A REPORT TO THE INDUSTRY

Resolving Medical Disputes: Factors that Drive IMR Volume and Outcomes in the California Workers' Compensation System

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INTRODUCTION

Though California workers' compensation is designed as a no-fault system, disputes over the course and scope of medical treatment often arise. Both before and after the adoption of the Independent Medical Review (IMR) system a decade ago, CWCI has monitored workers' compensation medical dispute activities and outcomes. Among the Institute studies are analyses that have tracked the volume of IMR letters, the timeliness of the IMR process, the most commonly disputed medical services, the concentration of IMRs among physicians involved in the disputes, the percentage of the disputes involving utilization review (UR) treatment denials versus modifications, and the percentage of the disputed services that are ultimately deemed medically necessary and in compliance with the Medical Treatment Utilization Schedule (MTUS) or other evidence-based medical standards.

In this report the Institute uses data from more than one million IMRs conducted from 2015 through 2022 to provide an updated look at those metrics. The report also offers additional insights on issues affecting medical management in California workers' compensation, the history of dispute resolution that led to the adoption of the IMR process, the distribution of modification disputes by service category, how medical dispute resolution in California workers' compensation differs from other health care delivery systems, and the types of disputes and the impact of the small number of physicians who account for the vast majority of IMR activity within the system.

In the last few years, California lawmakers have introduced various measures related to injured workers' medical care and other benefits, and the medical dispute resolution process. These include two proposals in the current legislative session:

- **SB 636** would require that doctors who conduct UR of workers' compensation treatment requests on private sector claims be licensed in California. Currently, only licensed physicians competent to evaluate the specific clinical issues involved in a requested medical service can determine if that service meets the evidence-based standards, and only they can modify or deny a request, but they do not need to be licensed in California.
- **AB 1213** would exclude from the 104-week temporary disability (TD) cap any TD benefits that were paid or owed from the date of a UR denial through the IMR determination date if a UR denial is overturned by IMR.

As public policymakers consider these and other proposed changes related to the California workers' compensation dispute resolution process, this report offers empirical data and practical insights to ground those debates and discussions.

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BACKGROUND

Resolving medical disputes is a part of every health care delivery system. A patient seeks relief from an injury or illness, sometimes with a specific treatment in mind. Their provider, imbued with advanced training to select from a variety of possible clinical interventions for medical conditions, must reconcile the terms and conditions of the health plan coverage that defines what is and what is not essential care. Most of the time there is agreement. Occasionally, there is not.

The form and function of medical dispute resolution in the California workers' compensation system has changed several times over the last few decades. Prior to 1993, the system operated under a "free choice" model in which injured workers selected physicians to treat their injuries, and disputes over medical care were determined based on a preponderance of the evidence. As in many health care systems, disputes over medical necessity were initially resolved through negotiation between the injured worker's physician and the payer, but unlike other systems, if no resolution could be found, the matter was adjudicated before a workers' compensation judge and ultimately decided by the Workers' Compensation Appeals Board (WCAB).

This court-based dispute resolution process required presentation of expert medical evidence, so the injured worker and the payer would each hire forensic physicians to develop their rationale and compile supporting documentation, including medical treatment guidelines, community standards, and other conventions, and hope to persuade the judge to rule in their favor. This process, commonly referred to as "dueling doctors," was expensive, time consuming, and was viewed as often leading to arbitrary, inconsistent medical decisions.

In 1993, California lawmakers enacted major reforms that attached a rebuttable presumption of correctness to the opinion of the primary treating physician (PTP) in regard to the calculation of permanent disability.[1] Subsequent case law (*Minniear*)[2], handed down by the WCAB in 1996, expanded the PTP presumption to give the injured worker's physician a presumption of correctness on all medical treatment issues, including the appropriateness of any given medical service. This severely limited the payor's ability to question or object to medical utilization, even when it was clear that a given treatment would not cure or relieve the effects of the injury or could potentially cause harm.

Between 2002 and 2004, California lawmakers drafted a series of additional reforms that introduced elements of managed care into workers' compensation and dramatically altered the workers' compensation dispute resolution process. AB 749, enacted in 2002, partially repealed the treating physician's presumption of correctness. That legislation was followed by SB 228, signed by Governor Davis in 2003, which mandated that the state adopt a workers' compensation medical treatment utilization schedule by December 2004, and specified that the new schedule incorporate evidence-based, peer-reviewed, nationally recognized medical treatment guidelines. As stated in the Journal of the American Medical Association (JAMA) in 1992, evidence-based medicine represented "a new paradigm for medical practice." "Evidence-based medicine de-emphasizes intuition, unsystematic clinical

[1] AB 110 (Peace and Brulte) was signed by Governor Pete Wilson as part of a larger workers' compensation reform package.
[2] *Minniear v. Mt. San Antonio Community College District*, 1996, 61 CCC 1055 (en banc).

experience, and pathophysiologic rationale as sufficient grounds for clinical decision making and stresses the examination of evidence from clinical research."[3]

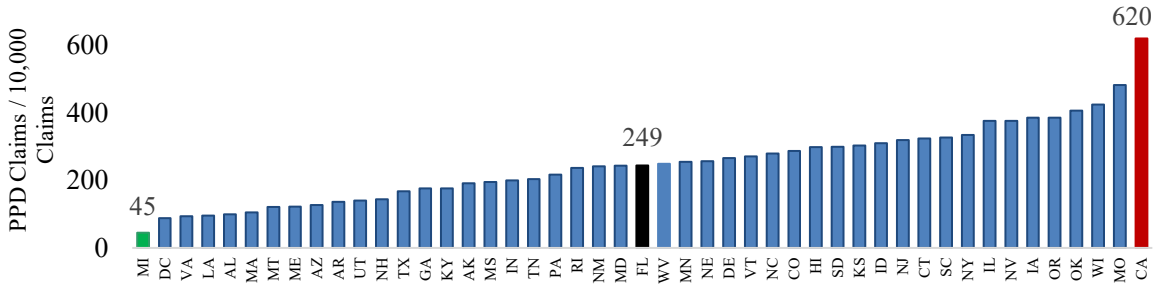
The reliance on evidence-based medicine for effective treatment of work injuries was strengthened with the passage of SB 863 in 2012, which transitioned the workers' compensation medical dispute process away from the system in which administrative judges served as arbitrators between "dueling doctors." Instead, state lawmakers mandated a new Independent Medical Review process in which "a conflict-free medical expert" would make "sound medical decisions, based on a hierarchy of evidence-based medicine standards drawn from the health insurance IMR process[4] with workers' compensation specific modifications."[5]

Effective January 1, 2013 for injuries occurring on or after that date, and effective July 1, 2013 for all dates of injury, disputes over the medical necessity of requested workers' compensation services have been adjudicated through the IMR process rather than through the court-based process. Since the implementation of IMR in 2013, the responsibility for determining whether a disputed utilization review (UR) denial or modification of a medical service request meets the evidence-based clinical guidelines, along with the responsibility to protect injured workers from unproven, unnecessary, and potentially harmful treatment, has rested with the IMR physician.

Issues that Influence Medical Management

Permanent Partial Disability (PPD) claims account for 79 percent of all California workers' compensation medical benefits and have a litigation rate of 90 percent.[6] Exhibit 1 shows that California has the highest rate of PPD claims (620 out of every 10,000 claims), which is more than twice the rate noted for the median state (Florida) and 13.8 times the rate of Michigan,[7] which has the lowest PPD rate.

Exhibit 1. Permanent Partial Indemnity Rate by State[8]



[3] Zimmerman, A.L. *Evidence-Based Medicine: A Short History of a Modern Medical Movement.* AMA Journal of Ethics. January 2013. https://journalofethics.ama-assn.org/article/evidence-based-medicine-short-history-modern-medical-movement/2013-01

[4] CWCI 2022 IRIS Database.

[5] California Senate Rules Committee. *Senate Floor Analyses SB 863*. August 31, 2012. https://leginfo.legislature.ca.gov/faces/billAnalysisClient.xhtml?bill_id=201120120SB863

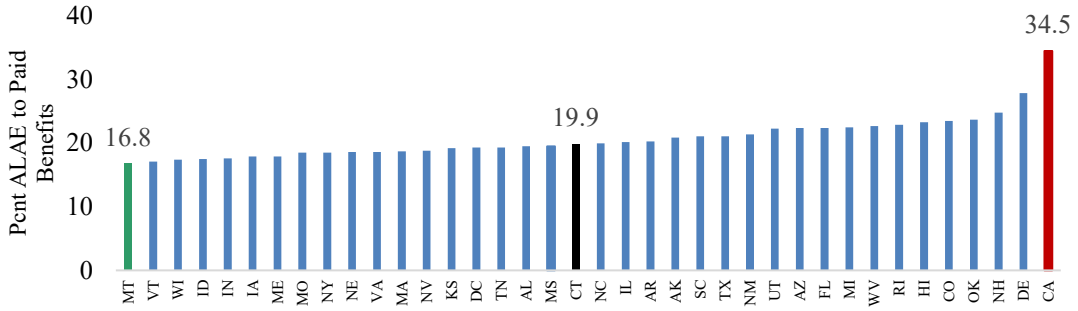
[6] CWCI 2022 IRIS Database for claims with dates of injury between 2008 - 2022.

[7] NCCI Annual Statistical Bulletin 2022. https://www.ncci.com/ServicesTools/pages/asb.aspx

[8] The green, black, and red bars denote the states with the lowest, the median, and the highest PPD rates respectively.

Allocated Loss Adjustment Expenses (ALAE), which are incurred during the administration of claims and are allocated directly to individual claims, are another area where California leads all other jurisdictions in terms of costs. In California it costs 34.5 cents to deliver $1 of workers' compensation benefits, more than twice the cost in Montana, which has the lowest ALAE in the U.S., and 73 percent higher than the median state of Connecticut,[9] where it costs 19.9 cents to deliver $1 in benefits (Exhibit 2).

Exhibit 2. ALAE to Paid Benefit Ratio – State Comparison



Reforming Medical Benefit Delivery

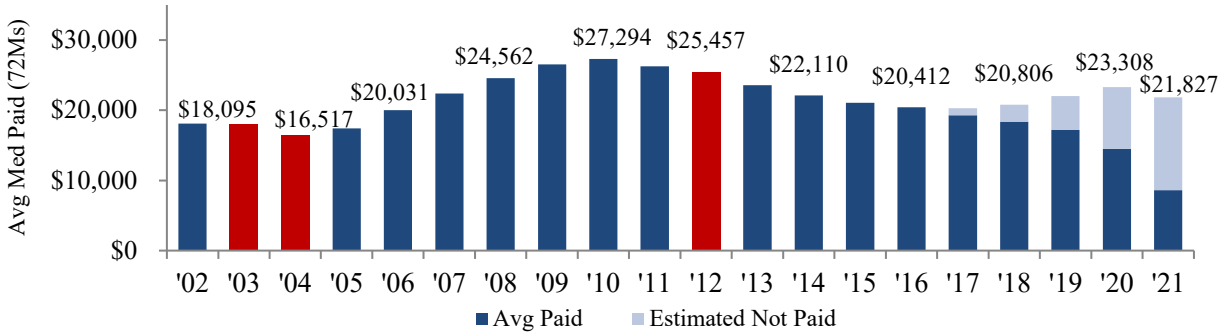
Legislative reforms enacted between 2002 and 2004 were intended to address rising medical and legal costs, as well as fraud and abuse that were associated with the financial insolvency of 28 insurance carriers.[10] AB 749, passed in 2002, represented the first step in the ultimate repeal of *Minniear*, as it eliminated the PTP's presumption of correctness on medical treatment issues for injuries on or after 1/1/2003. Two years later, SB 899 repealed the PTP presumption for all dates of injury. In between those two bills, SB 228, enacted in 2003, mandated that the Division of Workers' Compensation (DWC) adopt a Medical Treatment Utilization Schedule by December 2004, specifying that the new schedule incorporate evidence-based, peer-reviewed, nationally recognized medical treatment guidelines. SB 228 also placed a 24-visit cap on physical therapy and chiropractic care, two service categories that were associated with excessive treatment and cost. In addition to repealing the *Minniear* decision for dates of injury prior to January 1, 2003, SB 899 also mandated creation of new Medicare-based fee schedules for non-physician services and allowed employers and insurers to create Medical Provider Networks (MPNs) to control the provision of medical care for the life of a claim.

Unfortunately, the reforms of 2002-2004 did not provide the anticipated relief from rising medical costs, as shown in Exhibit 3.

[9] Ibid

[10] Gardner, L. and Swedlow, A. *The Effect of 1993-1996 Legislative Reform Activity on Medical Cost, Litigation and Claim Duration in the California Workers' Compensation System.* CWCI Research Note. May 2002.

Exhibit 3. Average Medical Benefits Paid at 72 Months: 2002 - 2021



After initially dipping during the reform years of 2003/2004, average medical payments on indemnity claims at 72 months of development began to climb again in 2006 and continued to rise through 2010. Increased medical costs helped trigger another round of reforms in 2012 that culminated with the enactment of SB 863, which ended duplicate payments for spinal hardware used in spinal fusion surgeries, mandated that the state adopt a Medicare-based fee schedule for physician services, and overhauled the medical dispute resolution process by replacing the court-based process with IMR performed by physicians. The immediate impact of SB 863 is evident in the decline in the average medical paid at 72 months development beginning with accident year 2011 claims. Other provisions of SB 863, including lien reform and the adoption of Independent Bill Review (IBR) to settle medical payment disputes yielded further relief from questionable medical costs. Furthermore, between 2012 and 2020, pharmaceutical costs per claim decreased by 85 percent, largely due to the implementation of SB 863, the MTUS Drug Formulary, updates to the MTUS evidence-based guidelines and national attention to the abuse potential of opioids.[11] Prior CWCI research found that the average number of prescriptions per claim and the average paid amount per claim during the initial 24 months of treatment began to decline with implementation of the SB 863 reforms.[12]

STUDY GOALS

The goal of this study is to build on prior IMR research by examining the underlying drivers of the high volume of IMR letters. (While letters provide a consistent measure of IMR activity, prior CWCI research noted that about a third of IMR letters issued in 2020 contained two or more decisions, with the average number of decisions per letter from 2014 through 2020 ranging from 1.6 to 1.8.[13]) The study also details how medical dispute resolution in California workers' compensation differs from other health care delivery systems and provides data and insights on the skew created by a small number of providers who generate a disproportionately high share of the California workers' compensation IMR decisions.

[11] WCIRB 2021 State of the System (https://www.wcirb.com/sites/default/files/documents/wcirb-report-2021_state_of_the_system-ho.pdf)

[12] David, R., Jones, S. and Bullis, R. *Changes in Medical Treatment Trends After 20 Years of Incremental Workers' Compensation Reform.* CWCI Research Note. September 2020.

[13] Bullis R., David, R. *Independent Medical Review Decisions: January 2014 – December 2020.* CWCI Research Update. April 2021.

DATA

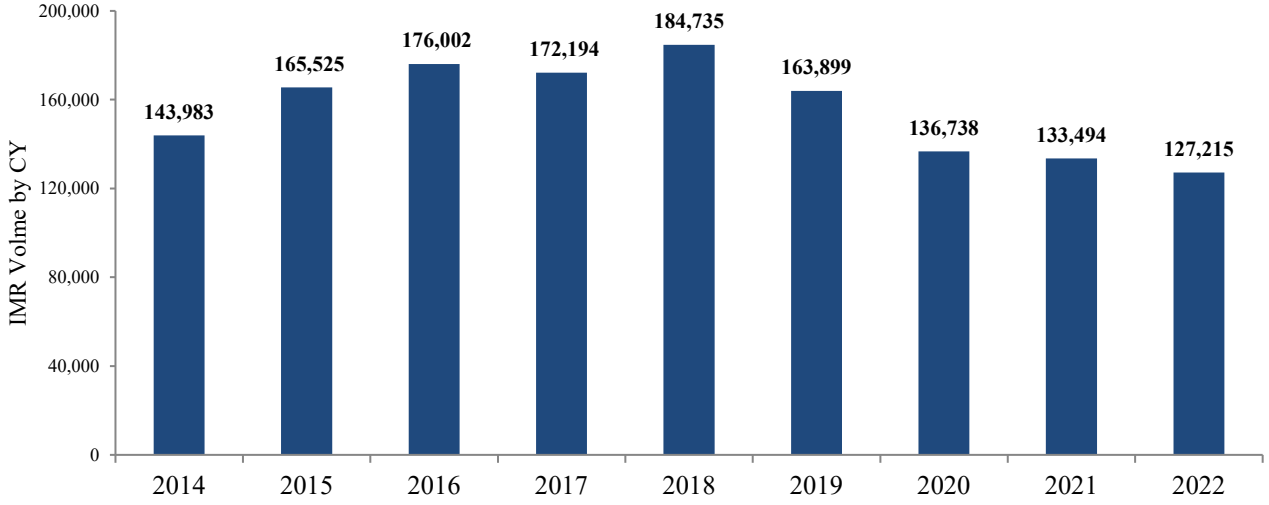
The primary data source for this study was more than one million IMR Final Determination Letters (FDL) processed by Maximus,[14] the sole source provider of IMR adjudication for California workers' compensation. The study sample encompassed more than 99 percent of all FDLs in the system. The determination letters were converted into a database that isolated information on the medical provider, the injured worker, background information on the disputed medical treatment, and the IMR decision (uphold of UR denial/modification, overturn of UR denial/modification), and the IMR physician's decision rationale.

In addition to categorizing treatment requests by service category, pharmaceuticals were subcategorized into therapeutic groups for more targeted analysis.[15]

RESULTS

When IMR was proposed, it was estimated that the volume of letters challenging UR denials or modifications would be fairly low and decrease over time as medical providers and payers became familiar with the types of care allowed under the system. However, as shown in Exhibit 4, there were 143,983 IMR determination letters in 2014 and IMR letter volume did not peak until 2018 when it hit a record 184,735 letters.

Exhibit 4. IMR Letter Volume: Calendar Years: 2014 - 2022



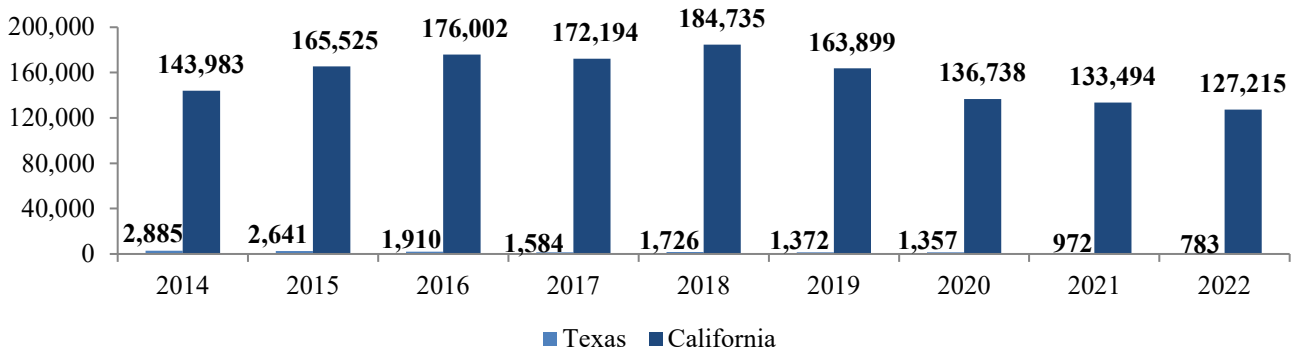
In the four years since then, the number of IMR decision letters has declined by 31 percent, falling to 127,215 letters in 2022. This decline is associated with the implementation of the MTUS Formulary, which has reduced the number of disputes over prescription medications, and the COVID-19 pandemic, which led to a reduction in the number of workers' compensation claims, especially in 2020, the first year of the pandemic.

[14] The Administrative Director contracted with Maximus Federal Services to provide all IMR services to resolve workers' compensation medical necessity disputes.

[15] Each medical service addressed in an IMR letter is considered separately by the IMR reviewer unless the decision involves an associated service linked to the necessity of a primary service (e.g., a request for preoperative lab linked to a surgery request). Associated services are excluded from the study data.

To provide additional context, the authors compared California's IMR volume to that of the state of Texas, which has had a similar IMR process since 2003. Although there are significant differences between the California workers' compensation system, which mandates coverage for all employers, and the Texas workers' compensation system, which allows employers to opt out of workers' compensation coverage,[16] comparing the volume of IMR determination letters under the two systems reveals startling disparities between the two systems. Exhibit 5 shows that between 2014 and 2022 California had more than 92 times the IMR letter volume of Texas.

Exhibit 5. California and Texas IMR Determination Letter Volume: 2014 - 2022



The IMR Process in California Workers' Compensation

After receipt of an IMR application Maximus sends a notification of the dispute and a request for medical records to the claims administrator. Within the time frames prescribed by state regulations,[17] claims administrators must submit all reports relevant to the employee's current medical condition that were produced within the prior six months of the date of the request for authorization. In addition to relevant medical reports, claims administrators must submit any correspondence with the employee or their representative related to the disputed medical service to Maximus. Upon receipt of a copy of the IMR notification of dispute, the employee or their representative may also submit relevant medical records and correspondence for consideration by the IMR physician reviewer.

The IMR physician reviewer is tasked with reviewing the medical records, the UR determination letter, and any submitted correspondence to determine whether the requested treatment is supported by the MTUS guidelines addressing the employee's medical condition. If the MTUS guidelines do not address the medical condition or proposed treatment, the requesting physician and physician reviewer must follow the Medical Evidence Search Sequence outlined in the regulations[18] to determine evidence-based necessity. The IMR physician then either upholds the UR physician's denial or modification of the requested medical service or overturns the UR decision. The rationale for the IMR physician's determination must be provided in the determination letter.

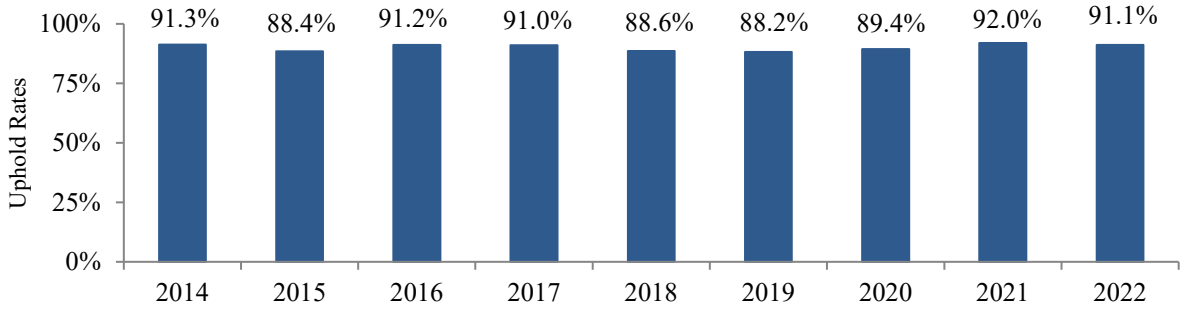
[16] Biennial data from the Texas DWC showed that from 2014 through 2022 between 80 percent and 83 percent of employees were covered under workers' compensation. *2022 Division of Workers' Compensation Biennial Report to the 88th Texas Legislature, December 2022* (texas.gov)

[17] CCR § 9792.10.5(a)(1) requires submission of relevant medical records within 15 days of mailed notification, 12 days of electronic notification or 24 hours for expedited reviews.

[18] CCR § 9792.21.1

Exhibit 6 shows the relative stability in uphold rates for disputed UR decisions by IMR physicians, which over the past nine years have ranged between 88.2 percent and 92.0 percent.

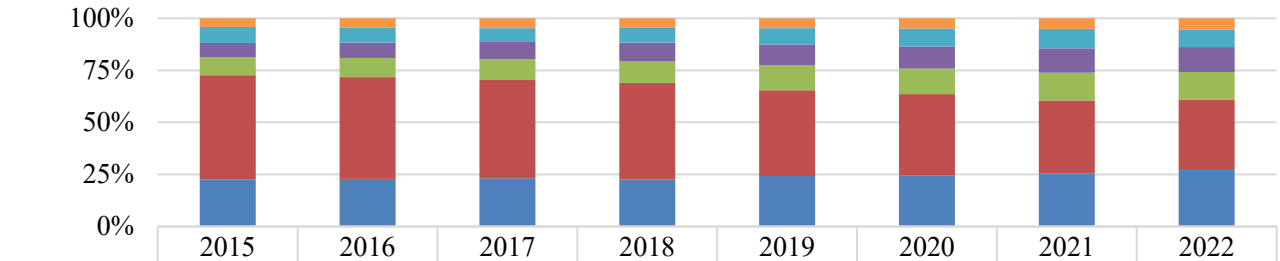
Exhibit 6. IMR Uphold Rates: 2014 – 2022



Medical Treatment Categories

Since IMR first took effect, prescription drugs requests have accounted for far more IMR disputes than any other type of medical service, though with greater understanding of the risks associated with opioids, the adoption of the Pain Management and Opioid Guidelines into the MTUS in late 2017, and the implementation of the MTUS Prescription Drug Formulary in January 2018, that proportion has declined sharply. Exhibit 7 shows the resulting redistribution of disputed services among the top five service categories addressed by IMR over the past eight years. [19] While disputes over prescription drug requests still accounted for a third of the IMRs in 2022, that was down from nearly 50 percent in 2015. The decline in pharmaceutical IMRs has also influenced the relative gain in the share of decisions represented by injections (+75 percent) and physical therapy (+53 percent) since 2015.

Exhibit 7. Top 5 Medical Treatment Categories by Calendar Year

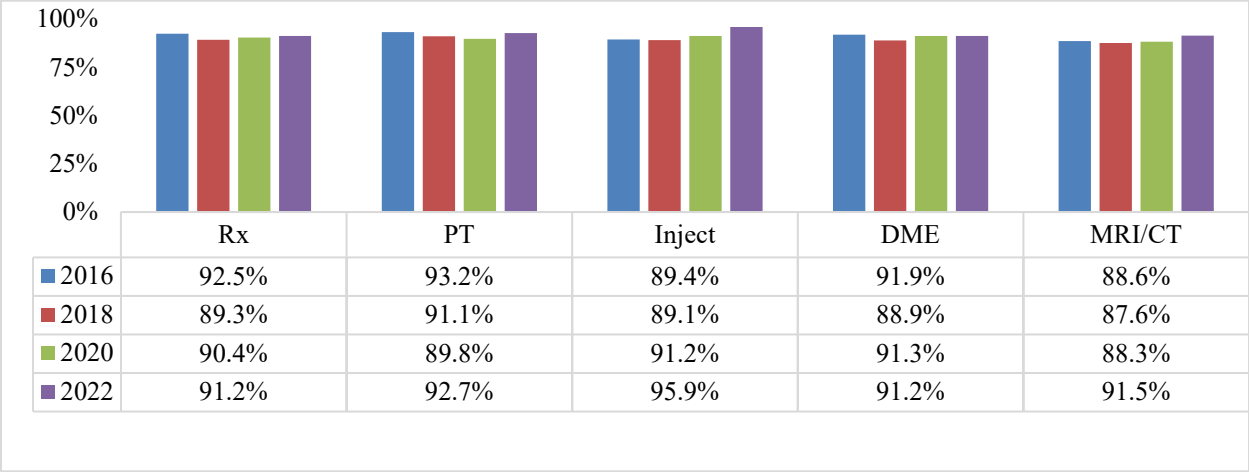


	2015	2016	2017	2018	2019	2020	2021	2022
MRI/CT	4.2%	4.5%	4.7%	4.6%	4.8%	4.9%	5.0%	5.5%
DME	7.7%	7.1%	6.7%	7.1%	7.8%	8.6%	9.5%	8.4%
Inject	6.8%	7.4%	8.2%	9.0%	10.0%	10.6%	11.6%	11.9%
PT	8.7%	9.3%	10.0%	10.3%	12.0%	12.3%	13.4%	13.3%
Rx	49.9%	48.8%	47.3%	46.4%	41.1%	39.2%	35.0%	33.3%
All Other	22.7%	22.9%	23.1%	22.6%	24.3%	24.4%	25.5%	27.6%

[19] Medical service detail was not as complete for 2014.

The uphold rates for each of the top five service categories fluctuated slightly between 2016 and 2022 but never fell below 87.6 percent. The most notable change in the uphold rates has been for injections, which increased from 89.4 percent in 2016 and 89.1 percent in 2018 to 95.9 percent in 2022 (Exhibit 8).

Exhibit 8. Uphold Rates for Top 5 Medical Treatment Categories

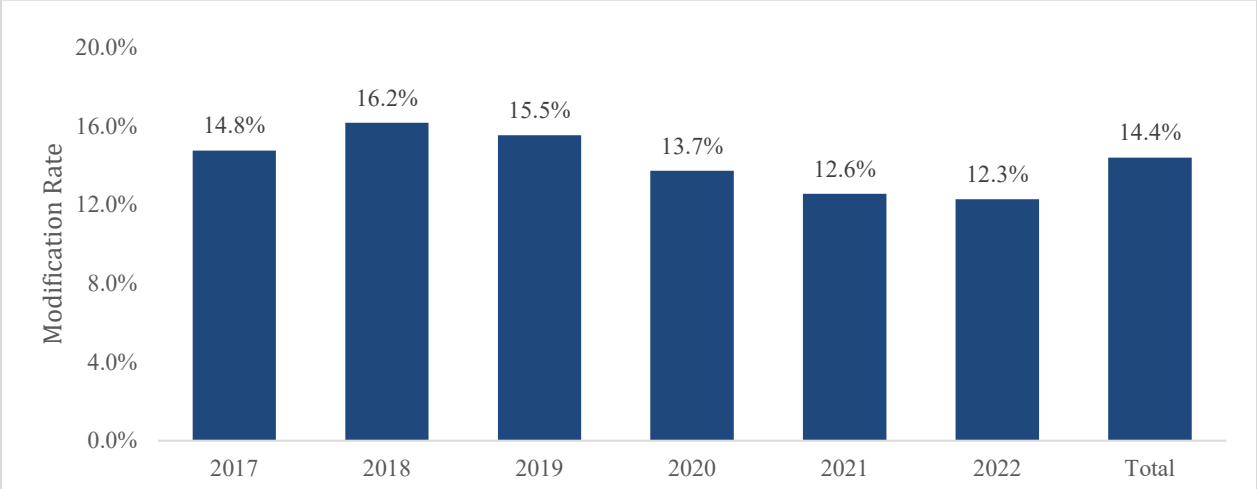


	Rx	PT	Inject	DME	MRI/CT
2016	92.5%	93.2%	89.4%	91.9%	88.6%
2018	89.3%	91.1%	89.1%	88.9%	87.6%
2020	90.4%	89.8%	91.2%	91.3%	88.3%
2022	91.2%	92.7%	95.9%	91.2%	91.5%

UR Modifications

Medical necessity disputes are not limited to treatment requests that were denied during UR – they also include services that were authorized but modified in some manner by the UR physician, most often for explicit deviation from the volume of service recommended by the MTUS. Exhibit 9 shows the share of IMR decisions associated with treatment modifications rather than denials. The year-over-year comparison shows that the share of disputes represented by modifications has ranged between 12.3 percent and 16.2 percent.

Exhibit 9. UR Modification Decisions as Share of Total IMR by Letter Year



UR modifications typically involve reducing the number of units dispensed or number of refills associated with prescribed drugs. They may also reduce the number or frequency of physical therapy, chiropractic, acupuncture, or psychotherapy services, authorize an Evaluation & Management (E&M) visit to a specialist prior to approval of bundled services under the same request, or authorize rental rather than purchase of durable medical equipment. Exhibit 10 shows the share of total IMRs involving UR modifications for each listed service category for 2017 to 2022. UR modification disputes have represented a declining share of pharmaceutical IMRs since 2019, dropping nearly five percentage points in 2020 and 3.5 percentage points in 2021. In contrast, UR modification disputes have represented a fluctuating share of physical therapy IMRs, but showed only minor variations, while among disputed E&M requests, UR modifications jumped markedly from 13.1 percent in 2017 to 34.2 percent in 2022.

Exhibit 10. UR Modification Decisions as Share of Total IMR by Service Category

Category	2017	2018	2019	2020	2021	2022	6-Yr Percentage
Rx	19.9%	23.6%	23.7%	18.8%	15.3%	15.2%	20.2%
Physical Therapy	22.4%	21.0%	20.5%	21.7%	22.2%	21.2%	21.3%
DME/POS	8.6%	8.9%	8.2%	6.7%	6.3%	6.4%	7.6%
Acupuncture	22.5%	16.4%	15.2%	13.9%	14.0%	13.2%	15.6%
E&M	13.1%	14.7%	18.2%	28.0%	31.3%	34.2%	22.7%
All Categories	14.8%	16.2%	15.5%	13.7%	12.6%	12.4%	14.4%

Exhibit 11 shows that in each of the past six years, the most commonly disputed UR modifications involved reductions in the amount of a drug to be dispensed. These types of disputes peaked at 66.8 percent of all IMR modifications in 2018, coinciding with the implementation of the MTUS Formulary and the adoption of the Chronic Pain and Opioid Guidelines, but by 2019 that share fell to 61.7 percent and has been trending downward ever since, falling to 40.6 percent in 2022.

Exhibit 11. Top Five Service Categories by Share of Modification Disputes

Category	2017	2018	2019	2020	2021	2022	6-Yr Share
Rx	62.9%	66.8%	61.7%	52.9%	42.0%	40.6%	57.1%
Physical Therapy	15.0%	13.2%	15.6%	19.2%	23.4%	21.9%	17.1%
DME/POS	3.9%	3.8%	4.1%	4.1%	4.7%	4.5%	4.1%
Acupuncture	3.7%	3.0%	3.6%	3.8%	4.6%	4.5%	3.7%
E&M	1.9%	1.8%	2.3%	4.3%	5.6%	7.7%	3.4%
Total	87.4%	88.6%	87.2%	84.4%	80.4%	79.2%	85.5%

The uphold rates for UR modification decisions were generally comparable or higher than the overall uphold rates shown earlier in Exhibit 8. Exhibit 12 shows the uphold rates for the top five modification service categories from 2017 through 2022, as well as the combined uphold rates for all modification disputes. Additional IMR statistics can be found in Appendix A.

Exhibit 12. Top Five Service Categories by Share of Modification Disputes – Uphold Rates

Category	2017	2018	2019	2020	2021	2022	6-Yr Rate
Rx	90.3%	89.4%	90.1%	92.0%	94.5%	92.0%	90.8%
Physical Therapy	93.8%	92.1%	90.5%	92.8%	94.1%	95.2%	93.0%
DME/POS	96.1%	93.0%	94.8%	92.0%	93.6%	97.1%	94.8%
Acupuncture	95.0%	95.0%	93.6%	91.4%	96.0%	98.6%	94.9%
E&M	89.5%	88.1%	89.1%	92.0%	93.6%	97.1%	92.5%
All	91.2%	90.0%	90.4%	91.9%	94.3%	93.8%	91.5%

Medical Dispute Resolution: California Workers' Comp vs. Other Health Systems

The workers' compensation IMR process mandated by the Legislature in SB 863 follows the same concept of physicians determining medical necessity for proposed treatment that is used by the California Department of Managed Health Care (DMHC) for commercial health plans,[20] but there are some important differences.

One fundamental difference is the level of patient involvement in the decision-making process. Under commercial health plans, patients make health care decisions that include financial aspects such as deductibles and co-payments when they decide to pursue treatment that has been deemed medically unnecessary or outside the health plan's contractual provisions. As should be the case, under workers' compensation the patient has no need to factor in cost when contemplating proposed medical care.

Another basic difference between the two systems is the lack of a mandatory UR appeal within the California workers' compensation dispute resolution process. DMHC rules require that a patient (or an "authorized assistant"[21]) file an appeal with the health care plan and only after that 30-day process may they file an IMR application with DMHC. Under the provisions of Labor Code section 4610.5 an injured worker or their representative may file an IMR application immediately after receipt of the notice of denial or modification of the requested treatment. Rules promulgated by the DWC further state that the IMR application may be filed by the employee's attorney, if represented, or another designee acting on their behalf.[22]

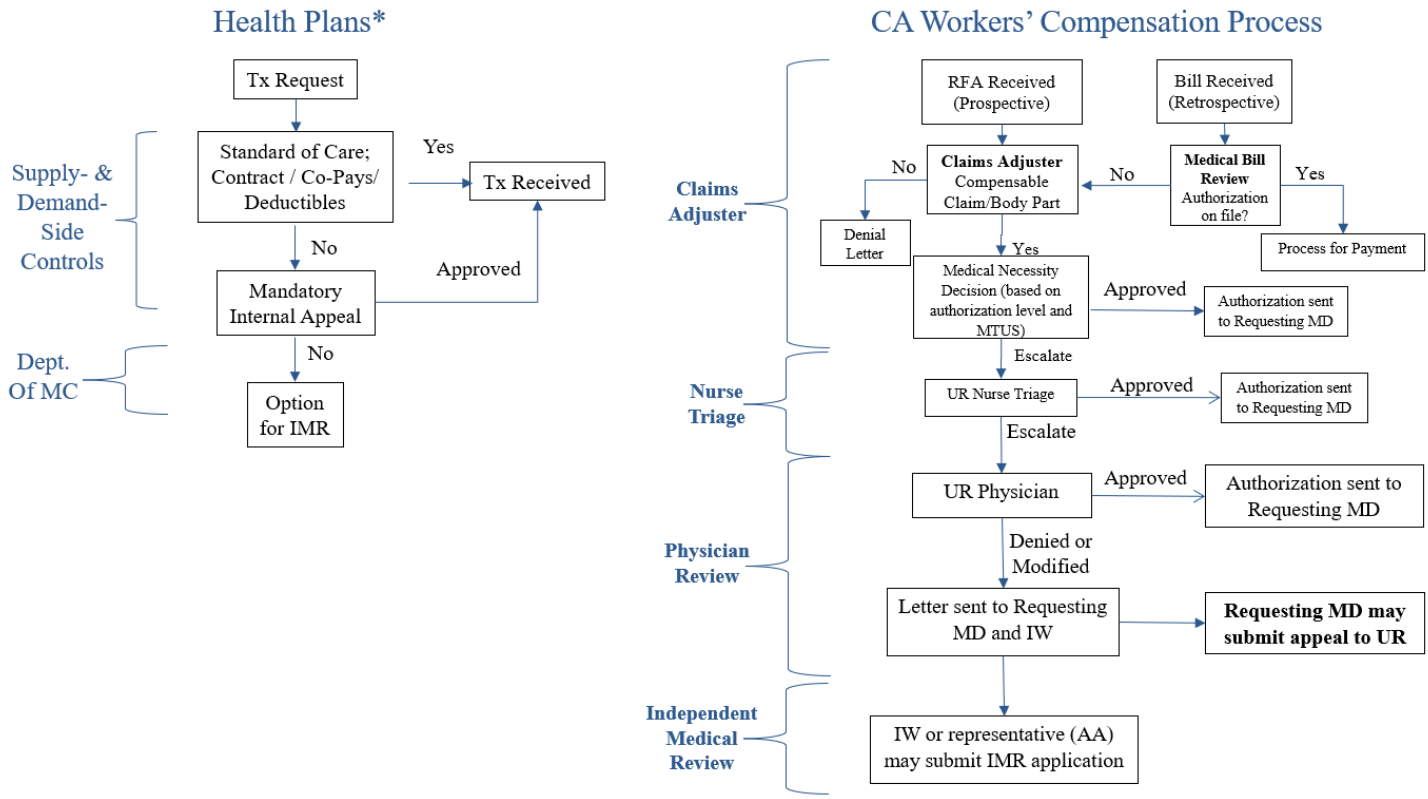
[20] The California Department of Managed Health Care regulates health care coverage in California including 96% of commercial and public enrollment in state-regulated health plans. *DMHC 2021 Annual Report*. https://www.dmhc.ca.gov/Portals/0/Docs/DO/2021ARFinalAccessible.pdf

[21] https://www.dmhc.ca.gov/Portals/0/Docs/HC/AccessibleAAFormEnglish.pdf?ver=2020-03-30-121642-337

[22] CCR §9792.10.1(2)(A)

Exhibit 13 details the medical dispute resolution process used for group health plans, Medicare, and Medi-Cal in California compared to the process used in workers' compensation.

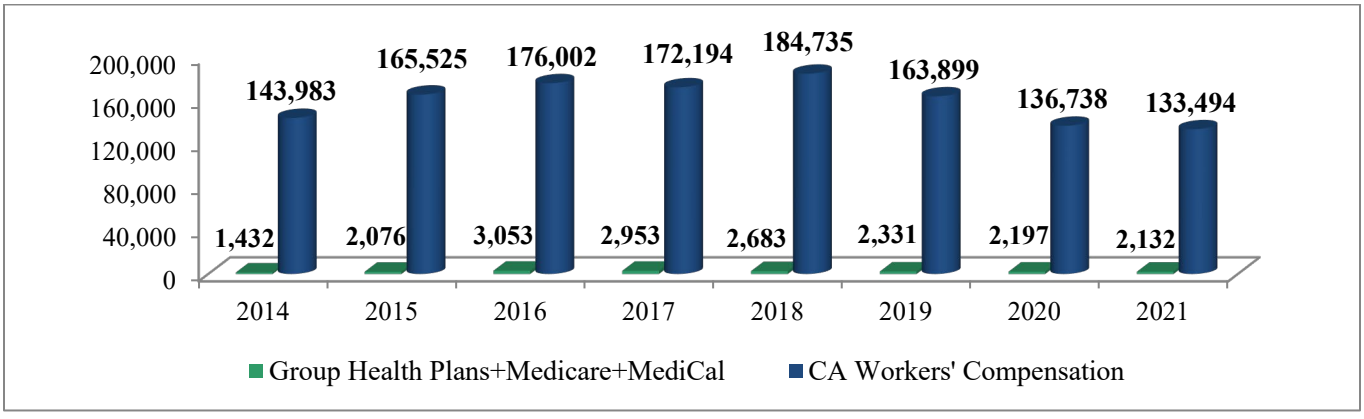
Exhibit 13. Medical Dispute Resolution: Group Health, Medicare & Medi-Cal vs. CA Workers' Comp



* Includes all group health plans, Medicare and Medi-Cal

Exhibit 14 shows that between 2014 and 2021, IMR volume in California workers' compensation was 68 times the volume for California group health plans, Medicare and Medi-Cal combined.[23]

Exhibit 14. Health Plans and Workers' Compensation IMR Volume: 2014 - 2021



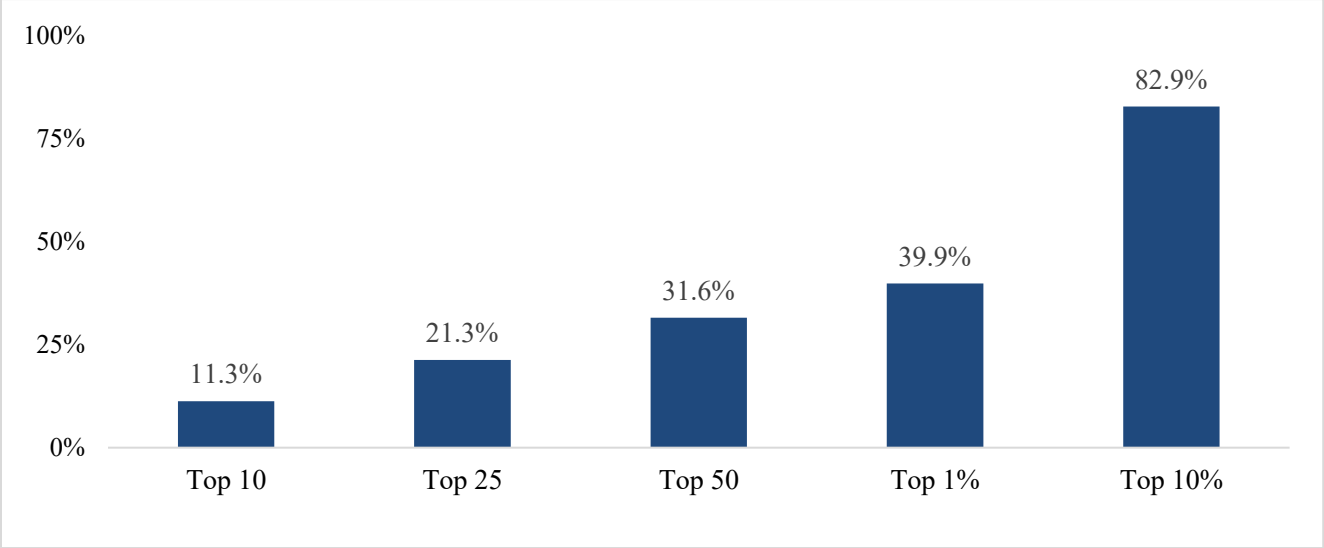
[23] CalHHS: https://data.chhs.ca.gov/dataset/indep endent-medical-review-imr-determinations-trend

Although workers' compensation represents approximately 1.6 percent of medical costs in California in 2021,[24] the number of IMR applications dwarfs the number of those filed with the DMHC for each of the eight study years.

The Skew

The disproportionate share of disputed medical treatment requests originating with a small subset of providers has been documented in prior CWCI reports beginning in 2015, with regular updates through the most recent March 2022 CWCI Research Update Report.[25,26] Total IMR activity in 2022 showed that 10 providers (0.1 percent of IMR providers) accounted for 11.3 percent of all IMR decisions, and 803 physicians (10 percent of IMR providers) accounted for 84.1 percent of all IMR decisions (Exhibit 15).

Exhibit 15. Percentage of 2022 IMR Letters Associated with High-Volume Providers



Although the high-volume provider lists have changed somewhat from year to year, many of the same providers continued to generate a disproportionate share of the disputed medical service requests and remained on the high-volume provider lists over time.

For example, on average, providers who made the top 10 list during the eight-year period (2015 through 2022) were among the top 10 providers 63.8 percent of the time (or for about five of those eight years).

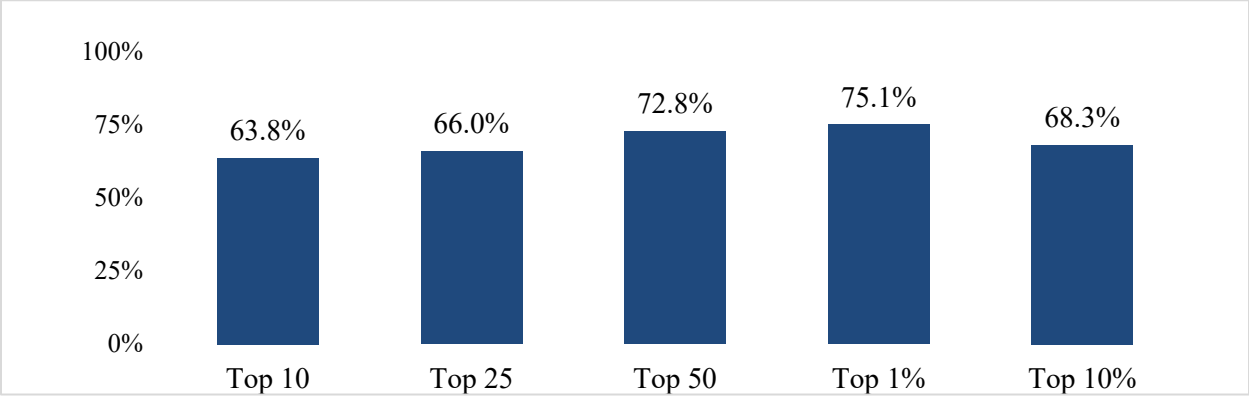
[24] 1.7 percent estimate based on CHCF 2021 total California health care expense of $405B (https://www.chcf.org/publication/2023-edition-california-health-care-spending/#:~:text=1.,2020%2C%20or%20%2410%2C299%20per%20person.) and WCIRB's 2021 adjusted estimate of $6.6B (4.4B insured + $1.2B self-insured) total medical benefit payments (https://www.wcirb.com/sites/default/files/documents/2021_ca_wc_losses_and_expenses_report.pdf)

[25] David, R., Jones, S., Ramirez, B. and Swedlow, A. *Medical Review and Dispute Resolution in the California Workers' Compensation System*. CWCI Research Update. December 2015.

[26] Bullis, R. and Young, B. *Independent Medical Review Decisions: January 2015 through December 2021.* CWCI Research Update. March 2022.

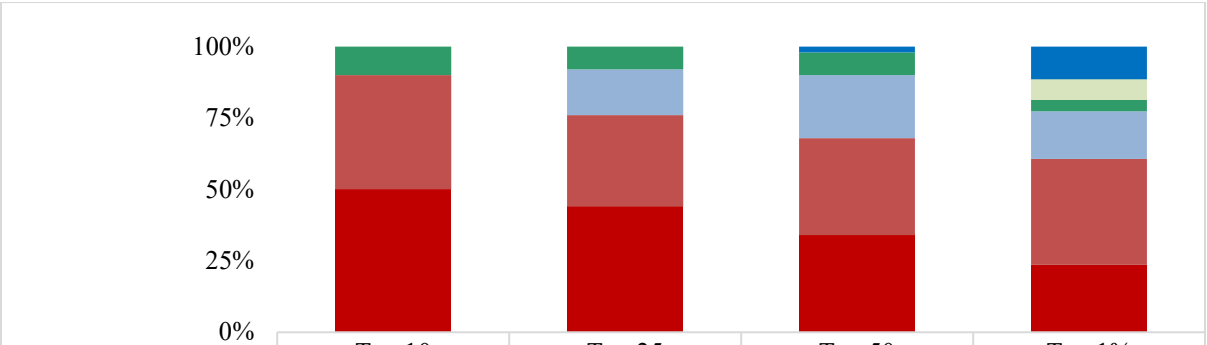
Exhibit 16 shows the proportion of the 8-year span that doctors in each of the high-volume IMR categories were in those categories between 2015 and 2022. These results confirm that a relatively small contingent of the same physicians have continued to account for most of the IMR activity in California workers' compensation.

Exhibit 16. Percentage of Years High-Volume Doctors Were in the Same Volume Category: 2015-2022



A closer look at the medical specialties of the top 10 providers from 2015 through 2022 shows that 90 percent were either pain management physicians or orthopedic surgeons (Exhibit 17). As the number of physicians increased from the top 10 to the top 1 percent, the mix of specialties became more varied, but orthopedists and pain management specialists continued to account for a majority of the disputed service requests. The authors also noted that many physical medicine and rehabilitation physicians requested pain management services, so pain management accounted for an even greater share of the disputed treatment services that went through IMR.

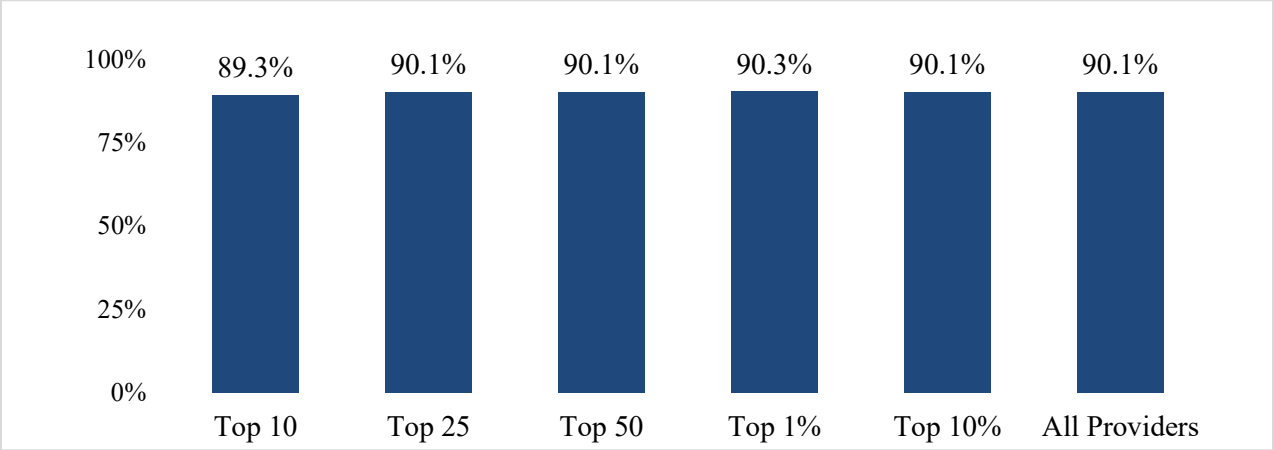
Exhibit 17. Distribution of High-Volume IMR Providers by Specialty: 2015 -2022



	Top 10	Top 25	Top 50	Top 1%
Other	0.0%	0.0%	2.0%	11.4%
Unknown	0.0%	0.0%	0.0%	7.1%
General Practice	10.0%	8.0%	8.0%	4.1%
Phys Med & Rehab	0.0%	16.0%	22.0%	16.8%
Orthopedist	40.0%	32.0%	34.0%	37.1%
Pain Management	50.0%	44.0%	34.0%	23.6%

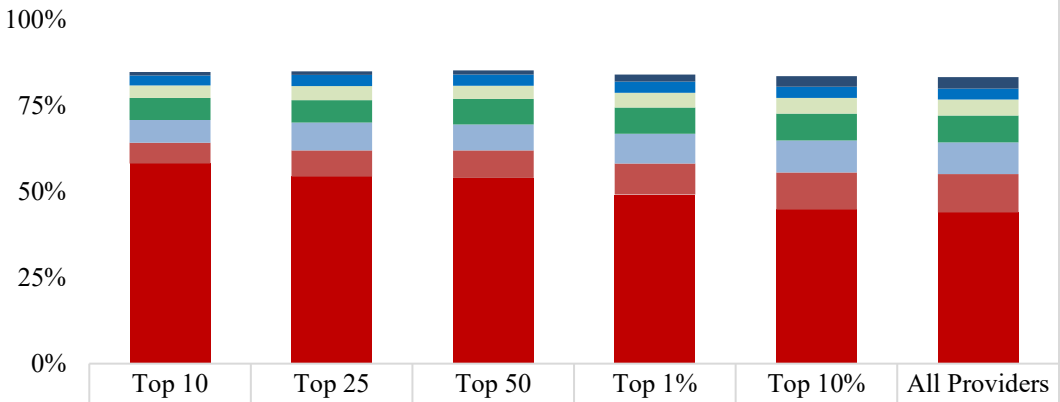
High-volume providers had uphold rates that were in keeping with the overall uphold rate of 90.1 percent for the 8-year period, ranging from 89.3 percent for the top 10 providers to just over 90 percent for the top 25, top 50, top 1 percent and top 10 percent of providers (Exhibit 18).

Exhibit 18. Decision Uphold Rates for High-Volume and All Providers



The highest volume providers had a higher percentage of disputes over pharmaceuticals (58.3 percent vs. 44.1 percent for all providers), which is likely due to a greater emphasis on medication by pain management specialists (Exhibit 19).

Exhibit 19. UR Modification Decisions - Share of Total IMR by Service for High-Volume and All Providers



	Top 10	Top 25	Top 50	Top 1%	Top 10%	All Providers
Surgery	1.1%	1.0%	1.2%	2.0%	3.1%	3.3%
Acupuncture	2.8%	3.3%	3.3%	3.3%	3.2%	3.2%
MRI/CT/PET	3.7%	4.1%	3.8%	4.2%	4.5%	4.6%
DME/Prosth/Ortho/Supplies	6.4%	6.6%	7.4%	7.7%	7.9%	7.8%
Injections	6.6%	8.1%	7.6%	8.7%	9.3%	9.2%
Physical Therapy	6.0%	7.6%	8.0%	9.0%	10.8%	11.1%
Pharmaceuticals	58.3%	54.5%	54.1%	49.2%	44.8%	44.1%

Exhibit 20 shows that the share of disputes associated with UR modifications are similar across all provider volume categories.

Exhibit 20. UR Modification Decisions - Share of Total IMR for High-Volume and All Providers

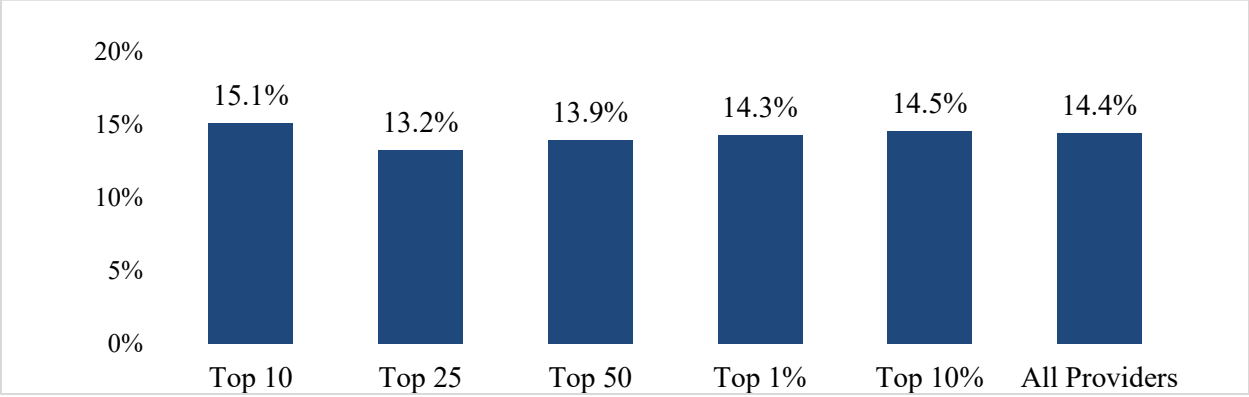
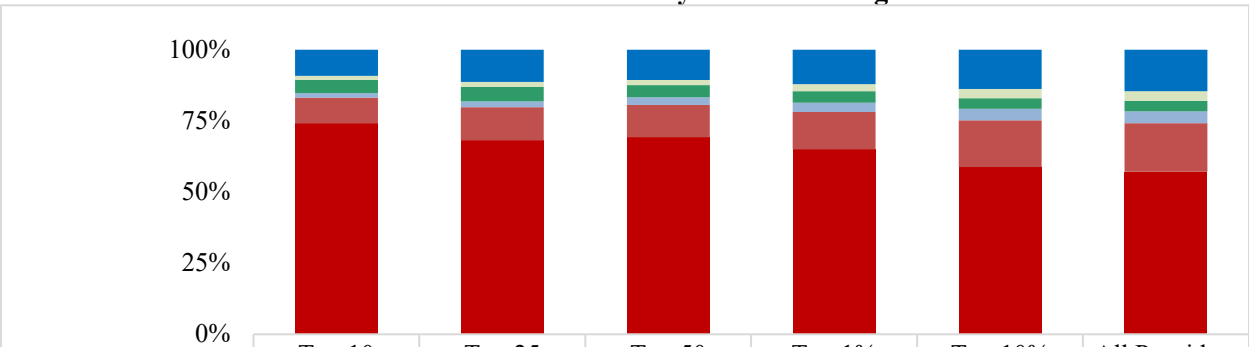


Exhibit 21 shows that among the top 10 providers, 74.1 percent of the disputed modifications involved pharmaceutical requests, compared to 57.1 percent for all providers. On the other hand, only 9.0 percent of the top 10 providers' disputed modifications involved physical therapy requests compared to 17.1 percent for all providers.

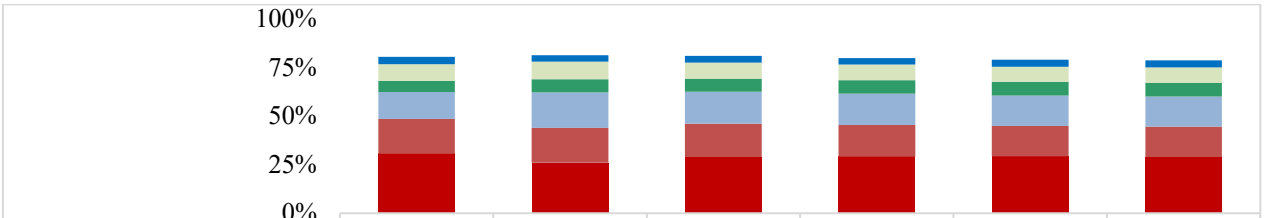
Exhibit 21. UR Modification IMR Decisions - Share by Service for High-Volume and All Providers



	Top 10	Top 25	Top 50	Top 1%	Top 10%	All Providers
Other	9.2%	11.4%	10.6%	12.1%	13.8%	14.5%
Eval & Mgt	1.5%	1.7%	1.8%	2.5%	3.2%	3.4%
Acupuncture	4.6%	5.1%	4.3%	4.0%	3.8%	3.7%
DME	1.6%	2.1%	2.6%	3.2%	4.0%	4.1%
Physical Therapy	9.0%	11.7%	11.4%	13.2%	16.4%	17.1%
Rx	74.1%	68.1%	69.2%	65.0%	58.8%	57.1%

Exhibit 22 provides a breakdown of the type of drugs that were modified in UR and elevated to IMR for resolution.

Exhibit 22. UR Modification - Share of Rx IMR Decisions by Therapeutic Group



	Top 10	Top 25	Top 50	Top 1%	Top 10%	All Providers
Antidepressants	3.8%	3.4%	3.4%	3.3%	3.6%	3.6%
Anti-Inflammatory	8.6%	9.1%	8.3%	8.0%	7.8%	7.8%
Anticonvulsants	5.8%	6.6%	6.7%	6.9%	7.1%	7.1%
Dermatologicals	13.7%	18.4%	16.6%	16.1%	15.6%	15.6%
Musculoskeletal Therapy	17.9%	18.0%	17.1%	16.4%	15.7%	15.5%
Analgesics-Opioid	30.7%	26.0%	29.0%	29.1%	29.3%	29.0%

Across all high-volume provider groupings, opioids accounted for about one-third of the pharmaceutical modifications, except for the top 25 group where 26.0 percent of the modifications involved opioid requests.

DISCUSSION

Medical dispute resolution plays an almost universal role in all health care delivery systems in California and the United States, yet the California workers' compensation system has struggled to find the optimal legislative and regulatory balance for resolving disagreements between treating physicians and payers.

Before 1996, the California workers' compensation system relied on the concept of "dueling doctors," utilization review and Appeals Board judges to resolve disputes. In 1996, the *Minniear* decision was premised on the notion that giving the PTP's opinion a presumption of correctness would be the most direct path to providing the right care at the right time and thereby reduce frictional costs. However, it failed to neutralize the controversial and time-consuming aspects of the medical dispute resolution process. In fact, it made things worse.

Unintended Consequences of Eliminating Medical Dispute Resolution

Expansion of the *Minniear* decision to include all treatment decisions, regardless of the injury date, was associated with a tripling of the average medical cost per indemnity claim from $10,642 to $32,500,[27] with scant evidence of a corresponding change in the clinical severity mix of workplace injuries. It also coincided with 28 workers' compensation carrier insolvencies primarily due to difficulty in containing medical costs.

Other attempts to scale back the medical dispute resolution process in a fee-for-service delivery system met with a similar fate. In Washington State, regulators thought the high cost of MRI utilization review was not justified given the high rate of approved procedures. The required UR component for such MRIs was discontinued in 1999. Immediately following the discontinuation of MRI UR, utilization for spine and lower extremity MRIs rose by 54 percent and 72 percent respectively. The UR program was reinstated in 2002.

The successive California workers' compensation reforms of 2002-2004 and 2012 shifted the means of dispute resolution from WCAB judges to evidence-based medicine guidelines and independent medical review. The post-2012 medical trend has proved to be more stable, with increases closer to general medical inflation and planned fee schedule changes. A CWCI study published earlier this year found that treatment patterns for California workers' compensation professional medical services have stabilized in recent years, with only minor changes in the utilization rates and the volume of services rendered to injured workers within the first two years for indemnity claims with 2014 through 2019 initial treatment dates, and within the first six months for indemnity claims with initial treatment dates in 2018 through 2021.[28] Of greater importance is that the implementation of independent medical review has improved the quality of care rendered to injured workers through the consistent application of evidence-based medicine recommendations, while raising continuous quality improvement (CQI) for providers, and preventing patient harm (see Appendix B).

Improvements in the medical trend came at the high cost of IMR volume and process inefficiencies. It is clear from the 10-year history of California workers' compensation IMR that the unexpectedly high volume of disputes

[27] State of the System: *WCIRB Report on the State of the California Workers' Compensation Insurance System*, WCIRB, June 2014.

[28] David, R., Young, B. *Patterns in the Provision of Professional Medical Services in California Workers' Comp.* Research Update, CWCI April 2023.

submitted to IMR has been driven by the skew; the relatively small group of providers who have been associated with a disproportionately large number of IMR submissions.[29] The study shows that out of some 8,000 providers whose disputed treatment requests underwent IMR from 2015 through 2022, the top 50 have been associated with almost a third of all disputed medical service requests, and that those same providers remained in the top 50 category for approximately six of those eight years.

The process flow of all medical dispute resolution events, coupled with a stable uphold rate of 89 to 91 percent, shows a high level of concordance across the spectrum of claims adjusters, nurse and physician UR, and finally IMR. At the same time, many UR disputes resolved through IMR continue to involve modifications where the recommended medical service is approved but the volume of services requested by the physician exceeds the MTUS recommended levels. It is debatable whether disputes over these types of modifications should be eligible for IMR, especially given that there is no disagreement over the appropriateness of the treatment and the physician can request additional treatment if the recommended level of service proves beneficial.

CWCI will continue to monitor IMR activity and outcomes as further study and debate can reveal opportunities to curb the high-volume, protracted process for resolving California workers' compensation medical disputes.

[29] CWCI reported that 95 percent of IMR letters are submitted by attorneys.

APPENDICES

A.1: IMR Service Mix

Service Requested	2015	2016	2017	2018	2019	2020	2021	2022
Pharmaceuticals	49.9%	48.8%	47.3%	46.4%	41.1%	39.2%	35.0%	33.3%
Physical Therapy	8.7%	9.3%	10.0%	10.3%	12.0%	12.3%	13.4%	13.3%
Injections	6.8%	7.4%	8.2%	9.0%	10.0%	10.6%	11.6%	11.9%
DME/Prosth/Ortho/Supplies	7.7%	7.1%	6.7%	7.1%	7.8%	8.6%	9.5%	8.4%
MRI/CT/PET	4.2%	4.5%	4.7%	4.6%	4.8%	4.9%	5.0%	5.5%
Acupuncture	2.2%	2.3%	2.5%	3.0%	3.7%	3.8%	4.2%	4.4%
Surgery	3.3%	3.2%	3.1%	3.1%	3.6%	3.7%	3.5%	3.7%
Diagnostic Test / Measure	3.5%	3.5%	3.4%	3.4%	3.2%	3.0%	3.0%	2.8%
Chiropractic Manipulation	1.6%	1.7%	1.7%	1.7%	2.2%	2.2%	2.5%	2.7%
Evaluation and Management	2.3%	2.2%	2.2%	2.0%	1.9%	2.2%	2.3%	2.6%
Laboratory Services	2.8%	3.2%	3.2%	2.5%	2.1%	1.6%	1.6%	1.5%
Psych Services	1.4%	1.4%	1.3%	1.2%	1.3%	1.4%	1.5%	1.7%
Other	5.7%	5.5%	5.8%	5.7%	6.3%	6.4%	6.9%	8.2%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

A.2: IMR Uphold Rates by Service

Service Requested	2015	2016	2017	2018	2019	2020	2021	2022
Pharmaceuticals	89.7%	92.5%	91.9%	89.3%	89.2%	90.4%	92.9%	91.2%
Physical Therapy	92.0%	93.2%	93.5%	91.1%	89.8%	89.8%	92.1%	92.7%
Injections	87.4%	89.4%	89.5%	89.1%	88.8%	91.2%	95.0%	95.9%
DME/Prosth/Ortho/Supplies	90.0%	91.9%	91.8%	88.9%	89.7%	91.3%	93.1%	91.2%
MRI/CT/PET	86.4%	88.6%	89.2%	87.6%	86.3%	88.3%	91.6%	91.5%
Acupuncture	91.6%	93.6%	93.9%	92.7%	89.7%	87.8%	90.5%	93.6%
Surgery	86.6%	88.8%	90.8%	88.0%	88.7%	87.3%	88.5%	86.2%
Diagnostic Test / Measure	84.6%	91.3%	91.4%	89.0%	86.7%	88.7%	92.4%	91.2%
Chiropractic Manipulation	90.7%	92.0%	93.8%	92.2%	89.0%	86.7%	89.3%	87.0%
Evaluation and Management	67.1%	77.3%	77.7%	75.8%	74.9%	80.8%	84.8%	82.6%
Laboratory Services	82.9%	88.5%	86.5%	82.9%	81.5%	82.1%	87.4%	84.4%
Psych Services	83.2%	85.3%	84.4%	78.7%	79.0%	81.8%	85.1%	82.5%
Other	86.4%	88.6%	87.9%	85.2%	85.6%	88.0%	90.3%	88.9%
Total	**88.4%**	**91.2%**	**91.0%**	**88.6%**	**88.2%**	**89.4%**	**92.0%**	**91.1%**

A.3: IMR Pharmacy Mix

	% of Rx							
Rx Drug Category	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Analgesics-Opioid	30.4%	28.9%	29.4%	32.1%	30.9%	28.3%	25.4%	24.4%
Musculoskeletal Therapy	12.6%	13.2%	13.4%	14.4%	15.4%	16.7%	17.6%	17.6%
Dermatologicals	15.0%	14.6%	14.2%	12.2%	13.8%	15.7%	17.6%	18.6%
Anticonvulsants	5.4%	5.6%	6.2%	8.2%	8.8%	10.1%	10.1%	10.0%
Anti-Inflammatory	8.5%	9.6%	10.3%	7.7%	6.4%	6.4%	7.5%	8.0%
Antidepressants	3.8%	4.0%	4.1%	4.9%	5.1%	4.4%	3.3%	3.3%
Ulcer Drugs	7.3%	7.3%	7.1%	4.7%	3.6%	3.5%	3.5%	3.3%
Hypnotics	3.9%	3.7%	3.1%	2.7%	2.4%	2.0%	1.7%	1.6%
Antianxiety	2.7%	2.8%	2.6%	2.4%	2.2%	1.9%	1.8%	1.6%
Analgesics-Non-Narcotic	1.1%	1.4%	1.8%	2.2%	1.9%	2.1%	2.1%	1.9%
Other	9.3%	8.8%	7.9%	8.4%	9.5%	8.9%	9.4%	9.6%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

A.4: IMR Pharmacy Uphold Rates

	% Upheld							
Rx Drug Category	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Analgesics-Opioid	88.1%	90.3%	90.1%	89.5%	90.3%	90.9%	93.1%	91.3%
Musculoskeletal Therapy	96.4%	97.1%	97.2%	95.8%	95.5%	96.5%	98.5%	98.4%
Dermatologicals	96.3%	97.1%	97.0%	94.9%	93.8%	93.2%	95.1%	95.8%
Anticonvulsants	82.0%	87.4%	87.8%	80.7%	82.0%	86.1%	91.3%	91.8%
Anti-Inflammatory	82.7%	90.2%	88.8%	84.0%	81.4%	82.9%	85.3%	80.0%
Antidepressants	74.5%	83.9%	82.3%	75.9%	74.8%	79.8%	82.4%	74.1%
Ulcer Drugs	89.0%	93.0%	91.8%	88.3%	87.9%	86.8%	89.8%	82.9%
Hypnotics	97.4%	98.2%	97.7%	97.2%	97.2%	97.9%	98.2%	97.5%
Antianxiety	96.3%	97.2%	95.1%	94.4%	92.5%	94.5%	94.6%	91.8%
Analgesics-Non-Narcotic	88.8%	92.6%	91.9%	91.7%	89.5%	91.0%	91.7%	86.2%
Other	88.2%	91.1%	89.6%	85.6%	85.8%	86.3%	89.3%	85.9%
Total	**89.7%**	**92.5%**	**91.9%**	**89.3%**	**89.2%**	**90.4%**	**92.9%**	**91.2%**

Appendix B. How Dispute Resolution Can Improve Quality, Raise Continuous Quality Improvement (CQI) for Providers, and Prevent Patient Harm

Physical Medicine

An important component of ACOEM's evidence-based medicine guidelines is a focus on treatment to facilitate functionality.[30] To that end, UR and IMR physicians look for functional improvement measures that support the timing and duration of physical medicine treatment methods including physical therapy, chiropractic care, and acupuncture. An example of a physical medicine request that did not incorporate an assessment of functional improvement for the requested treatment:

> 48-year-old female injured worker with pain in the thoracic spine, lumbar spine, shoulders, knees, right hand, and right wrist. The IMR letter addressed six different requests for physical therapy included in the application. The UR physician denied requests for physical therapy two times a week for four weeks (8 each) for bilateral knees, bilateral shoulders, thoracic spine, lumbar spine, right hand, and right wrist and those denials were upheld in IMR. The IMR physician noted a lack of documentation of functional improvement with prior physical therapy for the knees or remaining functional deficits after prior physical therapy for the shoulders. The IMR physician also referenced a lack of documentation of a diagnosis or assessment and plan in connection with physical therapy for the thoracic spine, lumbar spine, right hand or right wrist as rationale for upholding the UR denial.

Pharmaceuticals

Although opioids have been in the spotlight for a number of years related to their potential for abuse and negative side effects (e.g., nausea, vomiting, constipation, endocrine disorders, and opioid-induced hyperalgesia) researchers have also identified polypharmacy that includes drugs other than opioids as potentially harmful.[31] While a review of IMR decisions addressing medication denial identified numerous examples of prolonged use of opioids as problematic, there were also many instances of the UR dispute resolution process preventing patient harm resulting from potential drug interactions. Examples of potentially dangerous polypharmacy:

> 61-year-old female injured worker reported neck pain, headaches, and lumbar spine pain with four prior spinal surgeries noted. The IMR letter upholding the UR determinations addressed requests for a muscle relaxer (methocarbamol), an opioid (hydrocodone), an antidepressant (duloxetine), and antimigraine agent (sumatriptan), and extended-release morphine (MS Contin ER). The IMR physician cited lack of documentation of functional improvement with any of the requested medications, questioned the request for a refill for

[30] Tanisha K. Taylor, MD, MPH; Kathryn L. Mueller, MD, MPH; Robert C. Blink, MD, MPH; David W. McKinney, MD, MPH; Warren Silverman, MD; Rupali Das, MD, MPH; ACOEM Work Group on Workers' Compensation. *Workers' Compensation Elements in Different Jurisdictions in the United States*. ACOEM Guidance Statement. December 7, 2020. https://acoem.org/Guidance-and-Position-Statements/Guidance-and-Position-Statements/Workers%E2%80%99-Compensation-Elements-in-Different-Jurisdictions-in-the-United-States

[31] Giummarra M.J., Gibson S.J., Allen A.R., Pichler A.S., Arnold C.A. *Polypharmacy and Chronic Pain: Harm Exposure is Not All About the Opioids*. Pain Medicine. 2015 Mar;16(3):472-9.

each of the medications, and upheld the UR modification of MS-Contin ER from 150 units to 135 without refill.

A drug interaction report generated using Drug.com's online tool identified nine potential drug interactions including major interactions between morphine and methocarbamol, morphine and hydrocodone, and sumatriptan and duloxetine.[32]

45-year-old female with a primary diagnosis of low back pain. The IMR letter upheld UR determinations denying concurrent requests for an opioid (hydrocodone), morphine (MS Contin ER), an antianxiety medication (alprazolam), and a muscle relaxant (carisoprodol). The IMR physician acknowledged the reported relative control of pain with the medication regimen, but noted a lack of evidence of functional improvement or compliance verification using CURES or urine drug screening. The IMR physician further noted that benzodiazepines (alprazolam) are not recommended to treat chronic pain and the muscle relaxant (carisoprodol) specifically is not recommended due to potential abuse hazards.

Drugs.com identified 5 potentially major interactions due to multiple drugs causing central nervous system depression: alprazolam and morphine, morphine and carisoprodol, alprazolam and hydrocodone, morphine and hydrocodone, and carisoprodol and hydrocodone.

Surgery

Surgeries that are avoided following UR and IMR physician determinations that they are not medically necessary based on evidence-based treatment guidelines may mitigate potential harmful effects. Examples of requested surgeries that were deemed to be unnecessary range from less invasive arthroscopic procedures to more invasive and complex spinal surgery (e.g., laminectomies, discectomies, and vertebral fusions).

An example of multiple surgery requests from an orthopedic surgeon for the same injured worker:

59-year-old male with continued neck pain, bilateral shoulder pain, low back pain, and bilateral knee pain. The surgeon requested left shoulder arthroscopy, decompression of subacromial space with partial acromioplasty with coracoacromial ligament release, C5-C7 anterior discectomy and fusion, and L3-L5 decompression. The UR decision dates for the requested surgical services ranged from June 2022 to September 2022 and included two separate IMR applications for each of the spinal surgeries for a total of five IMR uphold

[32] https://www.drugs.com/interactions-check.php?drug_list=71-8487,2136-1391,1588-964,949-2273,1656-1026

> decisions. The IMR physician's rationale for upholding the denial decision for shoulder arthroscopy was a lack of evidence of a rehabilitation program or injections to address shoulder pain. Each of the IMR uphold decisions for the spinal surgeries noted that there was no specific objective clinical data demonstrating verifiable radiculopathy and or neurological deficits.

An example of multiple requests for arthroscopic shoulder surgery from the same orthopedic surgeon for the same injured worker:

> 30-year-old male with a diagnosis of shoulder rotator cuff tear. There were nine separate IMR applications (ranging from 02/20/2020 to 7/23/2021) addressing denial of Arthroscopy, Rotator Cuff Repair, SLAP Repair, potential distal clavicle excision, bursectomy, and debridement. All applications were related to treatment requests from the same orthopedic medical group. The IMR physician's rationale for upholding the UR physician's denial noted that the MR arthrogram and the MRI results were normal.

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California Workers' Compensation Institute

The California Workers' Compensation Institute (CWCI), incorporated in 1964, is a private, nonprofit membership organization of insurers and self-insured employers. CWCI conducts and communicates research and analyses to improve California's workers' compensation system. CWCI members include insurers that collectively write about 76 percent of California's 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.