



Spotlight Report

California's Workers' Compensation Formulary Part 2: A Review of the July 2017 Proposed Formulary Drug List of Exempt and Non-Exempt Drugs

Alex Swedlow, Steve Hayes, and Robby Bullis

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Background

Assembly Bill 1124, signed by Governor Brown in October 2015, mandated that the California Division of Workers' Compensation (DWC) adopt a prescription drug formulary for the California workers' compensation system. Prior studies estimated that a state-mandated workers' compensation formulary could save 8 to 42 percent of total drug spend in the system,^{1,2} while simultaneously raising the quality of care for injured workers and reducing frictional costs. The wide range of savings would be dependent on the structure and implementation of the formulary.

AB 1124's legislative intent, drug list, and draft regulations have also been the subject of prior studies.^{3,4} The statutory deadline for implementation of the formulary was July 1, 2017, however, more than 20 speakers provided testimony at a May 1, 2017 public hearing, each asking for the effective date to be delayed until January 1, 2018, and the DWC subsequently agreed to that delay. To address other stakeholder concerns expressed at that hearing, on July 18, 2017 the DWC issued additional modifications to the proposed regulations which offer distinct changes from the draft regulations that were issued on August 26, 2016. These include:

- The drug list category names of Preferred and Non-Preferred have been changed to Exempt and Non-Exempt to better reflect the relationship to prospective UR;
- 36 new drugs have been added to the Formulary Drug List⁵;
- The list of "Special-Fill" drugs, formerly "First-Fill" drugs, has been expanded from 7 to 15 items, including the newly added drug Cyclobenzaprine HCL. A new category, Perioperative Drugs,

1. Swedlow, A. and Hayes, S. "Are Formularies a Viable Solution to Controlling Prescription Drug Utilization and Cost in California Workers' Compensation." CWCI Report to the Industry. October 2014.

2. Thumala, V. and Liu, T. "Impact of a Texas-Like Formulary in Other States." June 2014.

3. Swedlow, A., Hayes, S. "California's Proposed Workers' Compensation Formulary Part 1: A Review of Proposed Drug List of Preferred and Non-Preferred Drugs." CWCI Spotlight Report. August 2016.

4. Wynn, B., Buttorff, C., Meza, E., Taylor, E.A., Mulcahy, A. "Implementing a Drug Formulary for California's Workers' Compensation Program." RAND, August 2016.

5. See Appendix 1 for list of new additions to the drug list.

contains 14 drugs which under certain conditions may be dispensed to the injured worker from 4 days prior to surgery to 4 days after surgery without seeking prospective utilization review (UR);

- Placeholder data fields have been added to the Formulary Drug List which will allow for the future inclusion of helpful information on drug strength, formulation, and unique product identifier;
- The language for retrospective UR has been removed to avoid conflict with UR regulations under Senate Bill 1160 (Mendoza)⁶;
- The proposed regulations state that Exempt drugs do not require authorization prior to dispensing as long as the drug therapy is supported by the Medical Treatment Utilization Schedule (MTUS) for the patient's condition and phase of recovery (acute vs. chronic); while Non-Exempt and not listed drugs are subject to prospective utilization review prior to dispensing. All pharmaceutical requests, regardless of drug list category, are subject to retrospective UR;
- For ongoing use of Non-Exempt, unlisted, or compounded drugs by workers injured prior to January 1, 2018, the physician will be required to submit a progress report and a Request for Authorization (RFA) no later than April 1, 2018, including either a treatment plan for safe weaning/transition to the MTUS, or documentation substantiating the medical necessity for a Non-Exempt, unlisted, or compounded drug.

Objective of this Research

In the following report, the authors examine several aspects of the draft regulations and analyze the potential impact of the proposed formulary on the use of prescription drugs⁷ in California workers' compensation, including:

1. The percentage of prescriptions and dollars classified by the formulary as Exempt or Non-Exempt, as well as the percentage of prescriptions and dollars for drugs currently used in California workers' compensation that are not listed in the formulary;
2. The therapeutic drug groups and drug ingredients that the formulary will most impact;
3. The estimated impact of the recommendation to allow workers to receive a "Special-Fill" drug following an injury, or a "Perioperative" drug immediately preceding and following a surgery, without requiring prior authorization; and
4. The proportion of utilization review and independent medical review (IMR) conducted for the Exempt, Non-Exempt and Not Listed categories.

6. The "pass-through" provisions of SB 1160 (Mendoza), approved by the Governor on September 30, 2016, would limit prospective utilization review in the first 30 days of a claim for care provided by an "employer-directed provider," such as a clinician in an employer's medical provider network. The bill does, however, contain exceptions to the "pass-through" rule, including non-preferred medications and those drugs not covered by the formulary.

7. Although the Formulary addresses over-the-counter (OTC) drugs as well as drugs that must be prescribed by a licensed medical professional, the authors have used the term "prescriptions" in a more generic sense -- encompassing both OTC and prescribed drugs.

Data Sources and Methods

To estimate the potential impact of the current draft formulary, the authors used the CWCI Industry Research Information System (IRIS)⁸ database's sample of 650,215 prescriptions with fill dates between January and December 2016, and the associated payments on those prescriptions. The prescriptions in the sample were compared to the proposed regulations and the Formulary Drug List of Drug Ingredients which was based upon the American College of Occupational and Environmental Medicine's (ACOEM) pharmaceutical formulary.⁹ To assess the potential effect of the proposed formulary on the workers' compensation medical dispute process, the authors also used CWCI's Utilization Review and Independent Medical Review databases, which contained more than 250,000 UR events and more than 296,000 IMR events involving pharmaceutical requests for which decisions were rendered in 2015 and 2016. In addition, to estimate perioperative utilization, the authors used the Centers for Medicare & Medicaid Services (CMS) Medicare National Physician Fee Schedule Relative Value File for surgical procedures¹⁰ to identify specific surgeries within the IRIS database and to flag perioperative prescriptions under the terms of the proposed regulations.

8. IRIS is CWCI's proprietary database containing data on employee and employer characteristics, medical service data, benefits, and administrative costs on approximately 5.3 million California workers' compensation claims.

9. American College of Occupational and Environmental Medicine. Reed Group, MDGuidelines, www.mdguidelines.com/.

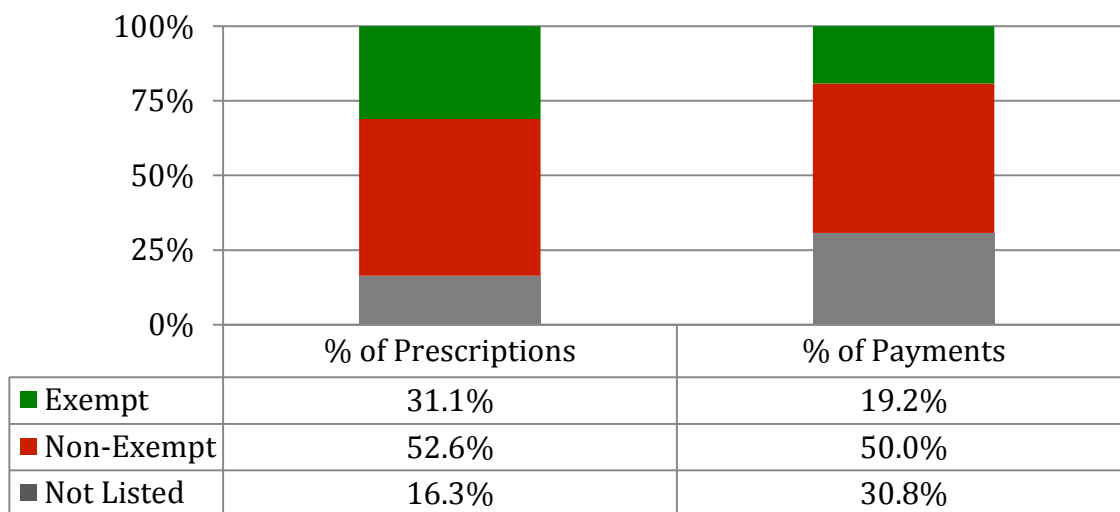
10. <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeeSched/PFS-Relative-Value-Files-Items/RVU17A.html?DLPage=1&DLEntries=10&DLSort=0&DLSortDir=descending>; File PPRRVU17_V1219.xls

Findings

Distribution of 2016 Prescriptions & Payments by Formulary Category

Using the sample of prescriptions with 2016 fill dates from the IRIS database, the authors first calculated the percentage of the prescriptions that would have been classified as either Exempt or Non-Exempt. All drugs not identified as Exempt or Non-Exempt on the Formulary Drug List will be subject to prospective utilization review.

Exhibit 1: Percentage of Prescriptions and Associated Payments by Formulary Category



As noted in Exhibit 1, nearly one-third (31.1 percent) of the prescription drugs dispensed to California injured workers in 2016 are on the proposed formulary's Exempt Drug list, and these drugs accounted for 19.2 percent of pharmaceutical payments in the study sample. In comparison, 27 percent of the drugs dispensed in 2016 were on the "Preferred" drug list included in the August 2016 draft regulations, and those drugs accounted for 22 percent of the pharmaceutical payments in the sample. Conversely, nearly 69 percent of the drugs in the sample are Non-Exempt and Not Listed drugs in the current version of the formulary, and these drugs accounted for 81 percent of the total workers' compensation prescription drug spend in the sample. In contrast, under the 2016 proposal, 73 percent of the drugs were on the Preferred list, and those drugs accounted for 78 percent of the total prescription drug spend.

All pharmaceutical drugs are classified based on their broad therapeutic group, active ingredient (*i.e.*, generic drug name), and other characteristics. The authors summarized all prescriptions by Therapeutic Drug Group. Exhibit 2 shows the distribution of drugs in each of the top 20 drug groups across the three formulary categories. Together, these drug groups represented 93.2 percent of all drugs dispensed in the California workers' compensation system in 2016.

Exhibit 2: Top 20 Therapeutic Drug Groups—Percentage of Total Prescriptions Sorted by Volume				
Therapeutic Drug Group	Percent of Total Scripts	Percent of Therapeutic Drug Group		
		Exempt	Non-Exempt	Not Listed
Analgesics - Opioid	23.4%	0.0%	99.7%	0.3%
Analgesics - Anti-Inflammatory	22.1%	98.3%	1.7%	0.0%
Musculoskeletal Therapy	8.9%	0.0%	98.1%	1.9%
Anticonvulsants	8.7%	0.0%	98.6%	1.4%
Antidepressants	6.5%	0.0%	95.5%	4.5%
Ulcer Drugs	6.0%	99.2%	0.0%	0.8%
Dermatologicals	4.7%	30.0%	52.5%	17.6%
Antihypertensives	1.8%	0.0%	0.0%	100.0%
Hypnotics/Sedatives/Sleep Disorders	1.6%	0.0%	0.0%	100.0%
Antianxiety Agents	1.4%	0.0%	40.4%	59.6%
Antihyperlipidemics	1.3%	0.0%	0.0%	100.0%
Beta Blockers	1.2%	0.0%	0.0%	100.0%
Corticosteroids	0.9%	0.0%	72.0%	28.0%
Laxatives	0.9%	0.0%	0.0%	100.0%
Cephalosporins	0.8%	70.5%	0.0%	29.5%
Analgesics - Nonnarcotics	0.7%	77.9%	21.7%	0.3%
Ophthalmic Agents	0.6%	38.1%	15.6%	46.3%
Antipsychotics/Antimanic	0.6%	0.0%	0.0%	100.0%
Calcium Channel Blockers	0.6%	0.0%	76.1%	23.9%
Antiasthmatic and Bronchodilators	0.5%	31.4%	44.9%	23.7%
All Other	6.8%	8.6%	11.6%	79.8%
Total	100.0%	31.1%	52.6%	16.3%

Under the proposed formulary, nearly all Anti-Inflammatory Analgesics (98.3%) and Ulcer Drugs (99.2%) are exempt from prospective utilization review. Anti-Inflammatory Analgesics include Ibuprofen (Motrin), Naproxen (Aleve), and Acetaminophen (Tylenol), while Ulcer Drugs include Omeprazole (Prilosec) and Pantoprazole (Protonix), among many others. The drugs in several other Therapeutic Drug Groups have been classified primarily as Non-Exempt, subject to prospective UR. These include Opioid Analgesics (99.7%), Musculoskeletal Therapy Agents (98.1%), Anticonvulsants (98.6%), and Antidepressants (95.5%).

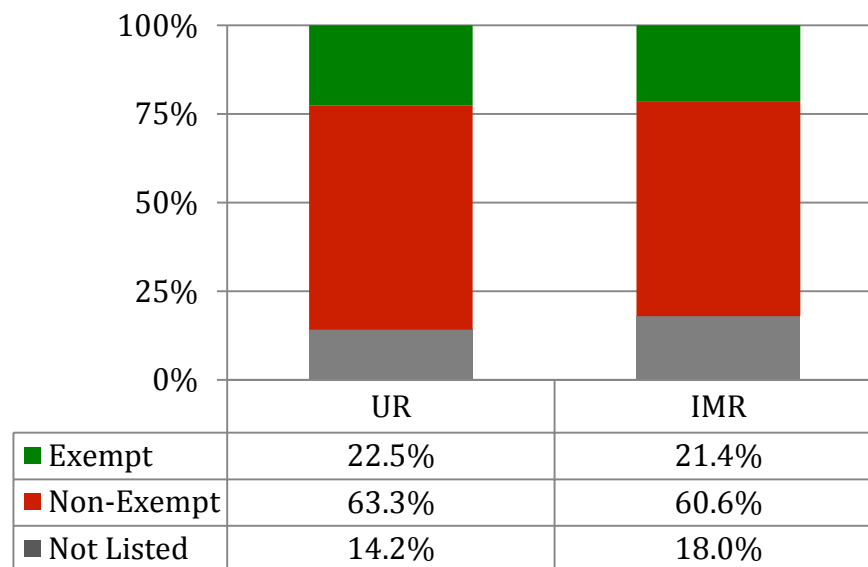
The largest Therapeutic Drug Group, Opioid Analgesics (*e.g.*, Hydrocodone-Acetaminophen and Tramadol), accounted for 23.4 percent of California workers' compensation prescriptions in 2016. The formulary categorizes almost all opioids as Non-Exempt drugs. With the exception of very limited special-fill and perioperative prescriptions, these would be subject to prospective UR.

Dermatologicals and other drug groups are in multiple classifications. For example, depending on the specific drug, Dermatologicals are in the Exempt, Non-Exempt, and Not Listed categories. Drugs in several other groups (*e.g.*, Antihypertensives, Hypnotics, Antihyperlipidemics, Beta Blockers, Laxatives, and Antipsychotics) are primarily Not Listed in the formulary, rendering them subject to prospective utilization review. The top 20 drugs within each of the Exempt, Non-Exempt, and Not Listed categories are noted in Appendix 2.

Pharmaceutical Oversight and Dispute Resolution: UR & IMR

In addition to raising quality of care and controlling cost, AB 1124 also sought to lower associated friction costs through pharmaceutical oversight and dispute resolution, particularly within utilization review and independent medical review. Prior studies showed that pharmaceutical dispute resolution accounted for 43 percent of UR costs and more than 48 percent of IMR costs.^{11,12} Exhibit 3 shows the percentage of pharmacy UR and IMR by Formulary Drug List Category.

Exhibit 3. Distribution of Utilization Review Events by Formulary Drug List Category



As shown above, 22.5 percent of all pharmacy UR events and 21.4 percent of all pharmacy IMR events involved requests for Exempt drugs. Additional analysis on IMR decisions show that 60.4 percent of Exempt drugs reviewed by IMR physicians are co-prescribed with either Non-Exempt or not listed drugs.

11. David, R., Ramirez, B., Swedlow, A. "Medical Dispute Resolution: Utilization Review and Independent Medical Review In the California Workers' Compensation System." CWCI, January 2014

12. David, R., Bullis, R. "IMR Decisions: January 2014 – December 2016." CWCI Spotlight Report, March 2017.

Special-Fill Provisions

The draft formulary includes a list of “Special-Fill” drugs that would be exempt from utilization review when prescribed or dispensed at the single, initial visit following the workplace injury when the visit occurs within seven days of the date of injury. Under the Special-Fill provision, a physician may prescribe or dispense a 4-day supply of the drug. The current formulary identifies 15 drugs that would be subject to the Special-Fill policy, up from seven in the August 2016 proposed drug list. Exhibit 4 shows that these 15 drugs represented 27.1 percent of all California workers’ compensation prescriptions dispensed at any point within the course of treatment. When dispensed within the first seven days following the date of injury, they represent 5.8 percent of these prescriptions (1.6 percent of all prescriptions). Data limitations prevent an estimate of the average number of days’ worth of these drugs that are currently supplied at the first fill.

Exhibit 4: Special-Fill Drug Utilization			
Drug Ingredient	Expected Special-Fill Scripts	All Special-Fill Scripts	% Filled in Special-Fill Period
Hydrocodone/Acetaminophen	0.36%	10.8%	3.3%
Tramadol HCL	0.2%	4.6%	3.8%
Cyclobenzaprine HCL	0.7%	4.4%	16.1%
Oxycodone/Acetaminophen	0.0%	2.0%	2.0%
Oxycodone HCL	0.0%	1.4%	0.4%
Tizanidine HCL	0.0%	1.1%	2.9%
Tramadol HCL/AC	0.1%	0.8%	18.0%
Baclofen	0.0%	0.7%	3.9%
Morphine Sulfate	0.0%	0.6%	0.5%
Methylprednisolone	0.0%	0.4%	9.0%
Prednisone	0.1%	0.3%	20.7%
Dexamethasone	0.0%	0.0%	12.3%
Hydrocortisone	0.0%	0.0%	0.0%
Prednisolone	0.0%	0.0%	0.0%
Cortisone	0.0%	0.0%	N/A
Total	1.6%	27.1%	5.8%

Perioperative Drugs

Perioperative Drugs are used just prior to and immediately following surgery. The Formulary Drug List identifies 14 perioperative drugs that may be dispensed to the injured worker without seeking prospective review under certain conditions. The drug must be prescribed during the perioperative period (from 4 days prior to surgery to 4 days after surgery), the supply must not exceed the number of days indicated for the particular drug, and the drug must be prescribed in accordance with the MTUS Treatment Guidelines.

Exhibit 5: Perioperative Drug Utilization			
Drug Ingredient	Expected Perioperative Drugs	All Perioperative Scripts	% Filled in Perioperative Period
Hydrocodone/Acetaminophen	0.61%	10.8%	5.7%
Gabapentin	0.03%	5.6%	0.5%
Tramadol HCL	0.06%	4.6%	1.4%
Oxycodone/Acetaminophen	0.19%	2.0%	9.7%
Oxycodone HCL	0.05%	1.4%	3.4%
Tramadol HCL/AC	0.02%	0.8%	2.4%
Baclofen	0.00%	0.7%	0.7%
Morphine Sulfate	0.01%	0.6%	1.1%
Warfarin Sodium	0.00%	0.2%	1.1%
Rivaroxaban	0.01%	0.1%	6.1%
Apixaban	0.00%	0.1%	0.5%
Enoxaparin Sodium	0.01%	0.0%	22.1%
Heparin Sodium	0.00%	0.0%	11.1%
Fondaparinux Sodium	NA	0.0%	0.0%
Total	0.99%	27.0%	3.7%

As shown in Exhibit 5, the 14 Perioperative drugs represented 27.0 percent of all prescriptions regardless of when they were dispensed. When dispensed within the 9-day Perioperative time frame described in the proposed regulations, they represented 3.7 percent of these prescriptions, which is just under 1 percent of all prescriptions.

Discussion

The July 2017 proposed regulations and Formulary Drug List modify the August 2016 draft regulations in several key dimensions. While the Formulary Drug List was expanded and the drug categories modified, resulting in a larger proportion of drugs that do not require authorization prior to dispensing, these new codes should have a negligible impact as they are primarily related to revisions to the ACOEM Foot and Ankle Treatment Guidelines, which was expanded to include foot ulcerations and paronychia (fungal infection), which account for a very small percentage of prescriptions and payments. The special and perioperative fill provisions target low-frequency but pivotal conditions in occupational injury treatment and should reduce some of the friction costs associated with prescription fulfillment. Finally, new estimates indicate that more than one in five UR and IMR dispute resolution events may no longer require prior authorization.

Despite these improvements, several challenges remain. As noted in a prior report, the Formulary Drug List is defined at the drug active ingredient(s) level and not at the more granular, more specific NDC¹³ or GPI¹⁴ levels. Such granularity would make it easier to identify effective, low-cost medications and eliminate unproven, costly alternatives. The lack of a more granular formulary list of approved drugs makes it more time consuming and expensive to control utilization and cost, particularly for controversial drugs such as novel formulations designed to bypass lower cost options,¹⁵ excessive variability in pricing,¹⁶ and repackaged, physician-dispensed drugs.¹⁷ In addition, the use of the industry's standards practices (i.e., NDC and GPI coding) would greatly enhance transparency, flexibility, and operational efficiency among carriers and PBMs. The DWC has added new placeholder columns within the Drug List for future inclusion of information on drug strength, dosage form, and specific drug identifier, which should add helpful detail to address some of the issues that continue to plague the system.

As for reductions in pharmaceutical disputes, the results show that 22.5 percent of all pharmacy utilization reviews and 21.4 percent of pharmacy independent medical reviews involved requests for Exempt drugs. The authors caution that the reductions in frictional costs are not likely to match those percentages, as a review of the IMR decisions found that 60.4 percent of the Exempt drugs reviewed by IMR physicians were co-prescribed along with either Non-Exempt or not listed drugs. In addition, all pharmaceutical requests, regardless of drug list category, are subject to retrospective UR and must be in agreement with the Medical Treatment Utilization Schedule.

Although there are still pathways for those who seek to exploit regulatory loopholes, the proposed formulary does represent a significant step toward achieving the legislative intent of AB 1124 by addressing the high percentage of medical disputes involving prescription drug requests and by helping to assure that the medications provided to injured workers are in accordance with evidence-based medicine.

13. The National Drug Code (NDC) is a unique product identifier used in the United States for drugs. Each drug product is assigned a unique 10-digit number.

14. The Generic Product Identifier (GPI) is a 14-character hierarchical classification system that identifies drugs from their primary therapeutic use to the unique interchangeable product, regardless of manufacturer or package size. The first 6 characters define the therapeutic class, the next 4 characters identify the drug name, and the last 4 define the dosage form, (e.g., tablet or cream) and strength.

15. Wang, D., Thumula, V., Liu, T. "Physician Dispensing of Higher-Priced New Drug Strengths and Formulations." Workers Compensation Research Institute, April 2016.

16. Swedlow, A., Hayes, S. "California's Proposed Workers' Compensation Formulary Part 1: A Review of Proposed Drug List of Preferred and Non-Preferred Drugs." CWCI Spotlight Report. August 2016.

17. Wang, D., Thumula, V., Liu, T. "Physician Dispensing of Higher-Priced New Drug Strengths and Formulations." Workers Compensation Research Institute, April 2016.

At the same time, it opens the door for additional controls that could be used to address the high cost of workers' compensation pharmaceuticals. Recent and pending changes in Medi-Cal drug pricing, the basis for the California workers' compensation Pharmacy Fee Schedule, offer an independent, partial solution. CWCI has previously detailed how a pharmacy fee schedule could establish maximum reasonable fees based upon the lesser of its Medi-Cal allowance or the National Average Drug Acquisition Cost (NADAC)¹⁸ of its therapeutic equivalent drug.¹⁹

In the meantime, as the formulary regulations take effect in 2018, the Institute will monitor the outcomes, with future reports examining the formulary's impact on workers' compensation prescription drug utilization, the medical dispute resolution process, cost trends, as well as additional issues that may arise.

18. National Average Drug Acquisition Cost is based on CMS's monthly surveys of retail pharmacies to determine average acquisition cost for covered outpatient drugs.

19. Niber, D., Ramirez, B., Jones, S. "California Workers' Compensation Pharmacy Reimbursement: A Proposal for Change." CWCI Spotlight Report. May 2017.

Appendix 1: New Additions to the Formulary Drug List				
Status	Active Drug Ingredient(s)	DWC Drug Class	Percent of Scripts	Percent of Payments
Exempt	Dicloxacillin Sodium	Antibiotics (Penicillins)	0.00%	0.00%
	Gentamicin (Topical)	Dermatologicals	0.00%	0.00%
	Metronidazole	Dermatologicals	0.00%	0.00%
	Mupirocin	Dermatologicals	0.10%	0.00%
	Neomycin/Polymyxin B/Bacitracin	Dermatologicals	0.00%	0.00%
Non-Exempt	Alclometasone Dipropionate	Dermatologicals	0.00%	0.00%
	Amcinonide	Dermatologicals	0.00%	0.00%
	Anakinra	Analgesics - Anti-inflammatory	0.00%	0.00%
	Becaplermin	Dermatologicals	0.00%	0.00%
	Betamethasone Dipropionate	Dermatologicals	0.00%	0.00%
	Betamethasone Valerate	Dermatologicals	0.00%	0.00%
	Butenafine HCl	Dermatologicals	0.00%	0.00%
	Calcium Phosphate Tribasic	Minerals & Electrolytes	0.00%	0.00%
	Ciclopirox Olamine	Dermatologicals	0.00%	0.00%
	Clotrimazole Antifungal	Dermatologicals	0.00%	0.00%
	Desonide	Dermatologicals	0.00%	0.00%
	Desoximetasone	Dermatologicals	0.00%	0.00%
	Econazole Nitrate	Dermatologicals	0.00%	0.00%
	Fluconazole	Antifungals	0.00%	0.10%
	Fluocinolone Acetonide	Dermatologicals	0.00%	0.00%
	Fluticasone Prop (Topical)	Dermatologicals	0.00%	0.00%
	Hydrocortisone (Topical)	Dermatologicals	0.00%	0.00%
	Hydrocortisone Valerate	Dermatologicals	0.00%	0.00%
	Itraconazole	Antifungals	0.00%	0.00%
	Ketoconazole	Dermatologicals	0.00%	0.00%
	Lidocaine HCl	Dermatologicals	0.00%	0.10%
	Miconazole Nitrate	Dermatologicals	0.00%	0.00%
	Minocycline HCl	Antibiotics (Tetracyclines)	0.00%	0.00%
	Mometasone Furoate (Topical)	Dermatologicals	0.00%	0.00%
	Nystatin/Triamcinolone	Dermatologicals	0.00%	0.00%
	Prednicarbate	Dermatologicals	0.00%	0.00%
	Tacrolimus	Dermatologicals	0.00%	0.00%
	Terbinafine HCl	Antifungals	0.00%	0.00%
	Terbinafine HCl (Topical)	Dermatologicals	0.00%	0.00%
	Tolnaftate	Dermatologicals	0.00%	0.00%
	Triamcinolone Acetonide I	Dermatologicals	0.10%	0.00%

Appendix 2A: Top 20 Exempt Drugs–Percentage of Total Prescriptions Sorted by Volume			
Active Drug Ingredient(s)	Reference Brand Name	DWC Drug Class	Percent of Scripts
Ibuprofen	Motrin	Analgesics - Anti-Inflammatory (NSAID)	7.6%
Naproxen	Aleve, Naprosyn	Analgesics - Anti-Inflammatory (NSAID)	5.0%
Omeprazole	Prilosec	Ulcer Drugs (Proton pump inhibitor)	3.5%
Celecoxib	Celebrex	Analgesics - Anti-Inflammatory (NSAID)	2.1%
Nabumetone	Relafen	Analgesics - Anti-Inflammatory (NSAID)	1.9%
Meloxicam	Mobic	Analgesics - Anti-Inflammatory (NSAID)	1.9%
Diclofenac Potassium	Cataflam, Voltaren	Analgesics - Anti-Inflammatory (NSAID)	1.4%
Diclofenac Sodium	Voltaren 1% gel	Dermatologicals	1.1%
Pantoprazole Sodium	Protonix	Ulcer Drugs (Proton pump inhibitor)	0.8%
Etodolac	Lodine	Analgesics - Anti-Inflammatory (NSAID)	0.8%
Ketoprofen	Oruvail	Analgesics - Anti-Inflammatory (NSAID)	0.7%
Cephalexin	Keflex	Antibiotics (Cephalosporins)	0.5%
Acetaminophen	Tylenol	Analgesics - NonNarcotic	0.5%
Ranitidine HCL	Zantac	Ulcer Drugs (H2 receptor blocker)	0.4%
Esomeprazole Magnesium	Nexium	Ulcer Drugs (Proton pump inhibitor)	0.3%
Famotidine	Pepcid	Ulcer Drugs (H2 receptor blocker)	0.3%
Lansoprazole	Prevacid	Ulcer Drugs (Proton pump inhibitor)	0.2%
Amoxicillin/Clavulanate P	Augmentin	Antibiotics (Penicillins)	0.2%
Capsaicin	Zostrix	Dermatologicals (Topical creams and ointments)	0.2%
Sulfamethoxazole/Trimethoprim	Bactrim	Anti-Infective Agents - Misc.	0.2%
Subtotal			29.7%
All Other			1.4%
Total (Exempt)			31.1%

Appendix 2B: Top 20 Non-Exempt Drugs—Percentage of Total Prescriptions Sorted by Volume			
Active Drug Ingredient(s)	Reference Brand Name	DWC Drug Class	Percent of Scripts
Hydrocodone/Acetaminophen	Norco, Vicodin, Xodol	Analgesics - Opioid	10.8%
Gabapentin	Neurontin	Anticonvulsants	5.6%
Tramadol HCL	Ultram, Ultram ER	Analgesics - Opioid	4.6%
Cyclobenzaprine HCL	Flexeril	Musculoskeletal Therapy Agents (Muscle Relaxants)	4.4%
Oxycodone/Acetaminophen	Percocet	Analgesics - Opioid	2.0%
Duloxetine HCL	Cymbalta	Antidepressants (SNRI)	1.9%
Lidocaine	Lidoderm	Dermatologicals	1.8%
Pregabalin	Lyrica	Anticonvulsants	1.7%
Oxycodone HCL	OxyContin, Roxicodone	Analgesics - Opioid	1.4%
Codeine/Acetaminophen	Tylenol #3, Tylenol #4	Analgesics - Opioid	1.2%
Tizanidine HCL	Zanaflex	Musculoskeletal Therapy Agents (Muscle Relaxants)	1.1%
Tramadol HCL/AC	Ultracet	Analgesics - Opioid	0.8%
Carisoprodol	Soma	Musculoskeletal Therapy Agents (Muscle Relaxants)	0.8%
Orphenadrine Citrate	Norflex	Musculoskeletal Therapy Agents (Muscle Relaxants)	0.8%
Trazodone HCL	Desyrel, Oleptro	Antidepressants (SSRI)	0.7%
Bupropion HCL	Wellbutrin, Wellbutrin XL, Wellbutrin SR	Antidepressants (SSRI)	0.7%
Methocarbamol	Robaxin	Musculoskeletal Therapy Agents (Muscle Relaxants)	0.7%
Baclofen	Lioresal	Musculoskeletal Therapy Agents (Muscle Relaxants)	0.7%
Morphine Sulfate	N/A	Analgesics - Opioid	0.6%
Amitriptyline HCL	Elavil	Antidepressants (TCAs)	0.6%
Subtotal			42.8%
All Other			9.8%
Total (Non-Exempt)			52.6%

Appendix 2C: Top 20 Not Listed in MTUS Drugs—Percentage of Total Prescriptions Sorted by Volume			
Active Drug Ingredient(s)	Reference Brand Name	DWC Drug Class	Percent of Scripts
Zolpidem Tartrate	Ambien Cr	Hypnotics/Sedatives/Sleep Disorder Agents	0.9%
Alprazolam	Xanax	Antianxiety Agents	0.5%
Atorvastatin Calcium	Lipitor	Antihyperlipidemics	0.5%
Lisinopril	Prinivil	Antihypertensives	0.4%
Eszopiclone	Lunesta	Hypnotics/Sedatives/Sleep Disorder Agents	0.4%
Docusate Sodium	Promolaxin	Laxatives	0.4%
Diclofenac Epolamine	Flector	Dermatologicals	0.3%
Metoprolol Succinate	Toprol XL	Beta Blockers	0.3%
Losartan Potassium	Cozaar	Antihypertensives	0.3%
Clopidogrel Bisulfate	Plavix	Hematological Agents - Misc.	0.3%
Liniments & Rubs	Salonpas	Dermatologicals	0.2%
Quetiapine Fumarate	Seroquel Xr	Antipsychotics/Antimanic Agents	0.2%
Tetanus Toxoid-Diphtheria-Acellular Pertussis Adsorb (Tdap)	Boostrix	Toxoids	0.2%
Rosuvastatin Calcium	Crestor	Antihyperlipidemics	0.2%
Atenolol	N/A	Beta Blockers	0.2%
Metoprolol Tartrate	N/A	Beta Blockers	0.2%
Temazepam	Restoril	Hypnotics/Sedatives/Sleep Disorder Agents	0.2%
Carvedilol	Coreg	Beta Blockers	0.2%
Polyethylene Glycol 3350	Miralax	Laxatives	0.2%
Bupirone HCl	N/A	Antianxiety Agents	0.2%
Subtotal			6.2%
All Other			10.2%
Total (Not Listed)			16.3%

About the Authors

Alex Swedlow is President of the California Workers' Compensation Institute.

Steve Hayes and Robby Bullis are Senior Research Associates with the California Workers' Compensation Institute.

California Workers' Compensation Institute

The California Workers' Compensation Institute, incorporated in 1964, is a private, nonprofit organization of insurers and self-insured employers conducting and communicating research and analyses to improve the California workers' compensation system. Institute members include insurers that collectively write more than 83 percent of California workers' compensation direct written premium, as well as many of the largest public and private self-insured employers in the state. Additional information about CWCI research and activities is available on the Institute's website (www.cwci.org).

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1333 Broadway, Suite 510

Oakland, CA 94612

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