.

<sup>a</sup> Data for California include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements. In 2007, a new California law equalized prices for pharmacies and physicians.

<sup>b</sup> In Massachusetts, New York, and Texas, physician dispensing is not allowed.

<sup>c</sup> Data for New York include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements.

<sup>d</sup> All prescriptions are those that were paid under workers' compensation, regardless of dispensing point. We excluded prescription drugs that were administered (e.g., injectibles) or dispensed by a hospital. See the Data and Methods and the *Technical Appendix* for a more detailed description of how we identified prescriptions.

<sup>e</sup> Columns may not add up to 100 due to rounding.

*Key:* n/a = not applicable; nd = no data available; Rx = prescriptions; SIDA = sleep inducing, antidepressant, and antianxiety medications.

**Table R3A Average Price per Prescription, by Type of Medication**

	CA <sup>a</sup>	FL	IA	IL	IN	LA	MA <sup>b</sup>	MD	MI	NC	NJ	NY <sup>b,c</sup>	PA	TN	TX <sup>b</sup>	WI	Median
<b>All prescriptions<sup>d</sup></b>																	
Pain medications	\$51	\$51	\$35	\$42	\$36	\$52	\$39	\$52	\$36	\$49	\$49	\$65	\$48	\$40	\$49	\$39	\$48
Muscle relaxants	\$113	\$79	\$55	\$65	\$52	\$66	\$49	\$63	\$53	\$70	\$65	\$100	\$67	\$53	\$68	\$58	\$65
Gastrointestinal agents	\$179	\$153	\$57	\$84	\$52	\$108	\$68	\$123	\$96	\$70	\$69	\$94	\$100	\$86	\$75	\$60	\$85
SIDA medications	\$67	\$76	\$67	\$58	\$63	\$74	\$41	\$59	\$59	\$70	\$65	\$91	\$78	\$73	\$74	\$51	\$67
Anti-infective medications	\$77	\$80	\$73	\$74	\$65	\$98	\$50	\$77	\$64	\$77	\$67	\$71	\$69	\$74	\$72	\$56	\$72
Other medications	\$37	\$55	\$44	\$49	\$43	\$49	\$62	\$43	\$39	\$52	\$59	\$103	\$57	\$43	\$56	\$46	\$49
<b>Rx dispensed at physicians' offices</b>																	
Pain medications	\$57	\$66	\$26	\$31	\$18	\$87	n/a	\$48	\$21	\$28	\$27	n/a	\$29	\$37	n/a	\$24	\$29
Muscle relaxants	\$133	\$98	\$39	\$64	\$30	\$142	n/a	\$67	\$38	\$52	\$45	n/a	\$47	\$46	n/a	\$36	\$47
Gastrointestinal agents	\$199	\$172	nd	\$92	\$17	nd	n/a	\$129	\$17	\$57	\$49	n/a	\$107	\$152	n/a	\$41	\$92
SIDA medications	\$64	\$101	\$8	\$23	\$36	\$83	n/a	\$85	\$21	\$23	\$15	n/a	\$43	\$34	n/a	\$17	\$34
Anti-infective medications	\$91	\$83	\$55	\$62	\$25	\$64	n/a	\$72	\$82	\$58	\$72	n/a	\$79	\$69	n/a	\$41	\$69
Other medications	\$18	\$49	\$11	\$12	\$12	\$12	n/a	\$12	\$8	\$10	\$10	n/a	\$20	\$21	n/a	\$20	\$12
<b>Rx dispensed at retail pharmacies</b>																	
Pain medications	\$39	\$44	\$36	\$46	\$42	\$52	\$39	\$54	\$41	\$50	\$53	\$65	\$53	\$41	\$49	\$40	\$45
Muscle relaxants	\$44	\$62	\$59	\$71	\$65	\$69	\$49	\$63	\$68	\$73	\$78	\$100	\$79	\$54	\$68	\$61	\$66
Gastrointestinal agents	\$64	\$95	\$57	\$79	\$63	\$125	\$68	\$78	\$88	\$70	\$97	\$93	\$98	\$82	\$75	\$60	\$79
SIDA medications	\$64	\$72	\$68	\$57	\$65	\$74	\$41	\$59	\$62	\$71	\$79	\$91	\$74	\$73	\$73	\$50	\$69
Anti-infective medications	\$59	\$78	\$74	\$73	\$68	\$107	\$50	\$81	\$68	\$78	\$70	\$71	\$68	\$74	\$72	\$57	\$71
Other medications	\$55	\$58	\$45	\$56	\$53	\$52	\$62	\$60	\$52	\$54	\$72	\$102	\$67	\$44	\$57	\$47	\$56

Note: The underlying data include claims with > 7 days of lost time that had injuries arising from October 2005 to September 2006 and prescriptions filled through March 2007. See the Data and Methods and the *Technical Appendix* for more details.

<sup>a</sup> Data for California include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements. In 2007, a new California law equalized prices for pharmacies and physicians.

<sup>b</sup> In Massachusetts, New York, and Texas, physician dispensing is not allowed.

<sup>c</sup> Data for New York include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements.

<sup>d</sup> All prescriptions are those that were paid under workers' compensation, regardless of dispensing point. We excluded prescription drugs that were administered (e.g., injectibles) or dispensed by a hospital. See the Data and Methods and the *Technical Appendix* for a more detailed description of how we identified prescriptions.

Key: n/a = not applicable; nd = no data available; Rx = prescriptions; SIDA = sleep inducing, antidepressant, and antianxiety medications.

**Table R3B Average Price per Pill, by Type of Medication**

	CA <sup>a</sup>	FL	IA	IL	IN	LA	MA <sup>b</sup>	MD	MI	NC	NJ	NY <sup>b,c</sup>	PA	TN	TX <sup>b</sup>	WI	Median
<b>All prescriptions<sup>d</sup></b>																	
Pain medications	\$1.08	\$1.08	\$0.83	\$0.94	\$0.88	\$1.10	\$0.76	\$1.08	\$0.79	\$1.03	\$1.13	\$1.14	\$0.99	\$1.02	\$1.01	\$0.86	\$1.02
Muscle relaxants	\$2.55	\$1.78	\$1.53	\$1.66	\$1.44	\$1.34	\$1.24	\$1.85	\$1.63	\$1.68	\$1.84	\$1.87	\$1.69	\$1.38	\$1.49	\$1.53	\$1.65
Gastrointestinal agents	\$3.15	\$3.11	\$1.07	\$2.13	\$1.39	\$3.58	\$2.18	\$2.81	\$2.95	\$2.02	\$2.71	\$2.26	\$3.82	\$2.95	\$2.10	\$0.96	\$2.49
SIDA medications	\$1.80	\$2.04	\$2.09	\$1.59	\$1.87	\$2.07	\$1.11	\$1.63	\$1.68	\$1.95	\$2.01	\$2.09	\$1.93	\$2.17	\$2.02	\$1.50	\$1.94
Anti-infective medications	\$2.75	\$3.45	\$2.05	\$3.35	\$2.77	\$3.63	\$1.74	\$2.77	\$2.68	\$2.29	\$3.13	\$2.16	\$2.98	\$2.13	\$2.03	\$2.14	\$2.72
Other medications	\$1.00	\$1.17	\$0.74	\$0.92	\$0.84	\$1.38	\$0.74	\$0.80	\$0.94	\$0.89	\$0.97	\$1.14	\$0.92	\$0.91	\$0.90	\$0.82	\$0.92
<b>Rx dispensed at physicians' offices</b>																	
Pain medications	\$1.29	\$1.43	\$0.93	\$0.97	\$0.76	\$1.51	n/a	\$1.39	\$0.80	\$1.02	\$1.02	n/a	\$1.11	\$1.19	n/a	\$0.82	\$1.02
Muscle relaxants	\$3.04	\$2.29	\$1.72	\$2.31	\$1.27	\$2.48	n/a	\$2.32	\$1.89	\$2.11	\$2.10	n/a	\$1.89	\$1.70	n/a	\$1.53	\$2.10
Gastrointestinal agents	\$3.38	\$3.54	nd	\$1.99	\$1.22	nd	n/a	\$2.78	\$0.90	\$0.87	\$2.16	n/a	\$3.22	\$2.89	n/a	\$1.32	\$2.16
SIDA medications	\$1.73	\$2.57	\$0.27	\$0.93	\$1.27	\$2.15	n/a	\$2.60	\$0.82	\$0.89	\$0.51	n/a	\$1.30	\$1.08	n/a	\$0.48	\$1.08
Anti-infective medications	\$3.22	\$3.07	\$1.91	\$3.09	\$1.15	\$3.55	n/a	\$2.86	\$3.21	\$2.27	\$3.45	n/a	\$3.28	\$2.91	n/a	\$1.60	\$3.07
Other medications	\$1.01	\$0.92	\$0.60	\$0.71	\$0.73	\$1.25	n/a	\$0.79	\$0.68	\$0.67	\$0.71	n/a	\$0.68	\$0.70	n/a	\$0.73	\$0.71
<b>Rx dispensed at retail pharmacies</b>																	
Pain medications	\$0.72	\$0.97	\$0.83	\$0.97	\$0.91	\$1.16	\$0.76	\$1.09	\$0.80	\$1.03	\$1.17	\$1.13	\$1.03	\$1.01	\$1.01	\$0.86	\$0.99
Muscle relaxants	\$0.97	\$1.44	\$1.51	\$1.55	\$1.61	\$1.50	\$1.24	\$1.54	\$1.56	\$1.64	\$1.87	\$1.87	\$1.70	\$1.35	\$1.48	\$1.54	\$1.54
Gastrointestinal agents	\$1.42	\$2.65	\$1.07	\$2.09	\$1.66	\$4.02	\$2.18	\$2.74	\$2.77	\$2.03	\$2.95	\$2.24	\$3.22	\$2.94	\$2.10	\$0.95	\$2.21
SIDA medications	\$1.74	\$1.96	\$2.10	\$1.57	\$1.79	\$2.08	\$1.11	\$1.43	\$1.79	\$1.95	\$2.24	\$2.09	\$1.85	\$2.19	\$2.01	\$1.47	\$1.90
Anti-infective medications	\$1.90	\$2.70	\$2.04	\$2.71	\$2.33	\$3.39	\$1.75	\$2.18	\$2.23	\$2.29	\$2.25	\$2.15	\$2.20	\$2.11	\$2.03	\$2.18	\$2.19
Other medications	\$0.96	\$1.07	\$0.74	\$0.91	\$0.83	\$1.33	\$0.74	\$0.86	\$0.94	\$0.89	\$1.12	\$1.14	\$1.00	\$0.93	\$0.90	\$0.82	\$0.92

Note: The underlying data include claims with > 7 days of lost time that had injuries arising from October 2005 to September 2006 and prescriptions filled through March 2007. See the Data and Methods and the *Technical Appendix* for more details.

<sup>a</sup> Data for California include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements. In 2007, a new California law equalized prices for pharmacies and physicians.

<sup>b</sup> In Massachusetts, New York, and Texas, physician dispensing is not allowed.

<sup>c</sup> Data for New York include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements.

<sup>d</sup> All prescriptions are those that were paid under workers' compensation, regardless of dispensing point. We excluded prescription drugs that were administered (e.g., injectibles) or dispensed by a hospital. See the Data and Methods and the *Technical Appendix* for a more detailed description of how we identified prescriptions.

Key: n/a = not applicable; nd = no data available; Rx = prescriptions; SIDA = sleep inducing, antidepressant, and antianxiety medications.

**Table R3C Average Number of Pills per Claim for Specific Type of Medication, among Claims with the Type of Medication**

	CA <sup>a</sup>	FL	IA	IL	IN	LA	MA <sup>b</sup>	MD	MI	NC	NJ	NY <sup>b,c</sup>	PA	TN	TX <sup>b</sup>	WI	Median
<b>All prescriptions<sup>d</sup></b>																	
Pain medications	260	250	214	219	222	325	210	229	171	259	163	262	234	224	260	206	227
Muscle relaxants	124	132	93	106	96	205	91	102	69	112	67	138	102	106	147	78	104
Gastrointestinal agents	167	137	130	119	96	164	118	145	174	127	68	132	159	110	122	138	131
SIDA medications	118	117	106	113	111	159	110	120	102	108	85	129	150	101	123	106	112
Anti-infective medications	46	41	63	39	41	46	41	37	42	46	33	39	42	53	47	41	42
Other medications	226	146	224	160	103	185	153	149	191	118	118	160	153	92	138	164	153
<b>Rx dispensed at physicians' offices</b>																	
Pain medications	208	169	79	90	64	228	n/a	124	64	60	45	n/a	69	86	n/a	87	86
Muscle relaxants	112	110	38	61	43	186	n/a	81	36	44	30	n/a	44	44	n/a	37	44
Gastrointestinal agents	170	125	nd	101	14	nd	n/a	162	26	33	24	n/a	50	73	n/a	55	55
SIDA medications	85	70	30	39	29	125	n/a	48	51	26	30	n/a	72	67	n/a	66	51
Anti-infective medications	42	38	29	26	30	25	n/a	35	33	31	27	n/a	33	28	n/a	32	31
Other medications	141	75	110	102	56	55	n/a	100	107	47	60	n/a	71	35	n/a	113	75
<b>Rx dispensed at retail pharmacies</b>																	
Pain medications	214	213	217	228	243	334	210	245	212	275	193	262	253	220	258	205	224
Muscle relaxants	114	118	98	117	105	213	91	107	102	120	89	139	133	110	147	82	112
Gastrointestinal agents	102	117	130	117	89	167	118	141	152	130	80	132	178	111	120	150	125
SIDA medications	124	118	106	109	106	168	110	130	102	109	89	129	148	100	122	102	110
Anti-infective medications	45	44	63	44	47	50	41	41	46	47	42	40	48	53	47	40	46
Other medications	253	159	230	188	110	209	153	158	186	121	166	160	157	98	134	154	159

Note: The underlying data include claims with > 7 days of lost time that had injuries arising from October 2005 to September 2006 and prescriptions filled through March 2007. See the Data and Methods and the *Technical Appendix* for more details.

<sup>a</sup> Data for California include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements. In 2007, a new California law equalized prices for pharmacies and physicians.

<sup>b</sup> In Massachusetts, New York, and Texas, physician dispensing is not allowed.

<sup>c</sup> Data for New York include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements.

<sup>d</sup> All prescriptions are those that were paid under workers' compensation, regardless of dispensing point. We excluded prescription drugs that were administered (e.g., injectibles) or dispensed by a hospital. See the Data and Methods and the *Technical Appendix* for a more detailed description of how we identified prescriptions.

Key: n/a = not applicable; nd = no data available; Rx = prescriptions; SIDA = sleep inducing, antidepressant, and antianxiety medications.

**Table R3D Average Number of Prescriptions per Claim, by Type of Medication**

	CA <sup>a</sup>	FL	IA	IL	IN	LA	MA <sup>b</sup>	MD	MI	NC	NJ	NY <sup>b,c</sup>	PA	TN	TX <sup>b</sup>	WI	Median
<b>All prescriptions<sup>d</sup></b>																	
Pain medications	5.7	5.9	5.2	5.1	5.5	7.5	4.7	4.9	4.1	5.9	3.9	4.9	5.3	5.9	5.9	4.8	5.3
Muscle relaxants	2.8	3.2	2.6	2.6	2.7	4.3	2.4	2.7	2.1	2.7	1.9	2.6	2.8	2.7	3.4	2.1	2.7
Gastrointestinal agents	2.8	2.8	2.6	2.7	2.3	3.7	2.9	2.9	3.9	3.1	1.9	2.9	3.6	2.8	3.3	3.3	2.9
SIDA medications	3.2	3.2	2.9	3.1	3.2	4.5	2.9	3.1	2.7	3.0	2.4	3.1	3.9	2.9	3.7	2.9	3.1
Anti-infective medications	1.6	1.7	2.2	1.7	1.7	2.0	1.5	1.5	1.6	1.6	1.4	1.4	1.6	1.9	1.7	1.6	1.6
Other medications	7.2	5.3	7.2	5.4	3.6	6.0	4.3	4.7	6.3	4.0	4.5	5.3	5.1	3.5	5.2	5.1	5.1
<b>Rx dispensed at physicians' offices</b>																	
Pain medications	4.7	3.7	2.8	2.7	2.6	4.8	n/a	3.2	2.3	2.2	1.6	n/a	2.7	2.7	n/a	2.9	2.7
Muscle relaxants	2.5	2.7	1.7	2.0	1.9	3.5	n/a	2.4	1.7	1.8	1.4	n/a	2.0	1.6	n/a	1.5	1.9
Gastrointestinal agents	2.8	2.5	nd	2.2	1.0	nd	n/a	3.0	1.0	1.3	1.1	n/a	1.6	1.3	n/a	1.4	1.4
SIDA medications	2.3	2.0	1.0	1.3	1.0	4.0	n/a	1.2	1.8	1.0	1.0	n/a	2.0	2.1	n/a	1.7	1.7
Anti-infective medications	1.4	1.4	1.0	1.2	1.3	1.3	n/a	1.4	1.3	1.3	1.2	n/a	1.2	1.2	n/a	1.2	1.3
Other medications	5.6	3.3	4.6	4.2	2.4	2.4	n/a	3.8	4.8	2.2	2.8	n/a	2.9	1.5	n/a	4.4	3.3
<b>Rx dispensed at retail pharmacies</b>																	
Pain medications	4.5	5.2	5.2	5.1	5.9	7.8	4.7	5.3	4.6	6.1	4.5	4.9	5.6	5.7	5.9	4.7	5.2
Muscle relaxants	2.6	2.8	2.5	2.6	2.7	4.5	2.4	2.5	2.3	2.7	2.1	2.6	3.0	2.7	3.3	2.1	2.6
Gastrointestinal agents	2.3	3.0	2.6	2.8	2.3	3.6	2.9	3.5	3.6	3.2	2.2	2.9	4.0	3.0	3.2	3.6	3.0
SIDA medications	3.4	3.3	3.0	3.0	3.1	4.7	2.9	3.3	2.8	3.0	2.5	3.1	3.9	2.9	3.6	2.8	3.0
Anti-infective medications	1.6	1.6	2.2	1.7	1.7	2.1	1.5	1.4	1.7	1.6	1.4	1.4	1.7	1.9	1.7	1.5	1.6
Other medications	7.3	5.7	7.3	6.0	3.7	6.6	4.3	5.1	5.8	4.0	5.7	5.2	5.2	3.8	5.0	4.8	5.2

Note: The underlying data include claims with > 7 days of lost time that had injuries arising from October 2005 to September 2006 and prescriptions filled through March 2007. See the Data and Methods and the *Technical Appendix* for more details.

<sup>a</sup> Data for California include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements. In 2007, a new California law equalized prices for pharmacies and physicians.

<sup>b</sup> In Massachusetts, New York, and Texas, physician dispensing is not allowed.

<sup>c</sup> Data for New York include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements.

<sup>d</sup> All prescriptions are those that were paid under workers' compensation, regardless of dispensing point. We excluded prescription drugs that were administered (e.g., injectibles) or dispensed by a hospital. See the Data and Methods and the *Technical Appendix* for a more detailed description of how we identified prescriptions.

Key: n/a = not applicable; nd = no data available; Rx = prescriptions; SIDA = sleep inducing, antidepressant, and antianxiety medications.

**Table R3E Average Number of Pills per Prescription, by Type of Medication**

	CA <sup>a</sup>	FL	IA	IL	IN	LA	MA <sup>b</sup>	MD	MI	NC	NJ	NY <sup>b,c</sup>	PA	TN	TX <sup>b</sup>	WI	Median
<b>All prescriptions<sup>d</sup></b>																	
Pain medications	46	42	41	43	41	43	44	47	42	44	42	53	44	38	44	43	43
Muscle relaxants	44	41	36	40	36	48	38	38	32	42	36	54	37	39	44	38	39
Gastrointestinal agents	59	49	49	44	41	44	41	50	45	41	35	46	45	39	37	41	44
SIDA medications	37	36	36	37	35	36	38	38	38	36	35	41	39	35	34	37	37
Anti-infective medications	28	24	29	23	24	24	27	25	26	29	24	27	26	27	28	26	26
Other medications	31	27	31	30	29	31	36	31	30	30	26	30	30	26	27	32	30
<b>Rx dispensed at physicians' offices</b>																	
Pain medications	44	45	29	34	24	47	n/a	39	28	27	28	n/a	26	31	n/a	30	30
Muscle relaxants	44	41	23	30	23	53	n/a	33	21	25	22	n/a	22	28	n/a	24	25
Gastrointestinal agents	61	49	nd	47	14	nd	n/a	54	26	26	23	n/a	32	56	n/a	41	41
SIDA medications	38	35	30	30	29	31	n/a	41	28	26	30	n/a	36	32	n/a	39	31
Anti-infective medications	29	27	29	21	23	18	n/a	25	25	24	23	n/a	27	25	n/a	28	25
Other medications	25	23	24	24	24	23	n/a	26	22	22	21	n/a	24	23	n/a	26	24
<b>Rx dispensed at retail pharmacies</b>																	
Pain medications	48	41	42	44	41	43	44	46	46	45	43	53	46	39	44	44	44
Muscle relaxants	43	42	39	44	39	48	38	42	43	44	43	54	45	41	44	39	43
Gastrointestinal agents	44	39	49	42	38	46	41	40	42	41	36	46	45	37	37	41	41
SIDA medications	37	35	36	36	35	35	38	39	37	37	36	41	38	35	33	36	36
Anti-infective medications	28	27	29	26	28	24	27	29	28	29	29	27	29	28	28	26	28
Other medications	35	28	31	31	30	32	36	31	32	30	29	30	30	26	27	32	31

Note: The underlying data include claims > than 7 days of lost time that had injuries arising from October 2005 to September 2006 and prescriptions filled through March 2007. See the Data and Methods and the *Technical Appendix* for more details.

<sup>a</sup> Data for California include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements. In 2007, a new California law equalized prices for pharmacies and physicians.

<sup>b</sup> In Massachusetts, New York, and Texas, physician dispensing is not allowed.

<sup>c</sup> Data for New York include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements.

<sup>d</sup> All prescriptions are those that were paid under workers' compensation, regardless of dispensing point. We excluded prescription drugs that were administered (e.g., injectibles) or dispensed by a hospital. See the Data and Methods and the *Technical Appendix* for a more detailed description of how we identified prescriptions.

Key: n/a = not applicable; nd = no data available; Rx = prescriptions; SIDA = sleep inducing, antidepressant, and antianxiety medications.

**Table R3F Average Number of Visits per Claim to Fill a Prescription, by Type of Medication**

	CA <sup>a</sup>	FL	IA	IL	IN	LA	MA <sup>b</sup>	MD	MI	NC	NJ	NY <sup>b,c</sup>	PA	TN	TX <sup>b</sup>	WI	Median
<b>All prescriptions<sup>d</sup></b>																	
Pain medications	4.4	4.7	4.4	4.2	4.7	6.2	4.1	3.9	3.4	5.0	3.4	4.2	4.5	4.8	4.7	4.0	4.4
Muscle relaxants	2.7	2.9	2.4	2.4	2.6	4.1	2.3	2.4	2.1	2.6	1.8	2.5	2.6	2.6	3.3	2.0	2.5
Gastrointestinal agents	2.7	2.4	1.8	1.9	1.8	2.1	1.8	2.1	1.9	1.9	1.4	1.9	2.2	1.8	2.0	1.8	1.9
SIDA medications	2.8	2.8	2.7	2.8	3.0	3.9	2.8	2.8	2.4	2.8	2.3	2.8	3.5	2.6	3.3	2.6	2.8
Anti-infective medications	1.5	1.6	1.9	1.5	1.6	1.8	1.3	1.4	1.5	1.5	1.3	1.4	1.5	1.6	1.5	1.5	1.5
Other medications	1.9	1.8	2.0	1.7	1.8	2.3	2.0	1.7	1.8	1.8	1.6	2.1	2.2	1.7	1.9	1.9	1.8
<b>Rx dispensed at physicians' offices</b>																	
Pain medications	3.6	2.7	2.3	2.1	2.1	3.4	n/a	2.3	1.9	1.8	1.5	n/a	2.2	2.2	n/a	2.3	2.2
Muscle relaxants	2.5	2.3	1.6	1.9	1.8	3.1	n/a	2.0	1.7	1.7	1.4	n/a	1.9	1.5	n/a	1.5	1.8
Gastrointestinal agents	2.7	2.3	nd	2.0	1.0	nd	n/a	2.2	1.0	1.3	1.1	n/a	1.5	1.3	n/a	1.0	1.3
SIDA medications	2.0	1.8	1.0	1.2	1.0	3.8	n/a	1.2	1.5	1.0	1.0	n/a	2.0	1.4	n/a	1.7	1.4
Anti-infective medications	1.4	1.3	1.0	1.2	1.1	1.2	n/a	1.2	1.3	1.1	1.1	n/a	1.2	1.2	n/a	1.1	1.2
Other medications	1.4	1.3	1.0	1.2	1.2	1.0	n/a	1.1	1.2	1.2	1.1	n/a	1.8	1.1	n/a	1.2	1.2
<b>Rx dispensed at retail pharmacies</b>																	
Pain medications	3.7	4.4	4.4	4.4	4.9	6.3	4.1	4.4	3.9	5.2	3.9	4.2	4.7	4.7	4.7	3.9	4.4
Muscle relaxants	2.6	2.7	2.4	2.5	2.6	4.3	2.3	2.5	2.3	2.6	2.0	2.5	2.9	2.6	3.2	2.0	2.5
Gastrointestinal agents	1.9	2.0	1.8	1.8	1.7	2.0	1.8	2.1	1.8	1.9	1.6	1.9	2.4	1.9	2.0	1.7	1.9
SIDA medications	3.0	3.0	2.7	2.8	2.8	4.2	2.8	3.0	2.5	2.8	2.3	2.8	3.5	2.6	3.3	2.5	2.8
Anti-infective medications	1.5	1.5	1.9	1.6	1.6	1.9	1.3	1.3	1.6	1.5	1.4	1.4	1.5	1.6	1.5	1.4	1.5
Other medications	2.1	1.9	2.0	1.9	1.8	2.3	2.0	1.9	1.8	1.8	1.8	2.1	2.1	1.8	1.8	1.9	1.9

Note: The underlying data include claims with > 7 days of lost time that had injuries arising from October 2005 to September 2006 and prescriptions filled through March 2007. See the Data and Methods and the *Technical Appendix* for more details.

<sup>a</sup> Data for California include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements. In 2007, a new California law equalized prices for pharmacies and physicians.

<sup>b</sup> In Massachusetts, New York, and Texas, physician dispensing is not allowed.

<sup>c</sup> Data for New York include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements.

<sup>d</sup> All prescriptions are those that were paid under workers' compensation, regardless of dispensing point. We excluded prescription drugs that were administered (e.g., injectibles) or dispensed by a hospital. See the Data and Methods and the *Technical Appendix* for a more detailed description of how we identified prescriptions.

Key: n/a = not applicable; nd = no data available; Rx = prescriptions; SIDA = sleep inducing, antidepressant, and antianxiety medications.

**Table R4 Percentage of Claims with Prescriptions That Had the Common Drug,<sup>a</sup> All Prescriptions<sup>b</sup>**

	CA <sup>c</sup>	FL	IA	IL	IN	LA	MA	MD	MI	NC	NJ	NY <sup>c</sup>	PA	TN	TX	WI	16-State Median
<b>Pain medications: Narcotics</b>																	
Hydrocodone-Acetaminophen (Vicodin®)	52%	48%	59%	57%	65%	68%	39%	27%	49%	54%	24%	52%	41%	62%	64%	61%	53%
Oxycodone HCL (OxyContin®)	1%	3%	5%	2%	3%	2%	7%	5%	2%	5%	5%	2%	4%	1%	1%	9%	3%
Oxycodone w/Acetaminophen (Percocet®)	4%	27%	20%	5%	16%	21%	41%	26%	6%	35%	37%	11%	28%	28%	2%	26%	23%
Propoxyphene-N w/APAP (Darvocet-N®)	17%	18%	16%	15%	19%	17%	4%	6%	16%	16%	6%	11%	13%	16%	20%	9%	16%
Tramadol HCL (Ultram®)	13%	23%	14%	13%	15%	15%	11%	23%	14%	16%	11%	9%	14%	21%	17%	10%	14%
Tramadol-Acetaminophen (Ultracet®)	2%	10%	6%	5%	6%	8%	1%	4%	3%	7%	9%	7%	5%	7%	10%	2%	6%
<b>Pain medications: Non-narcotics</b>																	
Celecoxib (Celebrex®)	5%	9%	7%	8%	7%	11%	4%	4%	3%	7%	9%	9%	8%	8%	14%	6%	7%
Ibuprofen (Motrin®)	48%	29%	26%	29%	21%	12%	30%	36%	43%	24%	32%	21%	33%	21%	23%	20%	27%
Naproxen (Aleve®)	29%	21%	15%	13%	15%	10%	14%	18%	12%	15%	18%	17%	20%	16%	18%	13%	16%
<b>Muscle relaxants</b>																	
Carisoprodol (Soma®)	21%	11%	1%	3%	5%	12%	4%	8%	2%	4%	2%	3%	4%	6%	8%	1%	4%
Cyclobenzaprine HCL (Flexeril®)	16%	21%	17%	16%	16%	22%	20%	23%	19%	21%	21%	19%	19%	21%	19%	20%	20%
Metaxalone (Skelaxin®)	3%	11%	9%	7%	10%	8%	7%	12%	11%	10%	8%	9%	9%	10%	12%	6%	9%
<b>Gastrointestinal agents</b>																	
Ranitidine HCL (Zantac®)	14%	7%	nd	1%	0%	0%	0%	6%	0%	0%	1%	0%	1%	1%	0%	0%	0%
<b>SIDA (sleep inducing, antidepressant, and antianxiety medications)</b>																	
Zolpidem Tartrate (Ambien®)	2%	3%	3%	3%	3%	8%	2%	3%	2%	5%	2%	4%	3%	4%	5%	2%	3%
<b>Anti-infectives</b>																	
Cephalexin (Keflex®)	13%	12%	11%	9%	14%	9%	7%	7%	10%	13%	9%	6%	10%	9%	11%	9%	10%

Note: The underlying data include claims with > 7 days of lost time that had injuries arising from October 2005 to September 2006 and prescriptions filled through March 2007. See the Data and Methods and the *Technical Appendix* for more details.

<sup>a</sup> The common drugs presented here are a collection of the 8 or 9 specific drugs that were most frequently used in each state over the study period. Provided in the parentheses are the most common brand names.

<sup>b</sup> All prescriptions are those that were paid under workers' compensation, regardless of dispensing point. We excluded prescription drugs that were administered (e.g., injectibles) or dispensed by a hospital. See the Data and Methods and the *Technical Appendix* for a more detailed description of how we identified prescriptions.

<sup>c</sup> Data for California and New York include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements.

Key: nd = no data available.

**Table R5 Percentage of All Prescriptions by Common Drug,<sup>a</sup> All Prescriptions<sup>b</sup>**

	CA <sup>c</sup>	FL	IA	IL	IN	LA	MA	MD	MI	NC	NJ	NY <sup>c</sup>	PA	TN	TX	WI	16-State Median
<b>Pain medications: Narcotics</b>																	
Hydrocodone-Acetaminophen (Vicodin®)	21%	17%	25%	27%	31%	29%	16%	10%	22%	22%	11%	24%	18%	28%	26%	28%	23%
Oxycodone HCL (OxyContin®)	0%	1%	1%	1%	1%	1%	4%	3%	1%	1%	2%	1%	2%	1%	0%	4%	1%
Oxycodone w/Acetaminophen (Percocet®)	1%	7%	6%	1%	5%	5%	18%	11%	2%	10%	16%	4%	11%	7%	0%	10%	7%
Propoxyphene-N w/APAP (Darvocet-N®)	4%	4%	5%	4%	5%	3%	1%	1%	4%	4%	2%	4%	3%	3%	5%	3%	4%
Tramadol HCL (Ultram®)	3%	6%	4%	4%	4%	3%	4%	8%	4%	4%	4%	3%	4%	5%	4%	3%	4%
Tramadol-Acetaminophen (Ultracet®)	0%	2%	1%	1%	1%	1%	0%	1%	1%	2%	2%	2%	1%	1%	2%	1%	1%
<b>Pain medications: Non-narcotics</b>																	
Celecoxib (Celebrex®)	1%	2%	2%	2%	2%	2%	1%	1%	1%	2%	3%	2%	2%	2%	4%	2%	2%
Ibuprofen (Motrin®)	12%	6%	6%	7%	5%	1%	8%	8%	12%	5%	9%	6%	8%	3%	5%	5%	6%
Naproxen (Aleve®)	7%	4%	3%	3%	3%	1%	3%	4%	3%	3%	5%	4%	4%	3%	4%	3%	3%
<b>Muscle relaxants</b>																	
Carisoprodol (Soma®)	6%	3%	0%	1%	1%	4%	2%	4%	0%	1%	1%	1%	1%	2%	3%	0%	1%
Cyclobenzaprine HCL (Flexeril®)	4%	5%	4%	5%	5%	5%	6%	6%	6%	5%	6%	6%	5%	4%	5%	5%	5%
Metaxalone (Skelaxin®)	1%	2%	2%	2%	2%	1%	2%	2%	3%	2%	2%	3%	2%	2%	3%	2%	2%
<b>Gastrointestinal agents</b>																	
Ranitidine HCL (Zantac®)	3%	2%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>SIDA (sleep inducing, antidepressant, and antianxiety medications)</b>																	
Zolpidem Tartrate (Ambien®)	1%	1%	1%	1%	1%	2%	1%	1%	0%	1%	1%	1%	1%	1%	2%	1%	1%
<b>Anti-infectives</b>																	
Cephalexin (Keflex®)	2%	2%	2%	2%	2%	1%	2%	1%	2%	2%	2%	1%	2%	2%	2%	2%	2%

Note: The underlying data include claims with > 7 days of lost time that had injuries arising from October 2005 to September 2006 and prescriptions filled through March 2007. See the Data and Methods and the *Technical Appendix* for more details.

<sup>a</sup> The common drugs presented here are a collection of the 8 or 9 specific drugs that were most frequently used in each state over the study period. Provided in the parentheses are the most common brand names.

<sup>b</sup> All prescriptions are those that were paid under workers' compensation, regardless of dispensing point. We excluded prescription drugs that were administered (e.g., injectibles) or dispensed by a hospital. See the Data and Methods and the *Technical Appendix* for a more detailed description of how we identified prescriptions.

<sup>c</sup> Data for California and New York include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements.

**Table R6 Average Number of Pills per Claim for Common Drugs,<sup>a</sup> All Prescriptions<sup>b</sup>**

	CA <sup>c</sup>	FL	IA	IL	IN	LA	MA	MD	MI	NC	NJ	NY <sup>c</sup>	PA	TN	TX	WI	16-State Median
<b>Pain medications: Narcotics</b>																	
Hydrocodone-Acetaminophen (Vicodin®)	152	125	118	149	144	216	102	109	132	132	96	164	133	131	162	113	132
Oxycodone HCL (OxyContin®)	202	180	84	157	111	189	196	347	196	140	115	244	224	91	192	119	185
Oxycodone w/Acetaminophen (Percocet®)	113	103	103	107	99	109	119	168	101	115	99	150	145	78	91	107	107
Propoxyphene-N w/APAP (Darvocet-N®)	91	75	93	74	76	88	57	75	63	78	64	110	80	57	90	68	76
Tramadol HCL (Ultram®)	135	118	80	109	73	118	111	114	68	90	80	121	89	80	102	111	105
Tramadol-Acetaminophen (Ultracet®)	93	64	76	85	77	94	75	81	73	80	77	116	84	64	87	99	80
<b>Pain medications: Non-narcotics</b>																	
Celecoxib (Celebrex®)	72	65	75	74	59	83	74	66	60	71	55	80	76	67	80	59	72
Ibuprofen (Motrin®)	106	77	104	85	78	83	92	75	76	89	63	137	82	79	101	90	84
Naproxen (Aleve®)	102	71	71	77	73	89	80	89	57	75	49	92	62	72	79	69	74
<b>Muscle relaxants</b>																	
Carisoprodol (Soma®)	136	173	184	181	61	209	100	161	99	101	93	166	112	109	172	42	124
Cyclobenzaprine HCL (Flexeril®)	64	71	65	75	80	141	63	62	52	80	41	102	62	69	89	61	67
Metaxalone (Skelaxin®)	72	72	68	76	55	94	66	55	57	78	59	119	95	69	87	67	71
<b>Gastrointestinal agents</b>																	
Ranitidine HCL (Zantac®)	170	141	180	113	48	53	93	157	59	53	24	78	79	70	51	44	74
<b>SIDA (sleep inducing, antidepressant, and antianxiety medications)</b>																	
Zolpidem Tartrate (Ambien®)	64	67	48	52	59	73	51	56	51	59	61	65	86	42	74	55	59
<b>Anti-infectives</b>																	
Cephalexin (Keflex®)	41	37	41	34	34	34	36	31	38	37	28	35	35	45	34	37	36

Note: The underlying data include claims with > 7 days of lost time that had injuries arising from October 2005 to September 2006 and prescriptions filled through March 2007. See the Data and Methods and the *Technical Appendix* for more details.

<sup>a</sup> The common drugs presented here are a collection of the 8 or 9 specific drugs that were most frequently used in each state over the study period. Provided in the parentheses are the most common brand names

<sup>b</sup> All prescriptions are those that were filled by injured workers and paid under workers' compensation, regardless of dispensing point. We excluded prescription drugs that were administered (e.g., injectibles) or dispensed by a hospital. See the Data and Methods and the *Technical Appendix* for a more detailed description of how we identified prescriptions.

<sup>c</sup> Data for California and New York include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements.

**Table R7 Average Number of Prescriptions per Claim for Common Drugs,<sup>a</sup> All Prescriptions<sup>b</sup>**

	CA <sup>c</sup>	FL	IA	IL	IN	LA	MA	MD	MI	NC	NJ	NY <sup>c</sup>	PA	TN	TX	WI	16-State Median
<b>Pain medications: Narcotics</b>																	
Hydrocodone-Acetaminophen (Vicodin®)	3.4	3.2	3.1	3.5	3.6	5.1	2.7	2.6	3.1	3.3	2.4	3.3	3.2	3.7	3.8	3.0	3.3
Oxycodone HCL (OxyContin®)	3.0	2.8	1.9	3.0	2.0	3.2	3.7	6.0	3.1	2.5	2.1	3.9	3.6	2.2	3.3	2.6	3.0
Oxycodone w/Acetaminophen (Percocet®)	2.1	2.3	2.2	2.1	2.1	2.5	2.8	3.2	2.0	2.5	2.3	2.6	2.8	2.0	2.1	2.3	2.3
Propoxyphene-N w/APAP (Darvocet-N®)	2.1	2.0	2.6	2.0	2.1	2.3	1.7	1.7	1.7	2.0	1.6	2.3	2.1	1.7	2.2	1.8	2.0
Tramadol HCL (Ultram®)	2.3	2.4	2.0	2.2	1.9	2.4	2.1	2.4	1.7	2.1	1.9	2.1	2.1	2.1	2.2	2.2	2.1
Tramadol-Acetaminophen (Ultracet®)	2.0	1.7	1.8	1.9	1.7	2.1	1.6	1.4	1.6	1.9	1.6	1.9	1.9	1.7	1.9	1.7	1.8
<b>Pain medications: Non-narcotics</b>																	
Celecoxib (Celebrex®)	2.1	1.9	2.1	2.1	1.8	2.3	2.0	1.9	1.5	1.9	1.6	2.0	2.2	1.9	2.3	1.8	2.0
Ibuprofen (Motrin®)	2.3	1.9	2.1	1.9	1.8	1.7	1.8	1.6	1.8	1.8	1.5	2.1	2.0	1.7	2.1	1.8	1.8
Naproxen (Aleve®)	2.3	1.9	1.8	1.8	1.7	2.1	1.7	1.9	1.6	1.7	1.4	1.8	1.8	1.8	1.9	1.6	1.8
<b>Muscle relaxants</b>																	
Carisoprodol (Soma®)	2.6	2.9	4.0	3.3	2.2	4.4	2.3	3.5	1.9	2.3	2.1	2.8	3.1	2.7	3.5	1.5	2.7
Cyclobenzaprine HCL (Flexeril®)	2.0	2.1	2.0	2.2	2.3	3.1	1.9	1.9	1.9	2.1	1.5	2.2	2.1	1.9	2.3	1.8	2.0
Metaxalone (Skelaxin®)	1.9	1.8	2.0	1.9	1.5	2.1	1.7	1.5	1.6	1.8	1.4	1.8	2.1	1.8	2.1	1.7	1.8
<b>Gastrointestinal agents</b>																	
Ranitidine HCL (Zantac®)	2.8	2.6	3.0	1.8	1.0	1.2	1.6	2.9	1.3	1.3	1.1	1.7	1.6	1.3	1.2	1.5	1.5
<b>SIDA (sleep inducing, antidepressant, and antianxiety medications)</b>																	
Zolpidem Tartrate (Ambien®)	2.4	2.5	1.8	2.0	2.3	2.8	2.1	2.0	2.0	2.2	2.2	2.2	3.1	1.9	2.9	2.1	2.2
<b>Anti-infectives</b>																	
Cephalexin (Keflex®)	1.3	1.3	1.6	1.4	1.3	1.3	1.3	1.2	1.4	1.3	1.2	1.3	1.3	1.6	1.3	1.3	1.3

Note: The underlying data include claims with > 7 days of lost time that had injuries arising from October 2005 to September 2006 and prescriptions filled through March 2007. See the Data and Methods and the *Technical Appendix* for more details.

<sup>a</sup> The common drugs presented here are a collection of the 8 or 9 specific drugs that were most frequently used in each state over the study period. Provided in the parentheses are the most common brand names

<sup>b</sup> All prescriptions are those that were paid under workers' compensation, regardless of dispensing point. We excluded prescription drugs that were administered (e.g., injectibles) or dispensed by a hospital. See the Data and Methods and the *Technical Appendix* for a more detailed description of how we identified prescriptions.

<sup>c</sup> Data for California and New York include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements.

**Table R8 Percentage of Physician-Dispensed Prescriptions by Common Drugs<sup>a</sup>**

	CA <sup>b</sup>	FL	IA	IL	IN	LA	MA <sup>c</sup>	MD	MI	NC	NJ	NY <sup>c,d</sup>	PA	TN	TX <sup>c</sup>	WI
% of all Rx that were physician-dispensed Rx	58%	30%	9%	22%	14%	9%	n/a	24%	27%	9%	14%	n/a	15%	11%	n/a	7%
% of claims with Rx that had physician-dispensed Rx	82%	51%	22%	46%	38%	23%	n/a	47%	56%	30%	42%	n/a	39%	37%	n/a	17%
<b>Pain medications: Narcotics</b>																
Hydrocodone-Acetaminophen (Vicodin®)	17%	9%	5%	15%	11%	27%	n/a	2%	4%	13%	1%	n/a	6%	16%	n/a	31%
Oxycodone HCL (OxyContin®)	0%	0%	0%	0%	0%	0%	n/a	0%	0%	0%	0%	n/a	0%	0%	n/a	0%
Oxycodone w/Acetaminophen (Percocet®)	0%	1%	1%	0%	0%	0%	n/a	0%	0%	0%	0%	n/a	0%	0%	n/a	1%
Propoxyphene-N w/APAP (Darvocet-N®)	5%	3%	6%	3%	3%	4%	n/a	1%	3%	3%	0%	n/a	4%	2%	n/a	5%
Tramadol HCL (Ultram®)	4%	13%	10%	6%	8%	4%	n/a	22%	8%	9%	7%	n/a	8%	10%	n/a	4%
Tramadol-Acetaminophen (Ultracet®)	0%	1%	0%	1%	2%	1%	n/a	0%	0%	1%	1%	n/a	1%	1%	n/a	0%
<b>Pain medications: Non-narcotics</b>																
Celecoxib (Celebrex®)	1%	1%	5%	1%	1%	0%	n/a	0%	0%	0%	1%	n/a	2%	1%	n/a	0%
Ibuprofen (Motrin®)	17%	9%	23%	21%	18%	9%	n/a	12%	30%	19%	31%	n/a	25%	11%	n/a	19%
Naproxen (Aleve®)	11%	7%	11%	8%	8%	5%	n/a	8%	7%	10%	10%	n/a	12%	11%	n/a	3%
<b>Muscle relaxants</b>																
Carisoprodol (Soma®)	9%	7%	1%	4%	4%	10%	n/a	8%	0%	3%	2%	n/a	4%	1%	n/a	0%
Cyclobenzaprine HCL (Flexeril®)	5%	6%	10%	7%	9%	9%	n/a	9%	12%	10%	16%	n/a	11%	9%	n/a	10%
Metaxalone (Skelaxin®)	1%	1%	4%	4%	5%	1%	n/a	4%	6%	4%	4%	n/a	4%	3%	n/a	2%
<b>Gastrointestinal agents</b>																
Ranitidine HCL (Zantac®)	7%	7%	0%	1%	0%	0%	n/a	8%	0%	0%	1%	n/a	0%	1%	n/a	0%
<b>SIDA (sleep inducing, antidepressant, and antianxiety medications)</b>																
Zolpidem Tartrate (Ambien®)	0%	1%	0%	0%	0%	1%	n/a	0%	0%	0%	0%	n/a	0%	0%	n/a	0%
<b>Anti-infectives</b>																
Cephalexin (Keflex®)	2%	2%	1%	2%	2%	2%	n/a	1%	2%	4%	2%	n/a	1%	1%	n/a	2%

Note: The underlying data include claims with > 7 days of lost time that had injuries arising from October 2005 to September 2006 and prescriptions filled through March 2007. See the Data and Methods and the *Technical Appendix* for more details.

<sup>a</sup> The common drugs presented here are a collection of the 8 or 9 specific drugs that were most frequently used in each state over the study period. Provided in the parentheses are the most common brand names

<sup>b</sup> The data presented for California were before major statutory changes affecting pharmacy reimbursements in the state. In 2007, new California law equalized prices for pharmacies and physicians.

<sup>c</sup> In Massachusetts, New York, and Texas, physician dispensing is not allowed.

<sup>d</sup> Data for New York include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements.

Key: n/a = not applicable; Rx = prescriptions.

**Table R9 Average Price Paid per Pill for Common Drugs,<sup>a</sup> Comparing Prices Paid to Physicians to Prices Paid to Pharmacies in Same State**

	CA <sup>b</sup>	FL	IA	IL	IN	LA	MA <sup>c</sup>	MD	MI	NC	NJ	NY <sup>c,d</sup>	PA	TN	TX <sup>c</sup>	WI
<b>Pain medications: Narcotics</b>																
<b>Hydrocodone-Acetaminophen (Vicodin<sup>®</sup>)</b>																
% of all Rx that were for the drug	21%	17%	25%	27%	31%	29%	n/a	10%	22%	22%	11%	n/a	18%	28%	n/a	28%
% of Rx dispensed by physicians	47%	12%	2%	10%	5%	11%	n/a	10%	5%	6%	0%	n/a	6%	8%	n/a	9%
Price paid to physician-dispensers	\$0.95	\$0.96	*	\$0.78	\$0.76	\$1.54	n/a	\$0.84	\$0.61	\$0.85	*	n/a	\$0.73	\$0.87	n/a	\$0.83
Price paid to pharmacies	\$0.45	\$0.46	\$0.48	\$0.53	\$0.53	\$0.62	n/a	\$0.49	\$0.45	\$0.54	\$0.49	n/a	\$0.41	\$0.52	n/a	\$0.44
<b>Oxycodone HCL (OxyContin<sup>®</sup>)</b>																
% of all Rx that were for the drug	0%	1%	1%	1%	1%	1%	n/a	3%	1%	1%	2%	n/a	2%	1%	n/a	4%
% of Rx dispensed by physicians	4%	0%	0%	0%	1%	0%	n/a	0%	0%	0%	0%	n/a	0%	0%	n/a	0%
Price paid to physician-dispensers	*	*	*	*	*	*	n/a	*	*	*	*	n/a	*	*	n/a	*
Price paid to pharmacies	\$2.32	\$1.41	\$1.24	\$2.20	\$2.17	\$2.58	n/a	\$2.12	\$2.71	\$1.17	\$2.23	n/a	\$2.21	\$2.18	n/a	\$1.74
<b>Oxycodone w/Acetaminophen (Percocet<sup>®</sup>)</b>																
% of all Rx that were for the drug	1%	7%	6%	1%	5%	5%	n/a	11%	2%	10%	16%	n/a	11%	7%	n/a	10%
% of Rx dispensed by physicians	8%	4%	2%	1%	0%	0%	n/a	0%	3%	0%	0%	n/a	0%	0%	n/a	1%
Price paid to physician-dispensers	\$0.46	\$2.22	*	*	*	*	n/a	*	*	*	*	n/a	*	*	n/a	*
Price paid to pharmacies	\$0.74	\$0.87	\$0.63	\$0.81	\$0.89	\$1.28	n/a	\$0.96	\$0.67	\$0.88	\$1.03	n/a	\$0.83	\$0.93	n/a	\$0.65
<b>Propoxyphene-N w/APAP (Darvocet-N<sup>®</sup>)</b>																
% of all Rx that were for the drug	4%	4%	5%	4%	5%	3%	n/a	1%	4%	4%	2%	n/a	3%	3%	n/a	3%
% of Rx dispensed by physicians	72%	19%	12%	12%	8%	10%	n/a	12%	18%	9%	2%	n/a	13%	10%	n/a	16%
Price paid to physician-dispensers	\$1.13	\$1.00	\$0.68	\$0.89	\$0.80	*	n/a	*	\$0.51	\$1.09	*	n/a	\$0.79	\$0.83	n/a	\$0.83
Price paid to pharmacies	\$0.46	\$0.63	\$0.64	\$0.70	\$0.67	\$0.70	n/a	\$0.62	\$0.62	\$0.66	\$0.69	n/a	\$0.64	\$0.67	n/a	\$0.65
<b>Tramadol HCL (Ultram<sup>®</sup>)</b>																
% of all Rx that were for the drug	3%	6%	4%	4%	4%	3%	n/a	8%	4%	4%	4%	n/a	4%	5%	n/a	3%
% of Rx dispensed by physicians	72%	56%	25%	27%	29%	12%	n/a	85%	51%	14%	30%	n/a	32%	28%	n/a	11%
Price paid to physician-dispensers	\$1.47	\$1.25	\$1.41	\$1.25	\$0.88	*	n/a	\$1.55	\$1.26	\$1.67	\$1.86	n/a	\$1.79	\$1.17	n/a	\$0.97
Price paid to pharmacies	\$0.81	\$1.25	\$0.97	\$1.15	\$1.24	\$1.44	n/a	\$1.30	\$1.03	\$1.23	\$1.27	n/a	\$1.24	\$1.17	n/a	\$0.90
<b>Tramadol-Acetaminophen (Ultracet<sup>®</sup>)</b>																
% of all Rx that were for the drug	0%	2%	1%	1%	1%	1%	n/a	1%	1%	2%	2%	n/a	1%	1%	n/a	1%
% of Rx dispensed by physicians	29%	22%	2%	13%	18%	6%	n/a	0%	15%	10%	5%	n/a	15%	4%	n/a	3%
Price paid to physician-dispensers	\$1.28	\$1.26	*	\$1.31	\$1.39	*	n/a	*	*	*	*	n/a	\$1.28	*	n/a	*
Price paid to pharmacies	\$1.02	\$1.09	\$1.03	\$1.14	\$1.17	\$1.24	n/a	\$1.04	\$1.05	\$1.15	\$1.14	n/a	\$1.14	\$1.10	n/a	\$0.99

continued

**Table R9 Average Price Paid per Pill for Common Drugs,<sup>a</sup> Comparing Prices Paid to Physicians to Prices Paid to Pharmacies in Same State (continued)**

	CA <sup>b</sup>	FL	IA	IL	IN	LA	MA <sup>c</sup>	MD	MI	NC	NJ	NY <sup>c,d</sup>	PA	TN	TX <sup>c</sup>	WI
<b>Pain medications: Non-narcotics</b>																
<b>Celecoxib (Celebrex<sup>®</sup>)</b>																
% of all Rx that were for the drug	1%	2%	2%	2%	2%	2%	n/a	1%	1%	2%	3%	n/a	2%	2%	n/a	2%
% of Rx dispensed by physicians	32%	8%	15%	8%	12%	0%	n/a	3%	4%	7%	8%	n/a	11%	7%	n/a	2%
Price paid to physician-dispensers	\$3.62	\$4.57	*	\$3.24	*	*	n/a	*	*	*	*	n/a	\$5.11	*	n/a	*
Price paid to pharmacies	\$3.07	\$3.35	\$3.28	\$3.53	\$3.52	\$3.49	n/a	\$3.28	\$3.11	\$3.61	\$3.50	n/a	\$3.51	\$3.47	n/a	\$3.46
<b>Ibuprofen (Motrin<sup>®</sup>)</b>																
% of all Rx that were for the drug	12%	6%	6%	7%	5%	1%	n/a	8%	12%	5%	9%	n/a	8%	3%	n/a	5%
% of Rx dispensed by physicians	79%	47%	35%	56%	46%	35%	n/a	57%	63%	35%	59%	n/a	43%	44%	n/a	31%
Price paid to physician-dispensers	\$0.63	\$0.49	\$0.37	\$0.47	\$0.32	\$0.66	n/a	\$0.57	\$0.43	\$0.42	\$0.53	n/a	\$0.47	\$0.42	n/a	\$0.44
Price paid to pharmacies	\$0.24	\$0.34	\$0.36	\$0.35	\$0.38	\$0.42	n/a	\$0.41	\$0.33	\$0.39	\$0.35	n/a	\$0.31	\$0.35	n/a	\$0.33
<b>Naproxen (Aleve<sup>®</sup>)</b>																
% of all Rx that were for the drug	7%	4%	3%	3%	3%	1%	n/a	4%	3%	3%	5%	n/a	4%	3%	n/a	3%
% of Rx dispensed by physicians	85%	49%	25%	42%	30%	37%	n/a	55%	55%	29%	37%	n/a	39%	44%	n/a	10%
Price paid to physician-dispensers	\$1.96	\$1.58	\$0.76	\$1.33	\$0.84	\$1.74	n/a	\$1.48	\$1.23	\$1.45	\$1.42	n/a	\$1.60	\$1.49	n/a	\$0.76
Price paid to pharmacies	\$0.58	\$1.17	\$1.12	\$1.15	\$1.30	\$1.28	n/a	\$1.20	\$1.16	\$1.31	\$1.24	n/a	\$1.26	\$1.16	n/a	\$1.20
<b>Muscle relaxants</b>																
<b>Carisoprodol (Soma<sup>®</sup>)</b>																
% of all Rx that were for the drug	6%	3%	0%	1%	1%	4%	n/a	4%	0%	1%	1%	n/a	1%	2%	n/a	0%
% of Rx dispensed by physicians	80%	54%	10%	45%	35%	23%	n/a	62%	17%	15%	37%	n/a	32%	8%	n/a	0%
Price paid to physician-dispensers	\$3.69	\$3.05	*	\$2.95	\$0.45	\$3.22	n/a	\$2.59	*	*	*	n/a	\$1.81	*	n/a	*
Price paid to pharmacies	\$0.57	\$0.62	\$0.60	\$0.63	\$0.81	\$0.99	n/a	\$0.67	\$0.53	\$0.85	\$0.80	n/a	\$0.69	\$0.63	n/a	\$0.69
<b>Cyclobenzaprine HCL (Flexeril<sup>®</sup>)</b>																
% of all Rx that were for the drug	4%	5%	4%	5%	5%	5%	n/a	6%	6%	5%	6%	n/a	5%	4%	n/a	5%
% of Rx dispensed by physicians	73%	33%	20%	31%	24%	19%	n/a	53%	52%	24%	49%	n/a	31%	26%	n/a	16%
Price paid to physician-dispensers	\$1.57	\$1.33	\$1.35	\$1.46	\$0.86	\$1.82	n/a	\$1.53	\$1.26	\$1.16	\$1.58	n/a	\$1.44	\$1.26	n/a	\$1.22
Price paid to pharmacies	\$0.71	\$1.19	\$1.10	\$1.18	\$1.20	\$1.31	n/a	\$1.24	\$1.17	\$1.40	\$1.38	n/a	\$1.20	\$1.17	n/a	\$1.13
<b>Metaxalone (Skelaxin<sup>®</sup>)</b>																
% of all Rx that were for the drug	1%	2%	2%	2%	2%	1%	n/a	2%	3%	2%	2%	n/a	2%	2%	n/a	2%
% of Rx dispensed by physicians	53%	25%	15%	39%	35%	5%	n/a	67%	56%	25%	32%	n/a	25%	28%	n/a	9%
Price paid to physician-dispensers	\$3.16	\$2.95	*	\$3.12	\$2.53	*	n/a	\$3.54	\$3.02	\$3.43	\$3.65	n/a	\$4.12	\$3.28	n/a	*
Price paid to pharmacies	\$2.87	\$3.03	\$3.13	\$3.17	\$3.16	\$3.18	n/a	\$3.53	\$2.95	\$3.25	\$3.38	n/a	\$3.24	\$3.30	n/a	\$3.19

continued

**Table R9 Average Price Paid per Pill for Common Drugs,<sup>a</sup> Comparing Prices Paid to Physicians to Prices Paid to Pharmacies in Same State (continued)**

	CA <sup>b</sup>	FL	IA	IL	IN	LA	MA <sup>c</sup>	MD	MI	NC	NJ	NY <sup>c,d</sup>	PA	TN	TX <sup>c</sup>	WI
<b>Gastrointestinal agents</b>																
Ranitidine HCL (Zantac <sup>®</sup> )																
% of all Rx that were for the drug	3%	2%	0%	0%	0%	0%	n/a	2%	0%	0%	0%	n/a	0%	0%	n/a	0%
% of Rx dispensed by physicians	95%	95%	0%	60%	0%	0%	n/a	96%	13%	38%	84%	n/a	38%	83%	n/a	33%
Price paid to physician-dispensers	\$3.48	\$3.15	*	*	*	*	n/a	\$2.78	*	*	*	n/a	*	*	n/a	*
Price paid to pharmacies	\$0.60	\$1.46	*	*	*	*	n/a	*	*	*	*	n/a	*	*	n/a	*
<b>SIDA (sleep inducing, antidepressant, and antianxiety medications)</b>																
Zolpidem Tartrate (Ambien <sup>®</sup> )																
% of all Rx that were for the drug	1%	1%	1%	1%	1%	2%	n/a	1%	0%	1%	1%	n/a	1%	1%	n/a	1%
% of Rx dispensed by physicians	15%	13%	0%	0%	0%	9%	n/a	4%	0%	0%	0%	n/a	1%	0%	n/a	0%
Price paid to physician-dispensers	\$5.04	\$6.38	*	*	*	*	n/a	*	*	*	*	n/a	*	*	n/a	*
Price paid to pharmacies	\$3.70	\$3.84	\$4.06	\$3.79	\$4.01	\$3.89	n/a	\$4.00	\$3.91	\$4.18	\$3.93	n/a	\$3.84	\$3.91	n/a	\$4.15
<b>Anti-infectives</b>																
Cephalexin (Keflex <sup>®</sup> )																
% of all Rx that were for the drug	2%	2%	2%	2%	2%	1%	n/a	1%	2%	2%	2%	n/a	2%	2%	n/a	2%
% of Rx dispensed by physicians	59%	27%	5%	18%	9%	17%	n/a	36%	23%	13%	21%	n/a	11%	9%	n/a	10%
Price paid to physician-dispensers	\$3.11	\$2.38	*	\$2.24	*	*	n/a	*	\$2.16	\$1.93	*	n/a	\$3.22	*	n/a	*
Price paid to pharmacies	\$0.80	\$1.22	\$1.21	\$1.31	\$1.32	\$1.60	n/a	\$1.36	\$1.28	\$1.42	\$1.23	n/a	\$1.25	\$1.23	n/a	\$1.31

Note: The underlying data include claims with > 7 days of lost time that had injuries arising from October 2005 to September 2006 and prescriptions filled through March 2007. See the Data and Methods and the *Technical Appendix* for more details.

<sup>a</sup> The common drugs presented here are a collection of the 8 or 9 specific drugs that were most frequently used in each state over the study period. Provided in the parentheses are the most common brand names

<sup>b</sup> Data for California include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements. In 2007, a new California law equalized prices for pharmacies and physicians.

<sup>c</sup> In Massachusetts, New York, and Texas, physician dispensing is not allowed.

<sup>d</sup> Data for New York include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements.

\* Not reported due to small cell size.

Key: n/a = not applicable; Rx = prescriptions.

# **TECHNICAL APPENDIX**

# LIST OF QUESTIONS

*What are in the underlying data supporting the prescription benchmarks?*

*How did you identify prescriptions?*

*How did you classify different types of medications?*

*How did you identify the most common drugs?*

*How did you identify dispensing points?*

*What are the benchmark metrics and how are they constructed?*

*Why did you use claims with more than seven days of lost time for the prescription benchmarks?*

*Are the prescription benchmark measures for each state representative of all cases (with more than seven days of lost time) in each state?*

*Did you adjust for the interstate differences in injury and industry mix?*

*Why did you anchor the analysis on the average prescription payment claim with prescriptions?*

*How many prescriptions were missing NDCs? How does that affect the prescription benchmarks?*

*What does it really mean if my state has a higher average price paid per pill for a benchmark measure that aggregates across different types of medications?*

## TECHNICAL APPENDIX

This technical appendix is an accompanying document to the first edition of the WCRI Prescription Benchmarks. It describes the data and methods used to construct the prescription benchmarks and answers several questions frequently asked by the readers regarding some technical and methodological issues.

### WHAT ARE IN THE UNDERLYING DATA SUPPORTING THE PRESCRIPTION BENCHMARKS?

The underlying data supporting the prescription benchmarks include approximately 160,000 claims with more than seven days of lost time in 16 states (California, Florida, Iowa, Illinois, Indiana, Louisiana, Maryland, Massachusetts, Michigan, New Jersey, New York, North Carolina, Pennsylvania, Tennessee, Texas, and Wisconsin). It covers work-related injuries from October 1, 2005, to September 30, 2006, with prescriptions filled through March 31, 2007. We have more than 900,000 prescriptions in the data that are associated with those claims. See Table TA.1 for the actual number of claims and prescriptions for each state included.

The prescription data come from various bill review and payment systems of payors and their pharmacy benefit managers. The data for each prescription typically identify the specific drug, amounts charged and paid, the number of pills, and the date on which the prescription is filled. Specific drugs were identified based on a National Drug Code (NDC).<sup>1</sup>

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<sup>1</sup> The National Drug Code (NDC), maintained by the Food and Drug Administration, is a unique, three-segment (for vendor, generic entity, and package code, respectively) number that identifies individual drug products. The system covers prescription drug products, over-the-counter agents or drugs, insulin, and herbal drugs that are distributed in the United States.

**Table TA.1 Actual Number of Claims and Prescriptions Included in the Analysis**

State	Number of Claims Included	Number of Prescriptions Included
California <sup>a</sup>	42,132	295,124
Florida	12,904	94,167
Illinois	11,794	49,897
Indiana	4,750	27,837
Iowa	2,116	10,175
Louisiana	3,111	28,067
Maryland	5,821	27,536
Massachusetts	4,188	11,090
Michigan	7,280	25,576
New Jersey	6,258	16,726
New York <sup>a</sup>	10,345	30,211
North Carolina	5,428	30,251
Pennsylvania	14,221	62,598
Tennessee	4,629	27,868
Texas	22,039	171,378
Wisconsin	5,431	19,038

Note: The underlying data include claims with > 7 days of lost time that had injuries arising from October 2005 to September 2006, and prescriptions filled through March 2007.

<sup>a</sup> Data for California and New York include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements.

HOW DID YOU IDENTIFY PRESCRIPTIONS?

Prescription drugs refer to those that require a prescription written by a physician. Once injured workers obtained a prescription, they could fill the prescription at a retail pharmacy or in some states, at the prescribing physician’s office. We identified prescriptions from the detailed transaction data in several ways. First, where an NDC was present, we determined if the code represented a prescription medication. If no NDC was present, we used a CPT (Current Procedural Terminology) code or a data source specific code that indicates a prescription.

We excluded the following from the prescription data used for the prescription benchmarks: (1) medications that are administered by a medical provider (e.g., injectibles and infusions) and (2) prescriptions dispensed by a hospital. Since the NDC covers over-the-counter drugs and nutritional supplements, we also identified those items and excluded them from the prescriptions used for the prescription benchmarks.

HOW DID YOU CLASSIFY DIFFERENT TYPES OF MEDICATIONS?

Individual drugs are often grouped based on the therapeutic action. We used the classification scheme developed by Medi-Span® (see Medi-Span®, 2005) to assign each medication to a therapeutic group. For the purposes of this study, we grouped the prescription drugs into five broader categories that represent most of the medications prescribed for injured workers—pain medications, muscle relaxants, SIDA (sleep inducing, antidepressant, and anti-anxiety medications), gastrointestinal agents, and anti-infectives. See Table TA.2 for a list of common drugs grouped by therapeutic class.

We also report a category called “other medications.” This category refers to prescriptions for specific drugs that were not classified into one of the five categories above. Table TA.3 shows the percentage of prescriptions, by state, that fell into this group.

**Table TA.2 Common Drugs by Therapeutic Class**

<b>Drug Name (Brand Name)</b>	<b>Descriptions/Indications</b>
<b>Pain medications: Narcotics</b>	
Hydrocodone-Acetaminophen (Vicodin®)	Narcotic (opiate) with acetaminophen used for relief of moderate to moderately severe pain
Oxycodone HCL (OxyContin®)	Narcotic (opiate) used for relief of moderate to severe pain
Oxycodone w/Acetaminophen (Percocet®)	Narcotic (opiate) with acetaminophen used for relief of moderate to moderately severe pain
Propoxyphene-N w/APAP (Darvocet-N®)	Narcotic (opiate) with acetaminophen used for relief of mild to moderate pain
Tramadol HCL (Ultram®)	Opiate agonist used to relieve moderate to moderately severe pain
Tramadol-Acetaminophen (Ultracet®)	Opiate agonist with acetaminophen used to relieve moderate to moderately severe pain
<b>Pain medications: Non-narcotics</b>	
Celecoxib (Celebrex®)	NSAID used to treat pain or inflammation
Ibuprofen (Motrin®)	Used to reduce fever and for relief of mild to moderate pain, swelling, and stiffness
Naproxen (Aleve®)	NSAID used to reduce fever and for relief of pain, swelling, and stiffness
<b>Muscle relaxants</b>	
Carisoprodol (Soma®)	Used as a muscle relaxant and to relieve pain caused by strains, sprains, and other muscle injuries
Cyclobenzaprine HCL (Flexeril®)	Muscle relaxant; sometimes prescribed for other uses
Metaxalone (Skelaxin®)	Used as a muscle relaxant and to relieve pain caused by strains, sprains, and other muscle injuries
<b>SIDA medications</b>	
Zolpidem Tartrate (Ambien®)	Used to treat insomnia
<b>Gastrointestinal agents</b>	
Ranitidine HCL (Zantac®)	Heartburn relief and treatment of ulcers and gastroesophageal reflux disease
<b>Anti-infectives</b>	
Cephalexin (Keflex®)	Cephalosporin antibiotic used to treat bacterial infections

Key: Cephalosporin = a class of  $\beta$ -lactam antibiotics originally derived from Acremonium; NSAID = non-steroidal, anti-inflammatory drug.

**Table TA.3 Percentage of Prescriptions That Were in the “Other Medications” Category**

State	% of All Rx that Were Rx for Other Medications	% of Physician-Dispensed Rx that Were Rx for Other Medications	% of Pharmacy-Dispensed Rx that Were Rx for Other Medications
California <sup>a</sup>	13%	9%	19%
Florida	14%	8%	17%
Illinois	14%	14%	16%
Indiana	11%	10%	11%
Iowa	15%	10%	16%
Louisiana	14%	6%	15%
Maryland	13%	10%	13%
Massachusetts <sup>b</sup>	10%	n/a	10%
Michigan	17%	15%	15%
New Jersey	14%	12%	17%
New York <sup>a, b</sup>	15%	n/a	15%
North Carolina	14%	7%	14%
Pennsylvania	13%	8%	14%
Tennessee	13%	8%	13%
Texas <sup>b</sup>	13%	n/a	13%
Wisconsin	12%	12%	12%
Median	14%	10%	15%

Note: The underlying data include claims with > 7 days of lost time that had injuries arising from October 2005 to September 2006 and prescriptions filled through March 2007.

<sup>a</sup> Data for California and New York include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements.

<sup>b</sup> In Massachusetts, New York, and Texas, physician dispensing is not allowed.

Key: n/a = not applicable; Rx = prescriptions.

**HOW DID YOU IDENTIFY THE MOST COMMON DRUGS?**

The most common drugs used to treat injured workers in each state were selected from a broader list of specific drugs, based on how frequently the prescriptions for each drug were used among the injured workers as well as among all prescriptions paid under workers’ compensation. Tables R4 through R9 in the Reference Table section provide the frequency, price, and utilization for a collection of the most common drugs used in each state. The broader list of specific drugs includes those that capture more than 1 percent of the prescription payments across the states studied. It also encompasses the top drugs presented in PMSI (2009) and Lipton et al. (2007), which were selected using the same criterion. Note that a drug name shown in the table represents both the brand name version and its generic equivalents. We also count individual prescriptions, regardless of the strength prescribed.

**HOW DID YOU IDENTIFY DISPENSING POINTS?**

This study distinguishes between prescriptions that were dispensed at pharmacies and those that were dispensed at the office of the prescribing physician.

Medi-Span<sup>®</sup> identifies NDC data that are associated with physician dispensing, which we used as a primary source of identification. We also reviewed some prescriptions with NDC data associated with

providers identified as physicians and reassigned those prescriptions as physician-dispensed prescriptions. This resulted in a small incremental improvement in identifying a physician’s office as a dispensing point.

Note that we include mail-order prescriptions in the definition of pharmacy-dispensed prescriptions.

**WHAT ARE THE BENCHMARK METRICS AND HOW ARE THEY CONSTRUCTED?**

Our benchmark metrics cover (1) the frequency of prescriptions (e.g., the percentage of claims that have at least one prescription, or the percentage of all prescriptions that are dispensed by physicians or at pharmacies); (2) the cost of prescriptions (e.g., the average prescription payment per claim with prescriptions); (3) the prices of prescription drugs (e.g., the average price per pill paid to pharmacies); and (4) utilization of prescription drugs (e.g., the average number of pills per claim with prescriptions and the average number of prescriptions per claim with prescriptions). We constructed these benchmarks for

- an aggregate measure (all prescriptions);
- each of the two dispensing points;
- each of the six therapeutic classes; and
- each of the most commonly used drugs in each state.

The data underlying those benchmarks were a subset of claims with more than seven days of lost time. Sometimes we used subsets for individual data sources that had more complete information. When we did this, we tested each subset for bias before including it. When combining the data from multiple data sources, we weighted the subset to represent all of the claims from that data source. We also weighted the data from different market segments (voluntary insurance, self-insurance, and state funds) to achieve their respective market shares in each state.

Note that we excluded the residual market claims since there were relatively few claims of this type in the data.

**WHY DID YOU USE CLAIMS WITH MORE THAN SEVEN DAYS OF LOST TIME FOR THE PRESCRIPTION BENCHMARKS?**

We chose to use claims with more than seven days of lost time for the prescription benchmarks for several reasons. First, those cases represent the overwhelming majority of the prescriptions and medical care delivered. Second, since we are interested in measuring, among other things, prescribing and dispensing patterns, our unit of observation is often “per claim.” If we included all of the claims with less than seven days of lost time, the number of claims would increase, on average, fourfold, with only a small increase in the number of prescriptions. This would often reduce variations in the per claim measures across states and therefore mask important interstate differences in prescribing and dispensing patterns. Third, although the cost and utilization of prescription drugs observed in those cases was higher than those for all claims, the cases with more than seven days of lost time provided a relatively more homogeneous and comparable base for the purpose of interstate comparisons. In addition, these claims accounted for the majority of the workers’ compensation medical costs, including prescription drug costs, and almost all indemnity benefits, providing an adequate base for addressing important public policy issues.

ARE THE PRESCRIPTION BENCHMARK MEASURES FOR EACH STATE REPRESENTATIVE OF ALL CASES (WITH MORE THAN SEVEN DAYS OF LOST TIME) IN EACH STATE?

To make meaningful interstate comparisons, we used only the data that are defined and captured in comparable ways from data source to data source and state to state. Because the data systems for capturing pharmacy detail are not as mature as those for capturing other types of medical care detail, we excluded more claims in this study than in other WCRI studies. Although the metrics in this study are based on a large number of claims, we caution that the data may not be representative of the state's full experience. Moreover, for some states, we did not have data for significant workers' compensation payors. In these states (New Jersey and New York), representativeness is less likely.

DID YOU ADJUST FOR THE INTERSTATE DIFFERENCES IN INJURY AND INDUSTRY MIX?

Unlike the WCRI CompScope™ studies, we did not make this adjustment. When the data systems are more mature and larger samples are analyzed, this may be desirable to do.

WHY DID YOU ANCHOR THE ANALYSIS ON THE AVERAGE PRESCRIPTION PAYMENT PER CLAIM WITH PRESCRIPTIONS?

In the report, we based the cost driver analysis on the average prescription cost per claim with prescriptions. We did not focus on the percentage of claims with prescriptions. Neither did we focus on per claim prescription costs. In the Limitations and Caveats section of the Data and Methods, we discussed in detail the related issues. Here we provide additional evidence that supports our assessment about missing prescriptions.

Table TA.4 provides, for each state, (1) the percentage of claims with prescriptions, (2) the median number of days from injury to first prescriptions paid under workers' compensation, and (3) the percentage of the population not covered by health insurance. A correlation analysis showed that a lower percentage of claims with prescriptions was associated with a greater number of days from injury to first prescription (correlation coefficient = -0.811, p-value = 0.0001), suggesting missing early prescription bills. The same analysis showed that a lower percentage of claims with prescriptions in a state was also associated with a greater coverage of non-occupational health insurance in the state (correlation coefficient = 0.532, p-value = 0.033), indicating that some of the early prescriptions that were not captured by workers' compensation data were likely to have been paid by other non-occupational health insurance.

**Table TA.4 Frequency and Timing of Use of Prescription Drugs Paid Under Workers' Compensation in Relation with Percentage of Population Covered by Health Insurance**

State	% of Claims with Rx	Median Number of Days from Injury to First Rx Paid	% of Population Not Covered by Health Insurance, 2-Year Average 2006–2007 <sup>a</sup>
California <sup>b</sup>	80%	3	18.5%
Florida	80%	4	20.7%
Tennessee	78%	8	14.0%
Indiana	76%	6	11.6%
Texas	74%	7	24.8%
Louisiana	71%	10	20.2%
Michigan	69%	3	11.0%
North Carolina	67%	7	17.2%
Iowa	65%	9	9.9%
Pennsylvania	64%	7	9.8%
Illinois	61%	8	13.7%
Maryland	60%	6	13.8%
Wisconsin	54%	11	8.5%
New Jersey	52%	10	15.6%
New York <sup>b</sup>	43%	25	13.6%
Massachusetts	42%	19	7.9%

Note: The underlying data include claims with > 7 days of lost time that had injuries arising from October 2005 to September 2006 and prescriptions filled through March 2007.

<sup>a</sup> U.S. Census Bureau. 2008. *Income, Poverty, and Health Insurance Coverage in the United States: 2007*. Table 8. Retrieved from <http://www.census.gov/prod/2008pubs/p60-235.pdf> (accessed July 1, 2009).

Key: Rx = prescriptions.

Another possible reason for missing prescriptions from workers' compensation systems is that some workers may have paid for their prescriptions out of pocket and received reimbursements subsequently from workers' compensation payors. If this occurred frequently, we could have missed a considerable number of prescriptions that were in fact paid by workers' compensation. As mentioned before, we conducted individual case reviews of 50 cases with several data sources. In these reviews, we found some incidences where the payment transactions indicated a reimbursement for an out-of-pocket payment, some of which might have been paid for prescription drugs. However, this only involved approximately 10–15 percent of the cases we reviewed. We will revisit this issue in the future prescription benchmark studies.

**HOW MANY PRESCRIPTIONS WERE MISSING NDCs? HOW DOES THAT AFFECT THE PRESCRIPTION BENCHMARKS?**

The NDC data were quite complete for the prescriptions dispensed at pharmacies—about 95–99 percent of the prescriptions had an NDC for all states except Texas (86 percent). However, the NDC data were less complete among physician-dispensed prescriptions—70–90 percent for most states, 62–63 percent for Florida and Indiana, and 54 percent for Louisiana. See Table TA.5.

**Table TA.5 Percentage of Prescriptions with an NDC**

State	All Prescriptions	Prescriptions Dispensed by Physicians	Prescriptions Dispensed by Pharmacies
California <sup>a</sup>	88%	86%	95%
Florida	83%	63%	94%
Illinois	90%	68%	98%
Indiana	91%	62%	97%
Iowa	94%	75%	97%
Louisiana	92%	54%	97%
Maryland	89%	74%	97%
Massachusetts <sup>b</sup>	99%	n/a	99%
Michigan	90%	77%	96%
New Jersey	94%	79%	98%
New York <sup>a,b</sup>	97%	n/a	97%
North Carolina	96%	72%	98%
Pennsylvania	95%	79%	99%
Tennessee	94%	76%	97%
Texas <sup>b</sup>	86%	n/a	86%
Wisconsin	95%	88%	97%

Note: The underlying data include claims with > 7 days of lost time that had injuries arising from October 2005 to September 2006 and prescriptions filled through March 2007.

<sup>a</sup> Data for California and New York include claims from the period prior to the implementation of major statutory changes affecting pharmacy reimbursements.

<sup>b</sup> In Massachusetts, New York, and Texas, physician dispensing is not allowed.

Key: n/a = not applicable; NDC = National Drug Code.

For the benchmark measures that rely on the presence of the NDC, we used a subset of the prescription data from the data sources where the prescriptions with an NDC were similar to those that did not. Although this reduced the sample size to a certain extent, it is more appropriate to use for the NDC-based benchmark measures. Since a physician treats injured workers regardless of who the payor is, it is unlikely that excluding some data sources would have a material impact on how the prescribing and dispensing patterns were characterized.

**WHAT DOES IT REALLY MEAN IF MY STATE HAS A HIGHER AVERAGE PRICE PAID PER PILL FOR A BENCHMARK MEASURE THAT AGGREGATES ACROSS DIFFERENT TYPES OF MEDICATIONS?**

The average price paid per pill reported reflects three things.

- The unit price of a pill—my state may have higher unit prices.
- The mix of pills—my state may have a mix of more expensive drugs, but the unit prices for the same drugs may not be higher. For example, this might occur in states where brand name drugs were prescribed and filled more often.
- The average strength of a given medication is higher in my state.

The best measures for interstate difference in price are those for the specific drugs. However, even those may reflect interstate differences in average strength of the drug, if any exist.

## GLOSSARY

**Average Wholesale Price (AWP):** Published by First DataBank and Medi-Span<sup>®</sup>. The AWP operates as an available price index that represents the most common wholesaler price charged to customers.<sup>1</sup> The AWP does not necessarily represent the actual sales price in any single transaction. The payors may negotiate for lower prices. In workers' compensation systems, however, the AWP is often used as a price benchmark for pharmacy reimbursements of prescription drugs.

**brand name drug:** A drug known by a specific registered name and/or trademark with a chemical formulation currently under patent by its owner/manufacturer.

**Current Procedural Terminology (CPT) codes:** A system of coding used to identify procedures and services performed by physicians and other medical providers.

**generic alternative:** A drug that does not necessarily contain the same active chemical ingredient as a brand name pharmaceutical but has been categorized as belonging to the same pharmacological or therapeutic class as the branded product.

**generic equivalent:** A drug which contains the same active chemical ingredients as the original patented brand name pharmaceutical. A generic equivalent or "generic" drug is considered to be identical to the original in dose, strength, route of administration, safety, efficacy, and intended use.

**Medi-Span<sup>®</sup>:** A publisher which offers a series of comprehensive drug databases, tools, and applications utilized by health care professionals. Medi-Span<sup>®</sup> is part of Wolters Kluwer Health, Inc.

**National Drug Code (NDC):** A unique 11-digit code assigned by the U.S. Food and Drug Administration to each medication in the United States that is intended for use on humans. The number identifies the specific drug product, its strength and dosage, package size, manufacturer, and repackaging firm.

**Pharmacy Benefit Manager (PBM):** A firm that contracts with payors to manage their prescription benefits through price discounts, utilization management, data processing, and other services. A PBM may have its own pharmacies or contracts with pharmacies for price discounts.

**pharmacy fee schedule:** A schedule of maximum reimbursement levels for drugs dispensed at pharmacies, as part of workers' compensation laws.

**physician-dispenser:** Physicians who write prescriptions and dispense the prescribed medications at their offices directly to the patient, and receive payments for the medications dispensed.

**physician dispensing:** Refers to the practice of physicians dispensing prescription drugs at their offices directly to the patient. There are three states in our study where physician dispensing is not allowed—Massachusetts, New York, and Texas.

**Rx:** The symbol used to indicate prescriptions.

**SIDA:** A WCRI-defined therapeutic class of prescription drugs that includes sleep inducing, antidepressant and anti-anxiety medications.

**therapeutic class:** A designation used in this study to group prescription drugs based on the NDC that are most frequently used to treat injured workers. There are five groups: pain medications, muscle relaxants, SIDA (sleep inducing, antidepressant, and anti-anxiety medications), gastrointestinal agents, and anti-infectives. The sixth group, labeled as "other medications," is created to include

<sup>1</sup> Medi-Span<sup>®</sup> 2005. *Master Drug Data Base (MDDB<sup>®</sup>) v2.5: Documentation Manual*. Published by Wolters Kluwer Health, Inc.

prescription drugs that are not classified in the above five groups.

**Wholesale Acquisition Cost (WAC):** Represents the cost reported by a pharmaceutical manufacturer at which wholesalers purchase drug products from that manufacturer. The WAC does not necessarily represent the actual sales price in any single transaction, as any manufacturer may agree to sell its product at a lower price through inclusion of discounts or rebates. The WAC is typically lower than the AWP.

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**Dongchun Wang**  
**Richard A. Victor**  
Cambridge, Massachusetts  
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