Cost Impact of California's Drug Formulary – Two-Year Checkup

By Julia Zhang, Ph.D. and YiChen Yu, M.S.

Executive Summary

Pursuant to Assembly Bill No. 1124 (AB 1124), the California Division of Workers' Compensation (DWC) adopted the Medical Treatment Utilization Schedule (MTUS) Drug Formulary (Formulary) effective January 1, 2018. The evidence-based drug formulary was intended to reduce frictional costs in the workers' compensation system, restrict inappropriate prescribing, especially that related to opioids, and ensure that injured workers receive medically necessary medications in a timely manner. In 2019, the Workers' Compensation Insurance Rating Bureau of California (WCIRB) published an evaluation of the cost impact of the formulary on prescribing patterns and pharmaceutical costs based on the actual pharmaceutical transaction information through the first year of implementation.[1] This early evaluation showed that the formulary contributed to an accelerated reduction in pharmaceutical costs and a shift toward prescribing drugs not subject to prospective utilization review (UR) during the first year of implementation. The WCIRB believes that the formulary was instrumental in the dramatic and further decline in pharmaceutical costs after the implementation, and the trend only began to reverse in the early months of the COVID-19 pandemic.

With more than a year of additional pharmaceutical transaction information in 2019 and through the pre-pandemic period in 2020 (before March 15, 2020), the WCIRB has updated the evaluation of the formulary impact. Given that the formulary impact on drug utilization during the ongoing pandemic may be mixed with the impact of the stay-at-home orders, this update focused on the pre-COVID-19 pandemic period and assessed how the formulary affected prescription drug utilization and costs during this period.

The WCIRB's key findings include:

- While pharmaceutical costs had been declining sharply prior to implementation of the formulary, the decline accelerated in 2018 and continued at a somewhat slower rate through 2019 and the pre-COVID-19 period in 2020.
- The share of prescriptions for drugs not subject to prospective UR in accordance with the formulary continued to increase in 2019 and early 2020, while that of drugs subject to UR continued to decline.
- The share of pharmaceutical payments for opioids, compounds and brand name drugs with generic alternatives dropped sharply in 2018 and continued to drop at a similar rate in 2019 and early 2020.
- While the share of pharmaceutical payments for physician-dispensed drugs started to increase slightly toward the end of 2019, on an annual basis, the share of payments to these drugs continued to decline during the two years of the formulary implementation.
- The continued downward trend in pharmaceutical costs through early 2020, as well as the continued decreases in the proportion of drugs not subject to UR, opioids, compounds, physician-dispensed drugs and brand name drugs with generic equivalents suggest the formulary is achieving its intended effects.

Background

Pursuant to AB 1124 that was signed into law by Governor Brown in 2015, the DWC adopted the new drug formulary linked to the California MTUS to be effective on January 1, 2018.[2] The evidence-based formulary was intended to reduce frictional costs mostly from UR and independent medical review (IMR), restrict inappropriate prescribing, especially that related to opioids, and ensure medically necessary and timely medications for injured workers. The formulary includes an MTUS drug list of about 300 drug ingredients that are assigned a status of exempt or non-exempt from prospective UR. All opioids and compounded drugs are non-exempt from prospective UR. Additionally, certain non-exempt drugs can be prescribed without prospective UR if fulfilling the requirements of special fill or perioperative fill policies.[3] Drugs not listed on the MTUS drug list must obtain authorization through prospective UR prior to dispensing. The DWC has been updating the MTUS drug list over time to ensure the drug list is in sync with the updated clinical guidelines.

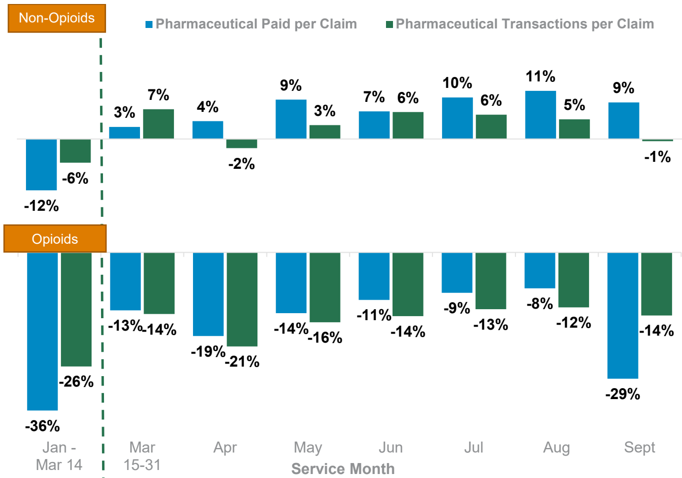
In the July 1, 2018 Pure Premium Rate Filing, the WCIRB estimated that the drug formulary will reduce pharmaceutical costs by 10 percent, resulting in an overall 0.5 percent reduction in the advisory pure premium rate level.[4] The WCIRB's initial estimate was based largely on projected reductions in the use of opioids, compounds, physician-dispensed drugs and brand name drugs when a generic alternative was available.

In August 2019, the WCIRB published an evaluation of the cost impact of the new drug formulary based on the actual pharmaceutical transaction information through the first year of implementation.[5] The evaluation showed significant increases in the prescriptions of drugs not subject to UR and sharp declines in the pharmaceutical payment shares for opioids, compounds, physician-dispensed drugs and brand name drugs with generic alternatives in 2018. The results of this early evaluation suggested that, in the first year of implementation, the drug formulary contributed to accelerated reductions in pharmaceutical costs and a shift toward prescribing drugs not subject to UR.

1 WCIRB Research Brief. California's New Drug Formulary: One-Year Checkup, August 2019.
2 The DWC regulations can be accessed through the following link: https://www.dir.ca.gov/dwc/MTUS/MTUS-Formulary.html
3 Special fill and perioperative fill policies allow certain non-exempt drugs without prospective UR if the drug is prescribed within certain time frames (special fill: 7 days of the date of injury; perioperative fill: 4 days prior to surgery and 4 days after surgery) and meet specified criteria in Sections 9792.27.12 and 9792.27.13, respectively.
4 See Section B, Appendix A of the WCIRB's July 1, 2018 Pure Premium Rate Filing submitted on April 9, 2018.
5 WCIRB Research Brief: California's New Drug Formulary: One-Year Checkup. August 2019.

The COVID-19 pandemic and the resultant stay-at-home orders have affected the patterns of medical treatment of California injured workers. While elective medical services were suspended during the early weeks of the pandemic, pharmaceutical use has increased throughout the pandemic. The increases have driven the average drug payments in the system above the pre-pandemic level. Most of the increases came from non-opioid pain medications (Figure 1).

Figure 1. Percentage Change in Pharmaceutical Utilization and Costs per Claim Comparing Each Service Month in 2020 to the Same Period in 2019[6]



Given that the formulary impact on drug utilization and costs may be mixed with the impact of the stay-at-home orders during the ongoing pandemic, this updated evaluation focused on the pre-COVID-19 pandemic period and assessed how the drug formulary affected prescription drug utilization and costs during this period.

Analysis Approach

The WCIRB analyzed the medical transaction data for pharmaceutical prescriptions filled between July 1, 2015 and March 14, 2020. Similar to the one-year impact evaluation in 2019, we identified exempt and non-exempt drugs in the transaction data based on the MTUS drug list as well as whether the non-exempt drug was provided on a special fill or perioperative fill basis. Six versions of the MTUS drug list effective between January 2018 and January 2020 were incorporated in the analysis.[7]

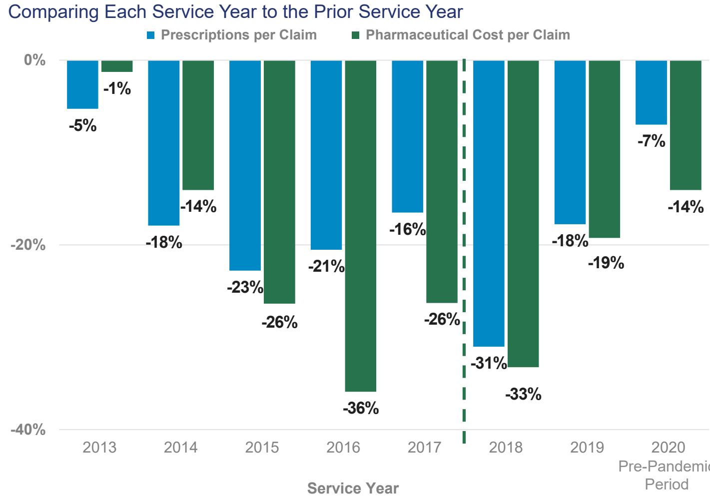
The WCIRB first compared the volume of prescriptions and drug costs that were no longer subject to prospective UR under the drug formulary between 2018 and early 2020 to the pre-reform period. We then evaluated the impact of the drug formulary on the four pharmaceutical components most likely impacted by the formulary and for which accelerated cost reductions were shown in the WCIRB's one-year cost evaluation: opioids, compounded drugs, physician-dispensed drugs and brand name drugs with generic alternatives.

Updated Evaluation Results

Overview of Pharmaceutical Utilization and Costs – Two Years Post-Reform

Even before the implementation of the formulary, pharmaceutical costs in California had been declining sharply (Figure 2). Key drivers of the decrease include Senate Bill No. 863 reforms related to IMR and spinal surgeries, changes in the federal government upper limit pricing levels, anti-fraud efforts and use of the California prescription drug monitoring program to track prescriptions of controlled substances. Following implementation of the formulary, both drug utilization and costs further dropped in 2018 at an accelerated rate. While the rate of decline slowed down somewhat after 2018, the downward trend continued through the pre-pandemic period.

Figure 2. Percentage Change in Pharmaceutical Utilization and Costs per Claim Comparing Each Service Year to the Prior Service Year



Based on the WCIRB's database of medical transactions for insured employers, about 750,000 drug prescriptions were provided to California injured workers in 2019, a further decrease from about 880,000 in 2018 and 1.3 million in 2017.[8] Of the drugs prescribed in 2019 and the pre-pandemic period in 2020, drugs exempt from prospective UR accounted for 50 percent of all prescriptions, up from 44 percent in 2018. Exempt drugs also accounted for 26 percent of total drug payments after 2018, compared to 21 percent in 2018. Conversely, non-exempt drugs accounted for a lower share of both prescriptions and total drug payments in 2019 and early 2020 compared to in 2018.

The Use of Drugs Exempt from Prospective Utilization Review

UR and IMR are two primary mechanisms of dispute resolution in the California workers' compensation system to ensure that appropriate medical treatments and prescription drugs are provided to injured workers. The UR and IMR processes, however, consume substantial resources from all stakeholders with the filing of applications, reviewing requests and making appeals. Pharmaceutical disputes, in particular, accounted for 40 to 50 percent of all UR and IMR decisions.[9] In addition to

6 WCIRB medical transaction data through November 2020 based on a subset of insurers that report the medical transaction data monthly.
7 Different versions of the MTUS drug list are available at: https://www.dir.ca.gov/dwc/mtus/MTUS-Formulary-Orders.html.
8 The WCIRB collects medical transaction data from insurers representing approximately 92 percent of the California insured market.Therefore, pharmaceutical transactions included in this analysis do not represent the entire insured market in California.
9 David, R., Young, B. California Workers' Comp Independent Medical Review: Q1 2015 Outcomes. CWCI Spotlight Report. July 2015.

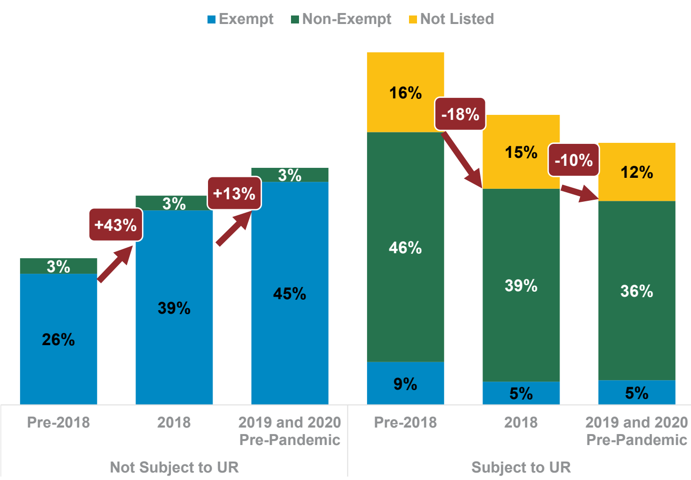
potentially reducing frictional costs, drugs listed in the formulary as exempt are generally less expensive than many of the alternatives that are either non-exempt or not listed in the formulary.

Following the implementation of the drug formulary, the prescriptions of drugs not subject to prospective UR continued to increase by 13% after 2018, while that of drugs subject to prospective UR continued to decrease by 10 percent (Figure 3a).

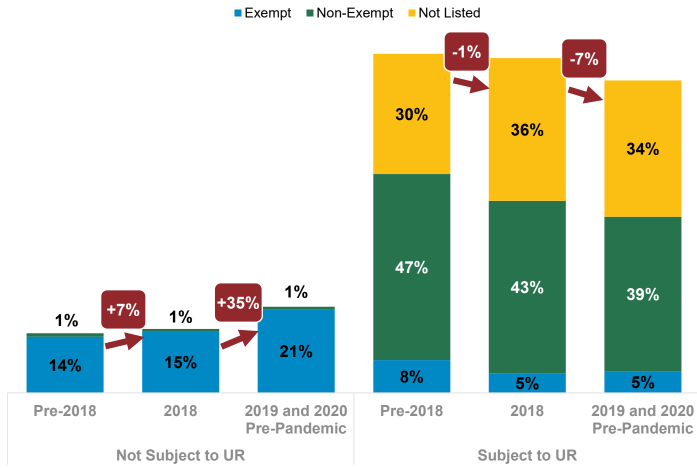
With respect to pharmaceutical payments, the average payments per prescription for exempt drugs started to increase after 2018. Specifically, despite a 13 percent increase in the share of prescription drugs not subject to UR, these drugs incurred more than a 35 percent higher share of total pharmaceutical costs in 2019 and early 2020 compared to the 2018 level (Figure 3b). Conversely, the share of payments to drugs subject to prospective UR in 2019 and early 2020 decreased more than in prior years, even when the share of prescriptions decreased less than in prior years. The steeper increase in the average payments for exempt drugs is partly due to a larger quantity of medications per prescription and some increases in the average drug cost for the leading drug groups.

Figure 3. Share of Pharmaceutical Transactions and Payments by Drug Formulary Category, Pre-Reform vs. Post-Reform[10]

a. Share of All Pharmaceutical Transactions



b. Share of All Pharmaceutical Payments

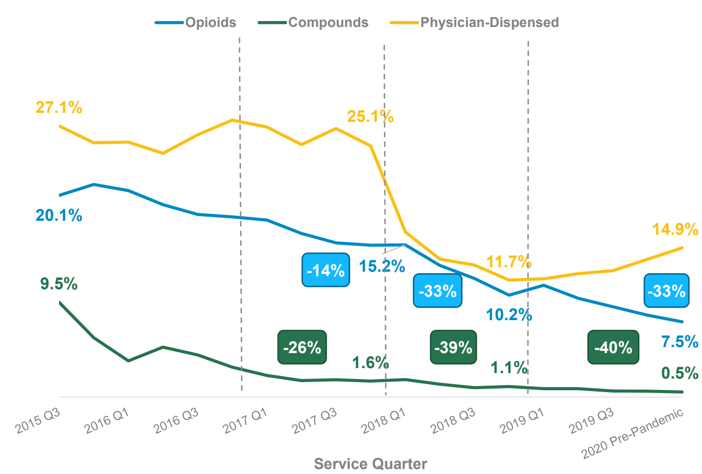


Other Prescribing Patterns

The analysis also examined the prescribing patterns in the four pharmaceutical components that were shown to be significantly impacted by the drug formulary in the WCIRB's 2019 evaluation: opioids, compounded drugs, physician-dispensed drugs subject to prospective UR[11], and brand name drugs with generic alternatives.

The shares of total drug payments for opioids and compounds continued to decline precipitously in 2019 and the 2020 pre-COVID-19 period. The rates of decline were similar to those of 2018 (Figure 4). For physician-dispensed drugs, the share of the total drug payments dropped significantly in 2018 by 29 percent, but the decline appeared to flatten in 2019 and started to trend up slightly in the last quarter of 2019. The different trend in physician-dispensed drugs near the end of 2019 was partly due to a growing number of relatively costly dermatologicals for pain relief that were physician dispensed.

Figure 4. Share of Pharmaceutical Payments for Opioids, Compounds and Physician-Dispensed Drugs[12]



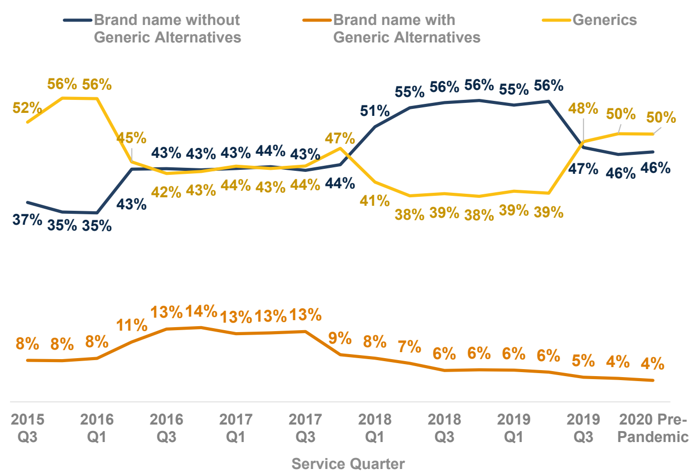
10 Pre-reform data includes the WCIRB pharmaceutical transaction data with service dates between July 1, 2015, and December 31, 2017. Post-reform data in 2018 includes drug prescriptions with a service date between January 1, 2018 and December 31, 2018. Post-reform data in 2019 and the 2020 pre-pandemic period includes drug prescriptions with a service date between January 1, 2019 and March 14, 2020.

11 These include exempt drugs dispensed by physicians after 7 days from the date of injury, and non-exempt drugs and unlisted drugs that were dispensed by physicians.

12 The compounds shown in the graph do not include opioids, and the physician-dispensed drugs shown in the graph do not include opioids or compounds. Physician-dispensed drugs include exempt drugs dispensed after 7 days of the date of the injury, and non-exempt drugs and unlisted drugs that were dispensed by physicians. The identification methodology was updated in this evaluation to include these three components.

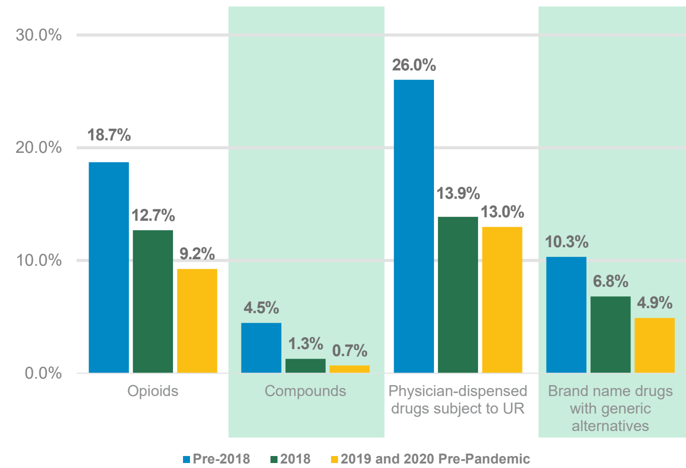
The share of the drug payments for brand name drugs with generic alternatives continued the decline and dropped from 6% in the first quarter of 2019 to 4% during the 2020 pre-pandemic period. (Figure 5).

Figure 5. Share of Pharmaceutical Payments for Brand Name Drugs vs. Generics



In summary, pharmaceutical payments for the aforementioned four categories of costly prescription drugs experienced continued decline in the second year of the formulary implementation, contributing to lower pharmaceutical costs in the workers' compensation system (Figure 6).

Figure 6. Summary of Share of Total Drug Payments by Prescribing Component[13]



Conclusions

In the two years after the California workers' compensation drug formulary was implemented, the shift toward prescribing exempt drugs and drugs not subject to prospective UR continued, reducing UR requests and resulting in lower drug costs. Payments for opioids, compounds and brand name drugs that were shown in the WCIRB's earlier evaluation to be significantly impacted by the formulary also continued to decline in 2019 and early 2020, at similar rates to those of 2018. While physician-dispensed drugs started to increase slightly in the last quarter of 2019, on an annual basis, the share of drug payments for these drugs was still lower in 2019 and early 2020 than that in 2018. The current COVID-19 pandemic has added uncertainty to the impact of the formulary on the pharmaceutical costs as early evidence from the WCIRB medical transaction data indicates an upward trend in both prescription drug utilization and costs in the workers' compensation system since the pandemic started. The WCIRB will continue monitoring the pandemic impact on the patterns of medical treatment costs, especially pharmaceutical costs, in the California workers' compensation system.

13 Pre-reform data includes WCIRB pharmaceutical transaction data between July 1, 2015 and December 31, 2017. Post-reform data in 2018 includes drug prescriptions with a service date between January 1, 2018 and December 31, 2018. Post-reform data in 2019 and the 2020 pre-pandemic period includes drug prescriptions with a service date between January 1, 2019 and March 14, 2020.

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1221 Broadway, Suite 900
Oakland, CA 94612
888.229.2472
wcirb.com