

Brand and Generic Drug Utilization in Oregon's Workers' Compensation System, First Quarter 2002

Research & Analysis Section

Department of Consumer & Business Services

September 2004

by Nathan Johnson

Analysis of workers' compensation medical billing data for the first quarter of 2002 shows that when generic and brand name versions of a drug are both available, the generic version is dispensed 92 percent of the time.¹ Evidence suggests that the average cost of generic drugs is between 30 and 50 percent less than their brand-name counterparts.² Analysis of Oregon's workers' compensation data shows that the average cost of generic drugs may be as much as 57 percent less. Thus, the utilization of generic drugs has resulted in significant cost savings.

Brand and generic drug utilization trends

Typically, a brand-name drug is dispensed when there is no generic drug available, when the brand-name drug is less expensive than the generic versions of the drug, when patients are medically unable to tolerate generic versions of the drug, or when patients experience unexpected effects from the generic version. Usually, generic drugs become available when a brand-name drug is no longer protected under a patent.

In 2000, generic drugs represented 49 percent of dispensed prescriptions in the general healthcare market, but only 14 percent of *total dollars* spent on dispensed prescriptions. In 2002, the proportion rose slightly with generic drugs representing 51 percent of dispensed prescriptions and 16 percent of dollars spent on prescriptions.³ Although generic drugs are being dispensed as frequently as brand-name drugs in general healthcare, they represent a much smaller percentage of total dollars.

In Oregon's workers' compensation system, generic drugs represented 61 percent of dispensed prescriptions and 23 percent of total dollars spent on prescriptions in the first quarter of 2000.⁴ These proportions rose slightly in the first quarter of 2002, with generic drugs representing 62 percent of dispensed prescriptions and 26 percent of dollars spent on prescriptions. It is clear that generic drugs are being dispensed more often in Oregon's workers' compensation system than in general healthcare and represent a greater portion of total dollars spent on prescriptions. As a result, the system experiences a significant cost savings by providing injured workers with generic drugs that are therapeutically and chemically equivalent to more expensive brand-name drugs.⁵

Top five dispensed drug classes

Due to injuries such as sprains, strains, and tears that predominately lead to workers' compensation claims, higher percentages of drugs for pain relief are dispensed to injured workers compared to patients in general healthcare.⁶ The largest category of drugs dispensed to injured workers is for pain management. Narcotic analgesics, a class of drugs used to manage moderate to severe pain, account for 36.7 percent of dispensed prescriptions in the Oregon's workers' compensation system during the first quarter of 2002, compared to 4.3 percent in the general healthcare market.⁷

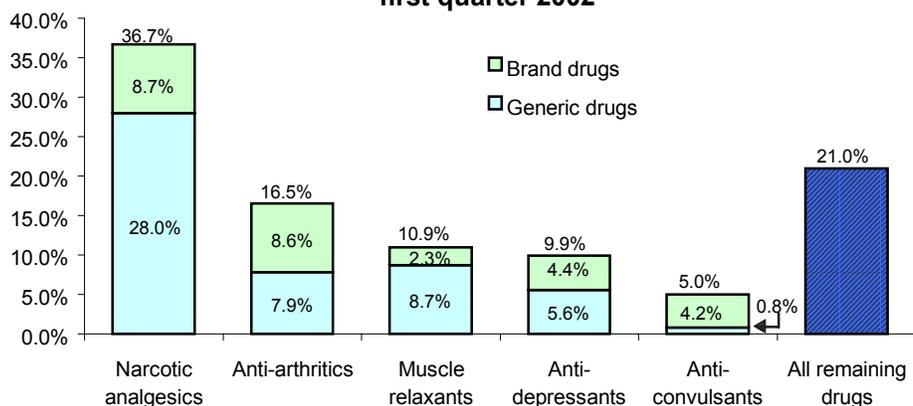
Five drug classes (narcotic analgesics; anti-arthritics, also known as anti-inflammatories; muscle relaxants; anti-depressants; and anti-convulsants) account for nearly 80 percent of dispensed prescriptions (79.0%)

Table 1. Distribution of generic and brand-name drugs in the top five drug classes, first quarter 2002

	Dispensed prescriptions		Payments	
	Dispensed prescriptions	Percent, top five classes	Total payments	Percent, top five classes
Generic drugs	32,700	64.4%	\$752,600	26.4%
Brand drugs	18,100	35.6%	\$2,099,200	73.6%
Total, top five drug classes	50,800	100.0%	\$2,851,800	100.0%
Remaining drugs and services	13,500		\$752,700	
Total pharmacy, first quarter 2002	64,300		\$3,604,500	

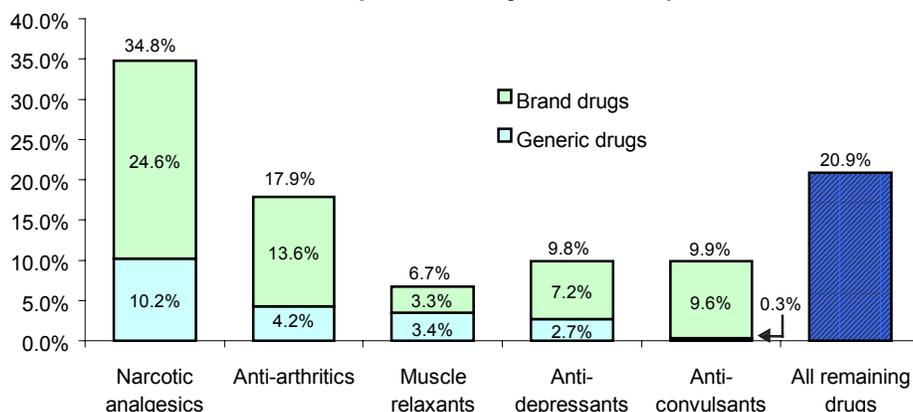
Note: Drug prescription and payment figures are rounded to the nearest hundred; also, figures and percents may not add to totals, due to rounding.

Figure 1. Percent of generic and brand-name drug dispensed prescriptions in the top five drug classes in the Oregon workers' compensation system, first quarter 2002



Note: Due to rounding, percents may not add to 100.

Figure 2. Percent of generic and brand-name drug payments in the top five drug classes in the Oregon workers' compensation system, first quarter 2002



Note: Due to rounding, percents may not add to 100.

and of total dollars spent on prescriptions (79.1%) in the first quarter of 2002. Seventy other therapeutic drug classes make up the remaining 21 percent of estimated drug prescriptions and payments.

In this report, the top five drug classes are selected for analysis, because the classes combined represent nearly four-fifths of the quarter's dispensed prescriptions and payments. Table 1 shows the distribution of generic and brand-name drug use within the top five drug classes during the first quarter of 2002. Figure 1 illustrates the distribution of dispensed generic and brand-name drug prescriptions within each of the top five drug classes. Figure 2 illustrates the percentage of payments attributed to generic and brand-name drugs dispensed within the top five drug classes.

Brand and generic utilization in top five drug classes

Table 2 shows the separation of generic and brand distributions within the top five drug classes (narcotic analgesics, anti-arthritis, muscle relaxants, anti-depressants, and anti-convulsants) into three categories for further analysis: "Brands with generic substitutions" (BWGS), "Brand-name-only," and "Generic-only."

The BWGS category consists of brand-name drugs and their generic counterparts. To estimate the effectiveness of generic and brand-name drug utilization, a sample of the payments for most frequently dispensed BWGS drugs (see Table 3 for a detailed overview) was used to analyze which brands could have had a generic version substituted and the approximate cost savings.

Table 2. Drug distribution in the top five drug classes, first quarter 2002

	Dispensed prescriptions			Payments		
	Dispensed prescriptions	Percent, drug category	Percent, top five classes	Total payments	Percent, drug category	Percent, top five classes
Brands with generic substitutions (BWGS)	35,200	100.0%	69.3%	\$956,800	100.0%	33.6%
<i>Generic</i>	32,300	91.8%		\$744,500	77.8%	
<i>Brand</i>	2,900	8.2%		\$212,300	22.2%	
Brand name only	15,300	100.0%	30.1%	\$1,886,800	100.0%	66.2%
Generic only	400	100.0%	0.8%	\$8,100	100.0%	0.3%
Total top five drug classes	50,800		100.0%	\$2,851,800		100.0%

Note: Drug prescription and payment figures are rounded to the nearest hundred; figures and percents may not add to totals, due to rounding.

The brand-name-only category consists of brand-name drugs for which there are no generic versions available on the market (usually because the drugs are still protected by patents).⁸ Brand-name-only drugs include several popular brand names such as the narcotic analgesics Oxycontin and Ultram, the anti-arthritis Celebrex and Vioxx, and the anti-convulsant Neurontin. It should be noted that most of the anti-convulsant drugs dispensed were brand-name-only, resulting in 84 percent of the prescriptions and 97 percent of total dollars in this drug class.⁹

The generic-only category consists of generic drugs dispensed in the first quarter of 2002 that have no brand-name counterparts.

Overall, BWGS drugs represented over two-thirds (69.3%) of the dispensed drugs within the top five drug classes (see Table 3). Analysis of BWGS data shows that when a brand-name drug has a generic counterpart, the generic is dispensed nearly 92 percent of the time.

Analysis of generic substitution

Oregon statutes and workers' compensation rules (such as OAR 436-009-0090) direct providers, pharmacists, and injured workers to use generic drugs and reduce costs for the workers' compensation system. For example (see Table 3), *hydrocodone bitartrate with acetaminophen*, a narcotic analgesic, accounts for 17 percent of prescriptions dispensed in the first quarter of 2002. Generic versions were dispensed 96 percent of the time, with an average price of \$14.56 per prescription, which is less than one-third the average price of comparable brand-name versions. Two other narcotic analgesics, *oxycodone HCL* and *oxycodone HCL with acetaminophen*, have brand-name versions (Roxicodone

and Roxicet, respectively) that are either less expensive than or the same as their generic counterparts. In each case, the brand-name drug was dispensed in nearly equal quantities as the generic versions, suggesting that the less-expensive drug is being dispensed, regardless of whether it is a brand name or a generic drug.

In conclusion, analysis of first quarter 2002 workers' compensation data reveals signs that the substitution of generic versions may be reaching the saturation point. In the top five drug classes, which represent nearly four-fifths of the quarter's total dispensed prescriptions and payments, when a brand-name drug has a generic counterpart, the generic is substituted 92 percent of the time. The substitution of generic drugs for brand-name drugs resulted in significantly lower costs for the workers' compensation system. Minimal additional cost savings will come from substituting generics for the remaining eight percent of substitutable brand-name drugs. Rather, cost containment of all drugs dispensed to injured workers, especially brand-name-only drugs, is necessary to create additional savings for pharmacy costs within the workers' compensation system.

The Information Management Division of the Department of Consumer and Business Services collects medical billing data on a quarterly basis as prescribed by Workers' Compensation Division Bulletin 220. WCD uses the medical billing data in its oversight of the workers' compensation system and assists the legislature in making policy decisions. The analysis in this report uses billing data for dispensed prescriptions reported to Bulletin 220 under the provider type listed for pharmacy. This report is based on a model developed by IMD to estimate the overall amount and composition of medical expenditures within the Oregon workers' compensation system.

Table 3. Most frequently dispensed brands with generic substitutions (BWGS) in the top five drug classes in Oregon's workers' compensation system, first quarter 2002

Anti-arthritics

Product name	Generic/Brand	Dispensed prescriptions	Percent, drug prescriptions	Total payments	Percent, drug payments
Diclofenac Sodium	Generic	300	93.8%	\$12,500	91.2%
Voltaren	Brand	20	6.3%	\$1,200	8.8%
Etodolac	Generic	320	88.9%	\$13,500	79.4%
Lodine	Brand	40	11.1%	\$3,500	20.6%
Ibuprofen	Generic	1,830	85.5%	\$22,400	82.1%
Motrin	Brand	310	14.5%	\$4,900	17.9%
Nabumetone	Generic	620	77.5%	\$43,600	74.0%
Relafen	Brand	180	22.5%	\$15,300	26.0%
Naproxen	Generic	1,110	99.1%	\$29,300	98.0%
Naprosyn	Brand	10	0.9%	\$600	2.0%
Piroxicam	Generic	150	88.2%	\$2,400	58.5%
Feldene	Brand	20	11.8%	\$1,700	41.5%

Anti-convulsants

Product name	Generic/Brand	Dispensed prescriptions	Percent, drug prescriptions	Total payments	Percent, drug payments
Clonazepam	Generic	340	91.9%	\$8,500	83.3%
Klonopin	Brand	30	8.1%	\$1,700	16.7%

Anti-depressants

Product name	Generic/Brand	Dispensed prescriptions	Percent, drug prescriptions	Total payments	Percent, drug payments
Amitriptyline HCL	Generic	1,410	98.6%	\$14,700	94.8%
Elavil	Brand	20	1.4%	\$800	5.2%
Bupropion HCL	Generic	40	80.0%	\$1,900	79.2%
Wellbutrin	Brand	10	20.0%	\$500	20.8%
Fluoxetine HCL	Generic	400	85.1%	\$47,500	82.9%
Prozac	Brand	70	14.9%	\$9,800	17.1%
Trazodone HCL	Generic	950	97.9%	\$15,900	86.9%
Desyrel	Brand	20	2.1%	\$2,400	13.1%

Muscle relaxants

Product name	Generic/Brand	Dispensed prescriptions	Percent, drug prescriptions	Total payments	Percent, drug payments
Carisoprodol	Generic	1,650	95.4%	\$50,400	73.3%
Soma	Brand	80	4.6%	\$18,400	26.7%
Cyclobenzaprine HCL	Generic	2,620	98.5%	\$40,200	95.3%
Flexeril	Brand	40	1.5%	\$2,000	4.7%
Methocarbamol	Generic	790	98.8%	\$16,700	99.4%
Robaxin	Brand	10	1.3%	\$100	0.6%

Continued on next page

Table 3. Most frequently dispensed brands with generic substitutions (BWGS) in the top five drug classes in Oregon's workers' compensation system, first quarter 2002, continued

Narcotic analgesics

Product name(s)	Generic/Brand	Dispensed prescriptions	Percent, drug prescriptions	Total payments	Percent, drug payments
Acetaminophen w/Codeine Phosphate	Generic	1,120	95.7%	\$21,400	88.1%
Tylenol w/ Codeine No. 3 & 4	Brand	50	4.3%	\$2,900	11.9%
Hydrocodone Bitartrate w/Acetaminophen	Generic	11,050	96.1%	\$161,000	88.1%
Lorcet, Lortab, Norco, Vicodin	Brand	450	3.9%	\$21,800	11.9%
Morphine Sulfate	Generic	480	77.4%	\$64,500	67.6%
MS Contin	Brand	140	22.6%	\$30,900	32.4%
Oxycodone HCL	Generic	550	93.2%	\$17,900	80.3%
OxylR, OxyFast, Roxicodone	Brand	40	6.8%	\$4,400	19.7%
Oxycodone HCL w/ Acetaminophen	Generic	1,790	91.3%	\$28,700	69.7%
Percocet, Roxicet, Tylox	Brand	170	8.7%	\$12,500	30.3%
Oxycodone HCL w/ Aspirin	Generic	80	72.7%	\$1,300	38.2%
Percodan	Brand	30	27.3%	\$2,100	61.8%
Propoxyphene Napsylate w/Acetaminophen	Generic	2,020	94.0%	\$43,200	87.3%
Darvocet-N	Brand	130	6.0%	\$6,300	12.7%

Summary of total pharmacy, first quarter 2002	Dispensed prescriptions	Percent, top five classes	Total payments	Percent, top five classes
Most often dispensed brands with generic substitutions in top five drug classes	31,500	62.0%	\$801,600	28.1%
Remaining brands with generic substitutions in top five drug classes *	3,700	7.3%	\$155,200	5.4%
Brand-name-only drugs in top five drug classes **	15,300	30.1%	\$1,886,800	66.2%
Generic-only drugs in top five drug classes	400	0.8%	\$8,100	0.3%
Total top five drug classes	50,800	100.0%	\$2,851,800	100.0%
Drugs in remaining drug classes	13,000		\$729,800	
Total drugs in all drug classes	63,800		\$3,581,600	
*** Non-drug pharmacy services	500		\$22,900	
Total pharmacy, first quarter 2002	64,300		\$3,604,500	

* Brands with generic substitutions (BWGS) not selected for the sample because the quantities dispensed were few.

** Drugs that have only a brand-name version on the market, usually because the drug's patent prevents generic versions from being sold.

*** Consists mostly of medical supplies and durable medical equipment (DME).

Note: Individual drug-prescription figures are rounded to the nearest ten, individual drug payment figures and aggregate prescription and payment figures are rounded to the nearest hundred; figures and percents may not add to totals, due to rounding.



Information Management Division
350 Winter Street NE, Room 300
P.O. Box 14480
Salem, OR 97309-0405
(503) 378-8254

Endnotes

¹ Generic drugs also include “branded” generic drugs. Branded generic drugs are usually generic drugs labeled with an assumed brand name either for marketing reasons or because a different patented method of action was used that varied from the brand-name drug version.

² See Generic Pharmaceutical Association (www.gphaonline.org/aboutgenerics/faqs.html) and Wellmark Blue Cross and Blue Shield (www.wellmark.com/products/pharmacy/branded_generic.htm).

³ See IMS Health, National Prescription Audit Plus™ and National Sales Perspectives™, (July 2003).

⁴ See Research Alert: Pharmacy Expenditures in the Oregon Workers’ Compensation System, Department of Consumer & Business Services (May 2001).

⁵ The FDA defines a generic drug as “...identical, or bioequivalent to a brand-name drug in dosage form, safety, strength, route of administration, quality, performance characteristics and intended use“ (<http://www.fda.gov/cder/ogd/>).

⁶ See Workers’ Compensation Claims Characteristics, Calendar Year 2002, Department of Consumer & Business Services (January 2004).

⁷ See Kumar and Zaugg, “IMS Review: Steady But Not Stellar” in MM&M, IMS Health Business Watch, (May 2003), (www.imshealth.com).

⁸ Drugs were considered “brand name only” based upon market conditions in the first quarter of 2002.

⁹ It is common for anti-convulsants, most often Neurontin, to be prescribed for purposes other than seizure suppression; typically for “off-label” use in relieving neuropathic and neurogenic pain and in migraine prophylaxis. The FDA approves a drug for a specific, labeled purpose, but some drug references, such as the *Physicians’ Desk Reference*, provide alternative, “off-label” purposes.

In compliance with the Americans with Disabilities Act (ADA), this publication is available in alternative formats by calling (503) 378-4100 (V/TTY).

The information in this executive summary is in the public domain and may be reprinted without permission. For more information, visit the DCBS Web site, <http://www.cbs.state.or.us>, or call (503) 378-8254.

To receive electronic notification of new publications, see the Information Management WebBoard, <http://www.cbs.state.or.us/imd/notify.html>