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Updated data from CWCI's Prescription Drug Interactive Tool shows that anti-inflammatories (NSAIDs) remain the number one prescription drug category in California workers' comp, and their share of the prescriptions dispensed in the 2021 was about the same as in 2019 and 2020, as was the case with opioids which now account for only about one out of every 10 workers' compensation prescriptions, down from nearly 30% a decade ago.

The update to CWCI's Prescription Drug Interactive Tool includes data on 13.4 million prescriptions dispensed to California injured workers from January 2007 through December 2021, with payments for those prescriptions totaling nearly \$1.39 billion. To identify trends within the past decade, Institute analysts compared data on prescriptions filled in calendar year 2021, regardless of the injury date on the claim, to those with 2012 through 2020 fill dates.

NSAIDs, often used as non-opioid alternatives to treat pain, surpassed opioids to become the top workers' comp drug group in 2016, and in 2021 they increased to a record 34.0% of the prescriptions dispensed to injured workers. The distribution of prescriptions by drug ingredient shows that most of the growth in NSAIDs over the past decade has been due to the increased use of inexpensive ibuprofen, which increased from 27.0% of all anti-inflammatories in 2012 to 41.2% of the NSAIDs dispensed in 2021. As a result, ibuprofen has become the most heavily used drug in workers' compensation, accounting for 14.1% of all prescriptions dispensed last year, ranking well ahead of another NSAID, naproxen, which was the second most heavily prescribed workers' compensation medication in 2021, accounting for 8.3% of the prescriptions dispensed to injured workers. Meanwhile opioids' share of the workers' comp prescriptions continued to decline, falling to 10.2% last year, though most of the decline in opioid use within the past decade occurred between 2012 and 2019, as opioid's share of the prescriptions has been relatively stable over the past 3 years, only edging down slightly from 11.7% to 10.2%.

Distribution of Calif WC Prescriptions, Top 10 Therapeutic Drug Groups, 2012 - 2021 Fill Dates

Top 10 Therapeutic Drug Groups	Percentage of All Scripts									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Anti-Inflammatory	17.8%	18.3%	21.1%	24.1%	26.3%	27.5%	31.0%	33.2%	33.8%	34.0%
Opioid	29.2%	28.5%	27.0%	24.1%	22.2%	19.8%	14.9%	11.7%	10.4%	10.2%
Anticonvulsant	5.4%	5.2%	6.1%	6.8%	7.7%	8.5%	9.6%	10.0%	10.5%	10.1%
Dermatological	5.8%	6.1%	5.8%	4.8%	4.9%	5.5%	6.4%	7.8%	8.5%	8.8%
Antidepressant	5.8%	5.9%	5.2%	5.4%	5.5%	5.7%	6.3%	6.6%	7.0%	8.0%
Musculoskeletal	9.7%	9.9%	10.1%	10.5%	10.6%	10.5%	7.1%	6.7%	6.5%	6.0%
Ulcer	7.2%	7.4%	7.4%	7.1%	6.6%	6.4%	6.2%	5.9%	5.9%	5.6%
Non-Narcotic Analgesic	0.6%	0.6%	0.6%	0.7%	0.8%	0.9%	1.3%	1.5%	1.8%	1.6%
Corticosteroid	1.4%	1.4%	1.2%	1.3%	1.5%	1.5%	1.5%	1.4%	1.3%	1.3%
Cephalosporin	0.8%	0.9%	0.9%	1.1%	1.2%	1.2%	1.5%	1.4%	1.2%	1.2%

Top 10 therapeutic drug list based on 2021 volume

As in 2020, anticonvulsants, dermatologicals, and antidepressants rounded out the top five most prescribed drug groups in 2021. Anticonvulsants and dermatologicals are often used as non-opioid alternatives to treat pain, and their share of the workers' comp prescriptions has risen over the past decade while antidepressants' share, which ranged between 5.2% and 6.6% from 2012 through 2019, climbed to a record 8.0% in 2021, as the pandemic dragged into year two. In contrast, musculoskeletal drugs have fallen from 10.6% of all workers' comp prescriptions in 2016 to 6.0% of the prescriptions last year, a drop that tracks with the implementation of the MTUS Formulary in 2017, as the formulary categorized musculoskeletal drugs as Non-Exempt drugs, which except in limited situations where they are allowed as special fill or perioperative drugs, are subject to utilization review (UR).

Ulcer drugs, typically used to treat digestive issues associated with opioid and NSAID use were the only other therapeutic drug group that comprised at least 5% of the prescriptions last year, though they fell to a 10-year low of 5.6% in 2021, a downtrend that tracks with the decline in opioid use over the past decade.

The table below shows the distribution of 2012 through 2021 prescription payments for the top 10 drug groups (based on their share of the 2021 drug spend) and reveals the shifting percentages of payments flowing toward each group within the past decade.

Distribution of Calif WC Rx Payments, Top 10 Drug Groups 2012 - 2021 Fill Dates

Top 10 Therapeutic Drug Groups	Percentage of Payments									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Anti-Inflammatory	13.4%	13.2%	15.8%	17.6%	16.9%	14.7%	13.2%	15.2%	23.3%	25.0%
Dermatological	12.9%	14.0%	13.9%	12.7%	16.2%	18.4%	16.7%	17.9%	15.8%	17.2%
Anticonvulsant	4.9%	5.3%	5.7%	7.0%	9.1%	11.3%	14.3%	14.1%	10.6%	8.6%
Ulcer	10.3%	9.7%	9.0%	9.1%	6.4%	6.8%	5.7%	6.1%	6.7%	6.3%
Opioid	26.2%	24.5%	22.7%	20.8%	18.4%	15.9%	12.4%	9.4%	6.4%	5.8%
Musculoskeletal	5.7%	6.7%	5.7%	6.3%	6.8%	6.7%	4.2%	3.5%	4.6%	3.9%
Antidepressant	5.9%	6.2%	4.6%	4.9%	4.4%	3.5%	3.3%	2.8%	3.3%	3.0%
Psychotherapeutic & Neurological	0.3%	0.3%	0.4%	0.6%	1.2%	1.3%	2.1%	2.7%	2.7%	2.9%
Anticoagulant	0.3%	0.3%	0.3%	0.4%	0.7%	0.7%	1.3%	1.6%	2.5%	2.6%
Antidiabetic	0.3%	0.4%	0.5%	0.7%	1.0%	1.3%	1.9%	2.1%	2.5%	2.6%

Top 10 therapeutic drug list based on 2021 payments

The top 10 groups combined for 77.9% of the total drug spend in the 2021, down from 80.2% in 2012, when opioids consumed 26.2% of the prescription dollars (vs. 5.8% in the 2021 data) and ulcer drugs, which are often prescribed with opioids, accounted for 10.3% (vs. 6.3% in 2021). With opioid payments down, the percentage of prescription drug reimbursements for NSAIDs climbed from 13.4% in 2012 to 25.0% in 2021 while dermatological drugs jumped from 12.9% to 17.2%, and anticonvulsants' share of the total drug spend rose from 4.9% to 8.6%. The 2021 data also show that several other drug groups (psychotherapeutic and neurological drugs, anticoagulants, and antidiabetic drugs) that a decade ago each represented only 0.3% of the prescription dollars are now among the 10 most expensive drug groups, with shares ranging from 2.6% to 2.9% of the total payments. Thus, the combined payments for these drugs, which a decade ago represented only 0.9% of the prescription drug costs, accounted for 8.1% of the total drug spend in 2021.

Ibuprofen and naproxen accounted for nearly two-thirds of all NSAIDs dispensed last year, but with average payments of \$12 and \$47 respectively, they are inexpensive, so as in 2020, it was two low-volume, high-priced NSAIDs, fenoprofen calcium and ketoprofen, that kept NSAIDs at the top of the list in terms of the total drug spend. In a March 2021 analysis, CWCI noted that under the formulary both these drugs are exempt from prospective utilization review and because they are not listed in the national Medicaid database, neither has a Federal Upper Limit, which would serve as a price control in California workers' comp. Instead, they are reimbursed at 85% of the average wholesale price, which is based on manufacturer pricing. The impact of this can be seen in the average payment data from 2021, as the average amount paid for a fenoprofen calcium prescription last year was \$1,487, while the average amount paid for a ketoprofen prescription was \$1,073. Thus, fenoprofen calcium, which represented just 0.5% of all workers' comp prescriptions in 2021, accounted for 9.2% of the total drug spend, by far the largest percentage of any single drug, while ketoprofen, which represented only 0.2% of the prescriptions, ranked fourth with 3.0% of the total drug spend.

CWCI members can log on to the Research section at www.cwci.org to access the Prescription Drug Interactive Tool, which features claim-level data to examine prescription drug utilization by accident year at different levels of development and service-level data on prescription drugs dispensed from 2007 through 2021. Other interactive tools (Claims Monitoring, Regional Scorecard, MTUS Formulary and the Inpatient Hospitalization Claim apps) are also available to members, while the COVID-19/Non-COVID-19 Interactive App is available to members and the public.

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