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THE IMPACT OF WORKERS COMPENSATION DRUG FEE SCHEDULES

INTRODUCTION

Fee schedules are a widely used cost containment tool to regulate workers compensation (WC) medical costs. An important question asked by many stakeholders is: How effective are fee schedules at controlling medical costs?

NCCI has published a series of studies on the price impact of physician fee schedules. Those studies have shown that properly designed physician fee schedules can help contain WC medical costs. However, fee schedules set too high can undermine their effectiveness [1].

This is a continuation of NCCI's research on the impact of fee schedules on WC prices paid. The focus of this study is on average wholesale price-based (AWP-based) prescription drug fee schedules. This study looks at differences in prescription drug (Rx) prices across states to assess the effect of Rx fee schedules on Rx prices paid in WC.

This report compares the effect of Rx fee schedules for:

- States with low-, medium-, and high-fee-schedule maximums
- Brand name Rxs vs. generic Rxs
- Physician-dispensed Rxs vs. pharmacy-dispensed Rxs
- In-network vs. out-of-network transactions

KEY FINDINGS

- AWP-based Rx fee schedules do have an effect on Rx prices paid in WC
- States with similar WC Rx fee schedules do not necessarily have similar Rx prices paid
- Lower WC state Rx fee schedules seem to correspond with lower WC Rx prices paid
- While average Rx prices paid are higher in high-fee-schedule states vs. low-fee-schedule states, the differences are smaller than the nominal differences in the AWP multipliers
- In low-fee-schedule states, WC Rx prices paid are concentrated closer to the fee schedule maximums compared to states with higher fee schedules
- Average Rx prices paid in high-fee-schedule states are greater than in states without fee schedules
- Brand name Rxs tend to be paid closer to the fee schedule maximums than generic Rxs
- Physician-dispensed Rxs are generally paid closer to the fee schedule maximums than pharmacy-dispensed Rxs
- Out-of-network Rxs tend to be paid closer to the fee schedule maximums than in-network Rxs

STUDY DATA

The data source used in this study is NCCI's Medical Data Call (MDC). The MDC captures transaction-level detail on WC medical bills processed on or after July 1, 2010, including dates of service, charges, payments, procedure codes, and diagnosis codes. Carriers are not required to report transactions for services provided more than 30 years after the date of the injury.

For this study, we used Medical Data Call experience evaluated as of March 2014 for:

- Services provided between January 1, 2011, and December 31, 2013
- AK, AL, AR, AZ, CO, CT, DC, FL, GA, HI, IA, ID, IL, IN, KS, KY, LA, MD, ME, MI, MN, MO, MS, MT, NC, NE, NH, NJ, NM, NV, NY, OK, OR, RI, SC, SD, TN, UT, VA, VT, WI, and WV

TERMINOLOGY

Terms used throughout this study include:

- Rx—A prescription drug identified with a National Drug Code (NDC). Drugs that are bundled with other services and included in codes such as Hospital Revenue Codes, Healthcare Common Procedure Code System (HCPCS), or Current Procedural Terminology (CPT) are not included.
- Units—One unit is a capsule or tablet.
- Cost—The total dollars paid per claim (Cost = Price x Utilization).
- Price—What is paid for individual services.
- Utilization—The intensity of services provided per claim.
 - The number of units (tablets, capsules, etc.) of Rx provided per claim
 - The mix of Rxs provided on a claim, e.g., OxyContin versus Ibuprofen
- Average Wholesale Price (AWP)—A published Rx price reported by commercial publishers of drug pricing data, such as First Databank, Red Book, or Medi-Span. While used as the benchmark for most fee schedules, it is not equivalent to the actual wholesale price paid by most large drug purchasers, such as pharmacy chains [2].
- Rx Maximum Amount Reimbursable (MAR)—A fee schedule established within a jurisdiction by rule, regulation, or statute, which limits the maximum amount to be reimbursed for the Rx provided. Typically, the Rx MAR is based on a formula, such as:
 - $MAR = \text{Units} \times \text{AWP} \times \text{Multiplier} + \text{Dispensing Fee}$
- Estimated Maximum Amount Reimbursable (EMAR)—NCCI's estimate of the Rx MAR based on drug pricing data published by First Databank.

BACKGROUND

Many states have various forms of regulation to control Rx costs in WC. Rx fee schedules that establish price limits are one form of regulation designed to control Rx costs. In most states, WC Rx fee schedules are based on AWP. AWP values are based on information reported by commercial publications such as First Databank, Red Book, or Medi-Span.

Out of 42 states included in this study, 26 have an AWP-based Rx fee schedule, while 16 are without Rx fee schedules. AWP-based state Rx regulation establishes a maximum AWP multiplier and a maximum dispensing fee. For a given state, multipliers and dispensing fees might vary according to the type of Rx (e.g., brand vs. generic). About a third of the AWP-based Rx fee schedule states included in this study specify a single published source of drug pricing data for the AWP. Another third specify more than one source, and the remaining third do not specify a source.

This study focuses on AWP-based Rx fee schedules. The main question this research is seeking to answer is: Do AWP-based Rx fee schedules have an effect on Rx prices paid in WC?

Exhibit 1 illustrates that there are multiple parties involved in a WC Rx transaction, which impacts Rx prices paid. The prescribing physician writes the Rx for the claimant. In some cases, the physician may also dispense the Rx, but for most cases, the claimant goes to a pharmacy to fill the Rx. Government agencies may establish fee schedules, resolve disputes, and make rules on provider choice for dispensing the Rx. The employer/insurance company is responsible for the payment of the Rx, and often will hire a pharmacy benefit manager to negotiate Rx prices with pharmacies.

Having so many parties involved in an Rx transaction makes it difficult to isolate the impact of a fee schedule on Rx prices paid.

Multiple Parties to WC Rx Transactions

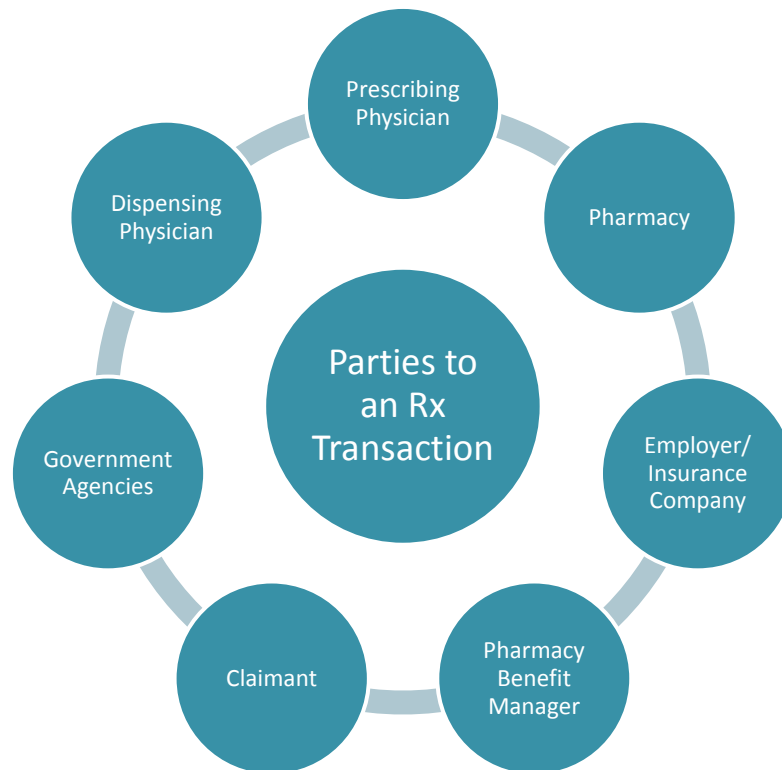


Exhibit 1

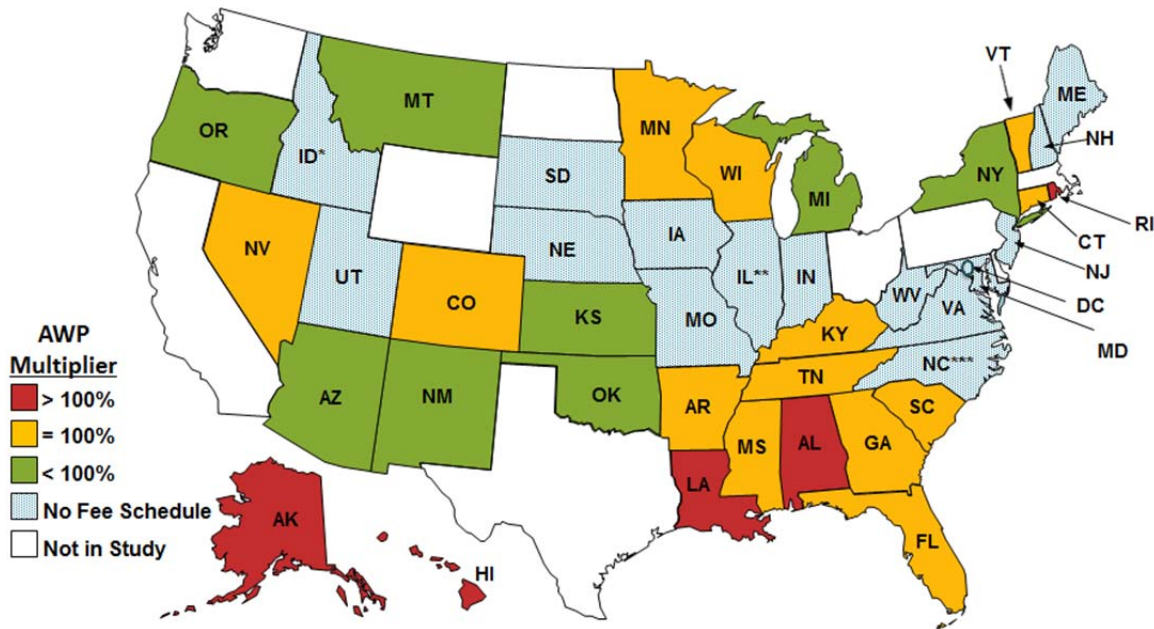
THE PRICE EFFECT OF RX FEE SCHEDULES

Rx fee schedules vary by state. Exhibit 2 is a map with states highlighted according to the AWP multiplier used in their fee schedule.¹ For the states included in this study, the fee schedule AWP multipliers range from 80% to 140%. Dispensing fees also vary by state in the range of \$0 to \$12. Even though the dispensing fees vary and contribute to the maximum reimbursement allowed by regulation, the AWP multiplier is the major determinant of the maximum reimbursement allowed.

In order to assess the effect of Rx fee schedules on Rx prices paid, this study categorizes states into low, medium, and high groups according to their AWP multiplier. States without a fee schedule are grouped together:

AWP Multiplier	Category	Color
< 100%	Low-Fee-Schedule States	Green
= 100%	Medium-Fee-Schedule States	Yellow
> 100%	High-Fee-Schedule States	Red
No Multiplier	No-Rx-Fee-Schedule States	Blue

Fee Schedule AWP Multipliers Range From 80% to 140%



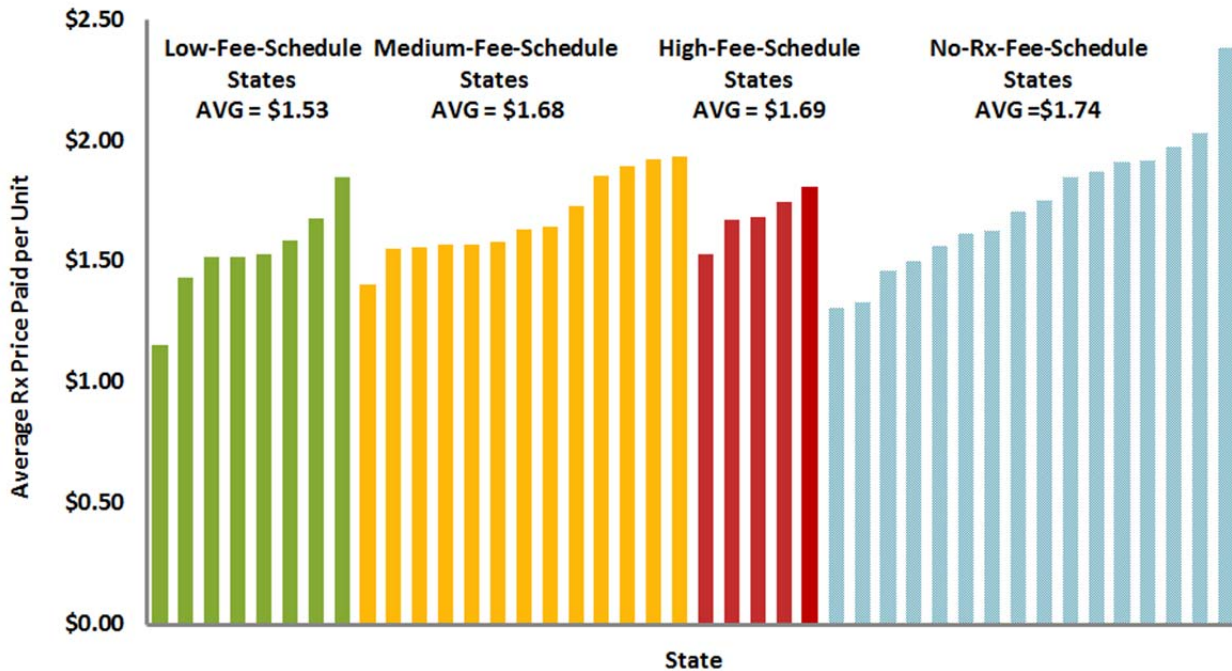
Based on regulations established for pharmacy dispensing of generic medications during Service Years 2011–2013.
 * AWP-based fee schedule for ID established July 1, 2013
 ** AWP-based fee schedule for IL only applies to prescriptions filled outside of a pharmacy
 *** AWP-based fee schedule for NC established August 7, 2014

Exhibit 2

¹ Exhibit 2 is based on the AWP multiplier for pharmacy-dispensed generic Rx's during the period from 2011 to 2013.

During the three-year period of this study, none of the states included had a major change in their Rx fee schedule. Therefore, in order to assess the effect of Rx fee schedules on Rx prices paid in WC, this study looks at differences in Rx prices paid across states. Exhibit 3 shows the average Rx price paid per unit by state, where a unit is a capsule or tablet.² This exhibit shows that there is wide variation in Rx prices paid per unit by state. The average state Rx price per unit ranges from \$1.16 to \$2.38. Also, there is significant price variation within each state group.

Average Rx Price per Unit Varies by State



Source: NCCI Medical Data Call, for prescriptions provided between Service Years 2011 and 2013
Capsules and tablets only

Exhibit 3

Much of the Rx price variation shown in Exhibit 3 is due to differences in prescribing patterns by state—the mix of Rx. A state with lower Rx prices but with a higher share of expensive drugs might have a higher average Rx price per unit than other states. Conversely, a state with higher Rx prices but with a lower share of expensive Rx might have a lower average Rx price per unit than other states. This is the mix effect on average Rx prices, which we control for in this study in order to isolate price differences, which are the main focus of this study.

Exhibit 4 is similar to Exhibit 3, but data was adjusted so that every state has the same mix of Rx and also the same mix of in-network and out-of-network Rx. The common mix used is based on the distribution of Rx transactions for all states included in the study.

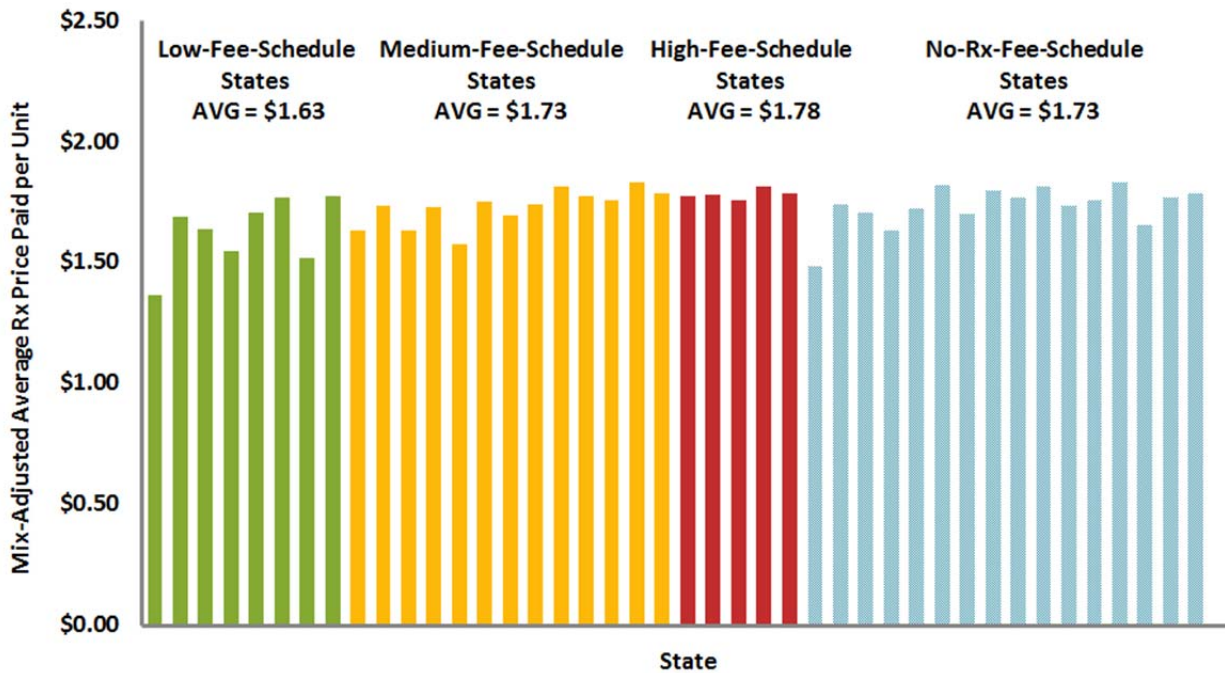
² This study includes only capsules and tablets for unit metric consistency. Capsules and tablets represent approximately 80% of Rx transactions and 75% of Rx costs.

Although the Rx price variation shown in Exhibit 4 is less than that observed in Exhibit 3, there still is Rx price variation. In particular, Rx price variation still exists between states within the same fee schedule group—illustrating the fact that states with similar fee schedules do not necessarily have similar Rx prices paid.

Overall, after adjusting for the mix of Rx, low-fee-schedule states have the lowest average Rx price per unit (\$1.63), while high-fee-schedule states have the highest average Rx price per unit (\$1.78). These observed price differences are smaller than the nominal differences in fee schedule AWP multipliers. For example, the average multiplier in low-fee-schedule states is approximately 30% lower than the average multiplier in high-fee-schedule states; however, the difference in average prices paid is slightly less than 8%. One key reason for this is that most WC Rx are provided through networks, where pharmacy benefit managers tend to negotiate prices for drugs on a countrywide basis. Within a network, the price paid for a specific drug is generally the same across states.

Another key finding is the comparison of average prices paid in states without a fee schedule compared to states with a high fee schedule. The average Rx price per unit is lower for states without an Rx fee schedule (\$1.73) compared with that in high-fee-schedule states (\$1.78). This is similar to NCCI’s finding in the study of the price impact of physician fee schedules where a consequence of fee schedules set too high is higher prices paid [1].

Mix-Adjusted Average Rx Price per Unit Also Varies by State, But to a Lesser Degree



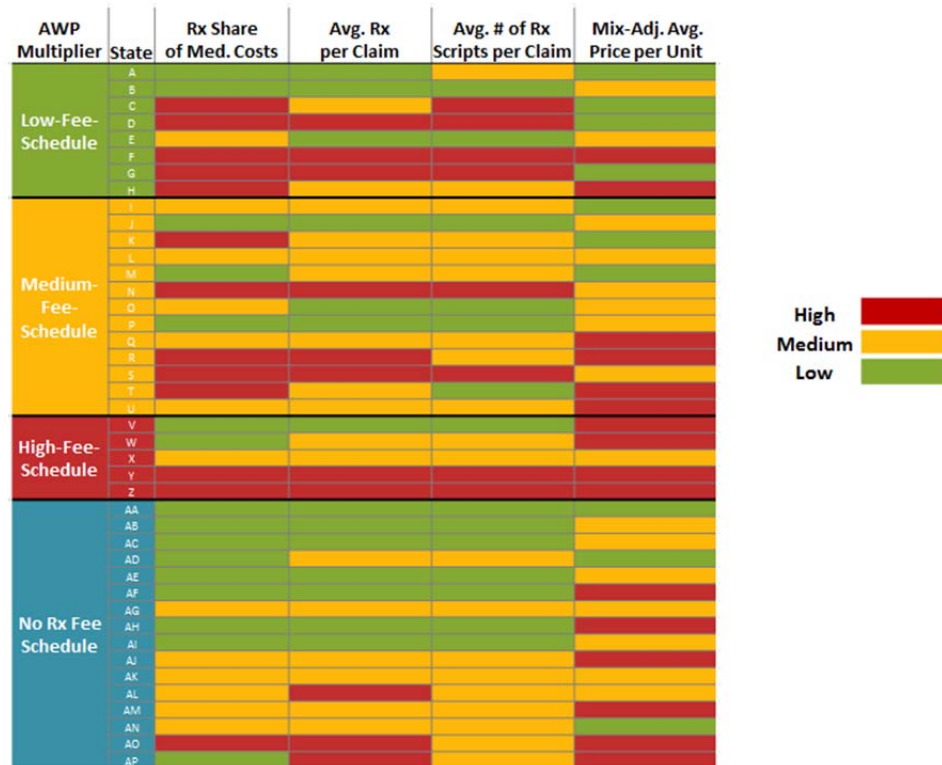
Source: NCCI Medical Data Call, for prescriptions provided between Service Years 2011 and 2013
 Capsules and tablets only
 Adjusted for mix of Rx and mix of network transactions

Exhibit 4

While Rx fee schedules have an effect on Rx prices paid in WC, they do not fully explain Rx costs. Exhibit 5 is a heat map, showing highest values for a column in red and lowest values for a column in green. Each row represents the values for a state, and states are grouped according to their Rx fee schedule AWP multiplier. Low-fee-schedule states are at the top of the chart and high-fee-schedule states are toward the bottom. Each column shows different Rx cost characteristics by state: the share of Rx costs of total medical costs, the average cost of Rx per claim, the average number of Rx per claim, and the mix-adjusted average Rx price per unit.

If fee schedules were to fully explain Rx costs, Exhibit 5 would show more green cells at the top of the chart and more red cells toward the bottom. However, the color pattern in this exhibit does not suggest that fee schedules fully explain Rx costs. In several columns, there are low-fee-schedule states with high indicated values and high-fee-schedule states with low indicated values. Furthermore, there are several states without fee schedules that are nonetheless associated with low (green) values. Therefore, having a low Rx fee schedule does not necessarily mean lower Rx costs. Similarly, having a high-fee-schedule or no fee schedule does not necessarily result in the highest costs.

Fee Schedules Do Not Fully Explain Rx Costs



Source: NCCI Medical Data Call, for prescriptions provided between Service Years 2011 and 2013
 Ranges are determined by comparing individual states to the average across states
 "High" is greater than average plus 0.5 x standard deviation; "Low" is less than average minus 0.5 x standard deviation

Exhibit 5

Exhibit 6 shows the distributions of Rx prices paid per unit. The graphical representations in this exhibit are called violin plots. The vertical span of the plot shows the range of Rx prices paid per unit, and the width of the plot shows the concentration of Rx transactions at that price.

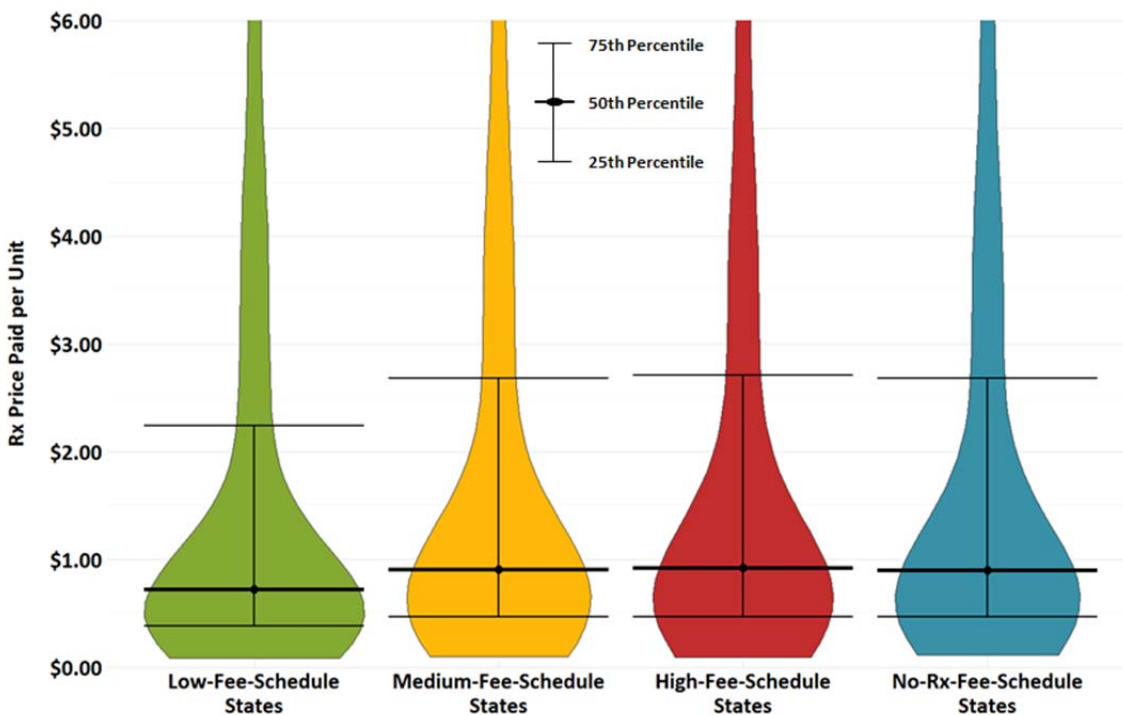
For each of the Rx fee schedule groupings, the corresponding plot is narrow above \$3 per unit, meaning that there are fewer Rx transactions above this price than below it. The plots are widest below \$1 paid per unit, meaning that there is a high concentration of Rx transactions below \$1 paid per unit.

The bold horizontal black line represents the 50th percentile, which indicates that half the Rx transactions have Rx prices paid that are below that amount and half the Rx transactions have Rx prices paid that are above that amount. The lower line is the 25th percentile and the upper line is the 75th percentile.³

For each of the state groups, most Rx prices are below \$2 per unit and the highest concentrations of Rx transactions are just below the median. However, the shape of low-fee-schedule states differs from the other Rx fee schedule groups. The plot for low-fee-schedule states is more compressed, and the 25th, 50th, and 75th percentiles are the lowest of all four groups. For low-fee-schedule states, the median is about 70¢ per unit, and for the other fee schedule groups the median is about 90¢ per unit.

Most WC Rx Prices Are Below \$2 per Unit

Distribution of Rx Price Paid per Unit

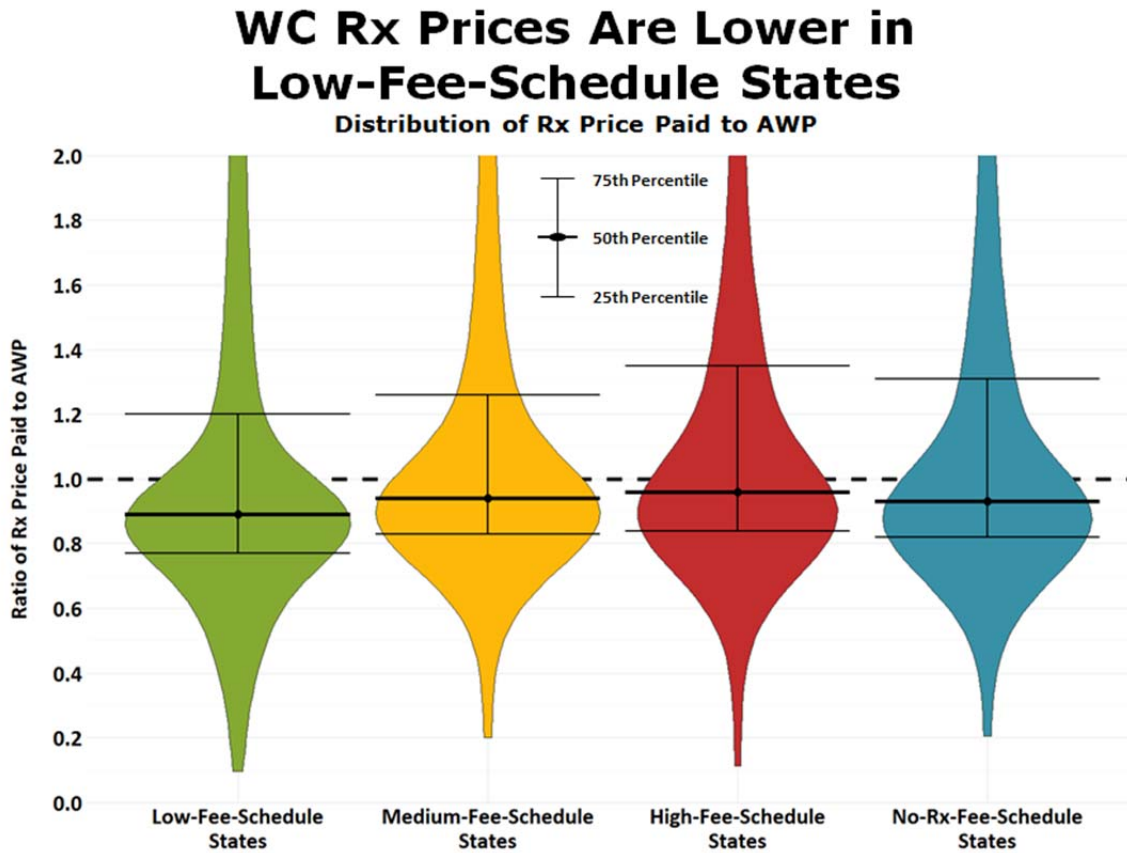


Source: NCCI Medical Data Call, for prescriptions provided between Service Years 2011 and 2013
 Capsules and tablets only
 Adjusted for mix of Rx's and mix of network transactions
 Width of violin plot represents the concentration of transactions at each price

Exhibit 6

³ For example, the 25th percentile is the value for which 25% of observations are that value or smaller. In general, the *p*th percentile is the value for which *p* percent of observations are that value or smaller. The median is the 50th percentile.

In order to assess differences in Rx prices between Rx fee schedule groups, Exhibit 7 relates Rx prices paid to their AWP. This exhibit shows the distribution of Rx prices paid to AWP for each of the Rx fee schedule groups. Recall that the width of the violin plot represents the concentration of transactions at that point. In this exhibit, the highest concentration of ratios of Rx prices paid to AWP for the low-fee-schedule states is between 0.85 and 0.90. For the other state groups, the highest concentration of ratios of Rx prices paid to AWP is at slightly higher ratios. Furthermore, the 25th percentile, median, and 75th percentile are lowest for low-fee-schedule states and highest for high-fee-schedule states. The median Rx price paid to AWP is about 0.90 for low-fee-schedule states and about 0.95 for high-fee-schedule states. Overall, Rx prices are lower in low-fee-schedule states than in the other three state groups.



Source: NCCI Medical Data Call, for prescriptions provided between Service Years 2011 and 2013
 Capsules and tablets only
 Adjusted for mix of Rx's and mix of network transactions
 Width of violin plot represents the concentration of transactions at each ratio

Exhibit 7

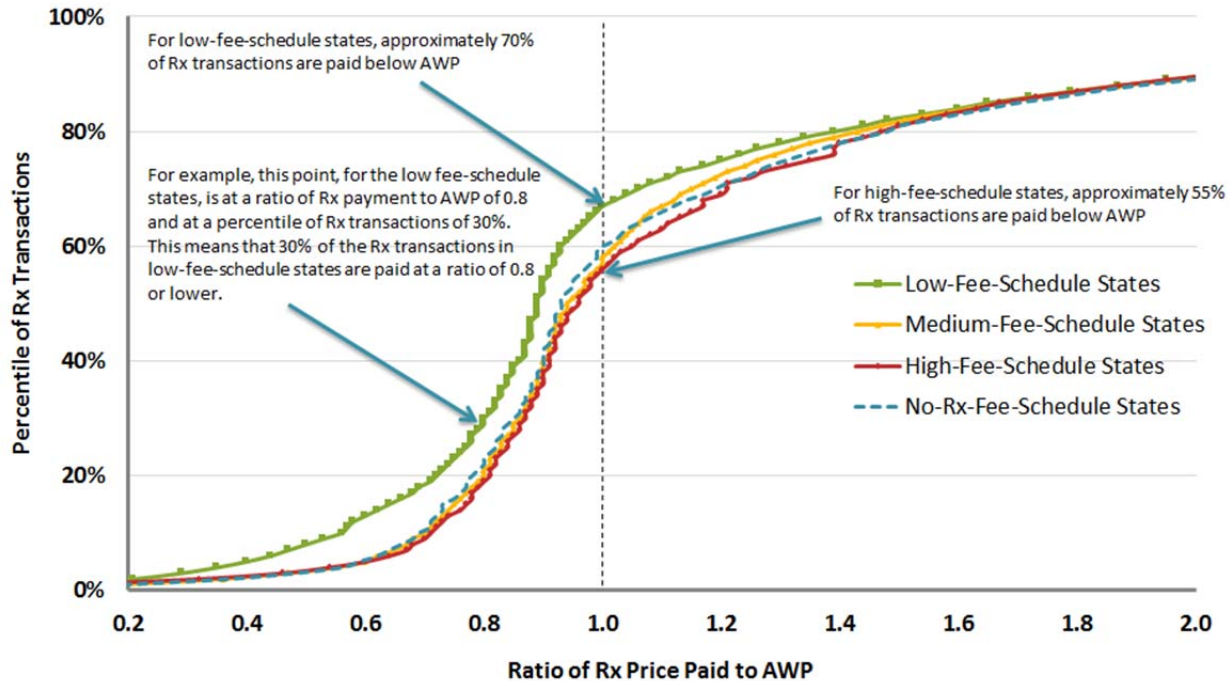
Exhibit 8 shows the same distribution of Rx prices paid to AWP as Exhibit 7, but in a different format, namely as a cumulative distribution. The horizontal axis is the ratio of Rx prices paid to AWP. The vertical axis shows the share (percentile) of ratios of Rx prices paid to AWP that are at, or below, the given ratio of Rx price paid to AWP. For example, for the low-fee-schedule states, approximately 30% of Rx transactions are paid at a ratio of 0.80 or lower relative to AWP compared to approximately 20% of transactions for high-fee-schedule states. The relative position of the curves also provides valuable information. A curve further to the left indicates lower prices than a curve further to the right. The curve for low-fee-schedule states is to the left of the other curves, indicating lower relative Rx prices. The curve for high-fee-schedule states is, for the most part, to the right of the other curves, indicating the highest relative Rx prices.

In this graph, a ratio of 1.0 means that the Rx price paid equals the AWP and is represented by the dashed vertical line. About 70% of the transactions for the low-fee-schedule states are paid below AWP, while about 55% of the Rx transactions for high-fee-schedule states are paid below AWP.

Similar patterns can be observed when analyzing a single drug, such as Celebrex. See Exhibit 14 in the Appendix.

WC Rx Prices Are Lower in Low-Fee-Schedule States

Distribution of Rx Price Paid to AWP



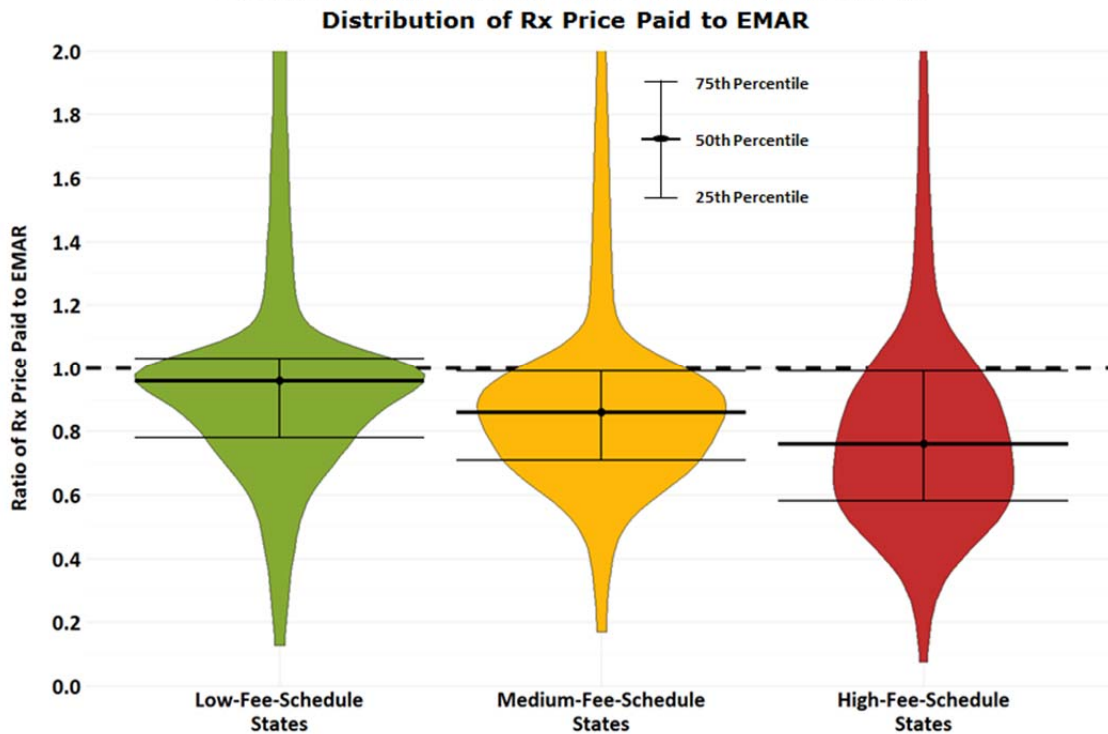
Source: NCCI Medical Data Call, for prescriptions provided between Service Years 2011 and 2013
 Capsules and tablets only
 Adjusted for mix of Rx's and mix of network transactions

Exhibit 8

In order to assess the effect of fee schedules on Rx prices, Exhibit 9 compares Rx prices paid to their estimated maximum allowable reimbursement (EMAR). Although there are multiple publishers of AWP information, for consistency, in this study, the EMAR is based on drug-pricing data from one of the major publishers of pharmaceutical information, First Databank. Hence, we consider the EMAR to be an estimate of the maximum allowable reimbursement.

Unlike in Exhibits 3 through 8, states without a fee schedule are not included in Exhibit 9 because these states have no EMAR. In this exhibit, a ratio of 1.0 means that the Rx prices paid are equal to the EMAR. Notice that the shape of the plots differs for each of the fee schedule groups. The plot for high-fee-schedule states is not as constrained by the EMAR, and the range of Rx prices paid to EMAR is more spread out. For medium-fee-schedule states, the plot is somewhat more compressed than the plot of the high-fee-schedule states. However, the shape of the plot for low-fee-schedule states is the most compressed, and a larger share of transactions is close to the EMAR.

In Low-Fee-Schedule States, WC Rx Prices Are Concentrated Close to EMAR



Source: NCCI Medical Data Call, for prescriptions provided between Service Years 2011 and 2013
 Capsules and tablets only
 Adjusted for mix of Rx's and mix of network transactions
 Width of violin plot represents the concentration of transactions at each ratio

Exhibit 9

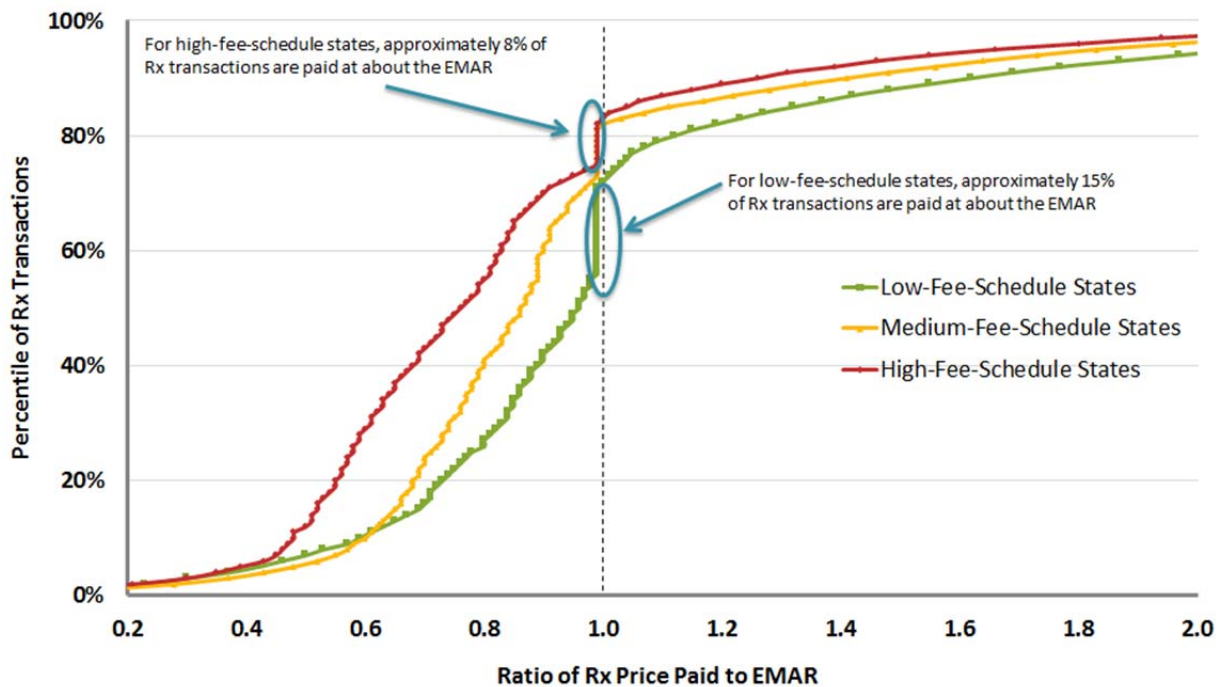
Exhibit 10 shows the same distribution of Rx prices paid to EMAR as Exhibit 9. By comparing the position of the curves, it can be seen that the curve for low-fee-schedule states is mostly to the right of the other curves, indicating that Rx prices are paid closer to the EMAR. Conversely, the curve representing the high-fee-schedule states is mostly to the left, indicating that Rx prices are paid further below the EMAR. This finding is similar to NCCI’s study on physician fee schedules, which shows that larger discounts off the fee schedule do not always imply lower prices [1]. Exhibit 10 shows that Rxs in high-fee-schedule states are generally paid further below the EMAR than in low- or medium-fee-schedule states. However, Exhibit 8 shows that actual prices paid in high-fee-schedule states are generally higher than in low- or medium-fee-schedule states. Taken together, these exhibits demonstrate that when Rx prices paid are further below the EMAR, actual Rx prices paid are not necessarily lower.

Recall from the Exhibit 9 discussion that a ratio closer to 1.0 means that the Rx price paid is closer to the EMAR. Exhibit 10 allows for a comparison of the share of transactions that are paid at about the EMAR. For low-fee-schedule states, approximately 15% of Rx transactions are paid at about the EMAR. However, for high-fee-schedule states, approximately 8% of Rx transactions are paid at about the EMAR.

Similar patterns can be observed when analyzing a single drug, such as Celebrex. See Exhibit 15 in the Appendix.

In Low-Fee-Schedule States, WC Rx Prices Are Concentrated Close to EMAR

Distribution of Rx Price Paid to EMAR



Source: NCCI Medical Data Call, for prescriptions provided between Service Years 2011 and 2013
 Capsules and tablets only
 Adjusted for mix of Rxs and mix of network transactions

Exhibit 10

THE EFFECT OF RX FEE SCHEDULES ON DIFFERENT TYPES OF RX TRANSACTIONS

This section of the report compares the effect of Rx fee schedules for:

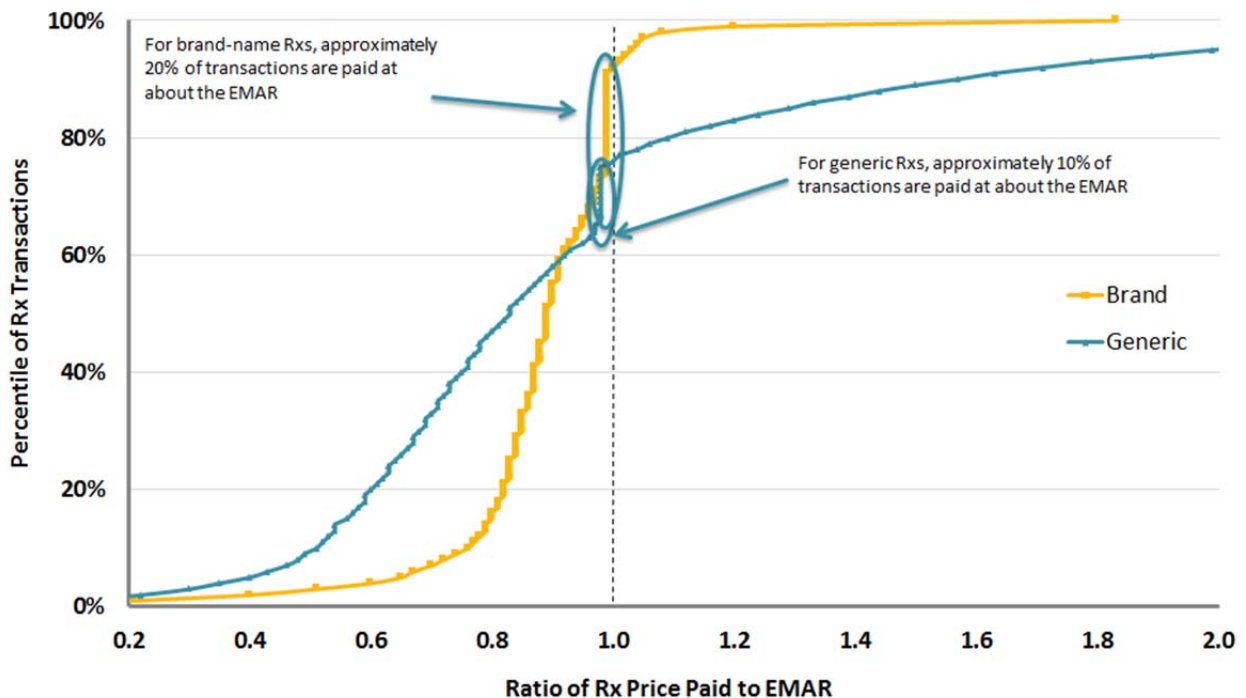
- Brand-name Rxs vs. generic Rxs
- Physician-dispensed Rxs vs. pharmacy-dispensed Rxs
- In-network vs. out-of-network transactions

Brand-name Rxs account for only one-fourth of the total Rx transactions, but they account for more than half of the WC Rx costs. Previous NCCI studies have found similar shares [3]. Exhibit 11 shows the distribution of Rx prices paid to EMAR, separately for brand-name and generic Rxs. For the lower 60% of transactions for brand-name Rxs, prices paid are closer to the EMAR than for the lower 60% of generic Rxs transactions. For brand-name Rxs, approximately 20% of transactions are paid at about the EMAR, while 10% of transactions are paid at about the EMAR for generic Rxs. At the upper end of the distribution, fee schedules hold Rx prices down more effectively for brand-name Rxs than for generics.

Similar patterns can be observed when analyzing a single drug formulation, such as Oxycodone-Acetaminophen. See Exhibit 16 in the Appendix.

Brand-Name Rx Prices Are Closer to EMAR Than Generic Rx Prices

Distribution of Rx Price Paid to EMAR



Source: NCCI Medical Data Call, for prescriptions provided between Service Years 2011 and 2013
Capsules and tablets only
Adjusted for mix of network transactions

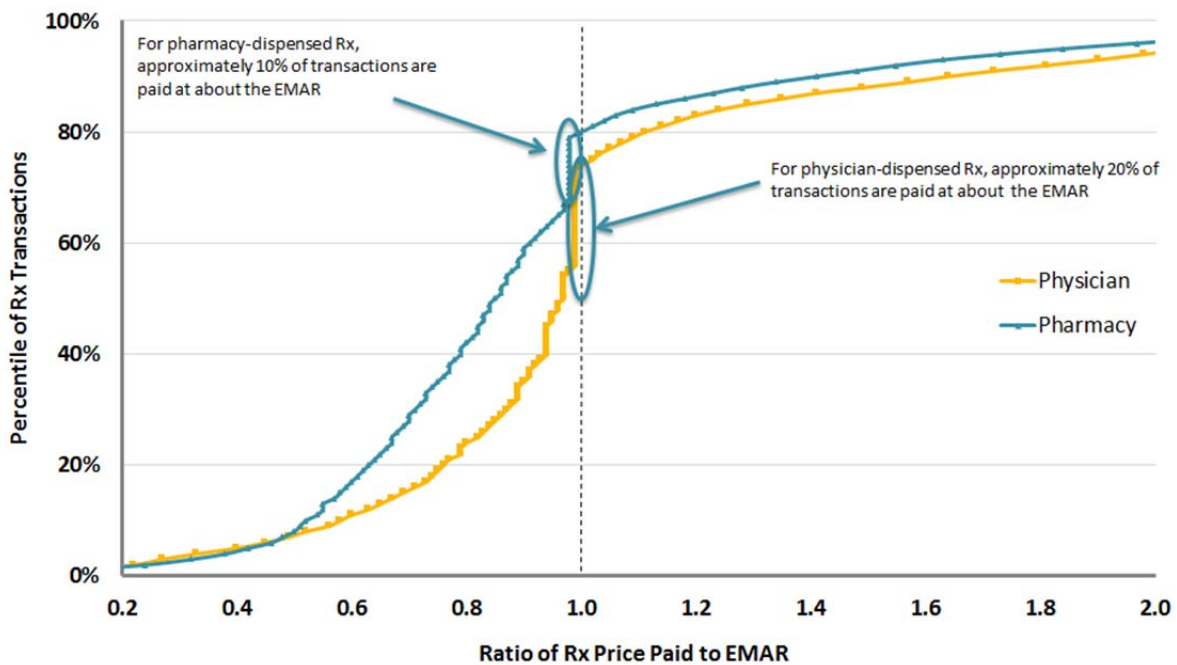
Exhibit 11

Physician-dispensed Rx's are a material share of WC Rx's costs. The cost per unit of physician-dispensed Rx's is often higher than the cost per unit of the same Rx dispensed by a pharmacy [3]. Exhibit 12 shows the distribution of Rx prices paid to EMAR for physician-dispensed and pharmacy-dispensed Rx's. The physician-dispensed distribution of Rx prices paid to EMAR is generally to the right of the pharmacy-dispensed distribution. This shows that overall, physician-dispensed Rx's are paid closer to the EMAR than pharmacy-dispensed Rx's. For physician-dispensed Rx, about 20% of transactions are paid at approximately the EMAR, while for pharmacy-dispensed Rx the figure is approximately 10%.

Similar patterns can be observed when analyzing a single drug formulation, such as Tramadol. See Exhibit 17 in the Appendix.

Physician-Dispensed Rx's Are Mostly Paid at a Higher Ratio to EMAR Than Pharmacy-Dispensed Rx's

Distribution of Rx Price Paid to EMAR



Source: NCCI Medical Data Call, for prescriptions provided between Service Years 2011 and 2013
 Capsules and tablets only
 Adjusted for mix of network transactions

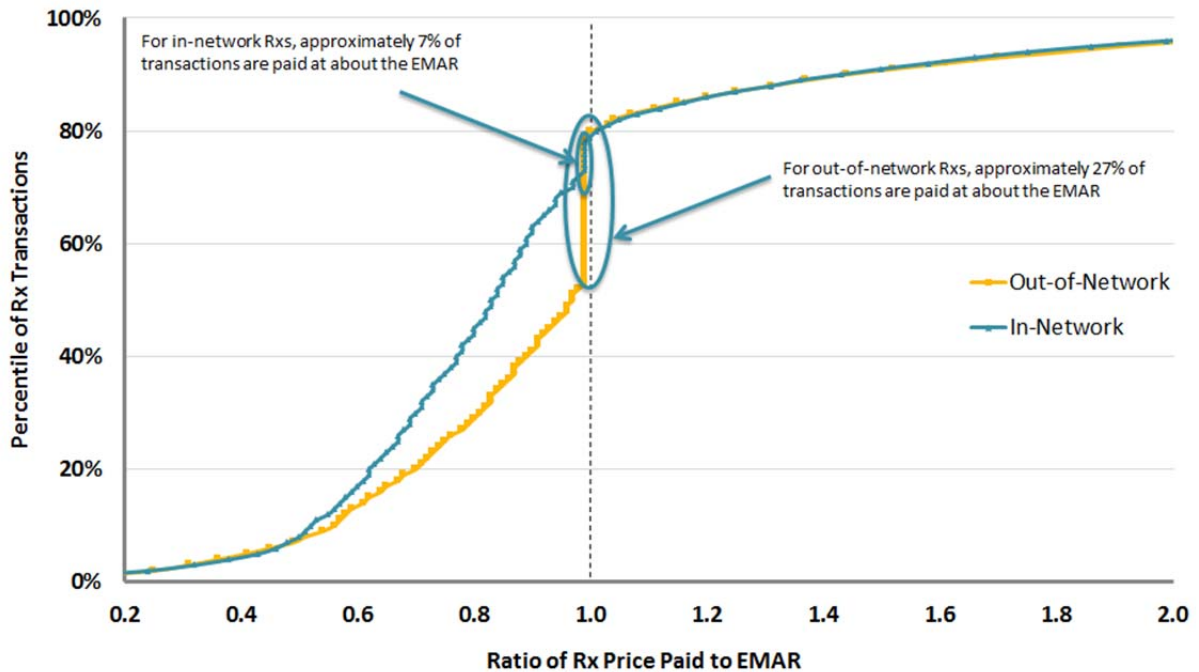
Exhibit 12

Most WC Rx's are provided through networks, such as pharmacy benefit managers (PBMs). In-network transactions are typically paid at negotiated Rx prices. In this study about three-fourths of the Rx transactions and costs are provided through networks. Exhibit 13 compares the distribution of Rx prices paid to EMAR for in-network and out-of-network Rx transactions. This exhibit shows that between about the 10th and 75th percentiles, the out-of-network curve is to the right of the in-network curve. This shows that overall, out-of-network Rx's are paid closer to the EMAR than in-network Rx's. In addition, for out-of-network Rx's, approximately 27% of transactions are paid at about the EMAR. However, for in-network Rx's, about 7% of transactions are paid at about the EMAR. Above the EMAR, or to the right of the dashed line, the out-of-network and in-network distributions are similar. That is, for any ratio of prices paid to EMAR greater than 1.0, similar shares of in-network and out-of-network Rx transactions exceed that ratio.

Similar patterns can be observed when analyzing a single drug formulation, such as hydrocodone-acetaminophen. See Exhibit 18 in the Appendix.

WC Rx's Are Paid at a Lower Ratio to EMAR In-Network Than Out-of-Network

Distribution of Rx Price Paid to EMAR



Source: NCCI Medical Data Call, for prescriptions between Service Years 2011 and 2013
 Capsules and tablets only
 Adjusted for mix of Rx's

Exhibit 13

CLOSING REMARKS

The focus of this study is on the effect of AWP-based Rx fee schedules on Rx prices paid in WC. The study shows that AWP-based Rx fee schedules have an effect on Rx prices paid in WC, but that this effect is smaller than the nominal difference in fee schedule AWP multipliers. Rx fee schedules with AWP multipliers greater than 1.0 can result in higher Rx prices paid than in states without a fee schedule. These findings are similar to NCCI's studies on the price impact of physician fee schedules. Those studies have shown that properly designed physician fee schedules can help contain WC medical costs. However, fee schedules set too high can undermine their effectiveness [1].

ACKNOWLEDGMENTS

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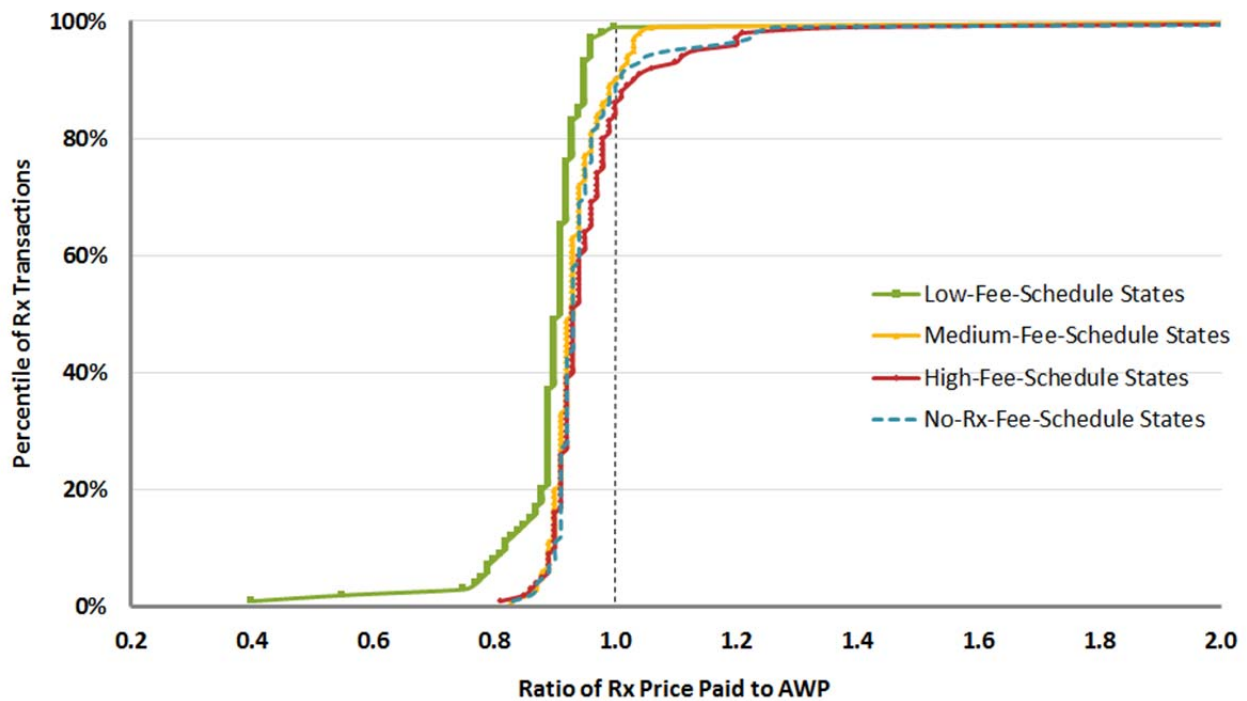
APPENDIX

Price patterns for many individual drugs are similar to the price patterns across all WC Rxs for capsules and tablets.

Exhibit 14 is similar to Exhibit 8, but is restricted to one of the top Rxs in WC—Celebrex. In this graph, the curves are somewhat steeper than the curves in Exhibit 8 because there is less price variation for this one drug than for drugs overall. However, for nearly all of the transactions, the curve for the low-fee-schedule states is to the left of all other fee schedule groups, indicating the lowest relative prices.

Celebrex* Prices Are Lower in Low-Fee-Schedule States

Distribution of Rx Price Paid to AWP



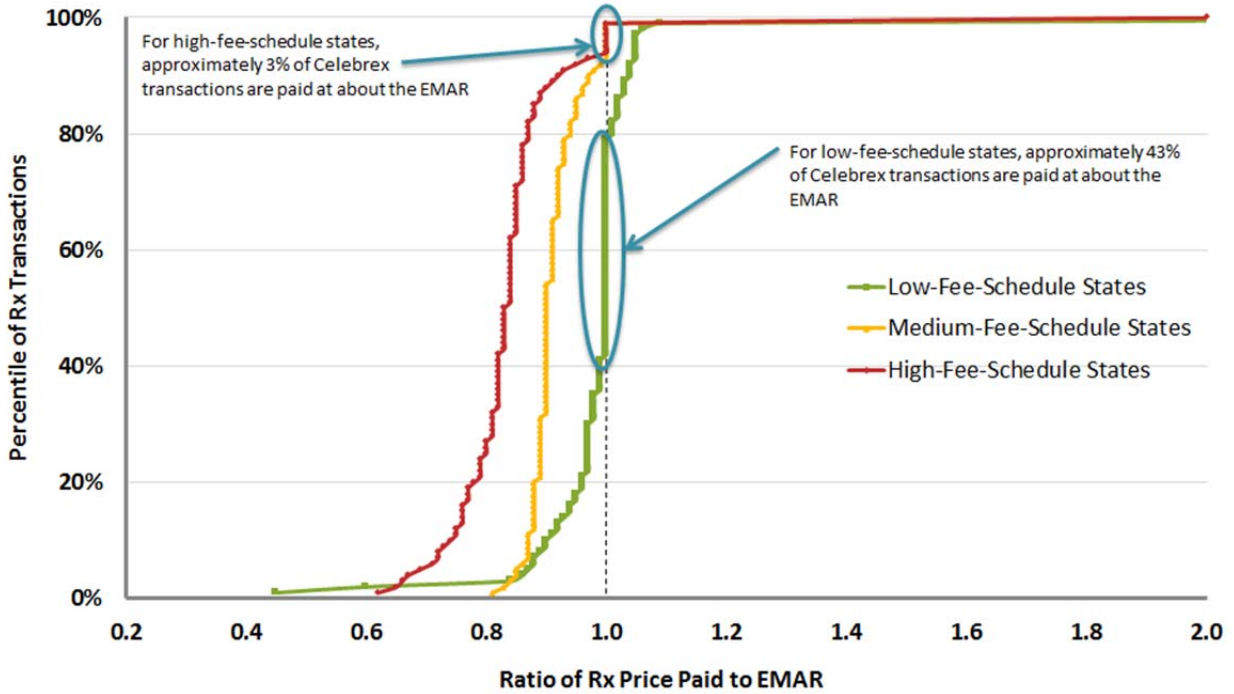
Source: NCCI Medical Data Call, for prescriptions provided between Service Years 2011 and 2013
 *NDC 00025152531: CELEBREX 200 MG CAPSULE

Exhibit 14

Exhibit 15 shows the distribution of prices paid to EMAR for a particular formulation of Celebrex. In low-fee-schedule states, Celebrex prices are concentrated close to the EMAR; this is similar to the pattern for all drugs shown in Exhibit 10. For low-fee-schedule states, approximately 43% of Celebrex transactions are paid at about the EMAR. However, for high-fee-schedule states, about 3% of Celebrex transactions are paid at about the EMAR.

In Low-Fee-Schedule States, Celebrex* Prices Are Concentrated Close to EMAR

Distribution of Rx Price Paid to EMAR



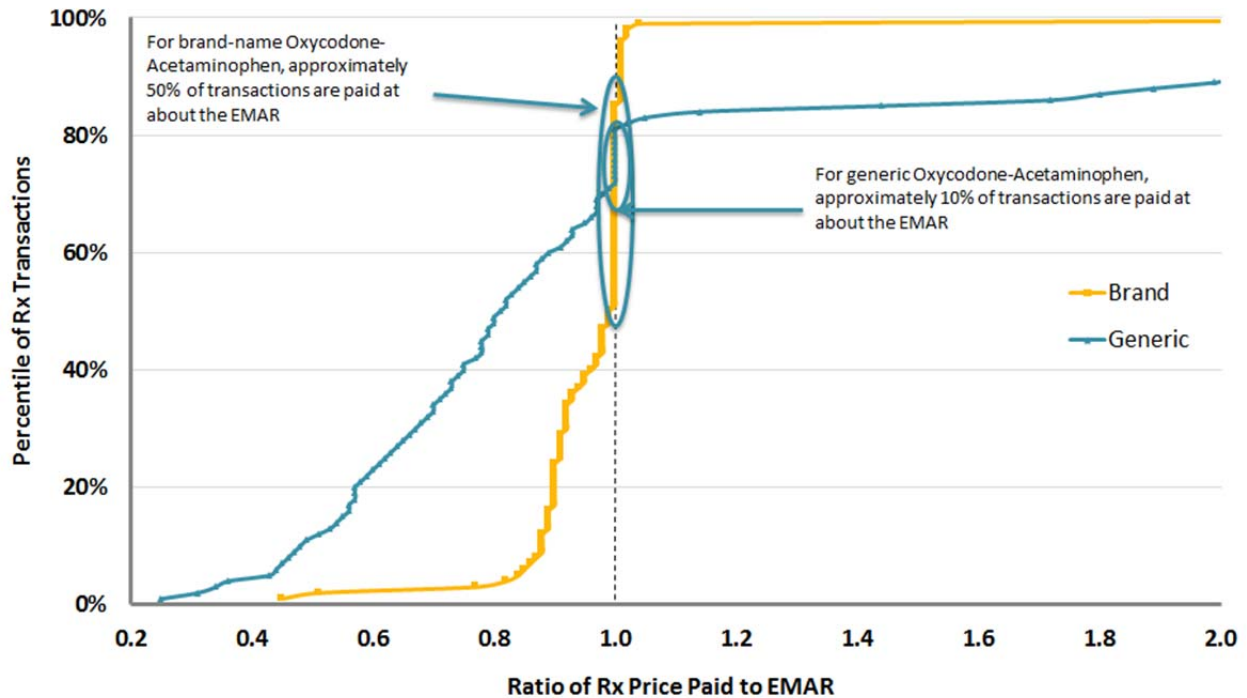
Source: NCCI Medical Data Call, for prescriptions provided between Service Years 2011 and 2013
 *NDC 00025152531: CELEBREX 200 MG CAPSULE

Exhibit 15

Exhibit 16 shows the distribution of Rx prices paid to EMAR for a brand name and a generic formulation of Oxycodone-Acetaminophen. The price relation of the brand name and the generic Oxycodone-Acetaminophen plots is similar to the relation observed for all Rxs in Exhibit 11. For brand-name Oxycodone-Acetaminophen, approximately 50% of transactions are paid at about the EMAR. However, for generic Oxycodone-Acetaminophen, only about 10% of transactions are paid at about the EMAR.

Brand-Name Oxycodone-Acetaminophen* Prices Are Closer to EMAR Than Generic**

Distribution of Rx Price Paid to EMAR



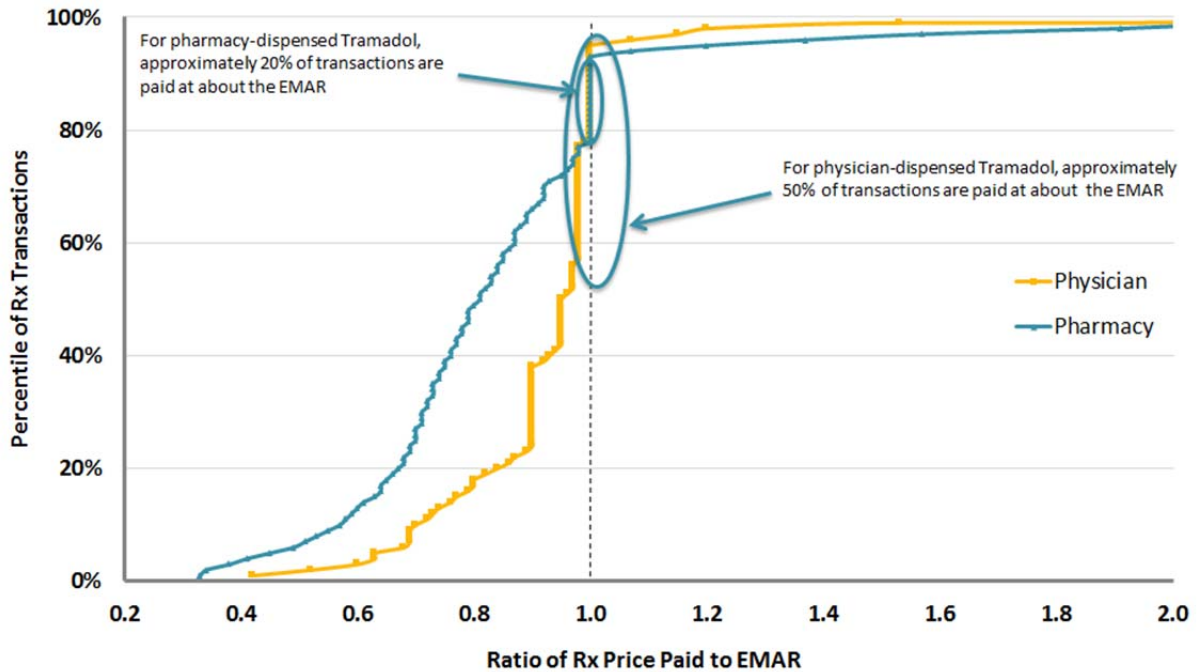
Source: NCCI Medical Data Call, for prescriptions provided between Service Years 2011 and 2013
 *NDC 63481062970: PERCOCET 10-325 MG TABLET (Brand of OXYCODONE-ACETAMINOPHEN 10-325)
 **NDC 00406052301: Generic OXYCODONE-ACETAMINOPHEN 10-325

Exhibit 16

Exhibit 17 gives a distribution of Rx prices paid to EMAR for a physician-dispensed and a pharmacy-dispensed formulation of Tramadol. This exhibit shows that a larger share of physician-dispensed Tramadol is paid at about the EMAR than for pharmacy-dispensed Tramadol. For physician-dispensed Tramadol, approximately 40% of transactions are paid at about the EMAR. However, for pharmacy-dispensed Tramadol, approximately 20% of transactions are paid at about the EMAR. The patterns observed in Exhibit 17 are similar to those observed in Exhibit 12.

Physician-Dispensed Tramadol* Is Mostly Paid at a Higher Ratio Than Pharmacy-Dispensed

Distribution of Rx Price Paid to EMAR



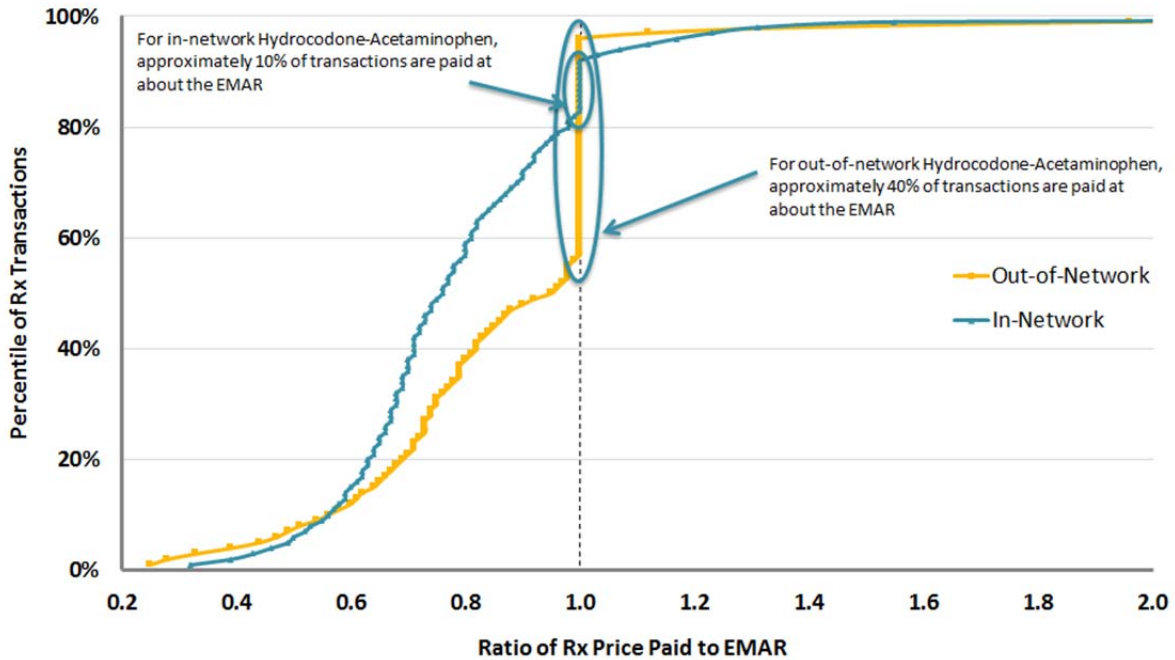
Source: NCCI Medical Data Call, for prescriptions provided between Service Years 2011 and 2013
Capsules and tablets only
*NDC 65162062711: TRAMADOL HCL 50 MG TABLET

Exhibit 17

Comparable to Exhibit 13, Exhibit 18 shows the distribution of Rx prices paid to EMAR for an in-network and an out-of-network formulation of Hydrocodone-Acetaminophen. This exhibit shows that a larger share prices paid for out-of-network Hydrocodone-Acetaminophen is closer to EMAR than for in-network transactions. For out-of-network Hydrocodone-Acetaminophen, approximately 40% of transactions are paid at about the EMAR. For in-network Hydrocodone-Acetaminophen, approximately only 10% of transactions are paid at about the EMAR.

Hydrocodone-Acetaminophen* Is Paid at a Lower Ratio to EMAR In-Network Than Out-of-Network

Distribution of Rx Price Paid to EMAR



Source: NCCI Medical Data Call, for prescriptions provided between Service Years 2011 and 2013
 *NDC 00406035705: HYDROCODONE-ACETAMINOPHEN 5-500

Exhibit 18

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