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BULLETIN

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A new CWCI analysis of changes in the mix of prescription drugs used in California workers' compensation shows a continued shift away from opioids and toward anti-inflammatories (NSAIDs) and anticonvulsants, while payment data show both dermatological drugs and anticonvulsants now rank ahead of opioids in terms of total reimbursements.

The Institute study, based on data from 5.75 million prescriptions dispensed to injured workers between January 2009 and June 2018 shows that opioids continue to represent a dwindling share of the drugs in the workers' compensation system. Opioids accounted for 18.0 percent of the prescriptions filled in the first half of 2018, down from 20.2 percent in 2017 and down from 30.5 percent a decade ago – a relative decline of 48.1 percent since 2009. NSAIDs, often prescribed as non-opioid alternatives to treat pain, surpassed opioids as the top therapeutic drug group in California workers' compensation in 2016, and their share of the workers' compensation prescriptions has continued to increase, climbing to 31.7 percent of the drugs dispensed in the first half of 2018. With opioids becoming less prevalent while the use of NSAIDs is growing, the spread between these two drug groups is widening. Anticonvulsants' share of the workers' comp prescriptions also has increased, and they have now surpassed musculoskeletal drugs (*i.e.,* muscle relaxants) to become the third most common drug group, accounting for 9.7 percent of the workers' compensation prescriptions from January through June of 2018, up from 8.8 percent in 2017 and 4.1 percent a decade ago, likely due to increased use of these drugs as a non-opioid alternative to treat neuropathic pain. The recent sharp decline in musculoskeletal drugs followed the adoption of the Medical Treatment Utilization Schedule Prescription Drug Formulary on 1/1/18, as under the formulary, musculoskeletal drugs are *not* exempt from utilization review, with the exception of limited "special fill" or "perioperative use" allowances, which place limits on the quantity of the drug that can be dispensed.

Distribution of California Workers' Comp Prescriptions -- Top 10 Therapeutic Drug Groups*
January 2009 Through June 2018 Fill Dates

	Percent of All Scripts										
Therapeutic Groups	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**09-18 % Diff**
Anti-Inflammatory	21.4%	20.3%	19.9%	19.3%	19.0%	22.1%	25.3%	27.6%	29.4%	31.7%	48.1%
Opioid	30.5%	29.9%	29.4%	28.6%	28.2%	26.9%	24.4%	22.9%	20.2%	18.0%	-41.0%
Anticonvulsant	4.1%	4.8%	4.6%	4.8%	5.2%	5.6%	6.7%	7.8%	8.8%	9.7%	136.6%
Musculoskeletal	11.0%	10.1%	9.5%	9.5%	9.7%	10.0%	10.6%	10.6%	10.3%	7.3%	-33.6%
Antidepressant	3.9%	4.5%	4.8%	5.2%	5.4%	4.7%	5.0%	5.2%	5.5%	6.0%	53.8%
Ulcer	7.6%	7.6%	7.2%	7.8%	7.9%	7.8%	7.2%	6.4%	6.2%	5.8%	-23.7%
Dermatological	5.0%	5.6%	6.2%	5.9%	6.4%	6.0%	4.7%	4.8%	5.0%	5.6%	12.0%
Cephalosporin	1.5%	1.3%	1.1%	1.0%	1.0%	1.0%	1.2%	1.2%	1.2%	1.4%	-6.7%
Nonnarcotic Analgesic	0.8%	0.8%	0.8%	0.7%	0.7%	0.7%	0.8%	1.0%	1.1%	1.4%	75.0%
Ophthalmic	0.6%	0.5%	0.6%	0.6%	0.5%	0.6%	0.7%	0.8%	0.9%	1.1%	83.3%
Top 10 Subtotal	86.4%	85.4%	84.1%	83.4%	84.0%	85.4%	86.6%	88.3%	88.6%	88.0%	1.9%

*Top 10 Rankings Based on 2018 Fills

The latest payment data reveal that 7 of the 10 most prevalent drug groups are also on the top 10 list based on percent of total drug spend, though the rankings based on payment rather than volume differ significantly, as the total amounts paid for each drug group are affected by a number of factors besides the volume of prescriptions, including allowable fees under the OMFS, average quantities and dosages dispensed, mode of delivery, and the availability of generics within each group. While opioids accounted for the highest share of the California workers' compensation prescription drug spend from 2009 through 2016, they were surpassed by dermatologicals in 2017, and in 2018 they ranked behind both dermatologicals and anticonvulsants.

The dermatological category, which a decade ago ranked as the fourth most costly therapeutic drug group in California workers' compensation, has seen its share of the prescription dollars increase steadily across most of the past decade, climbing from 10.1 percent of the pharmaceutical dollars in 2009 to a record 17.6 percent in the first half of 2018. Until a few years ago, much of the growth in dermatological payments was driven by "custom" pharmacy compounded drugs. In 2011, state lawmakers attempted to control the cost of often questionable, custom compounded drugs in the system by enacting AB 378 (Solorio). Effective January 1, 2012, AB 378 instituted medical billing changes and unit price controls, required more detailed itemization of the National Drug Codes (NDCs) associated with pharmacy-compounded drug products, and capped the price for physician-dispensed compounded drugs. While it did not effectively reduce costs of compounds as hoped, these changes -- along with well-publicized indictments for compounded drugs kickback schemes -- increased awareness, and reduced the prevalence of custom compounds.

As scrutiny grew over compounded drugs, some drug wholesalers who had promoted the custom compounds switched to mass-produced, high-cost, private label topicals, marketing them to physicians either for in-office dispensing or mail order. These manufactured private-label topicals, which are identified by a single NDC and usually contain one or more active ingredients commonly found in over-the-counter topical analgesics (*e.g.,* capsaicin, lidocaine, methyl salicylate and/or menthol) have accounted for a growing share of the workers' compensation prescription dollars in recent years. At the same time, there also has been a significant increase in payments for dermatologicals containing a prescription NSAID, such as diclofenac. These are available in brand and generic versions, and in a variety of formulations and strengths. The increased use of diclofenac topicals that are exempt on the MTUS formulary drug, and the increased prevalence of private-label topicals, have fueled recent growth in dermatological payments; and as physicians look for alternate drug treatments to opioids, these increases are likely to continue.

Distribution of California Workers' Comp Prescription Payments -- Top 10 Therapeutic Drug Groups*
January 2009 Through June 2018 Fill Dates

	Percent of Payments										
Therapeutic Groups	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**10-Yr Diff**
Dermatological	10.1%	11.7%	12.3%	13.5%	15.7%	15.6%	13.2%	17.2%	17.4%	17.6%	74.3%
Anticonvulsant	4.8%	5.2%	4.8%	4.4%	4.6%	5.0%	6.7%	8.9%	11.7%	15.2%	216.7%
Opioid	23.5%	22.8%	22.5%	20.9%	20.7%	19.6%	19.0%	17.8%	15.1%	13.8%	-41.3%
Anti-Inflammatory	16.4%	15.1%	14.5%	15.6%	14.2%	17.1%	18.9%	16.8%	15.8%	12.9%	-21.3%
Ulcer	13.4%	13.5%	12.6%	12.2%	11.0%	9.9%	9.9%	6.4%	7.4%	5.3%	-60.4%
Musculoskeletal	9.0%	7.5%	6.0%	6.1%	7.1%	5.8%	6.8%	7.2%	7.2%	4.2%	-53.3%
Antidepressant	4.3%	4.5%	4.8%	5.2%	5.6%	4.2%	4.9%	4.4%	3.7%	3.5%	-18.6%
Hematological	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.3%	2.0%	1.8%	3.4%	3300.0%
Neurological Agents (Misc.)	0.1%	0.2%	0.2%	0.3%	0.4%	0.4%	0.7%	1.3%	1.3%	2.3%	2200.0%
Antidiabetic	0.1%	0.2%	0.3%	0.3%	0.4%	0.5%	0.7%	1.1%	1.4%	2.0%	1900.0%
Top 10 Subtotal	81.8%	80.7%	78.1%	78.6%	79.8%	78.2%	81.1%	83.1%	82.8%	80.2%	2.0%

*Top 10 Rankings Based on Total Paid for 2018 Fills

Among the top 5 drug groups in terms of 2018 payments, anticonvulsants showed the most significant growth over the past decade, as their share of the total drug spend tripled from 4.8 percent in 2009 to 15.2 percent in the first half of 2018. Unlike the steady, 10-year increase noted for dermatologicals, nearly all of that growth has been in the past four years, coinciding with the sharp decline in opioids, suggesting that certain anticonvulsants are being used in place of opioids. Notably anticonvulsant prescriptions and payments are heavily concentrated in just two drugs, one of which is only available as a brand drug, and that drug represented nearly three quarters of the anticonvulsant payments in the first half of 2018.

The Institute has published full results of its study in a Research Update report, which includes background information, tables and additional data showing changes in the utilization of generic vs. brand drugs, and changes in average payments by therapeutic drug group. The report can be downloaded from the Research section at www.cwci.org.

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