



Research Update

Independent Medical Review Outcomes In California Workers' Compensation

Rena David, Stacy Jones, Brenda Ramirez and Alex Swedlow

EXECUTIVE SUMMARY

Independent Medical Review (IMR), implemented within the California workers' compensation system following legislative reforms enacted in 2012, has recently completed its second full year of operation. The introduction of this new process has spawned heated debate over whether IMR, as an adjunct to evidence-based utilization review (UR), has improved the medical dispute resolution process and the ability of the system to ensure high-quality care for injured workers while protecting them from unnecessary tests, surgeries and procedures that could impede their recovery or lead to further impairment or disability.

For this analysis, the authors compiled data from 137,781 final determination letters that were issued last year in response to 126,952 IMR applications submitted in 2014, plus 10,829 submitted in 2013. Altogether, the study sample encompassed IMR decisions in regard to 260,889 medical services requested for 76,718 injured workers. Although the volume of requests for IMR has far exceeded original projections, the study reveals that a relatively small number of physicians are responsible for the vast majority of requested medical services that result in IMR disputes, with the top 10 percent of all physicians named in the IMR decision letters (1,332 individual physicians out of approximately 13,000) accounting for 83 percent of all disputed treatment requests, while the top 10 individual physicians alone accounted for 15 percent of the disputed services submitted for independent medical review.

Data on the IMR outcomes show that 91 percent of all IMR decisions upheld or agreed with the physician-level utilization review opinion, while conversely, 9 percent of medical service requests submitted for IMR after being modified or denied by a UR physician were approved by the independent medical reviewer. Requests for pharmaceuticals topped the list of services submitted for independent medical review, representing nearly 45 percent of the total. The uphold rates for the pharmaceutical IMRs varied based on the drug group and route of administration. Compound drugs accounted for 12 percent of all pharmaceutical requests submitted for IMR, and the independent medical reviewer upheld the UR physician's denial or modification of those requests 98 percent of the time. No major differences in uphold rates were found based on year of injury. The authors also found that information made available after the UR decision can influence the IMR, and that while reviewers overwhelmingly rely on the Medical Treatment Utilization Guidelines (MTUS) for their decision-making, they frequently draw from additional sources to reach their final determination, though the frequency with which they do so depends on the service in question.

BACKGROUND

One of the major reforms in Senate Bill 863 was the creation of an Independent Medical Review (IMR) process in which medical doctors, relying on evidence-based treatment guidelines, replaced judges as the final arbiters in resolving disputes over the necessity of recommended medical services.

It has now been almost two years since the IMR program's inception and much discussion has occurred regarding its role and value to the overall system. This study endeavors to add new objective outcomes through an examination of all of the final determination letters for independent medical reviews completed in 2014. Each letter is a response to an IMR application and communicates the medical necessity determination for one or more medical services.

A preliminary study of IMR in January 2014¹ estimated that approximately 6 percent of medical service requests in California workers' compensation are modified or denied through utilization review.² It is those services that are eligible for IMR. This study of IMR determinations made in 2014 finds that the physician reviewers who conducted the independent medical reviews on those treatment requests upheld utilization review decision to modify or deny the service 91.4 percent of the time.

The report has three parts:

- **Part 1** focuses on the volume and timing of IMR reviews and presents the number of applications reported by the California Division of Workers' Compensation (DWC) as received each month in 2014. It also describes the number of applications, UR events, claims and services associated with the determination letters issued in 2014.
- **Part 2** includes data related to service mix, reviewer characteristics and other case-level attributes, and uphold rates.
- **Part 3** begins an examination of the independent medical reviewer's decision-making process.

1. David, R; Ramirez, B; and Swedlow, A. "Medical Dispute Resolution – Utilization Review and Independent Medical Review." CWCI Research Note, January 2014.

2. CWCI is conducting a more detailed study to further examine UR modification/denial rates. Results are expected in July 2015.

DATA AND METHODS

For this study, the authors did extensive data development using all IMR final determination letters completed in 2014. The letters were obtained from the independent medical review organization, Maximus, which is under contract with the DWC. Each letter included the following:

- IMR case number
- employee claim number
- employee name
- date of injury
- UR denial date
- provider name
- application received date
- medical specialty of independent medical reviewer
- state licensure of independent medical reviewer
- documents reviewed
- clinical case summary
- service-level medical necessity decisions, with sections on the requested service and medical necessity determination; the guidelines on which the claims administrator based the UR decision; the guidelines on which the IMR reviewer based their decision; and the IMR reviewer's decision rationale

The contents of each letter were parsed into database fields using a series of business rules with corresponding search logic. For the purpose of this study, the authors were limited to the information included in the letters. Primary source documents such as medical records and UR decision letters were not available.

DESCRIPTION OF TERMS

IMR final determination letter: The independent medical reviewer's decision is communicated in the form of a letter. The letter contains a unique IMR case number.

Service: Letters may address requests for multiple services, and each is evaluated individually by IMR.

Claim: An injured employee can have multiple injuries incepting on different dates. For this study, the authors used a combination of claim number and date of injury to identify each unique claim.

UR event: A unique combination of claim number, UR denial date and provider name.

IMR application: A unique combination of UR event and the IMR application received date.

IMR uphold rate: The percentage of IMR applications where the independent medical reviewer agreed with the UR physician's modification or denial of a requested procedure, good or service.

IMR overturn rate: The percentage of IMR applications where the independent medical reviewer disagreed with the UR physician's modification or denial of a requested procedure, good or service and authorized it.

PART 1: VOLUME & TIMING OF TREATMENT REQUESTS ELIGIBLE FOR IMR REVIEW

Under California law, workers' compensation claims administrators are required to establish a utilization review process guided by written policies and procedures, consistent with the requirements of Labor Code §4610, and overseen by a medical director. In recent years, the scope of these programs was expanded by legislative reforms enacted by state lawmakers, as well as by the courts, including the State Supreme Court which in 2010 ruled that all workers' compensation treatment requests must undergo utilization review.³

For most workers' compensation claims organizations, utilization review is a multi-level process that begins with a review of a doctor's Request For Authorization (RFA) of treatment by a claims examiner or nurse who may approve the request if:

1. the treatment has prior authorization under the claims administrator's written UR plan;
2. the treatment falls within the parameters of the claims administrator's best practices for which physician review is not required; or
3. it complies with the guidelines in the Medical Treatment Utilization Schedule (MTUS) adopted by the DWC Administrative Director (which are presumed correct in determining whether requested medical services are necessary, efficacious and appropriate), or if the MTUS is not applicable, other evidenced-based, nationally recognized, peer-reviewed treatment guidelines.

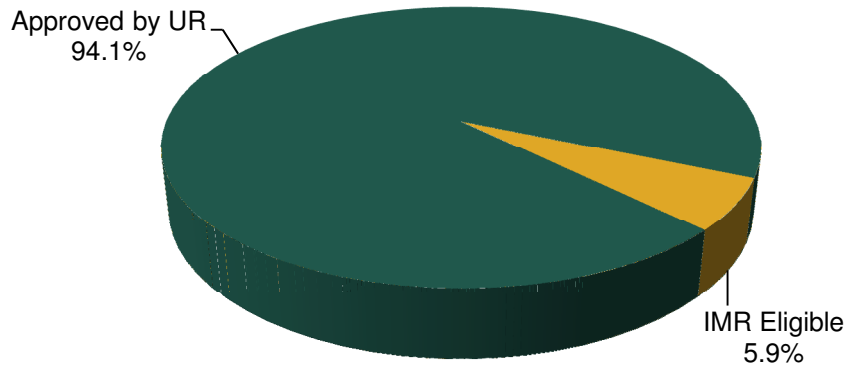
In their 2014 study, David, Ramirez, and Swedlow estimated that the majority of workers' compensation treatment requests are approved at this initial level of UR. Modifications or denials of requested medical services, however, may only be done by a physician, so RFAs that are not approved by a claims examiner or nurse are sent to a utilization review physician who reviews the injured worker's medical records as well as the treatment guidelines to determine if there is clinical evidence that the requested services are necessary, efficacious and appropriate for the specific type of injury. The 2014 study examined 919,370 medical treatment requests that made it to the elevated utilization review level and found that the UR physicians approved 76.6 percent of those requests, modified 6.6 percent, and denied 16.9 percent.

A treatment request only becomes eligible for independent medical review if it is denied or modified by a utilization review physician. With an estimated 75 percent of requests authorized after initial review, and 76.6 percent of the requests approved by the UR physician after elevated review, the overall approval rate for workers' compensation medical service requests following the first two stages of UR is 94.1 percent, while only 5.9 percent -- 1 out of 17 -- requested medical services are modified or denied during UR. Thus, as seen in Exhibit 1, the vast majority of treatment requests are approved by UR, leaving only a small percentage in which the injured worker may choose to dispute the UR physician's decision by applying for independent medical review.⁴

3. 44 CAL.4th 230, 186 P.3D 535, 79 CAL.RPTR.3D 171 State Compensation Insurance Fund, V. WCAB (Sandhagen). In its ruling, the court also held that a claims administrator's approval of a requested treatment without physician review is part of utilization review, but confirmed that only reviewing physicians may decide to delay, deny or modify requested treatment.

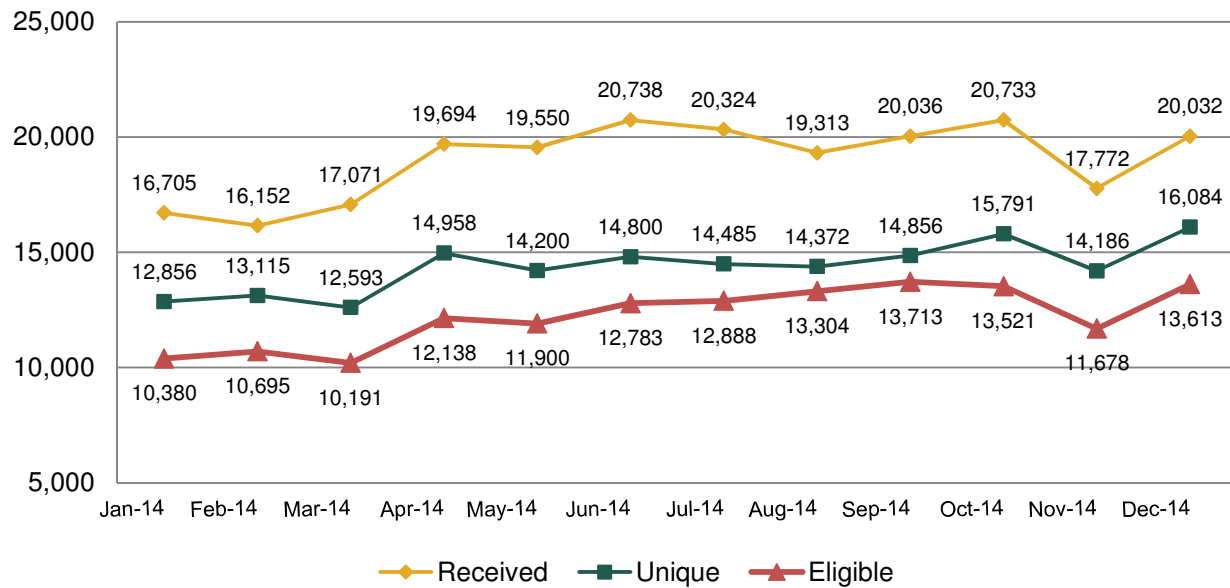
4. In 2014, CWCI interviewed senior claims and managed care experts from its members and from 5 UR companies operating in California to estimate the percentage of treatment requests approved by adjusters, nurses and others following initial utilization review, and conversely, the percentage elevated to UR by physician reviewers. The consensus was that 75 percent of treatment requests are approved at the first level of UR, while 25 percent go to elevated UR.

Exhibit 1: California Workers' Compensation Utilization Review Approval Rate



DWC reported that 228,120 IMR applications were submitted in 2014. Of these, 55,824 were duplicates, leaving 172,296 for evaluation.⁵ After receiving an IMR request, Maximus reviews each application to make sure it meets the eligibility requirements set by the regulations.⁶ For example, an application may be deemed ineligible if it is untimely or incomplete, an application for the service was already filed, or an outstanding legal issue must be resolved before the request can go to IMR. Exhibit 2 shows the number of applications submitted with and without duplicates in 2014, and the count of eligible applications reported by the DWC. Of the 172,296 unique IMR applications filed in 2014, 146,804 were deemed IMR eligible though as of March 30, 2015, Maximus had terminated 9,155 of the 2014 IMRs prior to review completion.

Exhibit 2: 2014 Independent Medical Review Applications



Source: Division of Workers' Compensation, February 2015

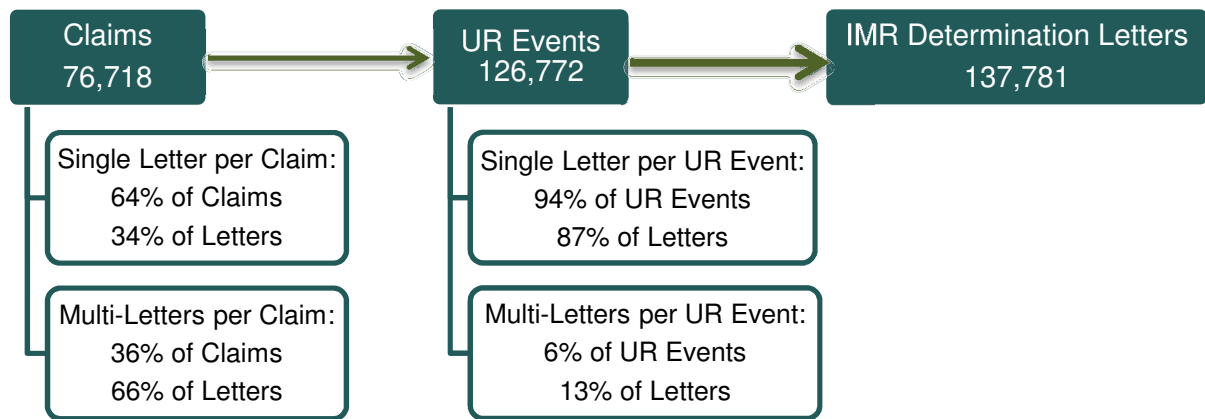
5. Presented at the CA Division of Workers' Compensation Educational Conference, February 2015.

6. CCR §9792.10.3(a)

Final Determination Letter

After an application is reviewed by the IMR physician, Maximus sends a determination letter to the injured worker or their representative. For the remaining sections of this analysis the authors examined the 137,781 final determination letters issued in 2014,⁷ which included decisions for requested services from IMR applications submitted in both 2013 and 2014. Exhibit 3 shows the number of UR events and claims associated with those letters. Of the 76,718 claims, 36 percent had more than one IMR determination letter within the year, with these claims accounting for 66 percent of the letters.

Exhibit 3: Relationship Between Claims, UR Events and IMR Determination Letters



IMR Process – Timeliness

Each 2014 determination letter contains the date of the UR denial or modification, the date the IMR application was received, and the date the letter was sent. The letter date is used as the review completion date. In the letters posted to the DWC website in 2013, the “notice to parties” date was also included. This is the date the application was accepted as eligible for IMR and the request for medical records was initiated. Unfortunately, the 2014 determination letters no longer contain the “notice to parties” date.⁸

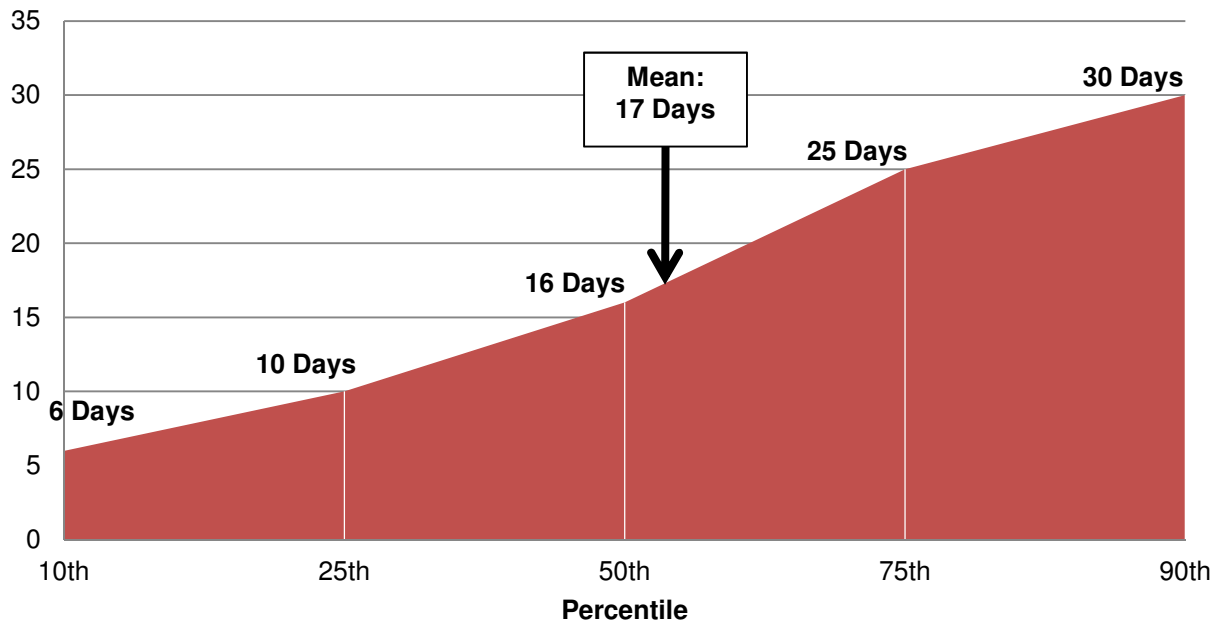
Under the IMR statute and regulations, an IMR application must be received within 30 days of the injured worker’s receipt of a UR denial. To assess the timeliness of the IMR requests, the authors determined the proportion of applications received within the regulatory timeframe, and calculated the average time elapsed between the UR decision date and the IMR application receipt date.

7. The authors processed 147,480 letters with IMR review dates in 2014 and eliminated 9,197 duplicate letters with the same IMR case numbers. Another 502 letters (representing 251 IMR cases) were not included in the study because they contained identical IMR case numbers with inconsistent content rendering those records unusable.

8. The redacted 2013 IMR determination letters available on the DWC website contained the Notice to Parties date; however, the absence of this date on the 2014 IMR determination letters made it impossible for the authors or any stakeholder to measure compliance and turnaround time between the IMRO (Maximus) and the payor.

As Exhibit 4 shows, 90 percent of the applications were received within 30 days of the UR decision, and on average, the application was received 17 days after the UR decision date.

Exhibit 4. Days from UR Decision to IMR Application Receipt Date

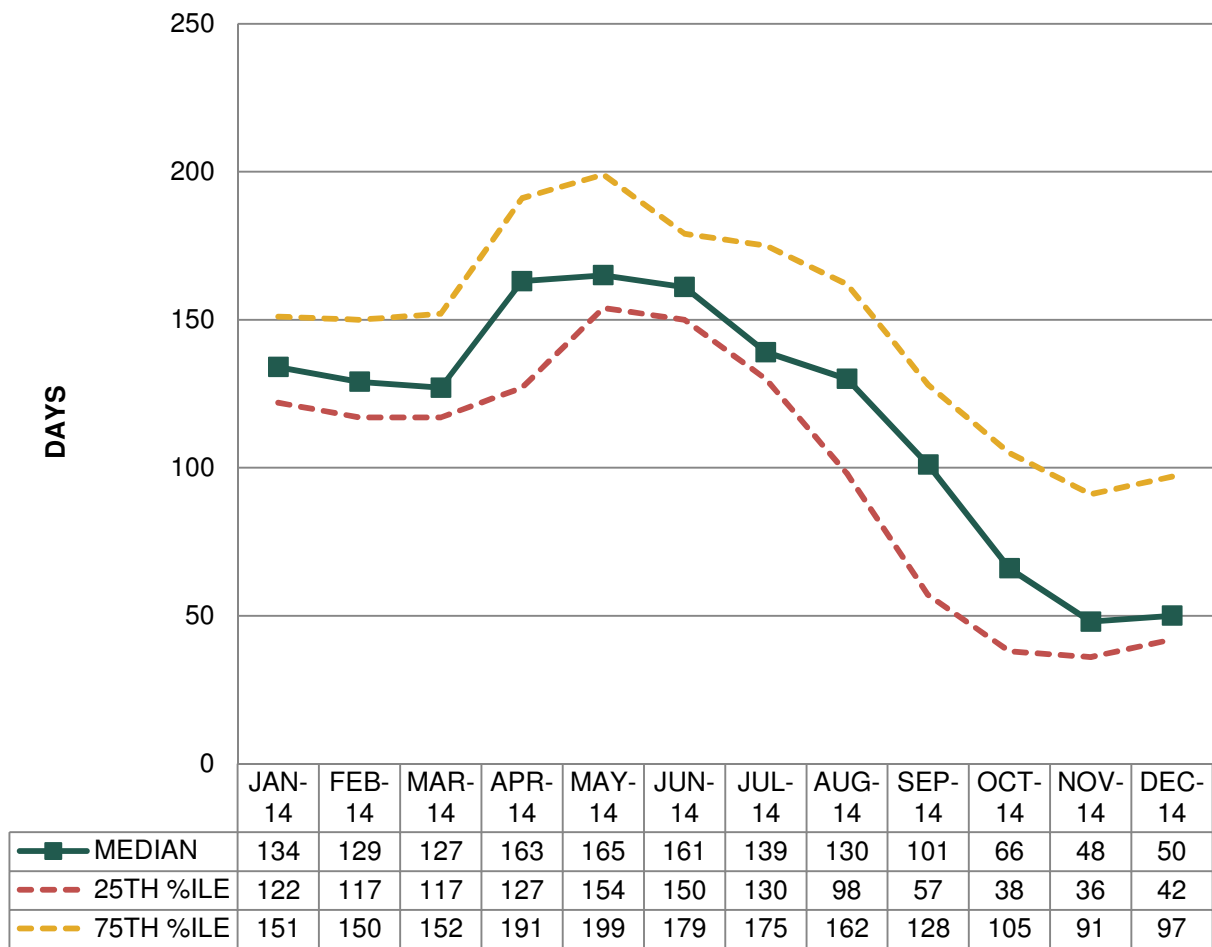


After Maximus receives an IMR application, it must confirm the eligibility of the application, request, receive and process the medical records, and assign the case to a reviewing physician to complete the review. State law requires that Maximus issue an IMR determination letter within 30 days of receiving the application and all necessary records.

Exhibit 5 shows the median time elapsed between Maximus' receipt of a 2014 IMR application and the date it issued the decision letter, with results broken out by the month in which the decision was issued.

In addition to showing the median time elapsed, the exhibit notes the 25th and 75th percentiles. As noted, the median IMR response time peaked in the second quarter of 2014, ranging between 161 and 165 days during this three-month period, but the response time improved significantly in the final quarter of 2014, with the median number of days from Maximus' receipt of the IMR application to the issuance of the decision letter ranging between 48 and 66 days in the last three months of the year.

Exhibit 5: Days From IMR Application to Determination

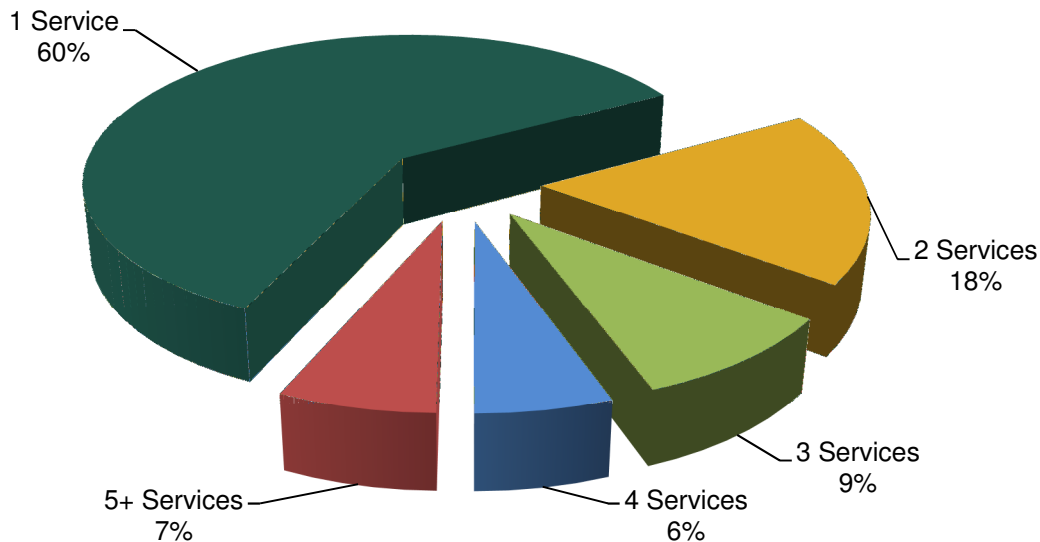


Volume of Services Under Review

After reviewing the injured worker’s medical records and the Medical Treatment Utilization Guidelines adopted by the DWC (or other treatment guidelines if applicable), the IMR physician decides whether the requested service is medically necessary, using the clinical evidence indicated by the guidelines to provide the rationale for that determination. In each case, the reviewer either upholds the UR decision (determines the service is not medically necessary) or overturns the UR decision (determines the service is medically necessary). IMR determination letters often contain decisions on multiple medical service requests (e.g., one determination letter may respond to a single request for an MRI, while another may contain decisions on requests for an MRI, an arthroscopy, and prescription medicines).

Exhibit 6 shows the distribution of the 2014 IMR applications by the number of medical services requested in the application. Altogether, the 137,781 IMR determination letters issued in 2014 contained decisions on requests for 260,889 individual medical services,⁹ with 40 percent of the letters addressing multiple medical service requests.

Exhibit 6. Distribution of 2014 IMR Applications by Number of Requested Services



PART 2: SERVICE MIX, IMR UPHOLD RATES, REVIEWER CHARACTERISTICS, GUIDELINES USED

Service Mix and IMR Uphold Rates

Labor Code Section 4610 makes all workers' compensation medical services subject to utilization review, but as noted earlier, it is estimated that less than 6 percent of all treatment requests are modified or denied by a UR physician following elevated review, at which point they would become potential candidates for IMR should the injured worker decide to dispute the UR determination.

While all medical services are subject to UR, those that are modified or denied and subsequently sent through IMR are heavily concentrated in just a few medical service categories. Exhibit 7 shows the distribution of goods and services reviewed in the 2014 IMR cases and the percentage of time the UR denial or modification was upheld (the independent medical reviewer determined the requested treatment was not medically necessary).

9. A total of 1,419 cases were eliminated from the service analysis due to unreadable formatting.

Exhibit 7: Volume, Distribution & Uphold Rates: IMR Decisions by Requested Service

Service Type	# of Services	% of Services	% Upheld
Prescription Drugs	113,169	44.7%	91.9%
Durable Medical Equipment, Prosthetics, Orthotics, Supplies	24,720	9.8%	93.7%
Physical Therapy	23,583	9.3%	94.0%
Injections	15,004	5.9%	92.2%
Diagnostic Tests & Measurements	12,382	4.9%	87.9%
Surgery	11,891	4.7%	88.5%
MRI/CT/PET Scans	9,635	3.8%	89.1%
Laboratory & Pathology	7,314	2.9%	87.3%
Acupuncture	5,413	2.1%	94.1%
Psych	5,255	2.1%	84.9%
Chiropractic	4,717	1.9%	95.4%
Evaluation & Management	4,178	1.7%	79.5%
Functional Restoration	2,961	1.2%	92.6%
Non-Surgical Procedures	2,407	1.0%	93.3%
Other Radiology	2,396	0.9%	88.6%
Pain Management	2,025	0.8%	80.3%
Home Health Care	1,623	0.6%	97.1%
Other	4,265	1.7%	90.4%
Total¹⁰	252,938	100%	91.4%

As in the Institute’s 2014 analysis, the 2014 IMR data show requests for pharmaceuticals were by far the most frequently reviewed type of service, accounting for nearly 45 percent of all IMR reviewed services last year. Requests for durable medical equipment (DME); physical therapy; injections (primarily epidural injections), and diagnostic tests and measurements (including sleep studies and nerve conduction studies) rounded out the top 5 IMR service categories, each accounting for about 5 to 10 percent of the IMR cases. Together these five categories represented nearly three quarters of California workers’ compensation independent medical reviews conducted in 2014.

Pharmaceutical Detail and Uphold Rates

Prescription drug requests account for the single largest share of medical disputes that go through IMR, and 92 percent of the UR decisions involving these drugs are upheld by independent medical review. The authors took a closer look at the IMR applications involving pharmaceuticals to identify the types of medications that are being reviewed in the IMR process. Reviewing the 113,169 prescription drug RFAs that underwent IMR in 2014, the authors classified the requests into three categories: compound drugs, injectable drugs,¹¹ and traditional prescriptions (traditional Rx). The resulting distribution is shown in Exhibit 8, along with the percentage of the UR denials or modifications in each drug category that were upheld following independent medical review.

10. The authors were not able to classify 7,951 services out of the 260,889 services in the study sample.

11. If a drug name was listed in the service description for an injectable it was classified in the traditional Rx category. If the request was for an injectable compound it was classified as a compound. All other injections were listed under “Injections,” and they represented an additional 6 percent of IMR services.

Exhibit 8: Rx Drug IMR Applications by Drug Category and Percentage of UR Decisions Upheld by IMR

Drug Category	# of IMR Applications	% Rx	% Upheld
Compound	14,105	12%	98.1%
Injection	1,870	2%	89.6%
Traditional Rx	97,194	86%	91.1%
Total Rx	113,169	100%	91.9%

Approximately 12 percent of the pharmaceutical requests that were sent through IMR in 2014 were identified as compound drugs. After reviewing the injured workers' medical records and the clinical evidence and recommendations in the treatment guidelines, the IMR physicians upheld the modification or denial of these requests 98 percent of the time. Injectable drugs represented 2 percent of the pharmaceutical requests that underwent IMR last year, and the IMR physicians upheld nearly 90 percent of the utilization review decisions in those cases. Traditional drugs accounted for 86 percent of the pharmaceutical IMRs last year, and the UR physician's modification or denial of these drugs was upheld following independent medical review in 91 percent of these cases. To identify the types of drugs involved in workers' compensation medical disputes, the authors grouped the IMR decisions involving pharmaceutical requests for non-compounded drugs into therapeutic drug classifications used by Medispan.¹²

Exhibit 9: Distribution & Outcomes of Non-Compound Drug IMRs by Drug Type

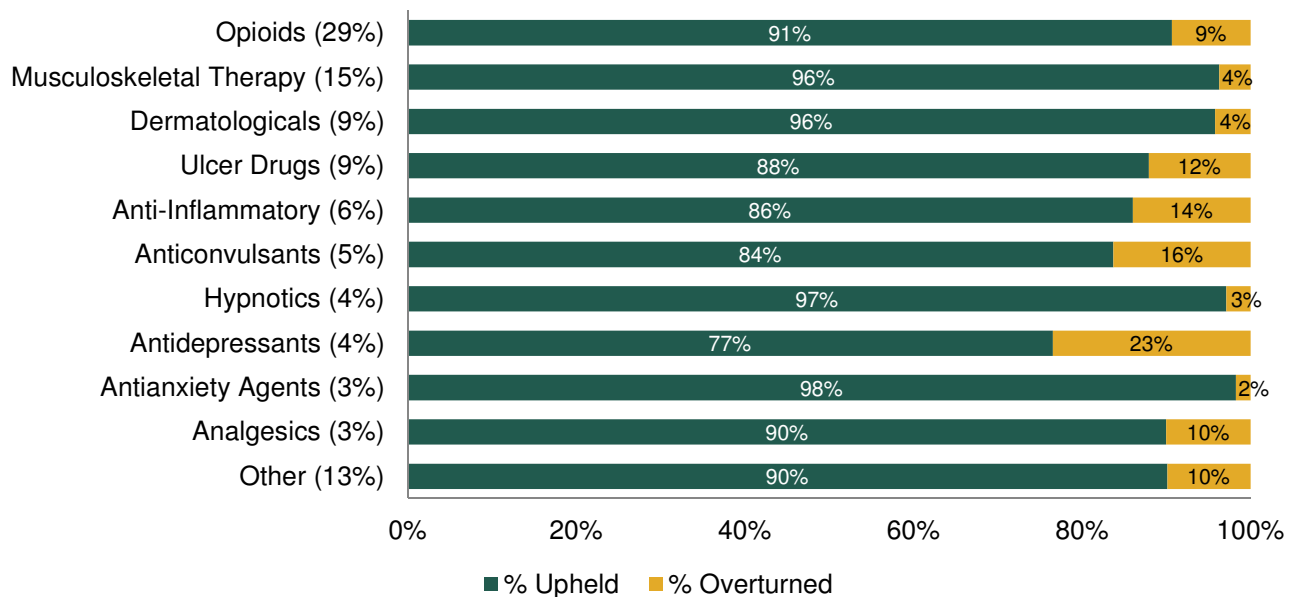


Exhibit 9 shows that requests for opioids represented the largest share of non-compound pharmaceutical requests reviewed by IMR physicians in 2014 (29 percent), and the UR decision to modify or deny those requests was upheld in 91 percent of the IMR determinations and overturned in 9 percent of the decisions.

12. Medispan, www.medispan.com is a division of Wolters Kluwer Health. The Medi-span drug database offers descriptive data on prescription drugs including drug name, strength, therapeutic class, National Drug Code (NDC) and pricing information. The authors were unable to group 9 percent of the non-compound pharmaceutical requests in the sample into a Medi-Span category, so they were excluded from Exhibit 9.

Requests for antidepressants, which accounted for 4 percent of the non-compound prescription IMR requests, had the highest overturn rate among the top 10 non-compound drug requests, with the independent medical reviewer finding that these drugs were medically necessary 23 percent of the time. Anticonvulsants or anti-seizure medications, which physicians sometimes prescribe for off-label use as mood stabilizers or for neuropathic pain, had the second highest overturn rate, with the IMR doctor overturning the UR physician's modification or denial in 16 percent of the decisions involving these drugs.

Case-Level Attributes

The header information on each IMR determination letter contains the employee's name, claim number and date of injury, as well as the name, address and salutation for the letter recipient, so to further profile the treatment requests that went through independent medical review in 2014, the authors examined a number of case-level attributes obtained from a review of the IMR determination letters.

Injury Year: Exhibit 10 shows the mix of medical service requests by year of injury. Half the services reviewed by an independent medical reviewer last year were for the treatment of injuries that occurred prior to 2010, and only 15 percent were for 2013 or 2014 injuries. The age of the injury does not appear to impact the outcome of the IMR decision, as the uphold rate showed little variation by accident year, with 91 to 92 percent of the utilization review determinations upheld after an independent medical review physician examined the medical records and the treatment guidelines.

Exhibit 10: Letters, Services and Outcome by Injury Year Category

Injury Year Category	% Letters	% of Services	% Services Upheld
<2004	21%	23%	91.0%
2004-9	26%	27%	91.1%
2010-12	37%	36%	91.7%
2013-14	15%	15%	91.3%

The distribution of medical services requested in the IMR cases was also consistent across the injury years, except that requests for surgery were more prevalent for older injuries and diagnostics were more common in newer injuries.

Geographic Distribution: To measure the prevalence of medical disputes resulting in independent medical review in different areas of the state, the authors reviewed the geographic information contained in the IMR determination letters issued in 2014. The geographic distribution was derived using the ZIP code from the address listed on the letter, which was addressed to either the injured employee or their representative.

Exhibit 11 shows the distribution of letters by region within California, the percentage of open and closed workers' compensation claims that come from those regions as identified by CWCI's Industry Claims System,¹³ as well as the ratio between the two, which indicates whether the volume of IMRs is disproportionately high or low relative to the claim volume in each region. The percentage of decisions upheld ranged from a low of 89.3 percent in San Diego to a high of 92.7 percent in Los Angeles.

13. The Industry Claims Database is a proprietary database maintained by CWCI that contains detailed information, including employee and employer characteristics, medical service information, benefit and other administrative cost detail on more than 4 million California workers' compensation claims.

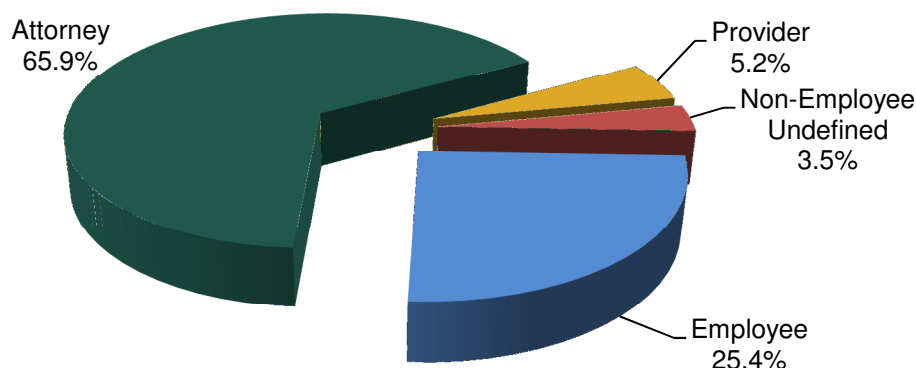
Exhibit 11: Distribution of 2014 IMR Determination Letters and Claims by Region

Region	Letters	% of Letters	% of Claims	Ratio	% Upheld
Los Angeles	47,457	36%	24%	1.5	92.7%
Bay Area	25,520	19%	19%	1.0	89.6%
Inland Empire/Orange	21,480	16%	18%	0.9	92.0%
Valleys	20,310	15%	20%	0.8	90.3%
Central Coast	8,646	6%	7%	0.9	90.8%
San Diego	6,587	5%	8%	0.6	89.3%
North Counties	2,047	2%	3%	0.5	89.7%
Sierras	1,203	1%	2%	0.4	90.9%
Grand Total¹⁴	133,250	100%	100%	1.0	91.4%

The ratio comparing those proportions shows that Los Angeles accounted for a disproportionately high number of IMR decisions, the volume of IMR decisions in the San Francisco Bay Area was in line with the claim volume in the region, while the Central Valley, San Diego, the North Counties and Sierras had a disproportionately low number of IMR decisions relative to the number of claims from those regions.

IMR Determination Letter Addressee: After a medical service request is modified or denied by a UR physician, an IMR application may be submitted by the injured worker or their representative – usually the worker’s attorney or the physician who requested the service. To determine how often applications were initiated by an injured employee rather than a representative, the authors compared the employee name to the letter addressee. If they were not the same, the letter was assumed to be addressed to a representative. Exhibit 12 shows the proportion of letters addressed to the employee (25.4 percent), a provider (5.2 percent) or an attorney (65.9 percent). Overall the percentage of treatment requests upheld following IMR was not materially different for applications submitted by injured workers, physicians and attorneys.

Exhibit 12: Distribution of IMR Determinations by Letter Addressee

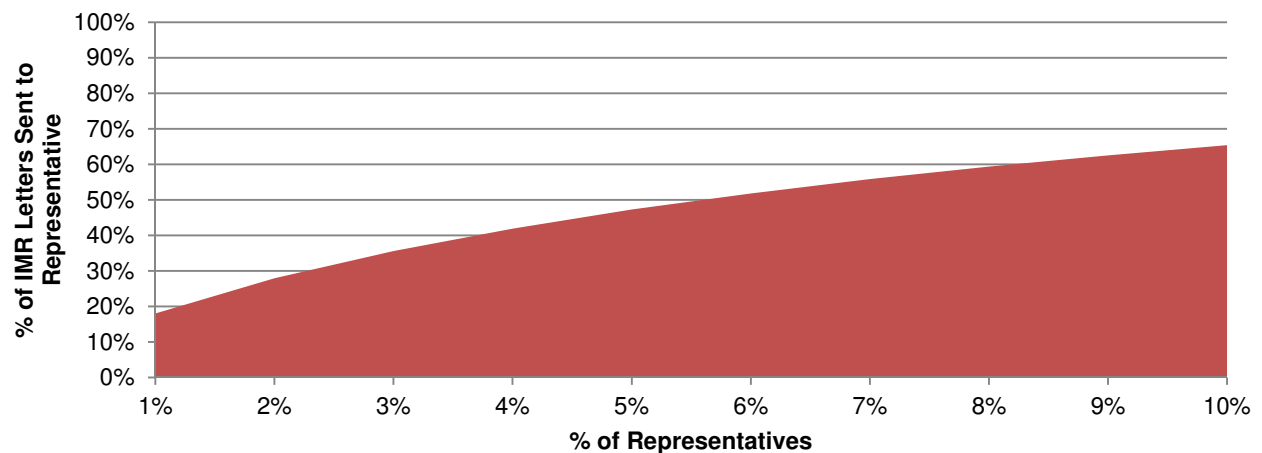


14. For the regional analysis, the authors omitted 4,531 IMR determination letters that had formatting issues or that were addressed to out-of-state recipients.

With nearly two-thirds of the 2014 IMR decision letters addressed to the injured workers' attorneys, it is clear that most injured workers who dispute a utilization review physician's determination regarding the necessity of a requested treatment are represented by counsel. To understand the impact of high-volume representatives on the total number of IMR requests, the authors used the addressee information on each IMR determination letter to identify the specific individual to whom the decision was sent, then tallied the total number of letters sent to that individual.

Exhibit 13 reveals that the vast majority of 2014 IMR decisions addressed to someone other than the employee were addressed to only a small number of representatives, with the top 1 percent of representatives named on 18 percent of the decision letters last year, and the top 10 percent of representatives named on 65 percent of the letters.

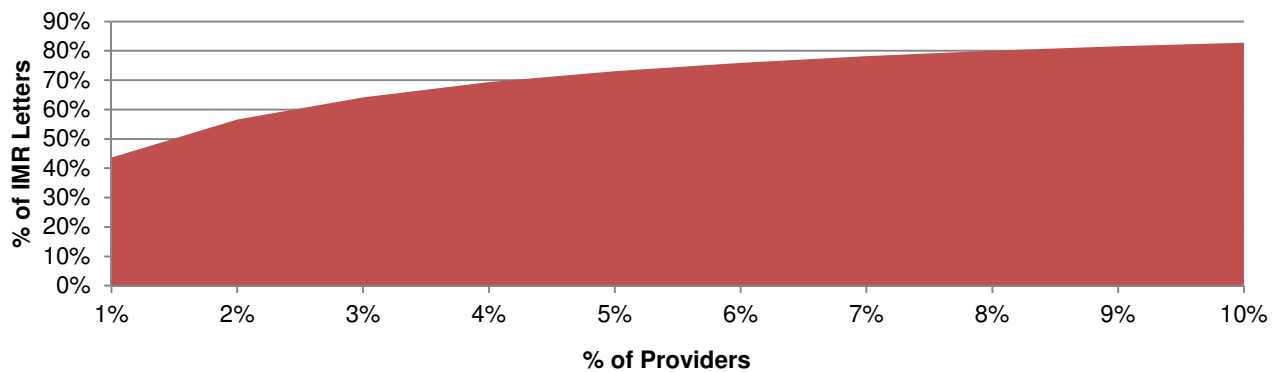
Exhibit 13: Percent of Non-Employee IMR Letters Addressed to High-Volume Reps



% of Reps	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
% of Letters	18%	28%	36%	42%	47%	52%	56%	59%	62%	65%
# of Reps	72	144	216	287	359	431	502	574	646	718

High-Volume Providers: After reconciling variations in the spelling of provider names, the authors identified approximately 13,000 unique provider names in the 2014 IMR determination letters. Just as the prior exhibit showed a small number of representatives were named in nearly two-thirds of the IMR requests, Exhibit 14 shows that only a small number of medical providers were responsible for most of the requested medical services that resulted in IMR disputes. The top 1 percent of medical providers named in the 2014 IMR decision letters were linked to 44 percent of the letters responding to disputed medical service requests, while the top 10 percent were named in 83 percent of the IMR determination letters.

Exhibit 14: Percent of 2014 IMR Decision Letters Associated With High-Volume Providers



% of Providers	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
% of Letters	44%	57%	64%	69%	73%	76%	78%	80%	82%	83%
# of Providers	134	267	400	533	666	799	933	1,066	1,199	1,332

The concentration of medical providers involved in the disputed treatment requests can also be seen in Exhibit 15, which shows the percentage of IMR determination letters, disputed services and claims that were linked to the 10 physicians with the highest number of IMR decision letters last year. These 10 providers alone were named on 11 percent (14,525) of the IMR determination letters and accounted for 15 percent of the disputed services submitted for independent medical review.

Exhibit 15: Percent of 2014 IMR Decisions, Requested Services, Claims - Top 10 Providers

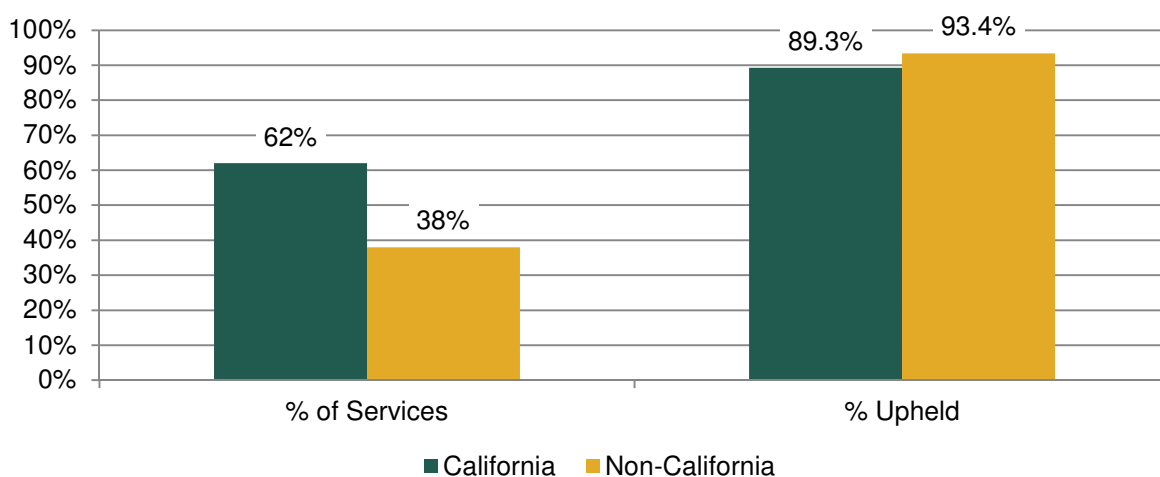
Provider	Letters	Services	Claims	IMR Upheld
Provider 1	1.9%	1.9%	3.1%	91.4%
Provider 2	1.6%	3.2%	1.9%	94.7%
Provider 3	1.0%	2.3%	1.1%	91.5%
Provider 4	0.9%	1.6%	1.2%	94.4%
Provider 5	0.9%	1.1%	1.3%	87.3%
Provider 6	0.9%	1.0%	1.3%	89.8%
Provider 7	0.8%	1.1%	1.1%	90.3%
Provider 8	0.8%	1.1%	1.0%	88.8%
Provider 9	0.8%	0.9%	1.0%	88.8%
Provider 10	0.8%	0.8%	1.0%	86.3%
TOP 10	11%	15%	14%	91.3%

Reviewer State and Specialty: In responding to DWC's request for proposal for an independent medical review organization,¹⁵ Maximus noted that it uses medical professionals from throughout the country to perform independent medical reviews and detailed the process it utilizes in performing IMRs. After receiving an eligible IMR application, Maximus determines the medical specialty or subspecialty required to perform the IMR, then identifies an appropriate, board-certified physician to conduct the review. All physician reviewers are independent contractors and all spend at least 60 percent (24 hours) of their work week in active practice. While preference is given to California licensed physicians, qualified physicians licensed in other states also may serve as independent medical reviewers. After verifying the physician's availability and knowledge regarding the injured worker's condition, the disputed service, and treatment options for the condition, Maximus assigns the physician to the case. The role of an IMR physician is not to perform additional physical exams of the injured worker, but rather to review:

- the treating physician's reports
- any other reports noted in the request for authorization or UR decision
- the UR determination that the service was modified or denied
- information given to the injured worker by the claims administrator regarding the UR decision
- materials the employee or their physician provided to the claims administrator to support the treatment request and
- any other relevant documents or information, including claims administrator statements explaining the decision to deny, modify or delay the requested treatment

After reviewing the documents submitted by the parties, the IMR physician issues a determination letter stating if the disputed service is medically necessary. Each letter contains information about the state the reviewer is licensed in and their medical specialty, so the authors were able to produce a distribution of IMR decisions based on the state where the reviewer was licensed (Exhibit 16). In 2014, 62 percent of the disputed services were reviewed by providers licensed in California, while 38 percent were reviewed by physicians from other states. Those licensed in California upheld 89.3 percent of the UR modifications or denials of treatment, while those licensed outside California upheld 93.4 percent of the UR decisions.

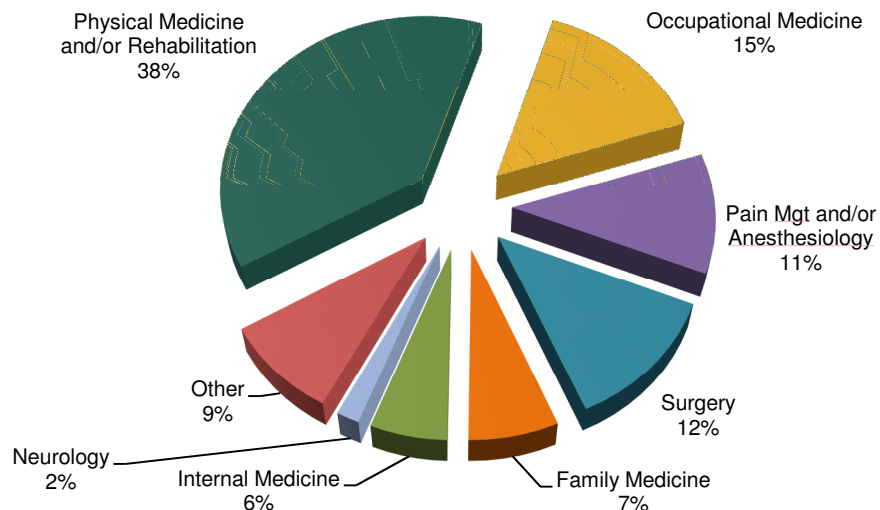
Exhibit 16: Percent of Services Reviewed & Uphold Rates: Calif vs Non-Calif Physicians



15. "Roles and Responsibilities" p. 101, Maximus Response to DWC RFP 13-001, www.dir.ca.gov/dwc/IMR/IMR-Contract/IMR-Contract.pdf

The IMR reviewer's medical specialty is also noted in the decision letter, so the authors also calculated the distribution of the 2014 independent medical reviews by physician specialty, which is shown in Exhibit 17.

Exhibit 17: IMR Reviewer Specialty – 2014 Independent Medical Reviews



Physical medicine and/or rehab and occupational medicine specialists conducted over half (53 percent) of the IMRs in 2014, which reflects the heavy use of these services in workers' compensation. Surgeons did the reviews in nearly 1 out of 8 IMRs, with 91 percent of those surgeons specializing in orthopedic and spine surgery, again reflecting the high incidence of back and joint problems in workers' compensation, and the disputes that arise over whether surgery is medically necessary or appropriate.

Overall, in 91 percent of the 2014 IMR determinations, the UR physician's decision to modify or deny a requested medical service was upheld following an independent medical review, with the uphold rate varying only slightly based on the IMR reviewer's medical specialty. Independent medical reviewers who specialize in occupational medicine upheld 87 percent of the UR determinations – the lowest rate of the 7 medical specialties included in the analysis – while neurologists who conducted independent medical reviews upheld nearly 95 percent of the UR decisions – the highest uphold rate among the 7 specialties.

Exhibit 18: Percent of UR Decisions Upheld By Independent Medical Reviewer Specialty

Specialty	% Upheld
Physical Medicine and/or Rehabilitation	92.7%
Occupational Medicine	87.0%
Pain Medicines and/or Anesthesiology	91.7%
Surgery	91.9%
Family Medicine	91.0%
Internal Medicine	90.9%
Neurology	94.9%
Other	91.3%

Exhibit 19 provides a breakdown of the other specialties of the physician reviewers who conducted independent medical reviews of surgical requests in 2014 and shows that beyond orthopedic and spine surgery, no other surgical specialty accounted for more than 4 percent of the surgical IMRs.

Exhibit 19: Distribution of Surgical IMR Reviewers by Surgical Specialty

Surgical Specialty	Letters	%
Orthopedic or Spine Surgery	15,617	91%
Neurosurgery	661	4%
Plastic Surgery	220	1%
Surgical Critical Care	145	1%
Podiatric Surgery	123	1%
Other	356	2%
Total Surgery	17,122	100%

PART 3. THE IMR DECISION-MAKING PROCESS

As described earlier, each IMR decision letter includes a case summary, a listing of the documents reviewed and for each service under review there is a description; a section giving the reviewer's summary of the guidelines used by the claims administrator and the guidelines used by the reviewer; and a narrative describing the reviewer's rationale for the decision. To understand more about the decision-making process, the authors examined information from these sections in two ways:

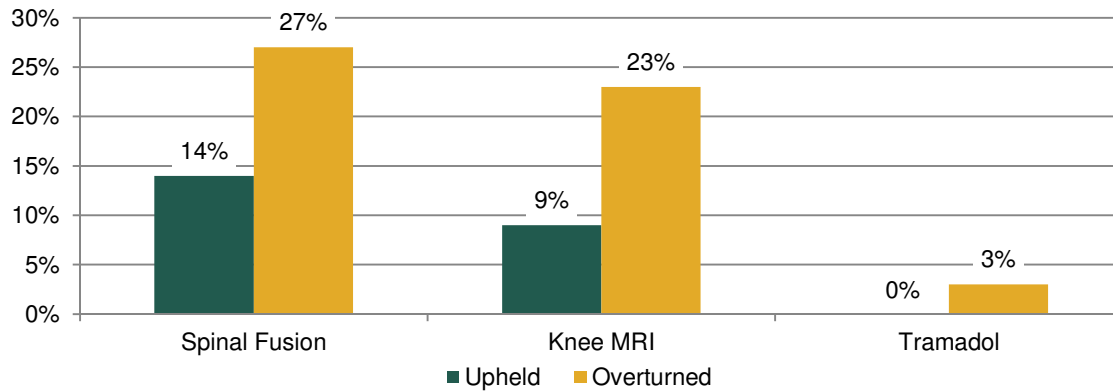
- 1) by characterizing document sources and use of guidelines across all of the letters; and
- 2) by performing a detailed examination of the entire letter contents from random samples of upheld and overturned decisions for three services: spinal fusions, Tramadol, and MRIs of the knee. Spinal fusions were chosen because of the ongoing controversy over their efficacy, Tramadol because it is one of the most common drugs reviewed, and knee MRIs because they are a common diagnostic test.

Timing and Sources of Information Used by the IMR Reviewer

Each letter contains a section that shows the records received by source (claims administrator, employee or their representative and provider). Approximately 22 percent of the time, the reviewer had access to records from sources in addition to the claims administrator. These records can contain information submitted after the UR denial such as progress reports, patient status, and test results, or simply records that duplicate those sent by the claims administrator. In the detailed sample, the authors found that the reviewer sometimes cites results in their decision rationale that were not listed in the "Documents Reviewed" section, so this section of the letter may not always represent a comprehensive list of documents available during the review.

In reviewing the sample decisions, the authors took a detailed look at how often information submitted after the UR denial was used by the IMR physician as part of the rationale for the decision. Exhibit 20 shows that the use of post-UR information was relatively high in the spinal fusion determinations (14 percent of upholds and 27 percent of overturns) and in the knee MRI determinations (9 percent of upholds and 23 percent of overturns), but was rarely used in the Tramadol sample.

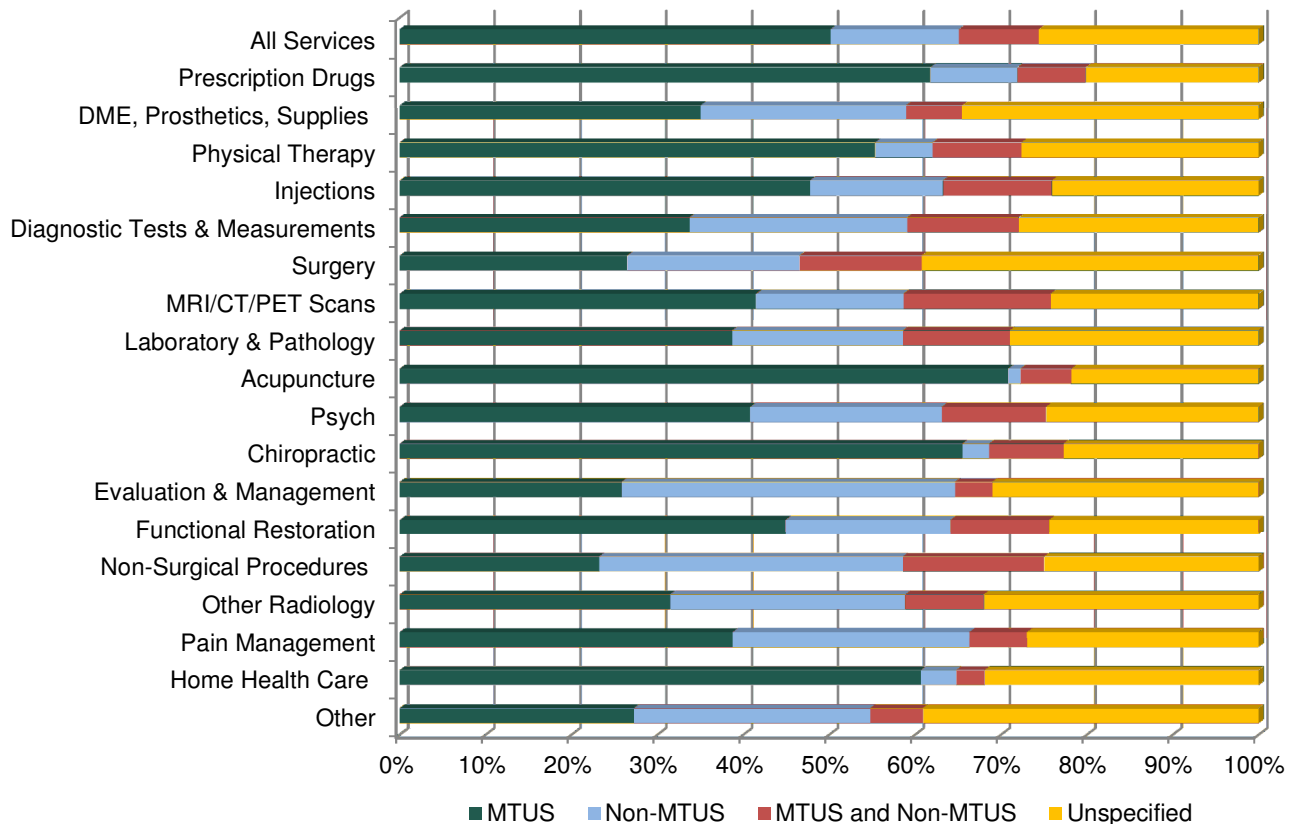
Exhibit 20. Percent of Sample Decisions Using Post-UR Information



Guidelines Used in Decisions

Using the data extraction methodology, the authors cataloged each requested treatment against the guidelines listed by the IMR reviewer as the basis for their decision. About 75 percent of the guideline summaries specified whether the guidelines used were part of the Medical Utilization Treatment Schedule, and among those summaries, 80 percent listed MTUS guidelines or both MTUS and non-MTUS guidelines. The rest relied exclusively on non-MTUS guidelines. Exhibit 21 shows the distribution of guidelines listed by the reviewer as the basis of their decisions, broken out by medical service category.

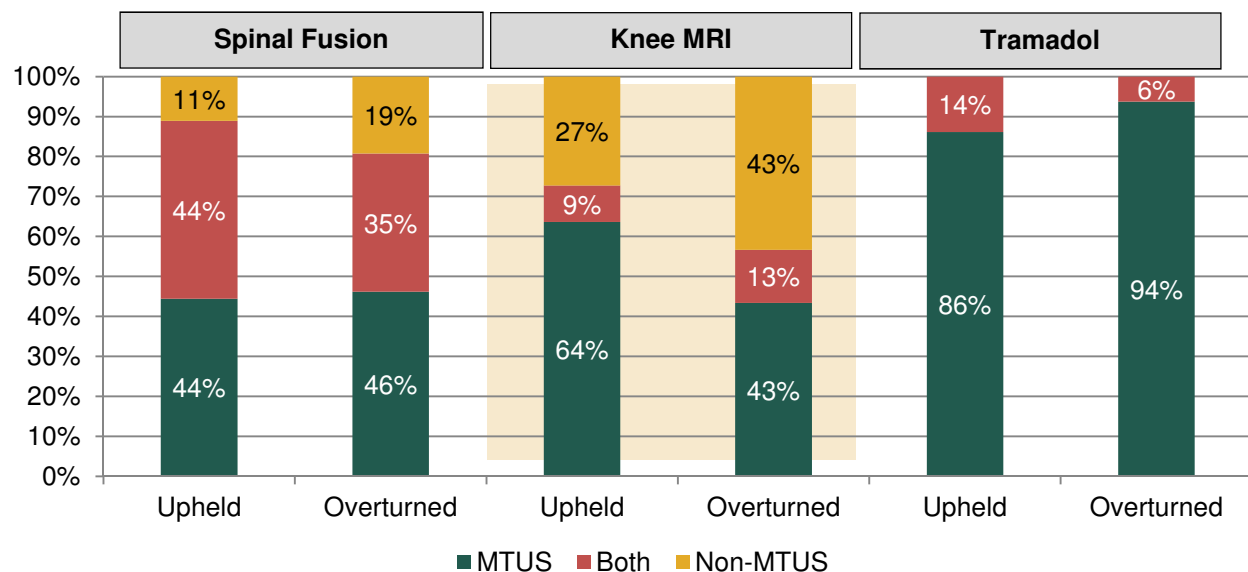
Exhibit 21: Guidelines Listed as Basis of 2014 IMR Decisions



Three Examples of IMR Decision-Making

To provide a deeper look at the UR/IMR decision making process, the authors conducted a focused review of the guidelines that were cited in the sampled IMR determination letters related to the requests for spinal fusions, knee MRIs, and the painkiller Tramadol. Exhibit 22 summarizes the IMR physicians' use of the MTUS and non-MTUS guidelines as noted in the decision rationale of the sampled determination letters for these services.

Exhibit 22: Guidelines Cited in Spinal Fusion, Knee MRI and Tramadol Determinations



The review of the rationales in the determination letters demonstrated how the use of the Medical Treatment Utilization Schedule (MTUS) guidelines versus non-MTUS guidelines varies by the type of requested service, and by whether the guideline is used to uphold or overturn the UR decision.

- Spinal Fusion Sample:** the MTUS alone provided the clinical rationale in nearly half of the IMR decisions upholding or denying a spinal fusion request. A combination of the MTUS and other guidelines was cited in 44 percent of the IMR letters that upheld a spinal fusion UR decision, as well as in 35 percent of the IMR decisions that overturned the UR decision. The IMR reviewer relied on non-MTUS guidelines alone in 11 percent of the decisions upholding the denial or modification of a spinal fusion request, and in 19 percent of the decisions in which the UR determination was overturned.
- Knee MRI Sample:** nearly two-thirds of IMR determinations that upheld a denial or modification of a request for an MRI of the knee, and 43 percent of the IMRs overturning such decisions, were based on the MTUS alone. The MTUS guidelines combined with other guidelines were used in 9 percent of IMRs that upheld the UR decision on knee MRIs, and in 13 percent of the cases where UR was overturned and the knee MRI was approved. More than a quarter of the IMRs that upheld the UR denial or modification of a knee MRI and 43 percent of those that overruled the UR decision relied solely on non-MTUS guidelines, which may suggest: 1) a lack of adequate and clear guidance in the MTUS guideline; or 2) that the IMR reviewers in these cases may have a greater familiarity with non-MTUS guidelines and the greater flexibility they provide.

- **Tramadol Sample:** use of the MTUS was highest for Tramadol, where the DWC-promulgated guideline alone provided the clinical rationale for 86 percent of the IMR decisions that upheld the UR denial or modification of the request, and for 94 percent of the decisions that overturned the UR determination. In the balance of the Tramadol decisions, the IMR physician cited a combination of the MTUS and other guidelines, while none of the Tramadol IMR decisions relied solely on non-MTUS guidelines.

The authors' examination of the determination letters in the sample revealed that many of the IMR decision letters would benefit from an improved clinical case summary and discussion of the reviewer's decision rationale. It was also apparent that in many instances the independent medical reviewer found that the requesting physician had not provided adequate clinical documentation for the injured employee's treatment, history and functional status.

IMR determination letters are intended to have the secondary purpose of educating physicians and claims administrators on what medical care is medically necessary so that in future, appropriate medical care will be requested and approved, speeding medical treatment and minimizing disputes. A clearly articulated rationale offers the best teaching tool for this purpose. An excellent rationale:

- Cites the MTUS (unless the MTUS does not cover the injury)
- States the MTUS criteria for the requested good or service
- References each section with the page number, and excerpts each guideline relied upon
- States how the clinical documentation supports or does not support MTUS criteria
- Identifies by description and date the documents relied upon in making the decision and specifically states when the documents relied upon to overturn a UR denial were not available at the time of the UR denial

The UR/IMR process was improved when the requesting physician clearly outlined the reasons for the requested goods and services and backed them up with clinical findings as that helped assure that the ultimate decision on the requested medical service was firmly supported by evidence-based medicine.

Do No Harm

As outlined above, the components of the medical review determination and its communication are complex. While an overwhelming proportion of requested medical services in California workers' compensation are approved following utilization review, the IMR process allows the injured worker to obtain a second, independent opinion on the medical necessity of any service that is modified or denied by a UR physician, and to have their records as well as any new or additional information considered when the service request is reevaluated by an independent reviewer. In 2014, 9 percent of medical service requests that went through IMR after being modified or denied by a UR physician were subsequently approved by the independent medical reviewer. The process exists to assure that the medical services provided to injured workers are appropriate and have been proven effective using the principles of evidenced-based medicine, as well as to prevent unnecessary or deleterious care that might not only impede the injured worker's recovery, but could leave them with further disabilities and impairments. Given the level of medical knowledge needed to make such determinations, the process is better suited for physicians than for non-physician workers' compensation judges.

Consider, for example, the following requested treatment that was obtained from the study sample of 2014 IMR cases. An injured worker's physician requested the following set of complex surgical procedures to address continued symptomology post-surgery:

1. L3-4 transforaminal lumbar fusion interbody fusions with instrumentation, removal of instrumentation and exploration from L4-S1; and
2. L3-S1 posterior spinal fusion (PSF/PSI).

In denying the request, the rationale provided by the independent medical reviewer stated, in part,

“In this case, an L3-4 transforaminal lumbar interbody fusion could have been performed alone at the L3-4 segment to address adjacent level segment disc disease at this level. This would not have reasonably required the additional procedures requested for this injured worker or the proposed L3 through S1 posterior spinal fusion. These procedures would have been considered excessive for the pathology noted on imaging and based on the injured worker's presentation.”

In total, the authors found that 39 percent of the 2014 IMRs involving spinal fusion requests were related to post-fusion issues, leading to requests for revisions and/or hardware removal. It can be reasonably stated that the review of medical records and decision-making associated with interpretation of such records must be accomplished by a physician specializing in the surgical treatment of complex spinal issues.

The 2014 IMR determination letters contained multiple other examples of questionable services that would have been performed unfettered if the UR and/or IMR processes had not been in place. Three such examples follow:

Example 1:

The physician proposed administering Propofol to a patient during an epidural injection because they get “anxious.” Propofol is typically used during major surgeries or ventilator placement.

Example 2:

The proposal was to fuse every vertebra from the pelvis to the middle back (7-levels) in a 76-year old patient. The request was denied because there was no documentation of a lesion, neural compromise, or limitations due to radiating leg pain, no evidence of prior conservative treatment, and no clinical findings supporting the procedure.

Example 3:

One IMR determination letter addressed requests for Oxycodone and Ambien prescriptions, a left knee MRI, and an MRI of the right shoulder. The IMR physician took issue with each of these requests:

- The treating physician had requested a higher dose of Oxycodone even though the patient had been on opioids since 2012 and there was documented addiction;
- Ambien was requested even though there was documentation that when the patient had taken it in the past it was ineffective; and
- Shoulder and knee MRIs were requested even though there was no evidence of shoulder or knee pain or other symptoms.

Had the UR/IMR process not been in place, this patient, who had already been subjected to multiple failed back surgeries and become addicted to opioids would have been prescribed even higher dosages of Oxycodone, combined with ineffective sedatives, and been subjected to unnecessary scans of areas where there was no evidence of a serious underlying condition requiring treatment.

SUMMARY

As independent medical review completes its second full year of operation, the outcomes point to the pivotal role it plays in assuring appropriate medical services for injured workers, supporting medical dispute resolution, and containing costs. The Workers' Compensation Insurance Rating Bureau of California recently announced a significant decrease in medical benefit development coupled with a significant increase in expenses related to the delivery of medical benefits. IMR is likely to be associated with both trends.

There were approximately 138,000 IMR determinations in 2014 -- far greater than was expected, and the time between application and IMR determination was much longer than predicted. However, the median timeframe dropped significantly in the last quarter of 2014, which may be a sign that the process is reaching a steady state that can meet expectations. The 2014 IMR decision letters reveal that a relatively small number of providers accounted for a disproportionate share of the medical service requests that went through IMR last year, with 134 providers named on 44 percent of the letters and the top 10 providers alone named as the requesting physician in 1 out of every 9 IMR determination letters. Given the small number of providers who generated such a high percentage of the disputed treatment requests, and how few of the treatment requests denied by a UR physician were overturned, it may make sense to engage these physicians directly in conversations about their treatment choices.

As in the earlier analysis, prescription drug requests were the predominant medical service that went through independent medical review last year, accounting for nearly 45 percent of all IMR decisions. This calls for special attention, especially for the 12 percent of those requests that involved compound drugs, which were rarely overturned. Services that have higher than average overturn rates may identify areas of medical controversy that the MTUS does not fully address. As pointed out in recent studies, consideration of a drug formulary may be the linchpin needed to reduce workers' compensation pharmaceutical disputes and control costs.¹⁶

The IMR results from 2014 provide validation of the UR process, as the vast majority of the UR decisions were upheld following review by an independent medical review physician. The IMR determination letters also offer a glimpse into the types of services that don't make it through the UR process. Some of the requested medical services are obviously egregious and it is clear that the UR process prevented harm to the injured worker.

Given the controversies and challenges that have surrounded utilization review and the implementation of independent medical review process, CWCI will continue to monitor the process and the outcomes. Toward that end, future research will produce detailed assessments of various types of medical services requested for injured workers, describing overall utilization patterns, and measuring their prevalence in in physician utilization review and independent medical review.

16. V., Liu, T. "Impact of a Texas-Like Formulary in Other States." WCRI, June, 2014; Swedlow, A., Hayes, S., David, R. "Are Formularies A Viable Solution to Controlling Prescription Drug Utilization and Cost in California Workers' Compensation, CWCI Report to the Industry, October 2014

About the Authors

Rena David is the Senior Vice President in charge of operations and research at the California Workers' Compensation Institute.

Stacy L. Jones is a Senior Research Associate at the California Workers' Compensation Institute.

Brenda Ramirez, Director of Claims and Medical Care, is responsible for research and commentary on Regulatory Activities as well as CWCI's Claims and Medical Care Committees.

Alex Swedlow is President of CWCI.

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 70 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 web site (<http://www.cwci.org>).

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1111 Broadway, Suite 2350
Oakland, CA 94607

510-251-9470

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