California Workers' Compensation Institute

Research Update

Post-Reform Medical Service Approval Rates in California Workers' Compensation

By Rena David, Robby Bullis, Stacy Jones, and Bob Young **October 2019**

Executive Summary

California workers' compensation reforms enacted in 2003 and 2004 introduced a new process for approving medical services for injured workers, including the adoption of mandatory utilization review (UR) using evidence-based medicine guidelines. Nearly a decade later, state lawmakers included reforms in SB 863 that added a new element to the medical service approval process, mandating the use of independent medical review (IMR) to resolve disputes over medical necessity.

With the implementation of these reforms, medical benefit delivery in California workers' compensation became subject to a series of checks and balances. Under this process, treating physician requests for medical services must be reconciled against treatment guidelines adopted by the state Division of Workers' Compensation (DWC) in the Medical Treatment Utilization Schedule (MTUS). Components of medical review and dispute resolution may include review of medical reports and bills by claims adjusters; case managers; nurses; UR physicians; and when requested, IMR physicians.

The Institute's latest study of California's medical benefit delivery process expands on earlier analyses to determine the proportion of requested and/or delivered care[1] that is approved versus denied after UR and IMR by service category. Results show that 94.1 percent of services performed or requested from January 1, 2018 to October 31, 2018 were either approved (92.5 percent) or approved with modifications (1.6 percent), and 5.9 percent were denied, though outcomes varied by service category. Evaluation and management services (*e.g.*, office and emergency department visits, consultations) represented 29.1 percent of the medical services in the 2018 data set and had an approval rate of 99.7 percent. Surgery services were approved with or without modifications 94.9 percent of the time, while 89.4 percent of physical medicine services (physical therapy, chiropractic manipulation, and acupuncture) were approved with or without modifications.

[1] For purposes of this report, medical treatment services that were requested for and/or delivered to an injured worker were defined as "medical services."

An examination of the 2018 data shows that at least 12 percent of all services reviewed in IMR were for UR decisions where the type of medical service was approved, but the quantity or the duration of the service was modified based on MTUS standards. The authors raise the question of whether UR determinations that simply modify the quantity of a prospective medical service to make it comport to the evidence-based medicine standards should be eligible for the IMR appeal process.

For the first time, the authors were able to estimate the proportion of UR denials and modifications that underwent IMR and found that an estimated 29 percent of UR modification and denial decisions were appealed and reviewed by an IMR physician. However, an examination of the top law firms identified in the UR data reveals that the IMR referral rates by applicant attorneys varied greatly. Some attorneys submitted nearly all of their clients' treatment modifications and denials to IMR, while others sent none.

The study also examines the impact of the UR provisions of 2016 legislation (SB 1160), which effective January 1, 2018, exempted the following services from prospective UR:

- Medical services rendered within 30 days of the date of injury, unless they are on a list of excluded services (*e.g.*, nonemergency surgery, advanced imaging service, psychological treatment);
- Basic medical services, (*e.g.,* physical medicine, evaluation and management, lab, and x-rays) performed by MPN providers in accordance with MTUS guidelines; and
- Emergency services.

One goal of SB 1160 was to speed delivery of medical care, and while the study does find that the proportion of physical medicine services performed in the first 30 days increased from 2017 to 2018, there was no meaningful change in the delivery of other services. At the same time, the total volume of services performed in the first 60 days from injury did not increase and the denial rate for these services remained very low in both periods, ranging from 0.0 to 4.8 percent. The MTUS Drug Formulary, mandated under AB 1124, exempts some drugs from prospective UR, and the study shows that as expected, denial and modification rates were lower for exempt drugs than for non-exempt drugs.

The last section of the study continues the Institute's monitoring of IMR volumes and results. After a 7 percent increase in volume from 2017 to 2018, IMR volume for the first half of 2019 appears to be dropping back toward 2017 levels. As in 2018, IMR reviewers have upheld UR decisions 88 percent of the time through the first half of 2019. In addition, a small number of physicians continue to drive a disproportionate share of the IMR volume, with the top 1 percent associated with 44 percent of the IMR decisions.

Background

For more than a decade, California law has required every workers' compensation claims organization in the state to have a UR program governed by written policies and procedures consistent with requirements detailed in the Labor Code[2] and filed with the DWC Administrative Director (AD). The goal of UR is twofold: to ensure that care provided to injured workers is medically necessary, effective, and appropriate for the injury; and to protect injured workers from unproven, unwarranted, and potentially harmful treatment. UR programs address not only the treatment modality, but the frequency, duration, and setting of the requested services. The UR process may include prior authorization for certain treatment requests outlined in the written program or simple review and approval by a claims examiner or other non-physician; however, only a physician may deny or modify a treatment request. Thus, any request that is not approved in the initial review, or that is not subject to prior authorization, must be reviewed for medical necessity by a physician who uses evidence-based guidelines to decide whether to authorize, modify, or deny the treatment.

In 2012, state lawmakers noted that the workers' compensation medical dispute resolution process, which relied on judges rather than physicians to make medical determinations, had become costly, time consuming, and often failed to ensure the uniform application of evidence-based medicine standards. In response to those concerns, they established the IMR process as a corollary to UR. The DWC adopted the emergency regulations needed to implement IMR in late 2012, and those regulations took effect for new claims in January 2013 and for all claims in July 2013. In 2016, three years after IMR took effect, state lawmakers made further refinements to the UR/IMR process, addressing concerns about timely access to care by enacting the prospective UR exemptions included in SB 1160.

In recent years, state policymakers have also enacted changes that altered the approval and dispute resolution process for pharmaceuticals. AB 1124, signed by Governor Brown in 2015, authorized the AD to create an evidence-based drug formulary for workers' compensation. That formulary, based on the American College of Occupational and Environmental Medicine (ACOEM) guidelines, took effect January 1, 2018. The formulary included a list of drug ingredients that were deemed exempt from prospective UR or for which there were special fill exemptions. The legislative intent was to facilitate appropriate medical care for injured workers and to reduce the frictional costs associated with medical necessity determinations.

[2] California Labor Code §4610

Under the IMR process, if a UR physician evaluates a medical service request for an injured worker against the MTUS, or other applicable guidelines, and determines it is not medically necessary, the injured worker may appeal the decision and obtain a final determination from an independent physician who has expertise in the treatment of that type of injury. The IMR physician reviews the medical records, the evidence on which the UR decision was based, and any subsequent information provided by or on behalf of the injured worker, then issues a decision. The goal of the UR/IMR process is to help ensure that injured workers' medical care is appropriate, while providing a check against prescription drugs, diagnostic tests, surgeries, and other medical services that do not meet California's evidence-based medicine standards and that could delay a worker's recovery or lead to further impairment or disability.

In the six years since the full implementation of IMR, there has been ongoing debate over how well the UR/IMR process meets those goals. During that time, the authors have produced multiple studies that have tracked UR/IMR volume and outcomes. The most recent of those analyses, published in April 2019,[3] provided detailed results from more than 830,000 IMR decision letters issued between January 2014 and December 2018 in response to applications submitted to the DWC after a UR physician modified or denied a requested medical service.

This study updates and builds on the earlier analyses using data from CWCI's Industry Research Information System (IRIS) database;[4] UR medical necessity determinations from CWCI members; and IMR outcomes data derived from IMR decision letters. The primary goal of the study is to advance the discussion on the current medical review and dispute resolution processes by using data at the service level to enable a more refined level of analysis. The study focuses on each component of the medical review and dispute resolution process, including approvals, partial approvals, and denials, with results at each of the review stages broken out by service category.

[3] David, R., Bullis, R. IMR Decisions: Jan 2014 Through Dec 2018. CWCI Research Update, April 2019.
[4] IRIS is CWCI's proprietary transactional database of California workers' compensation claims comprised of approximately 60 percent of the insurer market as well as self-insured employers.

The Medical Review/IMR Process

For most claims organizations, medical review consists of a multilevel process. When a Request for Authorization (RFA) is submitted by an injured workers' medical provider, it is first reviewed by a claims adjuster, case manager, or nurse who assesses whether the treatment complies with the MTUS or other nationally recognized, evidence-based, peer reviewed treatment guidelines for the injury, and responds within tight time frames.[5]

While claims adjusters, case managers, or nurses who perform utilization review may approve treatment requests, as noted previously, only a physician may deny or modify a request. If the initial reviewer cannot determine if a requested service is medically necessary, the RFA is sent to a UR physician to review the request and the applicable guidelines, and to make the determination. If the UR physician determines that the requested service is not medically necessary, the injured worker is notified that the request has either been modified or denied. After receiving a notice of a UR modification or denial, the injured worker or his or her agent (typically their attorney) has 30 days to submit an IMR application if they wish to dispute the UR decision.

If an IMR application is submitted, the IMR process provides a final determination on the medical necessity after the RFA, medical records, UR determination letter, and any new or additional information are reviewed by an independent reviewer. Upon acceptance of the IMR application by DWC/Maximus,[6] the claims administrator must submit any supporting documentation to Maximus within 10 days of the notice of assignment or within 24 hours if there is an imminent threat to the injured worker's health. An injured worker or his or her agent also may submit supporting documentation. The treating physician should already have provided any required reports and supporting documentation to the claims administrator as part of the mandatory reporting requirements under 8 CCR §9785. All costs related to the IMR are fully paid for by the claims administrator as an allocated expense on the claim.[7]

After receiving an eligible IMR application, Maximus examines the application to determine the medical specialty or subspecialty required to perform the IMR and identifies an appropriate, board-certified physician to conduct the review. All IMR physician reviewers are independent contractors and according to Maximus, all spend at least 60

[5] Labor Code §4610(i)(1)(3) currently mandates response by the claims administrator within 5 working days of receipt of an RFA, and within 72 hours if the employee faces "imminent and serious threat to his or her health."

[6] Maximus Federal Services is the independent medical review organization (IMRO) that is under contract with the state to manage the IMR process.

[7] Post-January 1, 2015 IMR fees are: Standard IMRs involving non-pharmacy-only claims, $390; Expedited IMRs involving non-pharmacy-only claims, $515; Standard IMRs involving pharmacy-only claims, $345. The DWC has posted IMR fees for post-January 1, 2015 applications at https://www.dir.ca.gov/dwc/IMR.htm. Fees prior to January 1, 2015 are listed in Tit. 8 CCR §9792.10.8.

percent (24 hours) of their work week in active practice.[8] 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 the treatment options for the condition, Maximus assigns a physician to the case. The role of an IMR physician is not to perform any additional physical exam of the injured worker, but instead, to review the following:

- 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 the 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 service.

Within 30 days of Maximus receiving the IMR application and the supporting documentation and information, the independent medical review physician must complete the review, determine whether the disputed service is medically necessary, and mail an IMR determination letter to the injured worker or his or her representative, with copies to the requesting physician, claims administrator, and the DWC.

Objective

This study refreshes the authors' prior analyses that identified the proportion of care modified or denied after UR and IMR review by using data on medical services requested for and/or delivered to injured workers from January 1 to October 31, 2018 and providing results by treatment type and drug formulary category. The study also compares calendar year 2017 and 2018 UR and medical payment data to assess the impact of changes to UR requirements implemented pursuant to SB 1160 (effective January 1, 2018) and provides an update on IMR outcomes through June 2019.

Data and Methods

[8] DIR and Maximus Federal Services, Inc. Independent Medical Review State of California. Contract #41430056. Qualified Reviewers, p. 102, www.dir.ca.gov/dwc/IMR/IMR-Contract/IMR-Contract.pdf

For this study, the authors compiled data on medical payments; prospective and concurrent UR determinations; and IMR decisions from multiple sources. Medical payment detail came from the IRIS database, which contains data from insurers representing 60 percent of statewide premium and a cross-section of public and private self-insured employers. The UR data contributors included payers that use in-house UR resources as well as those that use external utilization review organizations (UROs). Some data contributors administered their own claims while others used third-party administrators. Workers' compensation claims organizations track medical services submitted through RFAs and processed through internal or external UR, and some also compile data on services approved outside the UR process, but no uniform tracking method is used. However, all claims administrators track service requests denied or modified by UR physicians.

After an RFA is submitted, there are several different ways in which it can be resolved. For this study, the authors excluded any RFA that was withdrawn or denied due to missing documentation, claim compensability issues, or treatment by a non-network provider. Instead the focus of this analysis is exclusively on treatment requests that were modified or denied based on a medical necessity determination.

An RFA can contain requests for one or more types of services. For example, it can include a request for multiple pharmaceuticals, or a pharmaceutical and an MRI. The UR and IMR reviewers make separate decisions on the medical necessity of each service, and where relevant, the quantity of the service (*e.g.*, number of visits for physical medicine).

The authors identified the individual services within each RFA in the UR data and within each IMR determination letter. For physical medicine services, the quantity of visits was typically noted in the request, but the modalities to be performed (*e.g.*, exercise vs. passive treatment) were not. This contrasts with the paid service data in IRIS where a physical medicine visit has multiple bill lines associated with it, one for each modality performed.

In order to make the counts and service definitions comparable across the different data sources, the bill line data in IRIS was collapsed to match the level of detail available in the RFAs reviewed within UR and IMR. For example, for physical medicine, each day within the request in the UR and IMR data was counted as one service and each service day for the same provider within the paid service data was counted as one service (see Appendix 1 for a detailed example). The same quantity information was not as easily discernable for pharmaceuticals, especially in the case of UR denials. Therefore, the authors counted each request for a type of drug within the UR and IMR data as one service and each prescription within the paid service data as one service.

Paid services that are not subject to reviews for medical necessity (*e.g.*, medical-legal services and physician reports) were excluded from the study. Facility fees for

ambulatory outpatient or acute inpatient care were also excluded because there is typically a physician payment associated with the facility service.

To get an updated picture of UR outcomes, the authors analyzed data on workers' compensation medical services performed or requested from January 1, 2018 to October 31, 2018. For this analysis, the authors only used data from claims organizations that submitted both UR and medical bill review data to CWCI. The ratio of medical services (the count of paid services plus denied services) to paid services was calculated for each service category and then applied to the mix of services for all IRIS participants. Exhibit 1 shows the distribution of medical services by service category.

Exhibit 1: Adjusted Medical Treatment Services by Service Category*

Service Category	Service Mix
Physical Medicine (PT, Chiro, Acupuncture)	29.6%
Evaluation and Management	29.1%
Pharmaceuticals	16.9%
Radiology (Excluding MRI/CT/PET)	6.6%
DME/POS	5.6%
Diagnostic Tests/Measurements	2.5%
Surgery	2.3%
MRI/CT/PET	2.2%
Psych Services	1.3%
Injection	1.3%
Other	2.6%
Grand Total	100.0%

* Services rendered or reviewed from January through October 2018

To calculate the percentage of care denied after UR, the authors determined the denial rate for each service category (number of denials divided by the number of medical services in the study sample). The modification rate after UR was calculated using similar methods.

The authors obtained the IMR data for the study from Maximus, which included information from more than 935,000 IMR decision letters issued from January 2014 through June 2019.[9] The letters note the claim number, the name and address of the attorney if the injured worker was represented, the requested treatment, the name of the requesting medical provider, the date of the UR denial or modification, the date the IMR application was received, and the date of the determination letter, which is used as the review completion date. To calculate the proportion of UR modifications and denials that underwent IMR review, the authors used an expanded study sample that included UR data from all participating claims organizations whether or not bill review data was available.

[9] The DWC posts data on the volume of IMR applications and determination letters at: https://www.dir.ca.gov/dwc/IMR/IMR_Updates/IMR_Updates.htm.

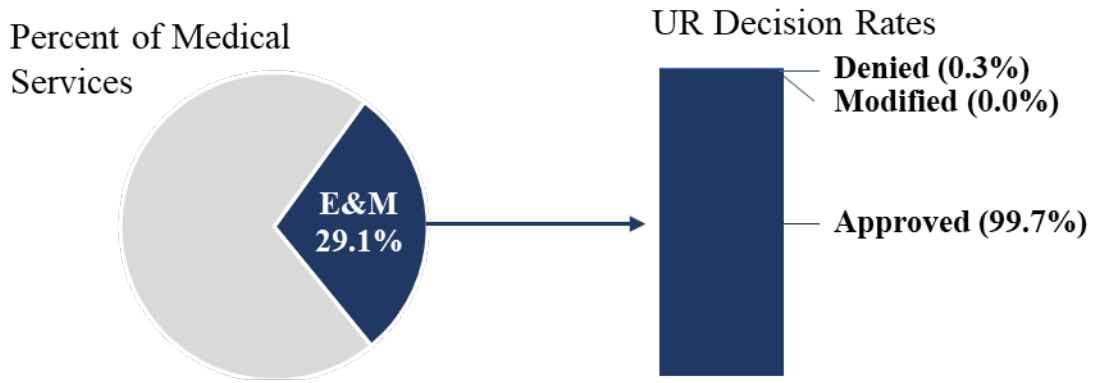
The expanded UR study sample was matched to the IMR data by claims organization, claim number, UR decision date (+/- 7 days), and service category to determine if the denied or modified service request was reviewed in IMR. IMR overturn and uphold rates were calculated by service category using the statewide IMR database.[10] The percent of services initially denied in UR and then overturned in IMR was used to calculate the final approval, modification, and denial rates. This report also shows IMR results by medical service category compiled from 2014 through June 2019 IMR decision letters.

Results

Medical Care by Type of Service

Medical care that falls within MTUS guidelines may be approved without being subjected to a formal UR process, when delivered by an MPN provider. As was noted in Exhibit 1, evaluation and management (E&M) and physical medicine services together represent 58.7 percent of all services in the study data. However, their profiles in UR and IMR are dramatically different. Exhibit 2 shows that 99.7 percent of all E&M services are approved, while a combined 0.3 percent are either modified or denied in UR. The high approval rate reflects the nature of E&M services, which include initial and follow-up office visits, emergency room physician services, and inpatient physician care.

Exhibit 2: UR Approval, Denial, and Modification Rates
January to October 2018 E&M Services

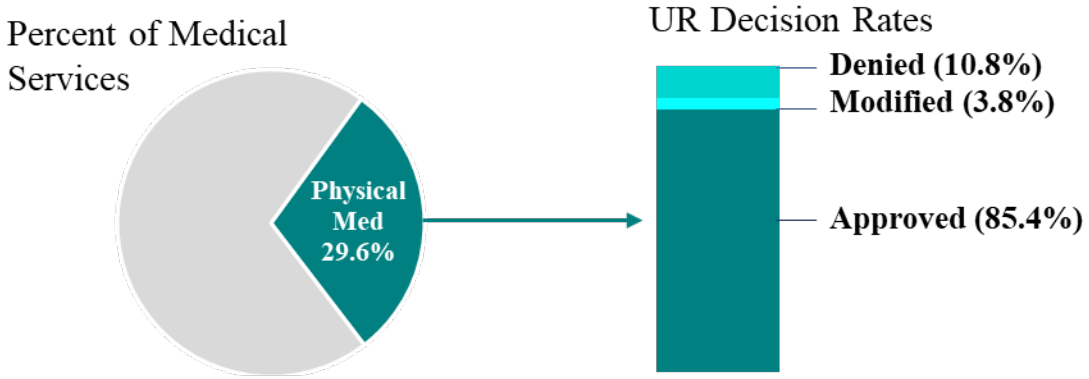


Physical medicine services also represent a high proportion of requested care (29.6 percent), but as Exhibit 3 shows, these services are more likely than E&M services to be deemed medically inappropriate or unnecessary by UR. The 85.4 percent approval rate

[10] The distribution of services in the study sample was consistent with the statewide distribution.

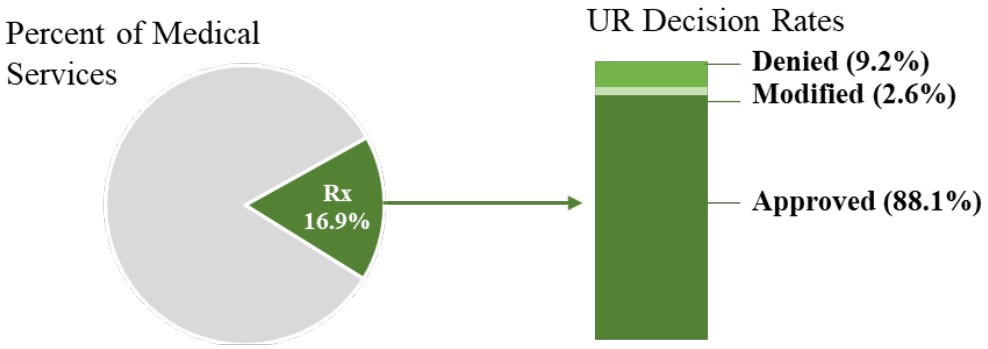
for physical medicine services is relatively low compared to most other medical services. Denials make up 10.8 percent of eligible physical medicine services, while 3.8 percent of the physical medicine services were modified by the UR physician. Closer analysis reveals that most of the UR modifications for physical medicine services were related to the number of treatment sessions. Such modifications may be based on the initial number of sessions exceeding the MTUS guidelines for a trial period or for exceeding evidence-based guidelines for the diagnosed injury or phase of treatment (acute vs. chronic).

Exhibit 3: UR Approval, Denial, and Modification Rates
January to October 2018 Physical Medicine Services



Pharmaceuticals accounted for 16.9 percent of the treatment services in the study sample. Exhibit 4 shows that 88.1 percent of those medications were approved by UR, 2.6 percent were approved with modifications, and 9.2 percent were denied. A review of UR modifications showed they typically called for a reduction in either the quantity of the medication dispensed or the number of refills requested in a single prescription.

Exhibit 4: UR Approval, Denial, and Modification Rates
January to October 2018 Pharmaceutical Services



The MTUS Drug Formulary identifies drugs as either exempt from prospective UR or non-exempt from prospective UR.[11] Drugs that are not listed in the formulary table are also subject to prospective UR. Exhibit 5 breaks out the UR results for pharmaceuticals within the three formulary categories (Exempt, Non-Exempt, and Not Listed). Exempt drugs were least likely to be modified or denied. The MTUS evidence-based guidelines provide the foundation for assigning drugs into the exempt and non-exempt categories.

Exhibit 5 : UR Approval, Denial, and Modification Rates by Drug Category
January to October 2018 Pharmaceutical Services

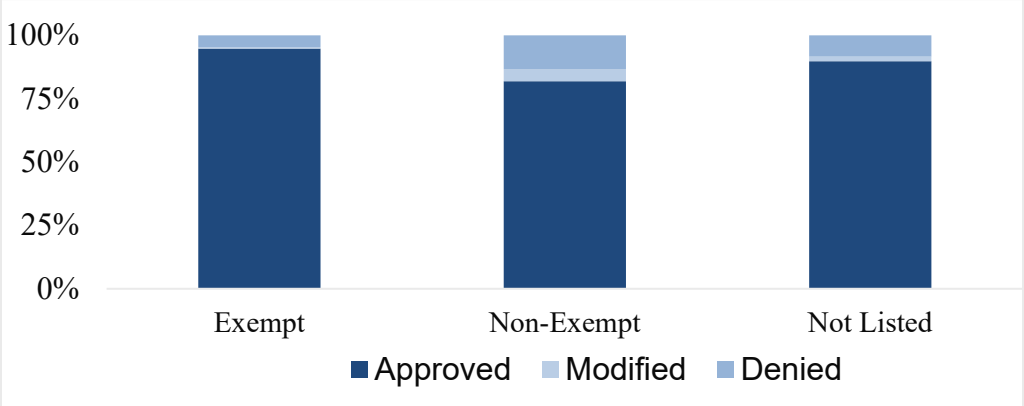


Exhibit 6 shows the UR approval and modification rates by top drug groups. Opioids are Non-Exempt drugs under the formulary and had the highest modification rate (8.2%), typically for changes in pill quantity or number of refills. Musculoskeletal drugs and dermatologicals had the highest rate of denials, while anti-inflammatories, which are Exempt drugs, had the lowest level of both denials and modifications.

Exhibit 6: UR Approval, Denial, and Modification Rates by Drug Group
January to October 2018 Pharmaceutical Services

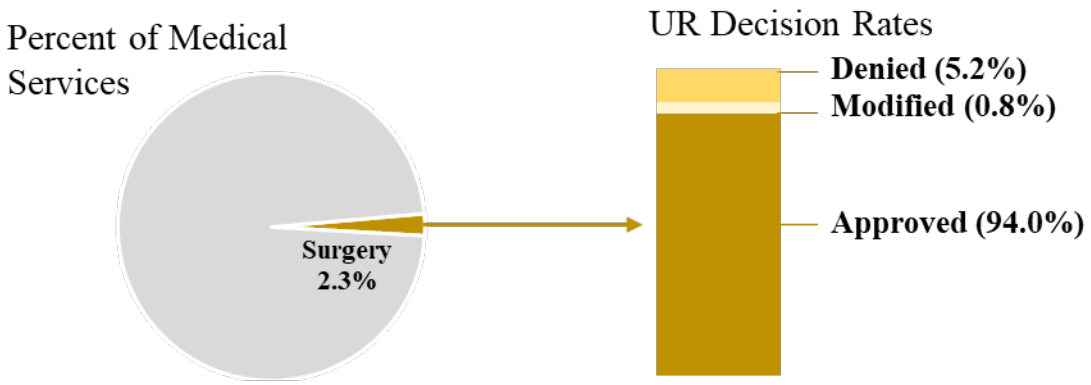
Top Drug Groups	Denials	Modifications	Denials + Modifications
Analgesics – Anti-Inflammatories	2.9%	0.4%	3.3%
Analgesics - Opioids	17.4%	8.2%	25.5%
Anticonvulsants	4.3%	2.2%	6.5%
Musculoskeletal Therapy Agents	20.9%	4.2%	25.1%
Antidepressants	3.3%	2.8%	6.1%
Dermatologicals	18.0%	0.7%	18.7%
Ulcer Drugs	7.6%	0.5%	8.1%
All Other Rx	9.8%	1.9%	11.7%

[11] Title 8 CCR §9792.27.15. https://www.dir.ca.gov/dwc/MTUS/MTUS-Formulary-Orders.html

The UR outcomes data show similar denial and modification rates for drugs such as opioids and musculoskeletal agents which are not recommended for long-term use. Benzodiazepines are not as prevalent as opioids and musculoskeletal agents, but had similar denial (20.7 percent) and modification (8.6 percent) rates, which may reflect the risks associated with their long-term use. Benzodiazepines are used to treat anxiety and insomnia, but are addictive, and prolonged use may worsen the underlying conditions.[12] Concurrent use of opioids and benzodiazepines also carries significant risk, as both types of drugs suppress breathing, potentially resulting in overdose deaths.[13,14]

Surgical requests are the traditional subject of UR. They have both the highest consequences for the injured worker and the highest costs. Minor surgeries and procedures were excluded from this category.[15] The study found that 94.0 percent of the surgical services under review were approved in the UR process (see Exhibit 7). Requests for spinal fusion surgery were a notable exception, as they experienced a substantially lower UR approval rate (53.9 percent). The MTUS recommends spinal fusion to resolve specific disorders, including vertebral instability and neurological compromise, while noting that there are "significant risks of complications."[16,17]

Exhibit 7: UR Approval, Denial, and Modification Rates
January to October 2018 Surgery Services

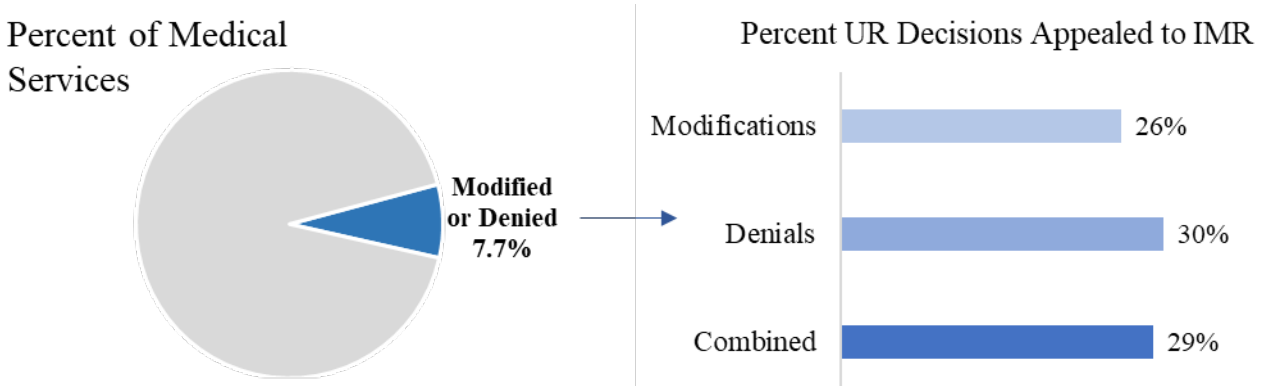


[12] Lembke, A. Benzodiazepines: Our Other Prescription Drug Epidemic. STAT, February 22, 2018, https://www.statnews.com/2018/02/22/benzodiazepines-drug-epidemic/
[13] Berger, K. Pharmacists Play an Important Role in Managing Patients Taking Opioids with Benzodiazepines. Pharmacy Times. Apr 1, 2019, www.pharmacytimes.com/contributor/karen-berger/2019/04/pharmacists-play-an-important-role-in-managing-patients-taking-opioids-with-benzodiazepines
[14] American College of Occupational and Environment Medicine (ACOEM). Opioids, April 20, 2017. https://www.mdguidelines.com/
[15] Surgery procedures included in the study were identified using the Centers for Medicare & Medicaid Services Physician Fee Schedule Relative Value File RVU18A, https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeeSched/PFS-Relative-Value-Files.html l
[16] American College of Occupational and Environmental Medicine (ACOEM). Cervical and Thoracic Spine Disorders, May 27, 2016, https://www.mdguidelines.com/
[17] American College of Occupational and Environmental Medicine (ACOEM). Low Back Disorders, February 24, 2016, https://www.mdguidelines.com/

UR Decisions Reviewed in IMR

Medical service requests that are denied or modified by UR physicians are eligible for IMR, but not all of them are submitted for additional review. Exhibit 8 shows the percentage of medical services delivered or reviewed from January to October 2018 that were denied or modified in UR and then submitted to IMR for additional review.

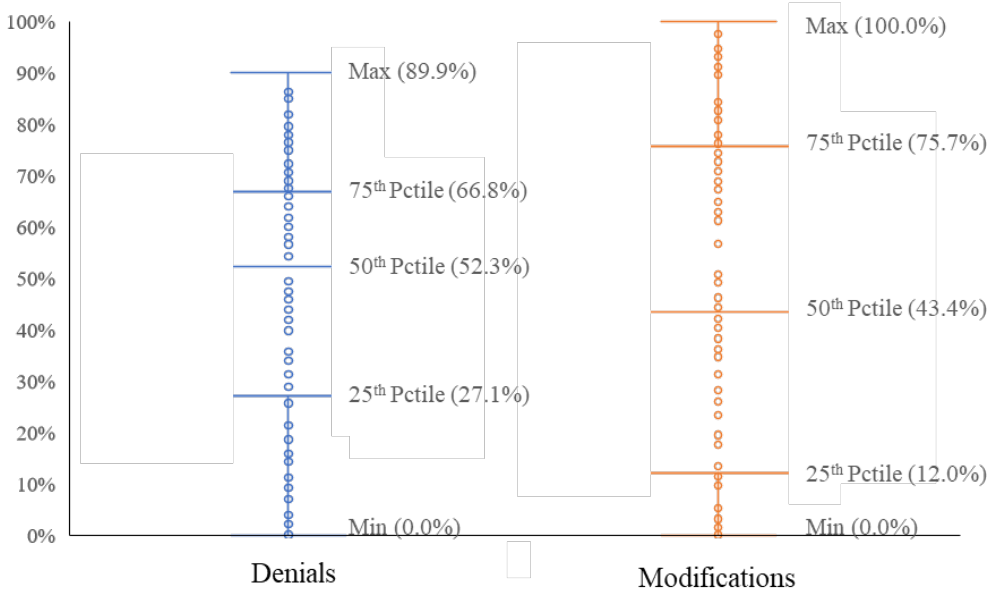
Exhibit 8: Percent of UR Modification and Denials Appealed through IMR January to October 2018 Medical Services



About 30 percent of UR denials and 26 percent of modifications are submitted to IMR for second level review, with little variation by service category (see Appendix 2 for additional service category detail). Only 5 percent of IMR applications were submitted by the injured worker; the rest were almost always submitted by the injured worker's attorney.

The 100 law firms with the highest number of UR modifications and denials represented 39 percent of UR decisions that involved an attorney. Exhibit 9 shows the percent of denied and modified UR decisions submitted for IMR by the top 100 law firms. There was considerable variation in UR decision submission rates among these firms, with one sending 89.9 percent of UR denials to IMR and several sending none. UR modifications showed an even greater dispersion, with one law firm submitting all of their modifications to IMR, and several firms submitting none.

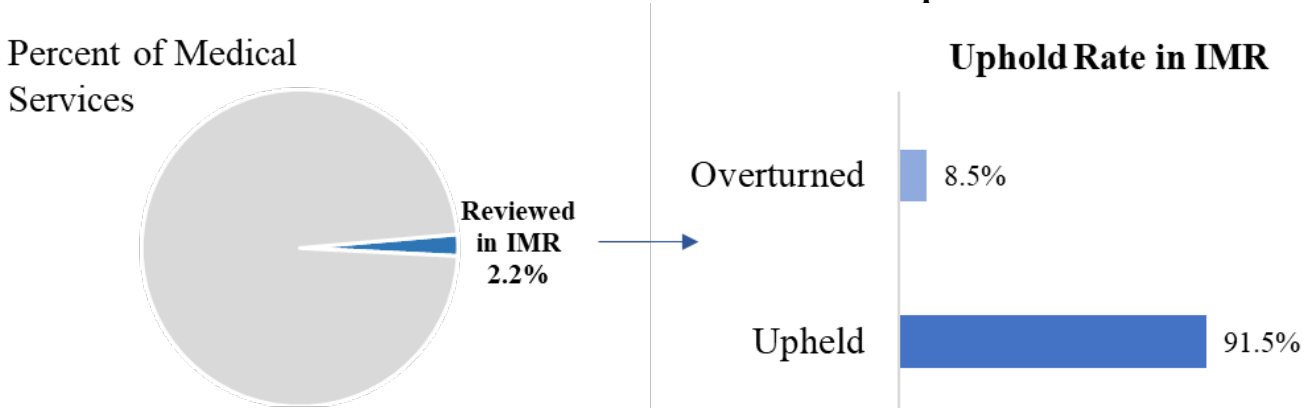
Exhibit 9: Top 100 Law Firms' Percent of UR Denials & Modifications Sent to IMR
All Medical Services from January to October 2018



IMR Decisions

Exhibit 8 showed that 7.7 percent of all medical services from January to October 2018 were modified or denied by a UR physician, and 29 percent of those UR denials and modifications were appealed to IMR. As noted in Exhibit 10, this translates to 2.2 percent of all medical services from January to October 2018 that were submitted to IMR. Of the 2.2 percent, 8.5 percent were overturned by IMR reviewers, increasing the overall approval rate by 0.2 percent. IMR outcomes by service category are noted in Appendix 2.

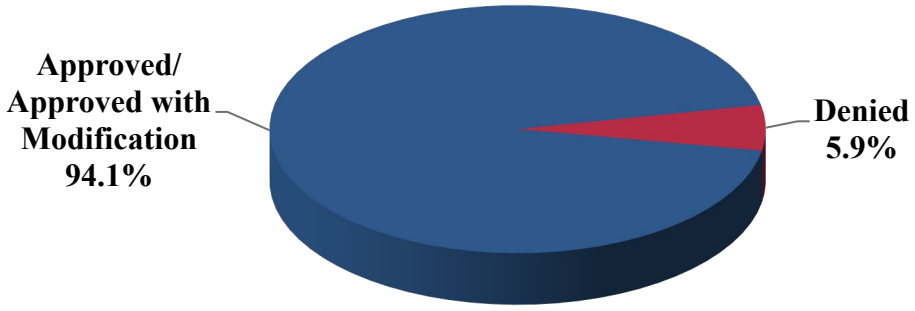
Exhibit 10: Percent of Services Reviewed in IMR & Uphold Rates



Approval Rates After IMR for All Medical Services

During the 10-month study period, 92.5 percent of medical services were approved without modification, 1.6 percent were approved with modification, and 5.9 percent were denied. After accounting for both UR and IMR outcomes, the overall approval rate for all services with or without modification was 94.1 percent (Exhibit 11).

Exhibit 11: Medical Dispute Resolution
Summary Results for January through October 2018 Medical Services



Approval Rates After IMR by Service Category

Exhibit 12 shows the proportion of services approved with or without modifications, after IMR, by service category. Evaluation and Management services had the highest approval at 99.7 percent, while injections had the lowest at 79.9 percent. Appendix 1 has detailed measures for each service category.

Exhibit 12: Post-IMR Approval Rates by Service Category

Service Category	% Approved or Approved with Modifications	Service Mix
Physical Medicine (PT, Chiro, Acupuncture)	89.4%	29.6%
Evaluation and Management	99.7%	29.1%
Pharmaceuticals	91.1%	16.9%
Radiology (Excluding MRI/CT/PET	99.1%	6.6%
DME/POS	94.0%	5.6%
Diagnostic Tests/Measurements	92.2%	2.5%
Surgery	94.9%	2.3%
MRI/CT/PET	91.2%	2.2%
Psych Services	98.1%	1.3%
Injection	79.9%	1.3%
Other	92.5%	2.6%
Overall	94.1%	100.0%

Impact of Legislative Changes Effective January 2018: The SB 1160 "30-Day Rule"

In response to reports of delay and denial of medical treatment based on UR decisions, the Legislature added language to Labor Code §4610 to preclude UR for emergency services and treatment rendered by a physician in the employer's Medical Provider Network (MPN), or a physician predesignated by the injured worker, within 30 days of date of injury.[18] The 30-day provision applies to treatment within MTUS guidelines for body parts accepted as compensable, and excludes nonemergency surgery; psychological treatment; home health care; imaging and radiology (except x-rays); durable medical equipment exceeding a combined total value of $250; and electrodiagnostic studies.[19] A provision was also made for the AD to define other excluded services through the rulemaking process.

To measure the impact of the 30-day rule, the authors compared the volume of services provided within 30 and 60 days of the injury date during the first 10 months of 2017 and 2018, for services not subject to preauthorization under SB 1160. For the defined services, the average number of service days per claim with the service provided within the first 60 days remained relatively stable from 2017 through October 2018 (Exhibit 13). For physical medicine (physical therapy, chiropractic, and acupuncture), there was a slight increase in the proportion of services performed within the first 30 days. Absent an increase in the average number of services within 60 days, this suggests that physical medicine services were being provided faster. There were no appreciable changes in volume or timing of E&M, lab, or x-ray services in the initial 30 or 60-day time periods.

Exhibit 13: Average Service Days within 60 Days of Injury and Percent of Services within 30 Days of Injury by Service Type

	Average Service Days w/in 30 Days of DOI		Average Service Days w/in 60 Days of DOI		Percent of Services w/in 30 Days		
Type of Service	2017	2018	2017	2018	2017	2018	Percentage Point Difference
Physical Therapy	2.6	2.7	5.1	4.9	51.6%	54.3%	2.7%
Acupuncture	0.8	0.8	3.4	3.3	22.2%	24.6%	2.4%
Chiropractic	2.7	2.9	4.5	4.5	59.3%	63.8%	4.5%
Evaluation/Management	2.6	2.5	3.4	3.3	76.6%	76.6%	0.0%
Lab	1.0	1.0	1.2	1.2	78.6%	77.8%	-0.8%
X-Ray	1.8	1.8	2.0	2.0	89.6%	89.6%	0.0%

[18] Effective for injuries occurring on or after January 1, 2018
[19] Labor Code §4610(c)(1-8)

Analysis of the UR records from 2017 and 2018 showed that denials of treatment requests for physical medicine, E&M, lab, x-ray, and emergency services within 60 days of the injury were very rare (with the exception of acupuncture) within the first 60 days of injury (Exhibit 14). The higher denial rates for acupuncture compared to other physical medicine services within the first 60 days may be reflective of MTUS guidelines that do not recommend acupuncture during the acute phase of injury.[20]

Exhibit 14: Percent of Treatment Requests Denied within 60 Days of Injury

Type of Service	2017	2018
Physical Therapy	0.6%	0.6%
Acupuncture	2.2%	4.8%
Chiropractic	0.8%	1.1%
Evaluation and Management	0.1%	0.1%
Lab	1.7%	1.4%
X-Ray	0.1%	0.1%
Emergency	0.0%	0.0%

[20] American College of Occupational and Environmental Medicine (ACOEM). Chronic Pain Guideline, May 15, 2017, https://www.mdguidelines.com/

IMR Results January 2014 through June 2019

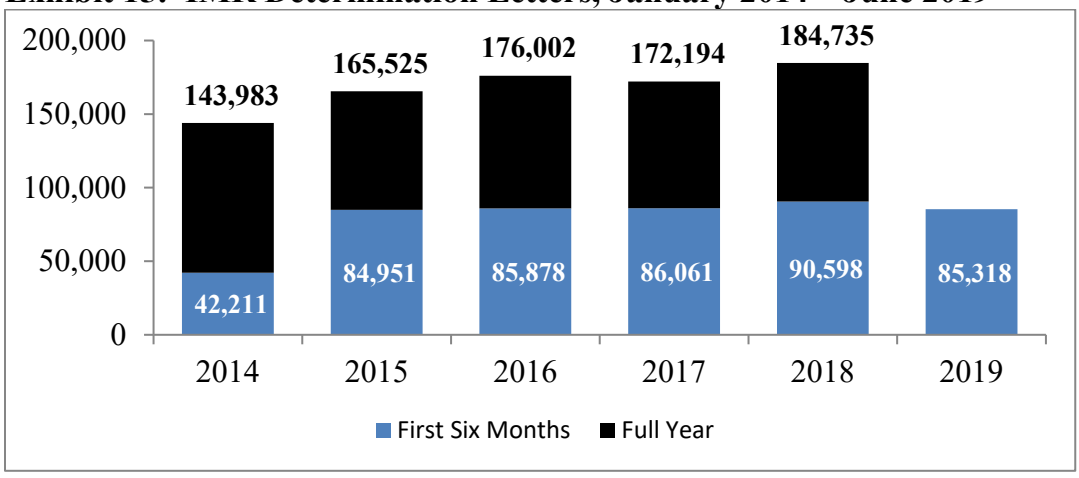
The authors have tracked IMR volume and outcomes since the program's inception. This section of the report continues the IMR outcomes series by generating summary statistics compiled from IMR determination letters issued from January 2014 through June 2019. In the study of approval and denial rates discussed above, results were measured on a service basis across all data sources. For example, a review of a request for six physical therapy (PT) visits was counted as six. In this section, IMR counts and outcomes were based on IMR decisions rather than service counts, so that same review of a request for six PT visits was counted as one decision in this section (see Appendix 1 for more details).

IMR decisions where the decision was for an associated service rather than the primary service were also excluded. Examples would be pre-operative labs, post-operative DME, and medications related to a request for surgery. In this situation, the medical necessity determination of the associated services would be linked to the primary surgery service and would not be considered separately if the surgery was denied.

Number of IMR Determination Letters

The authors reviewed data from nearly 930,000 IMR determination letters generated by Maximus from 2014 through June 2019. Letter volume fluctuated across this 5½-year period, climbing from 2014 to 2016, declining in 2017, then increasing 7.3 percent in 2018 (Exhibit 15). However, the increase did not continue in the first half of 2019, as there were 85,318 letters from January through June of this year, down 6.2 percent from 90,598 letters in the first six months of 2018 -- the lowest level since 2015.[21]

Exhibit 15: IMR Determination Letters, January 2014 – June 2019



[21] The letter counts in Exhibit 15 are from DWC and are posted on the DIR website. CWCI's analysis for the 5½-year period reflects data from 914,938 determination letters provided by Maximus, so the balance of the report is based on a 98.6 percent subset of the 927,757 letters reported by the DWC for this period.

IMR Uphold Rates

The high uphold rates shown in Exhibit 16 offer evidence that UR decision-making typically adheres to the relevant guidelines. At the same time, 11.7 percent of the 2019 UR decisions in the study were overturned, demonstrating that IMR can provide injured workers an opportunity to obtain a second opinion on the interpretation of guidelines and/or patient-specific factors that should drive exceptions.

Exhibit 16: IMR Uphold & Overturn Rates, Primary Services
January 2014 – June 2019 Determination Letters

Result	2014	2015	2016	2017	2018	Q2 2019
Upheld UR	91.3%	88.4%	91.2%	91.0%	88.6%	88.3%
Overturned UR	8.7%	11.6%	8.8%	9.0%	11.4%	11.7%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

IMR Distribution and Uphold Rates by Medical Service Category

Pharmaceuticals are by far the most frequently reviewed service since IMR was first implemented in January 2013. However, their share of the total has dropped significantly in 2019 moving from a high of 49.9 percent in 2015 to 42.5 percent in the first half of 2019. Physical therapy; injections; DME, prosthetics, orthotics and supplies; and MRI/CT/PET scans also remain among the highest volume categories.

Exhibit 17: IMR Distribution & Uphold Rates by Medical Service Category, 2014 – Q2 2019

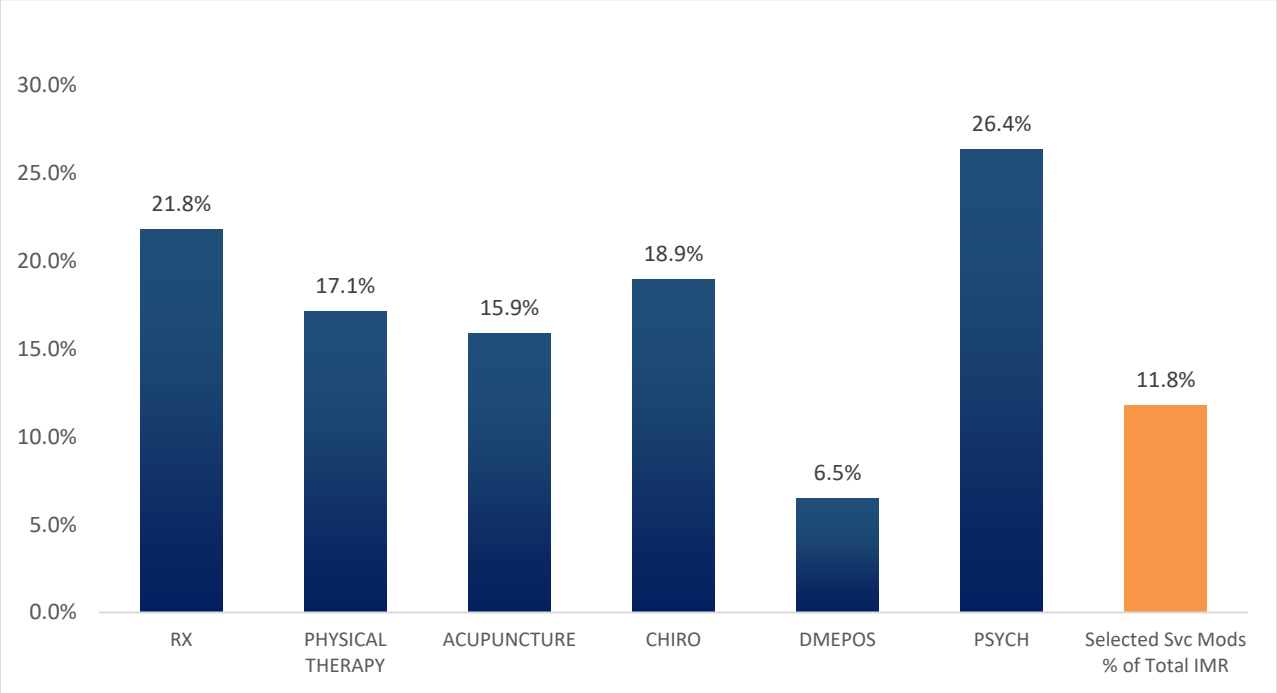
	'14	'15	'16	'17	'18	Q2 '19	'14	'15	'16	'17	'18	Q2 '19
Service Category	**% of All Services Sent to IMR**						**% Upheld**					
Pharmaceuticals	45.0%	49.9%	48.8%	47.3%	46.4%	42.5%	91.9%	89.7%	92.5%	91.9%	89.3%	89.2%
Physical Therapy	9.5%	9.0%	9.5%	10.3%	10.5%	11.8%	93.9%	92.3%	93.4%	93.6%	91.3%	90.3%
Injections	7.0%	7.0%	7.5%	8.3%	9.2%	10.0%	91.8%	87.4%	89.4%	89.5%	89.1%	89.8%
DME/Prost/Ortho/Supplies	9.4%	7.7%	7.1%	6.7%	7.1%	7.7%	93.5%	90.0%	91.9%	91.9%	88.9%	88.8%
MRI/CT/PET	3.7%	4.2%	4.5%	4.7%	4.6%	4.5%	89.1%	86.4%	88.6%	89.2%	87.6%	85.9%
Diagnostic Test/Measure	4.6%	3.5%	3.5%	3.4%	3.4%	3.2%	87.8%	84.5%	91.3%	91.4%	89.0%	85.1%
Surgery	4.3%	3.4%	3.2%	3.1%	3.1%	3.5%	87.9%	86.6%	88.8%	90.7%	88.1%	88.1%
Acupuncture	2.1%	2.2%	2.3%	2.5%	3.0%	3.5%	94.1%	91.6%	93.6%	94.0%	92.7%	91.8%
Lab Services	2.6%	2.8%	3.2%	3.2%	2.5%	2.0%	86.9%	82.9%	88.5%	86.5%	82.9%	81.4%
Evaluation & Management	1.8%	2.3%	2.2%	2.2%	2.0%	1.9%	78.7%	67.2%	77.3%	77.9%	75.9%	74.0%
Chiropractic Manipulation	1.8%	1.6%	1.7%	1.7%	1.7%	2.1%	95.3%	90.7%	92.0%	93.8%	92.2%	91.5%
Psych Services	2.1%	1.4%	1.4%	1.4%	1.2%	1.3%	85.0%	83.1%	85.3%	84.4%	78.8%	78.9%
Other	6.1%	5.1%	5.0%	5.4%	5.3%	5.8%	89.8%	85.5%	88.0%	87.3%	84.4%	84.7%
Total	100%	100%	100%	100%	100%	100%	91.3%	88.4%	91.2%	91.0%	88.6%	88.3%

IMR Reviews for UR Modifications of Quantity

Under current policies, any UR modification of a service is eligible for IMR review. This includes modifications where the UR physician has approved the medical necessity of a service but has reduced the requested quantity to levels consistent with the MTUS. A common example is when a provider requests eight physical therapy (PT) visits, but the UR reviewer only approves six, since the guidelines for most PT other than post-operative cases typically call for a six-visit trial period to see if the treatment is helpful. In this case, the provider can make the request for the additional visits after determining symptom improvement or functional gains.

The authors were able to refine previous methods of identifying UR modifications within the IMR data and examined the types of modifications that were requested by service category. Almost all of the modifications were concentrated in six service categories: pharmaceuticals; physical therapy; acupuncture; chiropractic; DME; and psych services. The modifications called for by the UR physicians in these service categories were almost exclusively adjustments to the quantity or duration rather than the type of service, and as noted in Exhibit 18, modifications for these services represented almost 12 percent of all 2019 IMR decision volume.

Exhibit 18: Percent Modifications for Selected Services, January – June 2019



Concentration of IMR Determinations among High-Volume Providers

The IMR determination letters identify the medical providers who requested the disputed medical services. As in each of the Institute's prior analyses of IMR outcomes, the latest data show that a small number of these providers continued to account for a disproportionate share of the modified or denied medical service requests that underwent IMR, with the top 50 providers identified on 28.4 percent of the IMR decisions for the twelve months ending June 2019. Exhibit 19 shows the proportion of service requests originating from the top 10, top 25, and top 50 individual providers, as well as the proportion that originated with the top 1 percent and top 10 percent of providers based on their IMR volume.

Exhibit 19: Proportion of Disputed Medical Services Requested by High-Volume Providers (2014 through June 2019)

Providers	2014	2015	2016	2017	2018	Q2 2019
Top 10	12.4%	11.9%	11.3%	12.3%	9.5%	9.7%
Top 25	20.6%	20.7%	20.3%	21.2%	18.1%	18.7%
Top 50	29.7%	29.9%	30.0%	30.4%	28.3%	28.4%
Top 1% (118)*	45.5%	45.4%	45.3%	44.8%	44.2%	43.6%
Top 10% (1,176)*	84.1%	85.4%	85.1%	84.6%	84.6%	84.3%

* Number of Providers from July 2018 through June 2019

Discussion

Since Independent Medical Review was integrated into the California workers' compensation medical dispute resolution process in 2013, CWCI has conducted multiple studies that have considered various aspects of UR and IMR and measured the volume and outcomes of IMR, in order to monitor its impact on medical benefit delivery. The prior studies documented that since the IMR process was implemented, the volume of IMR applications has remained high. There has also been no significant change in the broad mix of services reviewed or in the approval rates.

To gain a better understanding of the type of medical care disputed and the degree of dispute, this study expanded the scope of the research by analyzing medical necessity determinations beginning with UR and ending with the final IMR decision. The study focused primarily on UR decisions issued between January 1 and October 31, 2018, allowing time for completion of the IMR cycle for appealed decisions. The authors augmented the UR and IMR records data with medical payment data from the IRIS database to obtain a more complete picture of the medical services that were either requested or delivered without a formal request.

Contrary to the assertion made by critics of the current medical dispute resolution process that UR and IMR results in wholesale denial of care to injured workers, review of recent data shows that during the 10-month study period, 94.1 percent of treatment services were either approved (92.5 percent) or approved with modification (1.6 percent), while only 5.9 percent were denied. The latest data also confirm considerable variation in approval rates based on the type of service, with E&M services showing the highest approval rate (99.7 percent). This high level of approval is unsurprising, since E&M services represent the ongoing clinical management of medical care by the primary treating physician, emergency department physicians, and physicians treating on a hospital inpatient basis. The high approval rate for E&M services has a significant impact on the overall approval rates because these services account for a large share of workers' compensation medical services, representing 29.1 percent of the medical services from January to October 2018. Physical medicine services also accounted for a significant portion (29.6 percent) of medical services, but had a lower approval rate (85.4 percent), with an additional 3.8 percent of the physical medicine services approved by UR physicians with modification of the frequency or number of treatment sessions.

The authors were unable to review the rationale for modification or denial determinations in UR, but records for decisions that were appealed and reviewed in IMR did note the UR physician's rationale. Those records showed that UR modifications to physical medicine requests typically cite MTUS recommendations on the number of sessions for trial periods to determine clinical efficacy or for post-surgical therapy. This suggests that a

regulatory change precluding IMR submissions when a UR modification reduces the number or frequency of physical medicine visits to MTUS-recommended levels would eliminate a substantial number of physical medicine IMRs that appear to be automatically submitted without an opportunity to determine results from the approved treatment.

Pharmaceutical requests are also subject to modification and the data showed that, in addition to the 88.1 percent approval rate, 2.6 percent of requests for pharmaceuticals were approved with modification to either the number of units (*e.g.*, pills, tablets, etc.), or the number of refills. Drugs that are highly addictive (*e.g.*, opioids and benzodiazepines), or that have a higher potential for adverse effects, have evidence-based recommendations that place stricter limitations on the quantity or duration of treatment. Here again, precluding IMR submissions of pharmaceutical requests when the prescribing physician does not address the need to exceed MTUS recommendations and the UR physician simply modifies the prescription to comply with the MTUS could eliminate a significant number of pharmaceutical IMRs.

One of the goals of the Drug Formulary that took effect on January 1, 2018 was to improve patient care through the timely and judicious use of pharmaceuticals as part of an injured worker's treatment plan. To that end, limitations were placed on problematic drugs, while fewer restrictions were placed on dispensing of non-narcotic analgesics (*e.g.*, acetaminophen) and anti-inflammatories (*e.g.*, ibuprofen) without preauthorization. UR denials ranged from 2.9 percent for non-narcotic analgesics to 20.9 percent for musculoskeletal agents. Like opioids and benzodiazepines, musculoskeletal therapy drugs, such as cyclobenzaprine and carisoprodol, are intended for short-term treatment.

Review of medical treatment requests is intended to ensure delivery of efficacious medical care for injured workers, while reducing unnecessary or potentially harmful care. The aforementioned modifications for drugs exemplify attempts to mitigate negative consequences of overprescribing.

Requests for surgical treatment are also subject to utilization review to ensure that the proposed treatment has a high probability of improving the injured worker's condition and a low risk of causing unintended harm. Data showed that major surgery services (excluding services such as simple laceration repair and injections) accounted for 2.3 percent of all services requested or delivered during the study period. Surgical services were approved 94.0 percent of the time overall. However, spinal fusion surgeries were approved at a much lower rate (53.9 percent).

Of the requested services that were either denied or modified for medical necessity, 26 percent of the modification decisions and 30 percent of the denials were appealed in IMR. Only 5 percent of these appeals were submitted directly by injured workers, while the rest were submitted by a representative, almost always their attorney. The propensity

for appealing UR decisions varied significantly among law firms, with one sending 100 percent of UR modifications and some firms not sending any. While the results for firms at the extreme ends of the spectrum may represent outliers, they suggest that rather than reviewing the individual needs of the injured worker, at least some of the top 100 law firms have adopted an all-or-nothing approach when it comes to IMR submissions.

UR decisions that were eligible for IMR represented 2.2 percent of total medical services requested or delivered during the 10-month study period, and IMR physicians upheld 91.5 percent of the UR modifications and denials. The overall results of the UR and IMR processes was a 5.9 percent denial rate for services rendered or requested between January and October 2018.

Although the overwhelming majority of medical services deemed necessary by treating physicians are delivered, there has been ongoing concern that too many services are subject to review, resulting in delayed treatment. SB 1160 was passed by the Legislature to address these concerns, by limiting services subject to UR when rendered within 30 days of an injury.

Analysis of services provided within the initial 30 days following injury shows a modest increase in physical medicine services, with some variation within that service category: physical therapy increased 2.7 percent, acupuncture increased 2.4 percent, and chiropractic services increased 4.5 percent. The delivery rates for other basic care services remained flat.

In addition to measuring the volume and types of services provided within the first 30 days, the authors also looked at UR treatment requests made within 60 days of the injury date. This was done to determine whether treatments were occurring more rapidly and to see if more services were being delivered. The authors did not find an increase in rendered services in the 30 to 60-day time frame, evincing faster delivery of service, rather than increased service utilization.

Even at the 60-day benchmark, the UR records showed extremely low denial rates for 2017 and 2018 (ranging from 0 to 4.8 percent). The UR records included in the data were limited to services that are exempt from prospective review when provided by an MPN provider and within MTUS guidelines. Services that continue to be subject to prospective review (*e.g.,* nonemergency surgery, psychological treatment, and advanced imaging services) were excluded from analysis since the statutory amendments did not directly impact them.

Additional research on the impact of the 30-day exemption for prior authorization will be forthcoming, as SB 1160 calls for the AD to contract with an independent research organization to report to the Senate Committee on Labor and Industrial Relations and the Assembly Committee on Insurance before January 1, 2020.

The last section of this report focused exclusively on IMR results, continuing CWCI's series on IMR statistics. Comparing the number of IMR letters from the first six months of each calendar year beginning with 2014 (the first full calendar year following IMR implementation) shows relatively minor fluctuations in the volume of letters for each period. There was an increase in 6- and 12-month volume in 2018, but 6-month data for 2019 indicates a return to 2017 levels.

The 7.3 percent increase in the volume of IMR letters from 2017 to 2018 may be related to the adoption of long-awaited updates to the MTUS, which, effective December 1, 2017, incorporated changes that were made to the ACOEM guidelines. The MTUS updates also may have impacted IMR outcomes, as the data show that beginning in 2018, IMR decisions overturning UR determinations increased to 11.4 percent, up from 8.8 percent in 2016 and 9.0 percent in 2017. The latest data suggest a marginal increase this year, as the IMR overturn rate for the first half of 2019 was 11.7 percent.

After six years of experience with IMR, improved processes for achieving timely updates to the MTUS guidelines, and implementation of an evidence-based medicine drug formulary, the medical dispute resolution process appears to be relatively stable.

Reforming the California's medical disputes resolution system in 2012 resulted in some important improvements for injured workers, employers, and payers.

For injured workers, the high level of agreement and consistency in all stages of medical review is a realization of the legislative intent to raise quality of care through the reliance on objective medical evidence, such as the MTUS, and the medical expertise of IMR physicians rather than the more subjective opinions of judges.

Employers have benefited from more effective medical treatment for their injured workforce, reducing the costs associated with unproven, unnecessary, and potentially harmful treatments, and facilitating their return to work.

Likewise, payers have achieved greater predictability in dispute outcomes, which are now associated with stable medical costs and faster claim closures, though these gains have come at a price as the medical review/dispute resolution process has contributed to California having the highest allocated loss adjustment expense of any state in the country.[22]

[22] National Council on Compensation Insurance, NCCI 2019 Annual Statistical Bulletin

This study highlights potential areas for adding nuance to the existing regulations in order to reduce some of the frictional costs within medical dispute resolution – for example, eliminating IMR eligibility for treatment modifications in which the UR physician approves the treatment but reduces the volume of services to the MTUS-recommended level. Rather than denying treatment, such modifications help to ensure that injured workers receive an appropriate level of medical care that comports with evidence-based standards. Yet, these types of modifications account for almost 12 percent of all IMR decisions, adding considerable administration burden and cost that could be eliminated through regulations that exclude such modifications from the IMR mix.

While some stakeholders have called for a complete overhaul of the medical approval and dispute resolution processes, the outcomes and metrics noted in this study suggest that these programs have evolved to a point where they are working as intended.

Appendix 1: Example of Physical Medicine Service Data across Data Sources

Paid Medical Services Data – Same Claim and Provider			
Date of Service	**Procedure Code**	**Units**	**Study Service Count**
7/1/2018 7/1/2018	97110 97140	3 1	1 PT Service
7/7/2018	97110	4	1 PT Service
7/15/2018	97164	1	1 PT Service
7/22/2018 7/22/2018	97110 97140	3 1	1 PT Service
7/27/2018	97110	4	1 PT Service
8/2/2018 8/2/2018	97110 97112	2 2	1 PT Service

UR Data		
Date of Request	**Treatment Request**	**Study Service Count**
10/1/2018	Physical Therapy x 6	6 PT Services

IMR Letter Data			
Date of Request	**Treatment Request**	**Study Service Count**	**IMR Decision Count**
10/3/2018	Six (6) manual therapy technique sessions for the cervical spine, 2 times weekly for 3 weeks	6 PT Services	1 Service Decision

Appendix 2: UR and IMR Authorization Results by Service Category

UR and IMR Authorization Results by Service Category									
Service Category	**Service Mix**	**% Denied After UR**	**% Modified After UR**	**% Approved After UR**	**% Denied + Modified to IMR**	**IMR Overturn Rate**	**% Denied After IMR**	**% Modified After IMR**	**% Approved After IMR**
Phys Med (PT, Chiro, Acupuncture)	29.6%	10.8%	3.8%	85.4%	4.0%	6.9%	10.6%	3.8%	85.6%
Evaluation & Management	29.1%	0.3%	0.0%	99.7%	0.1%	17.9%	0.3%	0.0%	99.7%
Pharmaceuticals	16.9%	9.2%	2.6%	88.1%	3.9%	10.6%	8.9%	2.5%	88.6%
Radiology (w/o MRI/CT/PET)	6.6%	0.9%	0.0%	99.0%	0.2%	10.7%	0.9%	0.0%	99.1%
DME/POS	5.6%	6.2%	0.5%	93.3%	2.0%	9.4%	6.0%	0.5%	93.5%
Diagnostic Tests/ Measurements	2.5%	8.0%	0.5%	91.5%	2.5%	9.7%	7.8%	0.5%	91.7%
Surgery	2.3%	5.2%	0.8%	94.0%	1.5%	11.5%	5.1%	0.8%	94.1%
MRI/CT/PET	2.2%	9.1%	0.2%	90.7%	2.8%	12.6%	8.8%	0.2%	91.0%
Psych Services	1.3%	2.1%	0.9%	97.1%	0.9%	21.9%	1.9%	0.8%	97.3%
Injection	1.3%	20.8%	1.3%	77.8%	7.5%	10.8%	20.1%	1.3%	78.6%
Other	2.6%	7.7%	0.8%	91.5%	2.6%	9.9%	7.5%	0.8%	91.7%
Grand Total	100.0%	6.0%	1.6%	92.3%	2.2%	8.5%	5.9%	1.6%	92.5%

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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 81 percent of California workers' compensation direct written premium, as well as many of the largest public and private self-insured employers in the state. Additional information about CWCI research and activities is available on the Institute's website (www.cwci.org). The California Workers' Compensation Institute is not affiliated with the State of California.

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