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CWCI Research Brief

Differences in Outcomes for Injured Workers Receiving Physician-Dispensed Repackaged Drugs in the California Workers' Compensation System

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Background

Physician-dispensed medications have become commonplace in medical care delivery for injured workers within the workers' compensation system. The practice has been controversial for more than 10 years. Claims of improved access to prescription services and improved compliance with pharmacy prescriptions leading to improved medical and disability outcomes are often challenged by suspicions that an alternative motivating factor driving physician dispensing is financial benefit. In the California workers' compensation system, between 2002 and 2006, physician-dispensed repackaged drugs climbed to almost 55 percent of all outpatient prescriptions and nearly 60 percent of total prescription drug payments.[1] In a multi-state study of dispensing patterns, Wang reported that as of 2011, over half of all pharmacy prescriptions in the California workers' compensation system were still physician-dispensed, the highest reported level across the 16 states under review.[2]

In California, the financial incentive for a physician to dispense medications to injured workers directly from their office has been influenced by rules controlling the fee schedule. Effective January 1, 2004, California set the maximum reasonable allowances for pharmacy services and drugs at the Medi-Cal rates, which at the time were at least 10 percent below the average wholesale price (AWP).

[1] Swedlow, A., Ireland, J. Changes in Pharmaceutical Utilization and Reimbursement in the California Workers' Compensation System. CWCI Research Update, September, 2009.
[2] Wang, D. Physician Dispensing in Workers' Compensation. Workers Compensation Research Institute. July 2012.

Prior to 2007, however, maximum reasonable fees for medications not covered by Medi-Cal – such as repackaged drugs dispensed from a physician's office – were still frequently paid at the rates set by the 2003 Official Medical Fee Schedule. That schedule set maximum fees at 140 percent of the Average Wholesale Price (AWP) for generic drugs, and 110 percent of the AWP for brand drugs, plus a dispensing fee, resulting in reimbursements well beyond the Medi-Cal rates. This differential pricing paid physicians who dispensed repackaged drugs directly from their offices significantly more than pharmacies for the same medications. Neuhauser (2006) found that workers' compensation reimbursements for repackaged drugs often exceeded the amounts paid for equivalent pharmacy-based prescriptions by 500 percent or more.[3] Wang also found similar pricing differences in other states.[4] In response to the dramatic growth in physician-dispensed repackaged drugs, and their emergence as a significant cost driver, in February 2007 the California Division of Workers' Compensation in adopted revisions to the pharmacy fee schedule which, as of March 2007, largely eliminated the differential pricing. The effect was immediate, as both the volume of physician-dispensed repackaged drugs and the amounts paid for these medications declined by more than 90 percent by 2011.[5] Wang's recent finding that in 2011 more than half of all California workers' compensation prescriptions were still dispensed from physician offices challenges the notion put forth by drug repackagers that eliminating differential pricing for repackaged drugs would eliminate physician dispensing of all medications, creating a major inconvenience for injured workers. Access studies also showed that injured workers had a choice of up to five pharmacies within 2.2 miles of the dispensing physician's office, further refuting the assertions of an access crisis should physician dispensing be curtailed.[6]

However, the ultimate outcome of workers' compensation claims before and after the repackaged drug loophole was eliminated has yet to be examined. Claims by repackagers and dispensing physicians that physician-dispensed repackaged drugs led

[3] Neuhauser, F., Swedlow, A.,Wynn, B. Impact of Physician-Dispensing of Repackaged Drugs on California Workers' Compensation, Employers Cost, and Workers' Access to Quality Care. Commission on Health and Safety and Workers' Compensation. July 2006

[4] Wang, D. Physician Dispensing in Workers' Compensation. Workers Compensation Research Institute. July 2012.

[5] Ireland, J., Swedlow, A., Gardner, L. Analysis of Medical and Indemnity Benefit Payments, Medical Treatment and Pharmaceutical Cost Trends in the California Workers' Compensation System. California Workers' Compensation Institute. June 2012.

[6] Swedlow, A. California Workers' Compensation Repackaged Drugs Analysis. California Workers' Compensation Institute. January 2005.

to improved quality of care were typically drawn from anecdotal observations on higher rates of patient compliance with their drug regimen. While it may seem logical that there would be close to 100% compliance with the patient receiving the pharmaceutical prescription and drugs within a physician's office, it is not known how different the likelihood of a patient completing their drug regimen would be when compared to those receiving their drugs from a pharmacy.

This study examines the association between physician-dispensed repackaged drugs and overall claim outcomes for injured workers. For the purposes of this analysis, claim outcomes have been defined as average medical and indemnity benefit payments and total paid days of temporary disability – a common proxy measurement for return to work. The analysis also includes a separate analysis of the incremental cost of each physician-dispensed pharmaceutical.

Data and Methods

For this analysis, a special dataset was compiled from 1,319,663 open and closed California workers' compensation claims with dates of injury from January 2002 through December 2011. To identify the types and the number of physician-dispensed repackaged drugs in the claim sample, the authors analyzed detailed medical bill review data for the paid prescriptions within these claims, using the unique National Drug Codes (NDCs) assigned by the Food and Drug Administration to identify the specific types of drugs, and a flag indicating the number of repackaged drugs dispensed within a particular claim. The authors identified a total of 10,995,721 prescriptions within the claim sample, of which 3,082,993, or 28 percent, were identified as repackaged drugs, and 7,912,728, or 72 percent, were identified as other, non-repackaged drugs. The claims and their associated prescriptions were further grouped into pre- and post-reform buckets based on the date of injury:

1. Pre-reform: claims with dates of injury between January 2002 and March 2007 (N=474,692 or 36 percent of the total claim sample)

2. Post-reform: claims with dates of injury between April 2007 through December 2011 (N=844,971 or 64 percent).

Overall, 14 percent of the claim sample (28 percent of the pre-reform claims and 6 percent of the post-reform claims) contained one or more physician-dispensed repackaged drugs.

There were observed differences in the underlying data for claims with and without physician-dispensed repackaged drugs. For example, Table 1 displays the frequency distributions by injury category for claims with and without physician-dispensed repackaged drugs:

Table 1. Top 10 Injury Categories for Claims With and Without Physician-Dispensed Repackaged Drugs (PDRD)

Injury Category (DXCat)	Claims without PDRD	Claims with PDRD
Medical Back Problems w/o Spinal Cord Involvement.	18.4%	26.7%
Minor Wounds & Injuries	15.1%	20.7%
Sprain Of Shoulder, Arm, Knee, Lower Leg	15.3%	16.6%
Wound, Fx Of Shoulder, Arm, Knee, Lower Leg	5.1%	6.0%
Other Injuries, Poisonings & Toxic Effects	4.8%	5.7%
Wound, Fx Of Shoulder, Arm, Knee, Lower Leg	2.7%	4.5%
Degenerative, Infective & Metabolic Joint Dis.	2.9%	3.7%
Trauma Of Fingers & Toes	2.0%	3.5%
External Eye Disorders	2.8%	2.8%
Spine Disorders w/ Spinal Cord or Root Involvement	1.0%	2.0%
Top 10 Sub-total	**70.1%**	**92.3%**

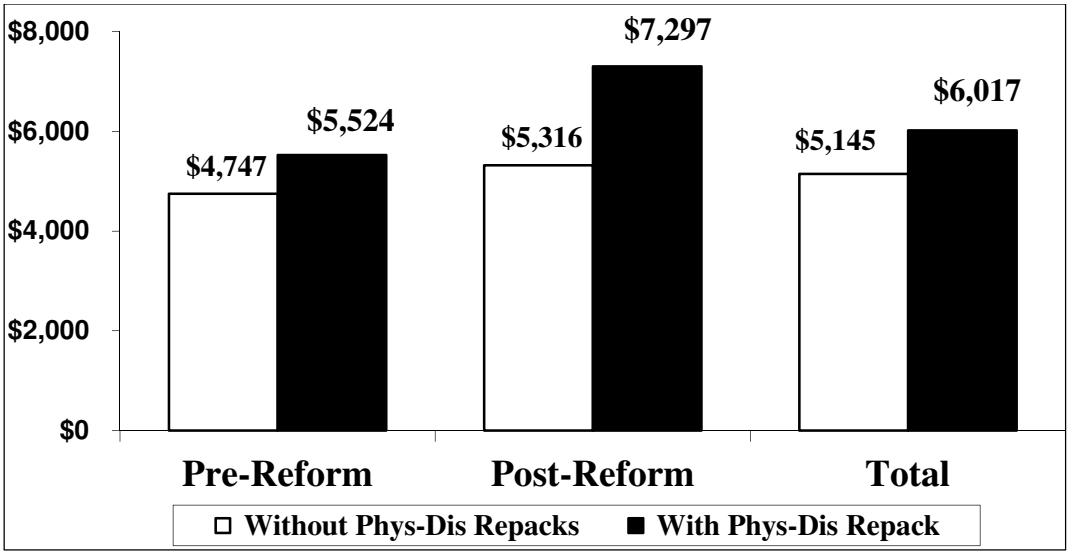
Differences were noted in other key variables as well. The authors used regression analysis to adjust for case mix factors that influenced the outcome measures, thus overcoming factors that would otherwise bias the results of the analyses. Regression methodology allowed the authors to examine the independent effect of each predictor variable on the outcome variable, controlling for the effects of the other predictor variables. The regression models developed for this evaluation contained five categories of independent variables: demographic variables, injury descriptions, employer characteristics, claim development variables and either a flag for presence of any repackaged drugs or a count of the number of repackaged drug prescriptions. The large number of observations available in the data made it possible to include many categories of each of the main variables, especially for diagnosis category. In addition to these variables, the models included claimant age and gender, claim type, presence

of indemnity benefits, presence of attorney involvement (litigation), presence of a catastrophic injury flag, average weekly wage, tenure, employment status, occupation, audited premium (a proxy for employer size), the month and year of injury, the presence of co-morbidities (such as obesity, diabetes and substance abuse), as well as utilization of non-repackaged pharmaceuticals. The discussion of the case-mix-adjusted results focuses on the association between the presence and quantity of physician-dispensed repackaged drugs and the various outcomes of interest.

Results

Exhibit 1 compares the average paid medical benefit on claims with and without the presence of at least one repackaged drug in the pre- and post-reform periods.

Exhibit 1. Average Paid Medical Benefits per Claim (All Claims)



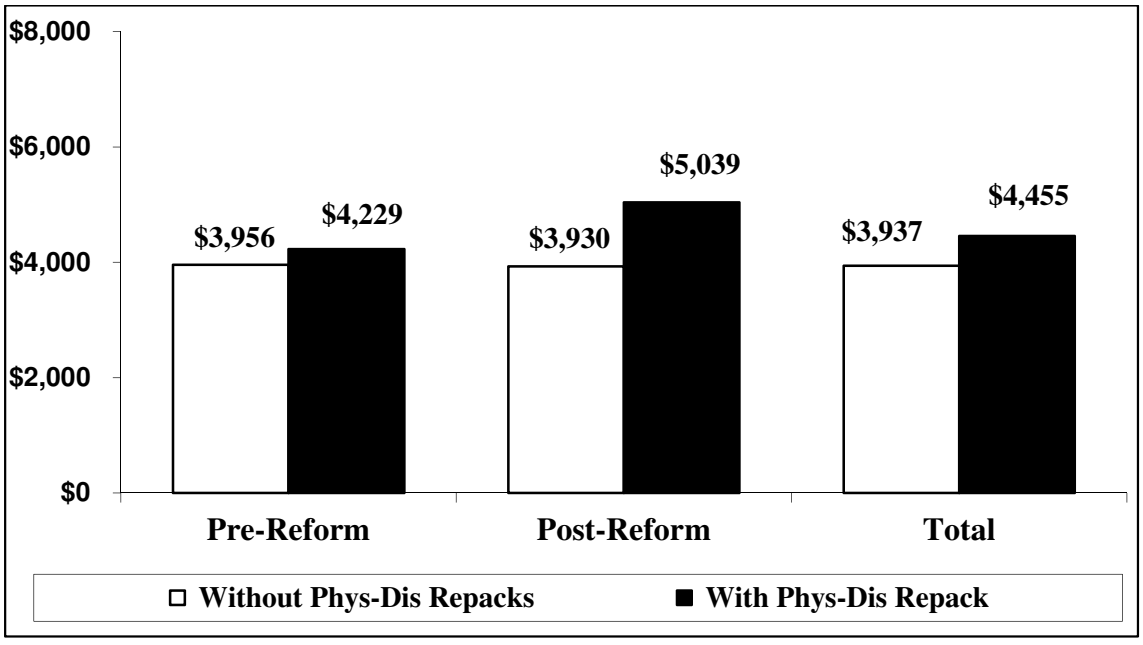
In the pre-reform period, when physician-dispensed repackaged drugs represented more than half of all drugs prescribed in California workers' compensation, paid medical benefits on claims with these physician-dispensed repackaged drugs averaged $5,524, or 16.4 percent more than the $4,747 average for claims without them. The difference in average paid medical benefits between these two groups of claims increased after the repackaged loophole was closed and the proportion of all claims with a physician-dispensed repackaged drug prescription fell to less than 5 percent. After March 2007, paid medical benefits on claims with physician-dispensed repackaged drugs averaged $7,297, or 37.3 percent more than the $5,316 average for claims without these types of prescriptions. These differences were statistically significant ($p<.05$).

Another way to consider this change is that average paid medical benefits on claims without repackaged drugs increased 12 percent from $4,747 in the pre-reform era to $5,316 in the post-reform era, while over the same period, average paid medical benefits on claims with repackaged drugs showed a much greater increase, climbing 32 percent from $5,524 to $7,297.

Combining the data from the pre- and post- reform periods, the authors found that for the 10-year span of the study (2002 – 2011), paid medical benefits on claims with repackaged drugs averaged $6,017, or 17 percent more than the $5,145 average for claims without repackaged drugs.

Results were similar for indemnity benefit payments (Exhibit 2).

Exhibit 2. Average Paid Indemnity Benefits per Claim (All Claims)

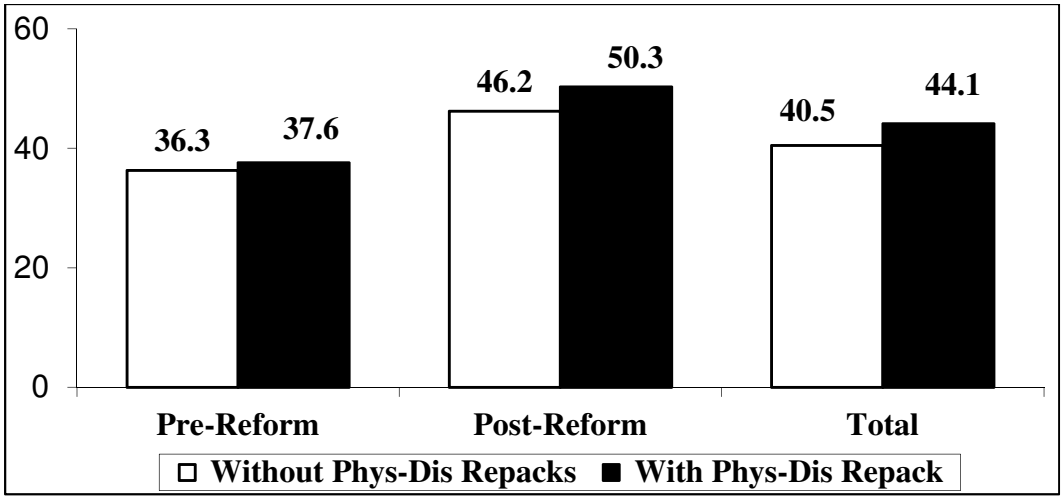


In the pre-reform period, indemnity payments on claims with physician-dispensed repackaged drugs averaged $4,229, or 6.9 percent more than the $3,956 average for claims without these drugs. After March 2007, indemnity payments on claims with physician-dispensed repackaged drugs averaged $5,039, or 28.2 percent more than the $3,930 average for claims without physician-dispensed repackaged drugs. For the entire 10-year study period, indemnity payments on claims with physician-dispensed

repackaged drugs averaged $4,455, or 13.1 percent more than the $3,937 average for claims without repackaged drugs. All observed differences were statistically significant (p<.05).

The authors also calculated and compared the average number of paid temporary disability (TD) days on claims with and without repackaged drugs in the pre- and post-reform periods (Exhibit 3).

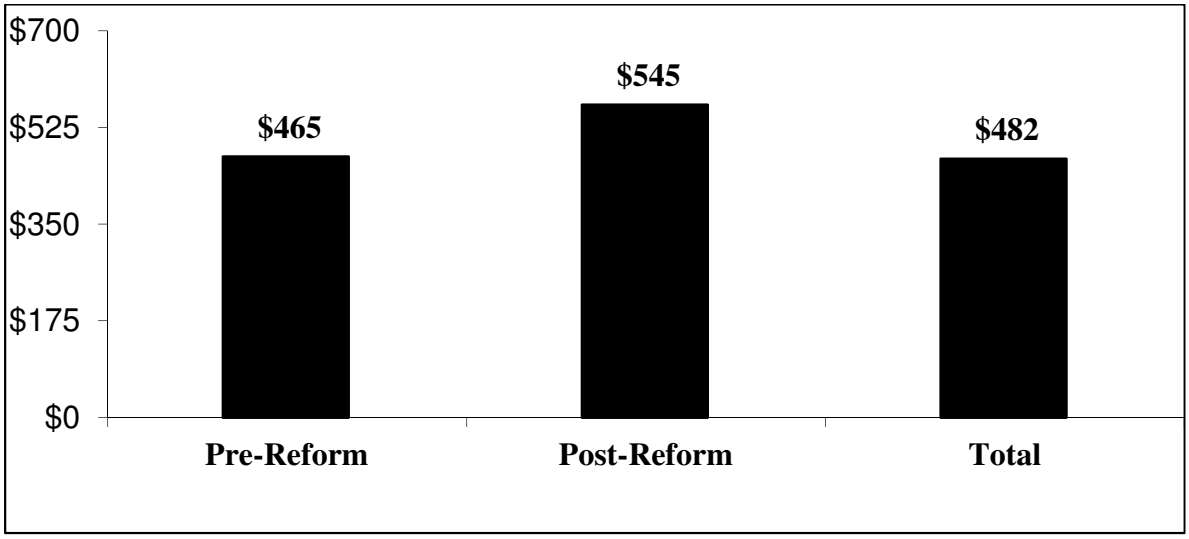
Exhibit 3. Average Paid Temporary Disability Days per Claim (All Claims)



In the pre-reform period, claims with physician-dispensed repackaged drugs averaged 37.6 days of temporary disability; 3.6 percent more days than the average of 36.3 TD days for claims without physician-dispensed repackaged drugs. The difference in the average number of paid TD days widened in the post-reform period as claims with physician-dispensed repacked drugs averaged 50.3 paid TD days – 8.9 percent more than the average of 46.2 days for claims without repackaged drugs. Combining the pre- and post-reform results shows that from 2002 through 2011, claims with repackaged drugs averaged 44.1 paid TD days; 8.9 percent more than the average of 40.5 days for claims without repackaged drugs. Post-reform and total differences were statistically significant (p<.05).

Exhibit 4 compares the incremental change to average medical payments per claim associated with each repackaged drug prescription found on the set of claims with at least one physician-dispensed repackaged drug.

Exhibit 4. Incremental Medical Benefit Cost per Physician-Dispensed Repackaged Drug (All Claims with PDRD)



In the pre-reform period, each physician-dispensed repackaged drug prescription added $465 dollars to the average cost of medical benefits per claim, while in the post-reform period (after March 2007) each of these types of prescriptions added $545 to the average medical benefit costs – a 17 percent difference. Overall, among 2002 through 2011 claims with at least one physician-dispensed repackaged drug, each prescription increased the cost of medical benefits per claim by $482. All observed differences were statistically significant ($p<.05$).

Discussion

The national debate over the role and influence of physician dispensing continues on across a variety of quality, cost and injured worker outcome topics. Public policy research has moved the debate from subjective, anecdotal observations to objective data-driven policy discussions and, as was the case in California, to action. In 2007, California was one of the first states to remove most of the economic incentive that had been generated by differential pricing for physician-dispensed repackaged drugs by

normalizing the cost of therapeutic equivalent drugs to that of drugs dispensed from a pharmacy. Studies show that the proliferation of California drug stores actively filling workers' compensation prescriptions effectively removes barriers to pharmaceutical access. While there are potential differences in patient compliance for fulfilling the proper use of drugs when dispensed within the physician's office rather than a pharmacy, the difference in compliance and the value of that difference to quality of care remains unknown. That said, this study provides new insights that associate physician dispensing of repackaged drugs with higher medical and indemnity costs and delayed return-to-work.

California's experience, while a potential model for other states, is a cautionary tale on the limits of regulatory and legislative controls on pharmaceuticals. According to WCRI, California's use of total physician-dispensed drugs remains among the nation's highest, despite the 2007 regulatory change associated with the rapid decrease of repackaged drug utilization and cost.[7] Furthermore, California's experience with compounded drugs in workers' compensation further illustrates the difficulty of managing pharmacy benefits without adequate controls over utilization as well as unit prices. A recent study on compounded drugs found that following 2012 statutory changes that included the adoption of fee schedule controls, new billing requirements, and the addition of compounded drugs and "other pharmacy goods" to the list of medical products and services that physicians are prohibited from self-referring, the number of compounded drug prescriptions did decline. Yet, despite the decline in volume, total expenditures for compounded drugs continued to grow due to a change in the mix of ingredients, as well as increases in the average number of ingredients, the average quantity of each ingredient and the average payment per ingredient. These changes effectively raised the average price of compounded drugs by 68 percent.[8] Future studies will continue to clarify the total contribution of all forms of physician dispensing to quality of care, patient convenience and cost effectiveness.

[7] Wang, D. Physician Dispensing in Workers' Compensation. Workers Compensation Research Institute. July 2012.

[8] Swedlow, A., Auen, E. Current Trends in Compound Drug Utilization and Cost in the California Workers' Compensation System. California Workers' Compensation Institute. February 2013

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