



# STUDY OF THE PHARMACY CHAIN OF SUPPLY



OFFICE of the  
**INSURANCE  
COMMISSIONER**  
WASHINGTON STATE

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## Executive Summary

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In 2016, the Washington legislature passed 5ESSB 5857, which required the Washington Office of the Insurance Commissioner (OIC) to conduct a Study of the Pharmacy Chain of Supply (Study). The legislation specified that the Study must include at least the following elements:

- + Review the entire drug supply chain including plan and pharmacy benefit manager reimbursements to network pharmacies, wholesaler or pharmacy service administrative organization prices to network pharmacies, and drug manufacturer prices to network pharmacies.
- + Discuss suggestions that recognize the unique nature of small and rural pharmacies and possible options that support a viable business model that do not increase the cost of pharmacy products.
- + Review the availability of all drugs on the maximum allowable cost list or any similar list for pharmacies and provide analysis of the differences in wholesale prices of pharmaceuticals and reimbursement prices.
- + Review data submitted to the Department of Revenue under RCW 19.340.100(4)(b), if any, for patterns and trends in the denials of internal pharmacy benefit manager appeals involving pharmacies with fifteen or more (*sic*)<sup>1</sup> retail outlets within the state of Washington, under their corporate umbrellas.
- + Review the telephone contacts and standards for response times and availability for telephone inquiries and appeals by pharmacies and providers to pharmacy benefits managers.
- + Review the pharmaceutical acquisition cost from national or regional wholesalers that serve pharmacies in Washington, and consider when or whether to make an adjustment and under what standards. The review may assess the timing of pharmacy purchases of products and the relative risk of PBM list price changes related to the timing of dispensing the products.

OIC contracted Health Management Associates (HMA) to conduct the Study. HMA subcontracted Mercer LLC and Gorospe Solutions to provide supplemental subject matter expertise and data analysis when necessary.

OIC identified six PBMs that provide pharmaceutical management services to 98% of the enrollees in Washington State's fully insured commercial market.<sup>2</sup> Elements of the Study required analysis of complex data sets that contained confidential and sensitive information. It is rare that these data are shared outside PBM organizations; however, 5ESSB 5857 required pharmacy benefit managers (PBMs) to provide all information needed to conduct the Study. As a result, HMA and its subcontractor received unprecedented access to claims, proprietary maximum allowable cost (MAC) reimbursement lists, and appeals data from the PBMs. Because of the sensitivity of the data, the names of the PBMs are blinded throughout the study. Each PBM is assigned a number and is referred to in the report as PBM 1, PBM 2, etc.

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<sup>1</sup> Senate Bill XXX at the secondary appeal rights of OIC applies to pharmacies with fewer than 15 stores, not greater.

<sup>2</sup> Note, through the Washington Attorney General Office's review, only fully insured commercial payers are subject to the secondary appeals process; therefore, data capture was restricted to those PBMs.

It should be noted that conducting dispensing and actual acquisition cost studies were out of scope for this project; therefore, industry benchmarks were used as proxies for Washington-specific drug acquisition cost and cost of dispensing. Further detail is presented in the methodology section beginning on page ten.

Overviews and key findings for each of the six main sections of the Study are summarized below. In order to achieve a logical flow, and due to overlap across the elements identified in the legislation, the Study was organized differently than the legislative list of required Study elements. Therefore, the six sections of the report summarized below do not align directly to the six elements of the Study outlined in the legislation bulleted above.

## The Pharmacy Supply Chain

The pharmacy supply chain is considered by some to be one of the most complex and opaque supply chains in the United States, with thousands of confidential monetary transactions occurring for each unique drug product. Pharmaceutical pricing for commercial insurers is a market established with minimal government regulation. This section of the Study provides descriptions of each segment of the supply chain and how each interacts with one another to provide an overall background on the industry players. The recent EpiPen pricing increase lends itself to be an evocative example of how the various segments of the supply chain impact the pricing of a drug.

## Maximum Allowable Cost Reimbursement

The purpose of this section is to understand how Washington state-specific PBM Maximum Allowable Cost (MAC) reimbursement for multi-source generic drugs (generic drugs produced by more than one manufacturer) compares to the National Average Drug Acquisition Cost (NADAC) reimbursement and to two regional benchmark MAC lists. A key objective of the Study is to determine the adequacy of PBM MAC reimbursement to independent pharmacies. In theory, MAC reimbursement adequacy will drive the number of MAC appeals that pharmacies submit to PBMs, thus impacting OIC's decisions on developing the infrastructure to process a secondary-level of appeals.

### Key Findings:

- + The number of drugs included on PBM MAC lists vary significantly across PBMs.
- + Aggregate PBM Wholesale Acquisition Cost (WAC) effective discounts of their MAC lists ranged from WAC -15.5% to WAC-38.0%, while regional benchmarks, and NADAC WAC discounts range from WAC -24.3% to WAC -30.6%. The PBMs demonstrated greater variance (e.g., larger range of effective WAC discounts as compared to national and regional benchmarks) with some PBM MAC lists having reimbursement rates more generous than the national and regional benchmarks (e.g., WAC – 15.5%), and other PBM MAC lists demonstrating more aggressive reimbursement rates (e.g., EAC - 38%) compared to the benchmarks.
- + In general, PBM MAC lists result in payments to pharmacies that are higher than the NADAC benchmark price and lower than the regional benchmark prices .
- + The fact that the PBM MAC lists result in reimbursements that are higher than the NADAC benchmark is attributable to the fact that NADAC is an average acquisition cost benchmark, whereas MAC lists are designed to reimburse pharmacies more than the lowest available acquisition cost for a drug grouping.
- + PBM 3 paid rural pharmacies less than all benchmarks; PBMs 5 and 6 paid more.

- + Five of the six PBMs paid independent pharmacies more than chain drug stores in the NADAC analysis.
- + PBMs in aggregate paid over 73% of claims to chain pharmacies. Within chain pharmacies there are significant PBM reimbursement variance swings depending on which benchmark (national or regional) the PBM reimbursement is compared to.

### PBM MAC List Update Processes

The generic drug market is in a constant state of flux. Prices change as some manufacturers enter the market and others leave. There is a direct relationship between the amount of discounts off of the list price and the number of manufacturers distributing a specific drug product. The greater the number of generic manufacturers available for a product, the greater the discount the purchaser will receive. It follows that the drug prices decrease when there is greater competition. Because the availability and pricing of generic drugs changes on a daily basis, pharmacy acquisition costs are changing constantly. In order for reimbursement to keep up with pricing changes, PBMs update their MAC lists on a frequent basis; some report daily updates. To help ensure that MAC reimbursement is fair, some states have passed laws to require PBMs to update their MAC lists on a frequent basis. Washington requires PBMs to update MAC lists weekly.

#### Key Findings:

- + The data varied so much that no conclusions can be drawn regarding timing of MAC list updates, and no trends are found for any of the six PBMs.
- + PBMs reacted differently on a drug-by-drug basis with regard to how cost changes were handled.
- + PBMs varied in how they reacted to the same cost change on a drug. PBM reimbursement prior to observed acquisition cost changes varied significantly compared to NADAC drug pricing. The PBM ingredient cost reimbursement differed widely, from being equivalent reimbursement to NADAC, to being more than 100% above or below NADAC.
- + PBMs appeared to proactively update reimbursement prior to a pricing change on certain drugs. However, the conclusion that PBMs alter reimbursement prior to a known pricing change is merely an inference that cannot be verified as fact through this Study.
- + Very rarely did PBMs react on the exact day of a WAC rate change.
- + There was no clear pattern in the way different PBMs updated prices, and even individual PBMs seemed to have no consistent method of dealing with price changes.
- + During the period reviewed for the Study, some PBMs updated their MAC lists within a week of a cost change, while others made no updates during the period.

### Pharmacy Profitability

The Study estimates pharmacy profitability based upon national and regional benchmarks including average wholesale price discounts for drug acquisition costs and cost of dispensing (COD) studies. In addition to assessing overall profitability of Washington pharmacies, the Study includes a case study of independent pharmacies profitability. The profitability of one rural independent and one urban independent was analyzed.

### Key Findings:

- + In the aggregate, pharmacies showed a positive Gross Profit across the PBMs, but only a positive Gross Profit for PBMs 1 and 4 when considering the cost of dispensing at \$10 per prescription.
- + Dispensing generic drugs was more profitable than dispensing brand drugs, but that profitability was dependent on an individual pharmacy's cost to dispense.
- + The rural independent pharmacy was more profitable than the urban independent pharmacy.
- + Profitability decreased when the cost to dispense increased from \$10 to \$15 per prescription, forcing pharmacies' Net Income as a percent of Gross Income into the negative range.
- + The rural independent pharmacy was more profitable at a \$10 COD and suffered lower losses at \$15 COD than the urban independent pharmacy.
- + Pharmacies that relied on prescription drug incomes must obtain higher or expanded fees, or, must maintain a sufficient spread between drug costs and reimbursements in order to remain profitable.

The following table shows pharmacy profitability as a percentage of Gross Income:

Cost to Dispense	Rural Independent Pharmacy Profit	Urban Independent Pharmacy Profit
\$10	3.3%	-0.2%
\$15	-7.0%	-10.9%

### Pharmacy MAC Appeals Analysis

The objective of the appeals analysis was to review data submitted to the Department of Revenue under RCW 19.340.100(4)(b), if any, for patterns and trends in the denials of internal pharmacy benefit manager appeals involving pharmacies with fewer than fifteen retail outlets within the State of Washington, under their corporate umbrellas. In absence of this data from the Department of Revenue, the data was obtained directly from the PBMs.

In order to accomplish the objective, the scope of work for this section included conducting the following:

- + An analysis of MAC appeals, the frequency of successful appeals, and the types of pharmacies most likely to generate appeals;
- + Establishing an estimate of the percentage of transactions which are likely to generate appeals under the provisions of ESSB 585; and
- + An analysis and recommendation for the most useful documents to be submitted by parties when an appeal is filed to OIC to allow for expeditious OIC resolution of submitted appeals.

The analysis separated pharmacies into two designators: SMALL and LARGE. SMALL pharmacies were defined as having fewer than 15 locations in Washington. Since SMALL pharmacies is the subset of pharmacies that will have access to the OIC secondary appeals process, a more granular analysis was conducted for these SMALL pharmacies.

### Key Findings

- + The Study estimated that OIC is likely to receive 13,500 – 15,500 appeals on average annually. This estimate assumes that PBMs do not change their current business practices, which, if they do, may affect the appeals volume they receive.

- + SMALL pharmacies generated a range of appeals, as a percentage of total claims volume, from 0.02% – 2.24% with an overall average of 0.19%.
- + 17% (44) of SMALL pharmacies that submitted an appeal generated 80% of the appeals.
- + All 44 pharmacies were paid at a higher rate than NADAC, but at a lower rate than all Washington pharmacies except for PBM 2.
- + All but one PBM paid the 44 pharmacies' ingredient costs at a higher rate than the statewide pharmacies when comparing to benchmark MAC List 1.
- + Four of the six PBMs paid the 44 pharmacies' ingredient cost at a higher rate than the statewide pharmacies when comparing to benchmark MAC List 2.
- + Of the 44 pharmacies, 9 were urban locations, 5 were in suburban locations, and 30 were in rural locations. By geography, 12 were in Eastern Washington (east of the Cascade Mountains), 10 were in Central I-5 corridor (defined as King, Pierce, Snohomish, and Thurston Counties), and 22 were in the rest of western Washington.
- + 37% (108) of the SMALL pharmacies submitted fewer than 10 appeals over the Study period.
- + PBM 4 had 59% of the appeal volume for SMALL pharmacies over the study period, with a notable increase over the study period.
- + PBMs denied between 77% and 94% of MAC appeals, with an average of 87%.
- + The majority of the appeals were on lower cost drugs. 89% of the appeals came from claims in which the pharmacy was reimbursed less than \$50 for the ingredient cost of the drug. Ingredient cost ranged from pennies to over \$500 per prescription.
- +

### PBM MAC-Related Process Review

The Study includes a review of the PBM MAC appeals processes to provide the OIC with baseline information. Areas reviewed include:

- + Timeframe for appeals resolution by the PBM (in accordance with RCW 19.340.100(3));
- + Provision of an alternative National Drug Code (NDC) for denied appeals (in accordance with RCW 19.340.100(4)(b));
- + Updates of the MAC pricing within one day (in accordance with RCW 19.340.100(5)(a));
- + PBM telephone contacts for submitting MAC appeals (in accordance with RCW 19.340.100(4)(a)); and
- + PBM MAC appeals policy review.

The analysis in this section is intended to be informational only and in no way should be considered a compliance audit. In some cases, the PBM did not provide sufficient data or information to allow the reviewers to gain a full understanding of the PBM's processes. Absence of data does not imply that a PBM is not in compliance with the terms of the regulation, but instead, it is a limitation of the dataset or PBM reporting capabilities. Further, the observations in this report are not intended to be used for enforcement purposes, but merely to show our conclusions based on the information reported.

Further, the appeal data set contains appeal records prior to the enactment of the law, so the data may not reflect compliance practices of the PBMs.

## Key Findings

- + PBMs reported faster resolution of denied appeals than upheld appeals: 84% of denied appeals were processed in 10 days and 4% were not completed within 30 days; 58% of upheld appeals were processed in 10 days and 10% were not completed within 30 days.
- + For SMALL pharmacies, the timeframes were longer: 55% processed within 10 days and 85% processed within 30 days.
- + Three of the six PBMs provided the alternate NDC greater than 90% of the time.
- + Only three PBMs provided information relating to the requirement to update their MAC list pricing within one day of a pricing change. Of those three, MAC lists updates within the one-day timeframe were made between 87% and 100% from the determination date.
- + Each PBM in the Study had a telephone contact number for pharmacies to use to speak with PBM personnel, although direct contact with a live PBM representative was not always available on the first call. The majority of the call center hours of operation observed in the Study were 24 hours a day, seven days per week.
- + Each PBM provided policies and procedures or a summary of processes that indicated that the PBM had an appeals resolution timeframe within the requirement of the regulation (30 days).
- + The PBMs' response times for appeals ranged from three to 30 days
- + The window of time a pharmacy had to submit an eligible MAC appeal varied by PBM.
- + The Study found that PBMs have sufficient policies and procedures or processes to fulfill the telephonic contact center requirements of RCW 19.340.100.
- + All but one PBM in the Study had specific policies and procedures for handling MAC pricing inquiries and appeals, and response times within the parameters required by regulation. Depending on day of the week and time that a placed a call, live assistance was not always available but callers had the option of leaving a voice message. At the time this report was prepared, not all calls were returned.

## Overall Observations

PBMs, in theory, design MAC lists to pay pharmacies fairly for multi-source generic and (sometimes) brand drugs. 'Fairly' is generally accepted to mean that a PBM's MAC list reimburses above a pharmacy's ingredient cost in aggregate while at the same time provides value to their payer clients. The results of this Study appear to generally validate this theory both when benchmarked against NADAC and generally accepted AWP brand and generic discounts for drug acquisition pricing. Additionally, independent pharmacies have higher reimbursement rates than chain pharmacies when compared to NADAC. Among independent pharmacies, a case study demonstrated that one rural independent pharmacy fared better than one urban independent pharmacy.

Pharmacy profitability appears to be impacted more by the cost of dispensing than drug cost reimbursement. When cost of dispensing increases, the spread that pharmacies make on ingredient cost reimbursement shrinks. Because the cost of dispensing appears to be the pressure point for profitability based on the data in this Study, the best method of improving pharmacy financial viability without increasing the price of drugs is to address reducing overhead costs or diversifying into profitable non-drug product ("front store") sales.

Pharmacist informants reported wide variability on PBM MAC list updating for drug price inflation, which impacts their profitability. This Study validates that there are no identifiable patterns for



updating MAC lists; however, timing of updating MAC lists does not appear to impact the fairness of the reimbursement in aggregate. Pharmacy informants also stated that PBMs could take 90 days or more to review MAC appeals and pay the pharmacy for upheld appeals. This Study did not validate those statements. PBMs' decision timeframes exceeded 30 days for only 4% of denied appeals and 10% of approved appeals. For PBMs that reported MAC adjustment timelines for approved appeals, one adjusted pharmacy reimbursement was completed within one day 87% of the time, and the other two at 100% of the time.

The Study estimated that OIC could potentially see 13,500 to 15,500 second level MAC appeals based upon current practices. Notably, of the pharmacies with fewer than 15 stores, 44 pharmacies submitted 80% of the appeals to PBMs. OIC has an opportunity to work with these pharmacies individually to understand why they submit a great number of appeals and to see if there are solutions outside of the appeals process. Additionally, nearly 70% of the appeals are driven by one PBM. OIC has another opportunity to work directly with the PBM to determine why it is generating the high percentage of appeals before the law becomes effective.

# Methods

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## Overview

The Study used both qualitative and quantitative data to complete all elements of analysis of the pharmacy supply chain. The data analyses consisted of interviews, research, and analysis of PBM data. The following are the six types of data that were analyzed:

- + Qualitative
  - + Conducting industry interviews with pharmacy supply chain segments and legislative staff
  - + Reviewing PBM MAC pricing and appeals policies and procedures
  - + Making secret shopper calls to PBM MAC appeals contact numbers
  - + Researching other state MAC transparency laws
- + Quantitative
  - + Analyzing pharmacy claims and payment data
  - + Analyzing MAC list update timeframes
  - + Analyzing PBM MAC appeals processing standards

The OIC reviewed the list of carriers in the fully insured commercial market in Washington State and identified the PBMs that provide the pharmacy benefit for their members. Six PBMs administer the pharmacy benefit to 98% of Washington's fully insured population on behalf of the carriers. This Study is limited to the activity of these six PBMs.

OIC sent the PBMs a formal data request for the claims data, appeals data, and policies and procedures (Appendix I). The rest of the data were gathered through interviews and research. As discussed in the Executive Summary, due to the sensitivity of the data received, the PBMs are blinded in the Study and are referred to PBM 1, PBM 2, PBM3, PBM 4, PBM 5, and PBM 6.

Different data and approaches were used in each section of the Study. Because of the variability in data analysis, each section includes a Methods subsection that applies specifically to the scope of the section it is found in. The following is an overview of how the data elements were used across the Study.

## Qualitative Analysis

### Informant Interviews

OIC and HMA solicited interviews with representatives from the pharmacy supply chain, trade associations, and Washington House and Senate staff. Efforts to secure interviews lasted for three months; all but two stakeholder groups had at least one individual interviewed. The lack of participation is likely due to the current sensitivities related to the pricing of new blockbuster drugs and recent price hikes to established medications, as well as competing positions on how drugs are priced. The general reluctance to be interviewed was probably strengthened by the fact that the controversial and highly publicized EpiPen price increase occurred in the middle of the Study.

The informants were all forthcoming and provided essential background into how each segment of the supply chain interacts with other segments. They also identified their own pressure points including increasing fluctuations in manufacturer pricing, payer pricing strategies, and efforts to keep drugs pricing affordable. Interviews with executive and legislative branch staff were helpful in understanding the environment that led to the initiation of the Study. However, the number of pharmacy supply chain informants was too small to draw definitive conclusions.

The following lists the organizations and categories that agreed to be interviewed, following by the number of interviews in parentheses.

- + Washington State Pharmacy Association (2)
- + Pharmaceutical Care Management Association (1)
- + Drug Manufacturer (0)
- + Wholesaler (0)
- + Pharmacy Services Administrative Organization (1)
- + Pharmacy Benefit Manager (1)
- + Washington State Chain Pharmacy (1)
- + Washington State Independent Pharmacy (3)
- + Industry Consulting Experts (2)
- + Washington State Legislative Staff (2)
- + Washington DSHS (2)
- + Washington Health Care Authority (1)

### Policy and Procedure Review

HMA and its subcontractor conducted a desk review of all policies, procedures, provider manuals and other documentation related to MAC appeals processing and related operations. When possible, quantitative data were compared to the policy documents to determine if practice follows policy.

### Secret Shopper Calls

A total of 18 secret shopper calls were made (three calls per PBM). Each PBM received calls during regular business hours, after hours, and weekend hours. A process diagram for the secret shopper call is provided as Exhibit 78. The secret shopper presented himself as an assistant calling on behalf of a pharmacist preparing for a MAC appeal. The secret shopper called into the phone number provided by the PBM and verified the hours of operation. The secret shopper was not provided with a pharmacy NCPDP/NPI number, specific RX number for a prescription, or patient number and thus was unable to pursue the call as a complete MAC pricing appeal.

### Researching Other State MAC Transparency Laws

Appendix IV contains supplemental research on other states' PBM MAC appeals laws for comparison to Washington's. The data were collected through subject matter knowledge of HMA and its subcontractor, as well as individual research through the firms.

### Quantitative Analysis

#### PBM MAC Reimbursement

The PBMS' ingredient cost reimbursement for multi-source generic drugs (MAC pricing) is compared to three acquisition cost benchmarks to determine the adequacy of MAC reimbursement. Benchmarks were used because the Study's scope did not include an actual acquisition cost survey. The NADAC benchmark is the most reliable because it is based upon actual acquisition cost surveys conducted by CMS and is updated weekly. The two regional benchmarks are Medicaid MAC lists. The first MAC list reimburses pharmacies in a rural region similar to eastern Washington. The second MAC list is used in a state with a similar population to that of Washington State. HMA's subcontractor believes the two benchmark MAC Lists are the best proxies to use for regional acquisition cost.

### PBM MAC List Updates

The Study reviewed 60 highly utilized generic drugs which had significant cost increases or decreases in 2015 for a timing analysis of when a drug price changes and when the PBM updates its MAC list. The analysis reviewed each drug's acquisition cost history, inferred from NADAC, in comparison to the PBM MAC lists. The goal was to understand how PBMs reacted once a price change affected the market. NADAC was used because it is based upon acquisition costs and is updated weekly. The Study reviewed the pricing for the drug before the price change, the time of the price change, and the length of time PBMs took to adjust reimbursement so that it is within a reasonable range of the adjusted acquisition cost. A 10% threshold on either side of a NADAC rate was considered reasonable.

### Pharmacy Profitability

The pharmacy profitability analysis differs from the PBM MAC Reimbursement analysis because it analyzes profitability for brand and generic drug rather than just generic drugs. The analysis uses national AWP discount benchmarks for drug acquisition costs (18% for brand and 90% for generics), compared to actual PBM reimbursement and then calculates Gross Profit. The cost of dispensing is estimated based upon a national study of cost of dispensing. That figure is then subtracted from the Gross Profit to arrive at estimated Net Income for Washington Pharmacies.<sup>3</sup>

### MAC Appeals Processing

PBM MAC appeals and claims data were reviewed to determine the following:

- + Number and percentage of appeals submitted by pharmacies in Washington with fewer than 15 pharmacies and those with 15 or more;
- + (For SMALL pharmacies) the percentage of pharmacies that generated the greatest number of appeals;
- + Timing of approvals and denials by PBMs;
- + Whether or not an NDC was provided for denied appeals;
- + Timing of a MAC list change for approved appeals; and the
- + Dollar amount of pharmacy submitted MAC appeals.

### Data Limitations and Cautions to the Reader

All estimates are based on the information available at a singular point in time. Because the data used to make these estimate may reflect unknown or random circumstances that may not be fully reflective of typical conditions, the result of the analysis should be interpreted as only estimates, with the understanding that the actual data point and projections based on that data may vary within a reasonable range around the estimate or the projection. Any estimate or projection may not be used or relied upon by any other party or for any other purpose than for which it was issued by OIC's consultants. HMA and its consultants are not responsible for the consequences of any unauthorized use.

For the analyses in this report, HMA and its subcontractor relied on data, information, and other sources of data as described; the data was not verified by an independent audit. The data was, however, reviewed for reasonableness and consistency to the degree consistent with the scope of the Study. It is

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<sup>3</sup> "Cost of Dispensing Study: An Independent Comparative Analysis of U.S. Prescription Dispensing Cost" September 2015. The Washington State estimates range from approximately \$10 to \$15 per prescription.

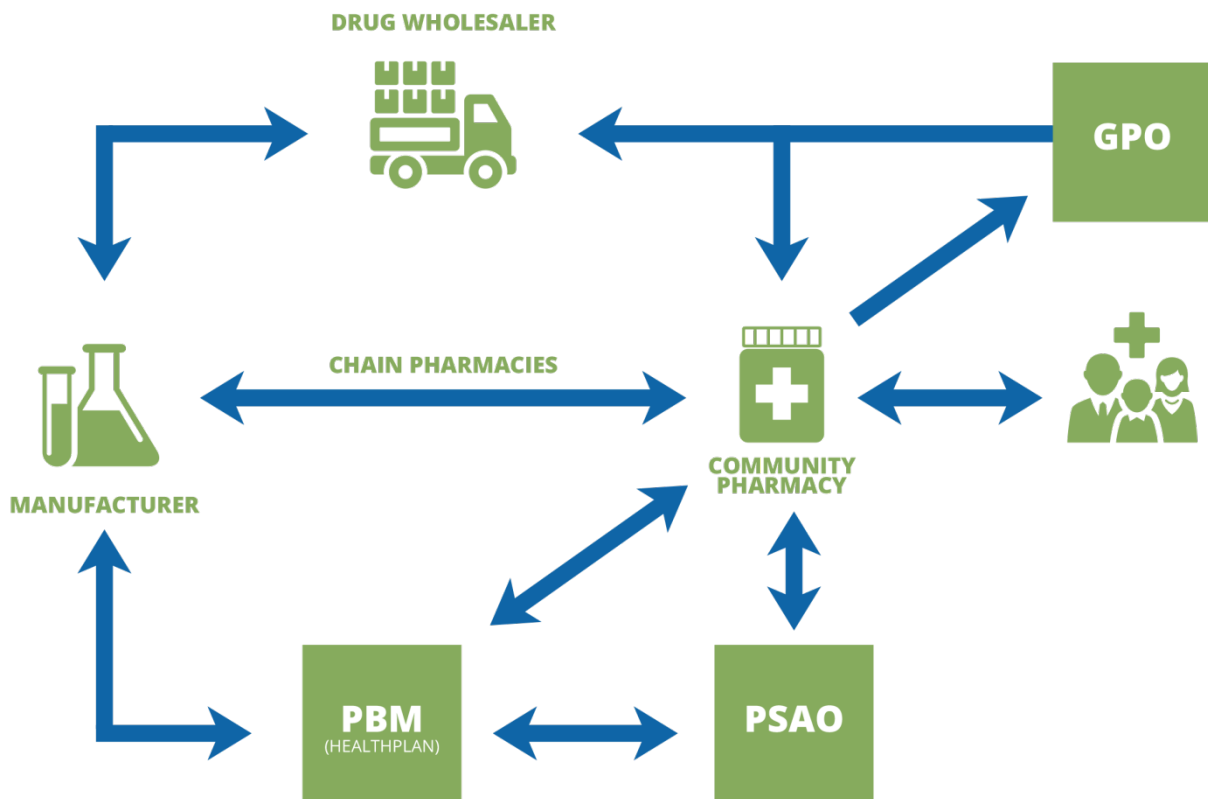
possible that the review of data may not have always revealed some problems or inaccuracies of the data that could affect the results of the Study.

## The Pharmaceutical Supply Chain

To understand plan and pharmacy benefit manager reimbursements to network pharmacies, it is important to understand how drugs move through the supply chain from manufacturer to patient and, how prices are influenced by the various members within the chain. At first glance, the pharmaceutical supply chain appears to be a simple, classic commodity design. Manufacturers sell to wholesalers, who in turn sell to retailers, who finally sell to consumers. A closer look at the pharmaceutical supply chain reveals other members who do not handle the product and yet have significant influence over its ultimate distribution to the healthcare consumer. These additional supply chain members are health insurance payers, pharmacy benefit managers (PBMs), group purchasing organization (GPOs), and pharmacy services administrative organizations (PSAOs).

Exhibit 1 illustrates the key players in the pharmaceutical supply chain and their relationships. The interactions each member of the supply chain (represented by blue arrows) has with another impact drug pricing and reimbursement.

**Exhibit 1: The Pharmaceutical Supply Chain**



## Pharmaceutical Supply Chain Acronyms

There are a number of pricing terms and acronyms that occur throughout this report. They are defined below.

**Actual Acquisition Cost (AAC)** – AAC is defined in federal regulations as the state Medicaid agency’s determination of the pharmacy providers’ actual prices paid to acquire drug products marketed or sold by specific manufacturers. The process used by the federal government to calculate the national AAC proxy, as defined below for NADAC, doesn’t factor-in off-invoice discounts, rebates and other reductions to a pharmacy’s price for pharmaceutical drugs. See section on Medicaid Reimbursement beginning on page 31.

**Average Manufacturer Price (AMP)** – AMP is the average price paid by wholesalers to manufacturers for drugs distributed to retail pharmacy class of trade. AMP is used in the federal Medicaid drug rebate program to calculate rebates and to calculate the federal ceiling reimbursement for generic drugs (see **Federal Upper Limit**). The AMP excludes sales to various entities including the federal government (e.g., Department of Defense, the Public Health Service), hospitals, HMOs or MCOs, mail order pharmacies and to clinics).<sup>4</sup>

**Average sales price (ASP)** – ASP is based on the manufacturer’s volume weighted average of average sales prices for a particular drug. ASP is net of rebates, discounts and other price concessions to all classes of trade.<sup>5</sup> ASP is used for reimbursement of drugs under Medicare Part B.

**Average Wholesale Price (AWP)** – AWP is a price generally used as a reference price for the reimbursement of pharmacies. It is also used by PBMs to establish upper payment rates in contracts with health plans. It is calculated by drug pricing compendia and is equal to 120% of a drug’s WAC price. This calculation tends to be more for brand drugs as generic drug companies publish AWP’s which can be significantly greater than 120% of WAC.

**Federal Upper Limit (FUL)** – The FUL is a price calculated by the Centers for Medicare and Medicaid Services (CMS) as the federally required upper payment limit for generic drugs in the Medicaid program. It is calculated based on the weighted average AMP for each generically equivalent drug available on the market.<sup>6</sup> See section on Medicaid Reimbursement beginning on page 31.

**Maximum Allowable Cost (MAC)** – MAC is the maximum price a PBM or other payer will reimburse a pharmacy for multi-source brand and generic drugs.

**National Average Drug Acquisition Cost (NADAC)** – NADAC is a national average invoice price derived from retail community pharmacy reports for drug products based on invoices from wholesalers and manufacturers.<sup>7</sup> The NADAC is a national reference that state Medicaid programs can use when determining their AAC reimbursement. It does not measure off-invoice discounts, rebates, or other price concessions. NADAC is calculated for single source, innovator multi-source (i.e., original brand drug for which there are generic equivalent drugs) and generic (non-brand) drugs.

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<sup>4</sup> 42 CFR § 447.504

<sup>5</sup> 42 CFR § 414.904

<sup>6</sup> 42 CFR § 447.514

<sup>7</sup> The NADAC contractor is Myers and Stauffer LC

**Rebates** – Rebates are supplemental payments to pharmacies, PBMs, and payers for making a drug preferred over others.

**Wholesale Acquisition Cost (WAC)** – WAC is the manufacturer’s list price for the drug or biological to wholesalers or direct purchasers in the United States. WAC is exclusive of prompt pay or other discounts, rebates or other reductions in price. WAC is calculated for the most recent month for which the information is available, as reported in wholesale price guides or other publications of drug or biological pricing data.<sup>8</sup> WAC is used by pricing compendia to calculate average wholesale price. It is also sometimes used to calculate pharmacy reimbursement.

## Supply Chain Segment Impact on Drug Pricing and Reimbursement

The following sub-sections describe the members of the supply chain (Exhibit 1) and their unique impact on drug pricing. This larger section closes with an illustration of the recent Epi-Pen price hike as a recent, real-life example of how pricing decisions impact payers, pharmacies, and consumers.

### Manufacturer

The supply chain starts with the development and production of a given drug by a manufacturer. Manufacturers of single source (brand name or innovator) drugs research, test, and submit drug products for potential marketing to the federal Food and Drug Administration (FDA) through a New Drug Application (NDA) process.<sup>9</sup> When the FDA approves a NDA, the manufacturer has marketing exclusivity for a period of time determined by either a drug’s remaining patent life or a period of exclusivity granted by the FDA.<sup>10</sup>

At the end of patent/exclusivity, other manufacturers are able to submit an Abbreviated New Drug Application (ANDA) to the FDA for the marketing of a generically equivalent drug.<sup>11</sup> As noted by the FDA, generic drug applications are termed "abbreviated" because they are generally not required to include preclinical (animal) and clinical (human) data to establish safety and effectiveness. Instead, generic drug applicants must scientifically demonstrate that their product is bioequivalent (i.e., performs in the same manner as the innovator drug). The first generic approved for marketing typically has a 180-day exclusivity period, during which no other generic may be sold. After this 180-day period, all other approved generic products are allowed onto the market.

### Brand Drug Price

Manufacturers of brand name products set their list price based on a number of factors including: development and manufacturing costs; exclusivity period; rebate paid to payers to ensure their drug is preferred on their drug formularies; impact of mandatory discount pricing; rebates to government payers; and estimates of what the market is willing to pay. Not to be overlooked is the impact that brand competition has on initial brand drug pricing. According to the Tufts Center for the Study of Drug Development, the time frame during which competing brand name drugs go to market has become

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<sup>8</sup> 42 USC § 1395w-3a(c)(6)(B)

<sup>9</sup> New Drug Application process at

<http://www.fda.gov/Drugs/DevelopmentApprovalProcess/HowDrugsareDevelopedandApproved/ApprovalApplications/NewDrugApplicationNDA/default.htm>

<sup>10</sup> Exclusivity varies depending on the type of drug product and reason for exclusivity. Exclusivity limits are dictated by federal rules. FDA FAQ on Patents and Exclusivity <http://www.fda.gov/Drugs/DevelopmentApprovalProcess/ucm079031.htm>

<sup>11</sup> ANDA process at

<http://www.fda.gov/Drugs/DevelopmentApprovalProcess/HowDrugsareDevelopedandApproved/ApprovalApplications/AbbreviatedNewDrugApplicationANDAGenerics/default.htm>



shorter over the past few years.<sup>12</sup> This type of competition pressure is exhibited, for instance, in the change in pricing and/or discounts for Hepatitis C drugs with the introduction of a lower-priced product.<sup>13</sup> Gilead increased market discounts from 22% to 46% after the introduction of competing products on the market.

Discounts and other price concessions within the brand supply chain also have an impact on how manufacturers price their drugs. The Pharmaceutical Research and Manufacturers of America (PhRMA) indicates that manufacturers are retaining a smaller share of the price increases as evidenced by the divergence between drug invoice price growth and net price. With the exception of federally mandated discounts, such as rebates in Medicaid and lower acquisition costs for federal programs (e.g., Federal Supply Schedule, Veteran’s Affairs, and 340B discount program), all other discounts are negotiated by manufacturers as a way to gain market access through preferred status on payer formularies. Exhibit 2 illustrates reduction in net price growth due to these voluntary discounts and price concessions.<sup>14</sup> Mylan justifies its increase in the invoice price of EpiPen by citing the need to offset reductions in the net price, as presented by PhRMA (see Exhibit 12; page 30).

**Exhibit 2: Brand Medicine Net Price Growth Slowed in 2015<sup>15</sup>**

**BRAND MEDICINE NET PRICE GROWTH SLOWED IN 2015**  
*as Discounts, Rebates Negotiated by Payers Rose Sharply*



Source: IMS Institute for Healthcare Informatics, National Sales Perspectives, March 2016.

Prescription Medicines: Costs in Context [www.phrma.org/cost](http://www.phrma.org/cost)

Source: Pharmaceutical Research and Manufacturers of America

<sup>12</sup> “Nearly all Later Entrants to Drug Classes Were in Clinical Testing or Regulatory Review Before First-in-Class Approval,” November 3, 2105, Tufts CSDD, summary at [http://csdd.tufts.edu/news/complete\\_story/pr\\_ir\\_november\\_december\\_2015](http://csdd.tufts.edu/news/complete_story/pr_ir_november_december_2015)

<sup>13</sup> “Merck goes toe-to-toe with Gilead’s Hep C goliath, flags discount with blockbuster OK,” Fierce Biotech, January 28, 2016 at <http://www.fiercebiotech.com/regulatory/merck-goes-toe-to-toe-gilead-s-hep-c-goliath-flags-discount-blockbuster-ok>

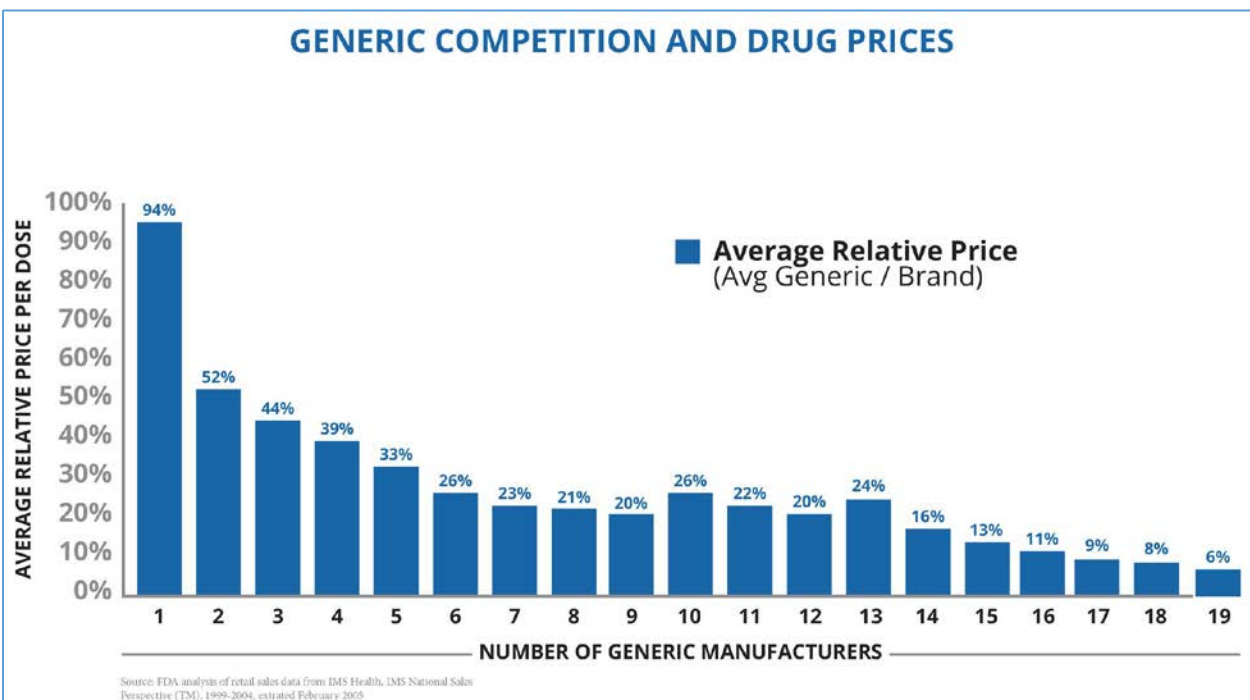
<sup>14</sup> “Prescription Medicines: Cost in Context,” PhRMA, August 2016 at <http://www.phrma.org/sites/default/files/pdf/prescription-medicines-costs-in-context-extended.pdf>

<sup>15</sup> Source: Pharmaceutical Research and Manufacturers of America

## Generic Drug Price

Generic drug manufacturers set prices primarily based on two factors: production costs and competition. This is due to the fact that generic companies do not have to bear the burden of research and development costs. Generic drugs also benefit from the fact that a brand name manufacturer has already created a marketplace for the drug. The price of the initial generic drug is near that of the original brand drug, but decreases over time. An FDA analysis of retail sales data between 1999 and 2004 indicated that generic drug prices dropped as generic manufacturers entered into the market, dropping significantly with just three or more generic manufacturers (Exhibit 3).<sup>16</sup> Seen another way, Exhibit 4 shows how the WAC and AWP discounts increase as the number of labelers increases.

**Exhibit 3: Generic Competition and Drug Prices<sup>17</sup>**



Source: Assistant Secretary for Planning and Evaluation

**Exhibit 4: Draft Aggregate Discounts: Generic Legend Drug Groups by Rebating Labeler Count<sup>18</sup>**

Draft Aggregate Discounts: Generic Legend Drug Groups by Rebating Labeler Count		
Count of Labelers per Drug Group	Generic Legend Drugs	
	WAC Median	AWP Median
1	-6.0%	-28.9%
2	-14.7%	-36.6%

<sup>16</sup> Office of the Assistant Secretary for Planning and Evaluation Issue Brief, "Expanding the Use of Generic Drugs," December 1, 2010.

<sup>17</sup> Source: Assistant Secretary for Planning and Evaluation

<sup>18</sup> "State Reimbursement Requirements Webinar, April 28, 2016, CMS Division of Pharmacy

Draft Aggregate Discounts: Generic Legend Drug Groups by Rebating Labeler Count		
Count of Labelers per Drug Group	Generic Legend Drugs	
	WAC Median	AWP Median
3	-20.2%	-43.8%
4	-28.6%	-51.9%
5	-34.5%	-63.2%
6	-43.8%	-73.8%
7	-43.2%	-79.8%
8	-49.2%	-83.8%
9	-48.1%	-88.6%
10	-55.7%	-94.7%
11 or more	-62.2%	-96.8%

Source: Centers for Medicare & Medicaid Services

According to the Generic Pharmaceutical Association (GPhA), 88 percent of all prescriptions in the United States are for generic drugs, accounting for approximately 28 percent of national drug costs.<sup>19</sup> GPhA also notes that generic drugs saved \$254 billion in health system costs in 2014, and it anticipates increased savings as new generics are introduced onto the market.

Despite this, the price of generic drugs is significantly increasing. Some of these increases are significantly more than can be explained by increased production costs. The following conclusions are based on a study of 4,421 generic drug groups and their prices from November 13, 2013 to November 13, 2014<sup>20</sup> :

- + 222 drug groups increased in price by more than 100%;
- + 90 drug groups increased in price by more than 200%;
- + 25 drug groups increased in price by more than 500%; and
- + 17 drug groups increased in price by more than 1,000%.

Some of the reasons identified for the increases in price by generic manufacturers include the following:

**Industry consolidation** – Consolidations have reduced the number of manufacturers producing older and less-profitable products. An example of consolidation is the 2012 Watson Pharmaceuticals merger with Actavis under the Actavis name. Actavis then bought Allergan in 2014. In 2015, Teva (after its failed bid to purchase Mylan) purchased Actavis (now the generic arm of Allergan). Teva is now the generic drug market share leader in the United States.

**Price competition** – When the number of generic manufactures becomes large, the increased competition causes some to leave the market, which reduces the downward pressure on prices.

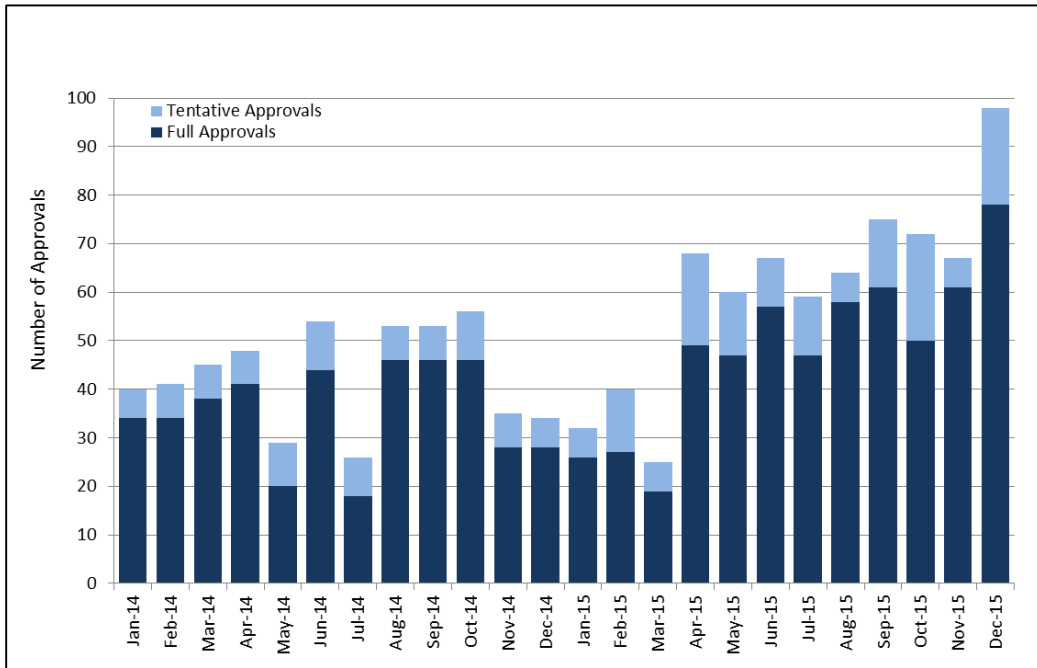
<sup>19</sup> “Generic Drug Savings in the U.S.”, Seventh Edition: 2015, GPhA at [http://www.gphaonline.org/media/wysiwyg/PDF/GPhA\\_Savings\\_Report\\_2015.pdf](http://www.gphaonline.org/media/wysiwyg/PDF/GPhA_Savings_Report_2015.pdf)

<sup>20</sup> Analysis by Todd Grover (Glass Box Analytics), as reported in “Generic Drug Price Increases: Causes and Impact,” Elsevier Clinical Solutions at [https://www.elsevier.com/clinical-solutions/insights/resources/insights-articles/drug-information/whitepapers/whitepaperrising-generic-drug-prices/wpgeneric-drug-prices-form?sq\\_content\\_src=%2BdXJsPWh0dHAlM0EIMkYIMkZlbHNjc2ZvcmlzLmNvbSUyRmdlbmVyaWMTZHJ1Zy1wcmljZS1pbmNyZWFzZXMtY2F1c2VzLWVfZC1pbXBhY3QmYWxsPTE%3D](https://www.elsevier.com/clinical-solutions/insights/resources/insights-articles/drug-information/whitepapers/whitepaperrising-generic-drug-prices/wpgeneric-drug-prices-form?sq_content_src=%2BdXJsPWh0dHAlM0EIMkYIMkZlbHNjc2ZvcmlzLmNvbSUyRmdlbmVyaWMTZHJ1Zy1wcmljZS1pbmNyZWFzZXMtY2F1c2VzLWVfZC1pbXBhY3QmYWxsPTE%3D)

**Drug shortages** – A lack of raw materials, other manufacturing problems, and declining demand and can lead to limited numbers of manufacturers producing a specific generic drug. This lack of competition (like consolidation) can induce manufacturers to increase prices

**Slow FDA ANDA approvals** – There has been a backlog of ANDA applications at the FDA. In her testimony before the U.S. House Committee on Oversight and Government Reform, Janet Woodcock, M.D. (Director of the Center for Drug Evaluation and Research), indicated that the FDA would accelerate ANDA reviews with the influx of new staff. The chart (Exhibit 5) provided in her testimony provides supporting evidence.<sup>21</sup>

**Exhibit 5: Approvals and Tentative Approvals of ANDA Applications<sup>22</sup>**



Source: FDA, CDER

When there is little or no competition, an environment for higher drug prices (especially among generics) is created. Generic companies stop making older, less-used medications due to the lack of profitability, creating the possibility that the remaining one or two manufacturers could establish a monopolistic pricing structure. As recently as November 2016, the United States Department of Justice considered filing criminal charges against several generic drug manufactures for collusion.<sup>23</sup> Price increases impact costs within the entire healthcare market.

<sup>21</sup> Testimony of Janet Woodcock, M.D. at <https://oversight.house.gov/wp-content/uploads/2016/02/Woodcock-FDA-Statement-1-26-Prescription-Drugs.pdf>

<sup>22</sup>Source: Federal Drug Administration and Center for Drug Evaluation and Research

<sup>23</sup> <http://www.wsj.com/articles/generic-drug-makers-shares-drop-on-report-of-possible-probe-1478209036>

## Manufacturer Wholesaler Interaction



Manufacturers of prescription drugs, both brand and generic, ship their products to primary distributors (e.g. traditional wholesalers), for distribution to pharmacies and other healthcare providers. Approximately 90% of all prescription drug sales are handled through primary distributors.<sup>24</sup> This means only 10% of all drug sales are shipped directly to providers. Approximately 80% of sales go through traditional wholesalers, with 16% (12.8% of all drugs sales) of traditional wholesale drug sales going to independent pharmacies and 45% (36% of all drug sales) going to chain pharmacies (either directly or through the chain’s central distribution center).<sup>25</sup> The remaining 39% (31% of all drug sales) is distributed to hospitals, doctors and clinics. Chain warehouses act as centralized distribution points for the chain.

It is important to note that while there may be dozens of drug wholesalers, three companies generate as much as 90% of all drug distribution revenues in the U.S (Exhibit 6).<sup>26</sup>

### Exhibit 6: Drug Wholesaler U.S. Revenues

Wholesaler	2015 U.S. Revenues	% Increase from previous year
AmerisourceBergen	\$132 billion	12.0%
Cardinal Health	\$92 billion	19.5%
McKesson Corporation	\$141 billion	16.4%
<b>BIG THREE TOTAL</b>	<b>\$365 billion</b>	<b>15.5%</b>

Source: Pembroke Consulting, Inc. and Drug Channels Institute

When establishing a distribution relationship, each manufacturer enters into agreements related to the purchase and sale of the manufacturer’s drug. In the past, wholesalers relied on the “buy-and-hold” model of drug reselling. The wholesaler would invest in drug inventory, with the expectation that drug prices would rise before the drugs were resold. Wholesalers were making about 50% of their profit from investment buying. In this model, manufacturers lost the profit made available through price inflation.<sup>27</sup> If the wholesaler knew that a manufacturer increased its price by 10 percent annually, then purchasing drugs prior to the increase in order to sell after the increase would allow the wholesaler to make not only the amount it normally would have, but to also gain the net profit from the price increase.

For example, a drug has a WAC (list) price of \$100 and the wholesaler buys it for \$90 (WAC – 10%) and sells it to a pharmacy for \$98 (WAC – 2%). If the wholesaler has inventory at the \$90 price when the manufacturer increases WAC to \$110, then it can sell to the pharmacy at the new WAC – 2% price of \$107.80, increasing its profit from \$8 (\$98 minus \$90) to \$17.80 (\$107.80 minus \$90).

The move away from buy-and-hold was largely prompted by a 2004 settlement between the federal Securities and Exchange Commission (SEC) and Bristol-Myers Squibb (BMS). BMS was accused of

<sup>24</sup> Perry Fri presentation to HDMA, “Understanding the Pharmaceutical Supply Chain”, July 22, 2015

<sup>25</sup> Perry Fri presentation to HDMA, “Understanding the Pharmaceutical Supply Chain”, July 22, 2015

<sup>26</sup> Fein, AJ, “The 2016 Economic Report on Retail, Mail, and Specialty Pharmacies,” Pembroke Consulting, Inc., and Drug Channels Institute, January 2016.

<sup>27</sup> Iacocca, K & Zhao, Y; Resell vs. Direct Models: US Branded Drug Distribution in the Future; PharmExec.com, July 17, 2105

perpetrating “a fraudulent earnings management scheme by, among other things, selling excessive amounts of pharmaceutical products to its wholesalers ahead of demand.”<sup>28</sup> BMS used this scheme to inflate sales and earnings figures in order to create the appearance that the company had met or exceeded sales and earnings targets and Wall Street analysts' earnings estimates. As part of the settlement, BMS agreed to base the amount of drug sold to wholesalers on demand levels.

With the inability to profit from inflated prices on drugs held within their inventory, wholesalers sought to replace the lost revenue and moved to “fee-for-service” or “distribution service agreements” with manufacturers. In general, these agreements have various performance goals that the wholesaler has to meet. Agreement fees are calculated as a percentage of the drug’s list price, allowing the wholesaler’s fee to increase whenever a manufacturer increases a drug’s list price (typically indexed to the WAC price).<sup>29</sup>

The wholesaler could theoretically profit by selling drugs at the new price if purchased under the old price.<sup>30</sup> However, larger manufacturers have begun to include recapture clauses within the distribution service agreement. These recapture agreements essentially increase the cost of existing wholesaler inventory to the new price.

Historically, generic drugs have been more profitable for wholesalers based on the ability to bargain within a crowded generic market. For example, while only 9% of the revenue for the three largest wholesalers was generated by generic drugs, those same generic drugs generated 56% of the wholesalers’ gross profits (Exhibit 7).<sup>31</sup> Fein notes this is due to the enhanced bargaining position wholesalers have with generic manufacturers, requiring generic manufacturers to offer significant price concessions with large wholesalers.

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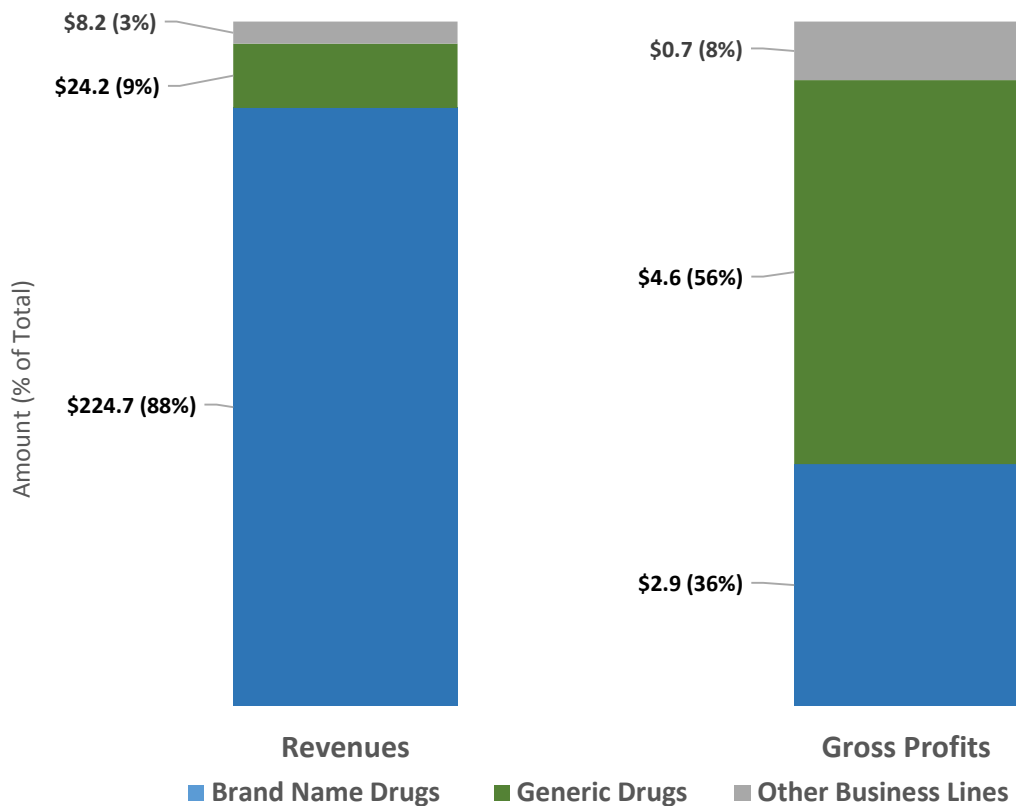
<sup>28</sup> SEC Press Release, August 4, 2004; Bristol-Myers Squibb Company Agrees to Pay \$150 Million to Settler Fraud Charges

<sup>29</sup> How Wholesalers Profit from Brand-Name Drug Inflation (But Perhaps Not As Much As You Think), Drug Channels, October 22, 2015.

<sup>30</sup> IBID

<sup>31</sup> “Wholesaler Profits: Brand vs. Generic Drugs”, Drug Channels, June 2010.

**Exhibit 7: Big Three Wholesaler Revenues and Gross Profits<sup>32</sup>**



**Manufacturer/Pharmacy and Wholesaler/Pharmacy Interaction**



As previously noted, the majority of prescription drug sales occurs through traditional wholesaler distribution channels, with independent pharmacies accounting for 16% of sales and chain stores accounting for 45%. Pharmacies purchase drugs from wholesalers based on discounts calculated off of a drug’s WAC price. The percentage discount afforded a pharmacy is typically based on the volume of purchasing and/or any discounts the pharmacy may have negotiated with a manufacturer.

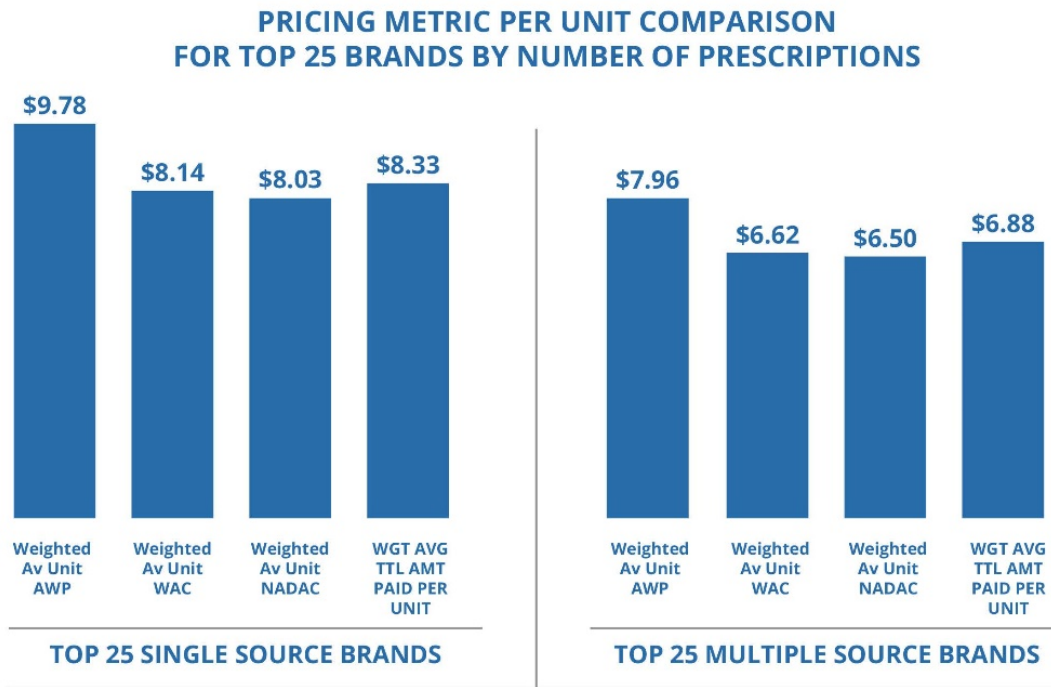
In its Issue Brief, “Paying for Prescribed Drugs in Medicaid: Current Policy and Upcoming Changes,”<sup>33</sup> the Kaiser Family Foundation compared the acquisition costs using NADAC of both brand and generic drugs to AWP and WAC prices. Their study showed that on average, the NADAC price was only slightly lower than WAC for single source (1.35%) and for multi-source brand drugs (1.81%) (Exhibit 8).

<sup>32</sup>Source Drug Channels: “Wholesaler Profits: Brand vs. Generic Drugs,” June 2010

<sup>33</sup> Bruen, B & Young, K, Paying for Prescribed Drugs in Medicaid: Current Policy and Upcoming Changes, The Kaiser Commission on Medicaid and the Uninsured, May 2014 Issue Brief

For generic drugs the Kaiser Issue Brief found that there was a significant difference between AWP and the NADAC price, with the difference between NADAC and WAC being much closer. The NADAC average for the top 25 generic drugs was 64% lower than WAC, and for the top 100 drugs, it was 53% lower than WAC (Exhibit 9). The break-out of generics into therapeutic classes shows significant variance, “ranging from 11% less than WAC for the eye, ear, nose, and throat preparations class to 73% less than WAC for the gastrointestinal drugs class.”<sup>34</sup>

**Exhibit 8: Per Unit Comparison for Top 25 Brand Drugs**



KAISER FAMILY SOURCE: CMS Drug Utilization Data, 2011Q4-2012Q3; Wolters Kluwer Master Drug Data Database, Version 2.5, March 1, 2013; CMS NADACs, October 4, 2012.

<sup>34</sup> IBID



## Exhibit 9: Per Unit Comparison for Top 25 Generic Drugs

### PRICING METRIC PER UNIT COMPARISON FOR TOP 25 AND TOP 100 GENERICS BY NUMBER OF PRESCRIPTIONS



SOURCE: CMS Drug Utilization Data, 2011Q4-2012Q3; Wolters Kluwer Master Drug Data Database, Version 2.5, March 1, 2013; CMS NADACs, October 4, 2013.

Source: Kaiser Family Foundation

According to pharmacies interviewed for this report, a significant topic of interaction with drug wholesalers is the minimum purchase requirement language within their agreements. For example, a pharmacy may be required to purchase at least \$50,000 in drugs on a monthly basis in order to obtain better discount purchase prices. These purchase minimums play a significant role in a small volume pharmacy's ability to shop around for the best price. National Community Pharmacists Association (NCPA) notes the average annual sales per pharmacy is approximately \$3.6 million.<sup>35</sup> According to some independent pharmacies, the inability to shop for the best price can have a significant impact on the pharmacies' profitability when reimbursement is lower than the purchase price of the drug.

### Group Purchasing Organizations (GPO)



Independent pharmacies improve their buying power by joining together as a group, generally referred to as Group Purchasing Organizations (GPO). As a GPO member, pharmacies can take advantage of the fact that:

- + GPOs aggregate purchasing power to obtain discounts and rebates from manufacturers;
- + GPOs facilitate product comparison analysis; and
- + GPOs streamline and standardize the purchasing process.

<sup>35</sup> NCPA 2015 Digest, at <http://www.ncpa.co/pdf/aaaa-2015-digest-sponsored-by-cardinal-health.pdf>

Due to their already large purchasing volume, local and national chain pharmacies may not need to utilize a GPO, opting instead to contract directly with wholesalers, or in some instances, to purchase directly from a manufacturer.

According to some pharmacy informants, another problem is that the high price of specialty drugs makes it impossible for them to stock and dispense those products. Small volume pharmacies may not have the cash flow or credit lines to enable them to purchase and hold high-cost drugs. For example, a small pharmacy with a \$40,000 credit line would not be able to purchase \$70,000 worth of Hepatitis C drugs to dispense. According to pharmacies, this is compounded by the fact that wholesalers are seeking payment from pharmacies over shorter timeframes as a condition for qualifying for a discount. One pharmacy informant reported payment was required within a week rather than the more common 30 days. There are further complications due to the delay in payment by PBMs and other insurers. PBMs generally pay every two weeks; thus a pharmacy must pay the wholesaler at least a week prior to getting reimbursement from the PBM.

The results of the pharmacy interviews show that only large chain pharmacies can bargain effectively with manufacturers. Small independent pharmacies indicate that they do not have the volume to elicit significant discount or rebate contracts from manufacturers.

### Pharmacy Benefit Managers



On the “reimbursement” side of the supply chain, there are companies known as Pharmacy Benefit Managers (PBMs). PBMs administer the prescription drug benefit for a variety of third-party payers (e.g., self-insured employers, insurance companies, and HMOs). PBMs administer drug plans for more than 266 million Americans.<sup>36</sup> The top three PBMs, nationally, (Express Scripts, CVS Health, and OptumRx) process 73 percent of all prescription claims; 96 percent of national claims are processed by the top six PBMs.<sup>37</sup>

PBMs are accountable to payers as customers of their services. Third-party payers contract with PBMs to process and pay prescription drug claims submitted by network pharmacies. PBMs contract with a pharmacy network to dispense prescriptions. Much of the value that PBMs bring to their customers is balancing the need to provide adequate network access with providing drugs at the lowest cost. PBMs also obtain discounts (i.e., rebates) to help lower the cost of drugs for payer health plans. In addition to claims adjudication and pharmacy payment, PBMs handle a variety of services for third-party payers, including formulary management, and increasingly, administering clinical programs to improve medication adherence. Many PBMs have sophisticated fraud waste and abuse programs.

PBMs establish their own Pharmacy and Therapeutics (P&T) Committees which recommend how drugs should be covered and which drugs appear on the plan preferred drug list (formulary). Formularies are typically divided into “tiers,” with each tier tied to different cost sharing responsibilities for an enrollee in a particular plan. In 2005, approximately 70% of employer-sponsored plans utilized a three-tier

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<sup>36</sup> About PCMA, Pharmaceutical Care Management Association, at <http://www.pcmanet.org/about-pcma/about-pcma>

<sup>37</sup> Fein, AJ, “The 2016 Economic Report on Retail, Mail, and Specialty Pharmacies,” Pembroke Consulting, Inc., and Drug Channels Institute, January 2016.

design, and only 4% used four or more tiers. In 2015, the three-tier design percentage fell to 58% while plans using four or more tiers rose to 23%.<sup>38</sup>

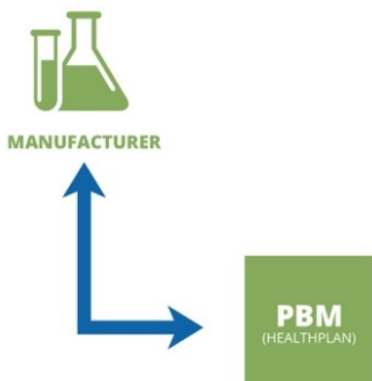
The first and lowest copay tier typically applies to generic drugs. Since generic drugs are less costly, the PBM requires a lower copay to encourage enrollees to utilize a generic drug whenever possible. This helps push generic drug utilization toward 90% of total prescription volume, thus making generic drug reimbursement an important financial factor for network pharmacies. The higher generic volume puts less emphasis on drug rebates or discounts that might be obtained for brand name drugs. Generics can be on a higher tier when the brand drug is lower cost.

PBMs are compensated by payers through two different pricing models: spread pricing and pass-through pricing. Payer clients decide which model will be used in their contracts with PBMs based upon how much risk the payer wants to assume. Under spread pricing the PBM guarantees that reimbursement of network pharmacies will not exceed a predetermined level. The majority of the risk lies with the PBM to meet the guarantee.<sup>39</sup> The PBM then retains the difference between the guaranteed rate and what it actually reimburses network pharmacies. In the pass-through model, the PBM passes everything (reimbursement costs, drug rebates, etc.) through to the plan and is in turn, paid an administrative fee for services rendered by the PBM. In the pass-through model, the payer assumes the majority of the risk.

Spread pricing reduces the plan's risk because the rates are guaranteed, forcing the PBM to absorb any loss when a pharmacy rate is higher than the guaranteed rate. The potential for lost revenue incentivizes the PBM to negotiate lower rates with its pharmacy network and encourages the PBM to structure drug coverage to promote lower-cost (i.e., generic) drugs. Because the PBM is earning revenue via the spread, administrative fees are often lower or eliminated. Payers typically scrutinize PBMs closely to confirm that the PBM is adhering to its guaranteed rates, rebates, and other contractual requirements.

Pass-through pricing does provide for more transparency for the plan, but also increases the risk to the plan by making it absorb the impact of manufacture price increases.

#### Manufacturer PBM/Plan Interaction



The primary interaction that a PBM has with a manufacturer is in the development of plan formularies and the ability to elicit drug rebates from the manufacturer to establish the manufacturer's drug as a preferred second-tier drug at a lower copayment for plan enrollees. First-tier drugs are almost exclusively multiple source generic drugs. Some single or limited source generic drugs may be placed in either the first or second tier depending on product cost.

A PBM lowers plan costs by engaging in drug rebate negotiations with brand name drug manufacturers. The amount of cost reduction is dependent on the type of agreement the plan has with the PBM.

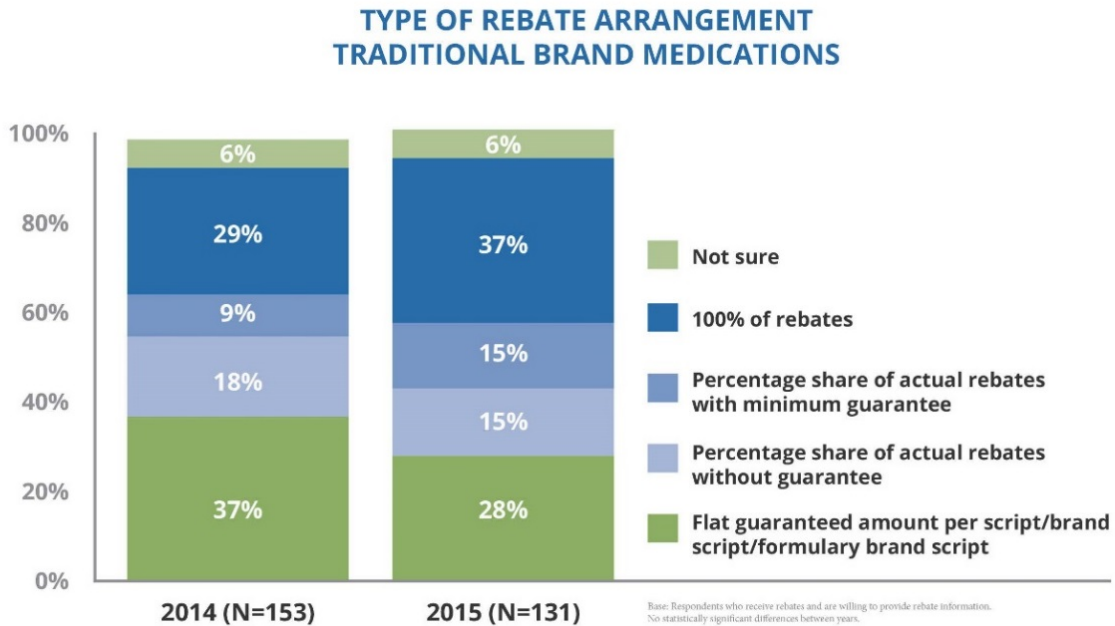
A PBM may pass 100% of negotiated rebates to the plan, provide a guaranteed amount per prescription, or share a preset amount without any specific guarantee. A survey of employer-based plans revealed

<sup>38</sup> IBID

<sup>39</sup> In this instance risk means fluctuating drug prices which can increase costs.

that 37% of the rebate arrangements in 2015 passed 100% of the rebate through to the plan (Exhibit 10).<sup>40</sup>

**Exhibit 10: Type of Rebate Arrangements**



Source: Pharmacy Benefit Management Institute

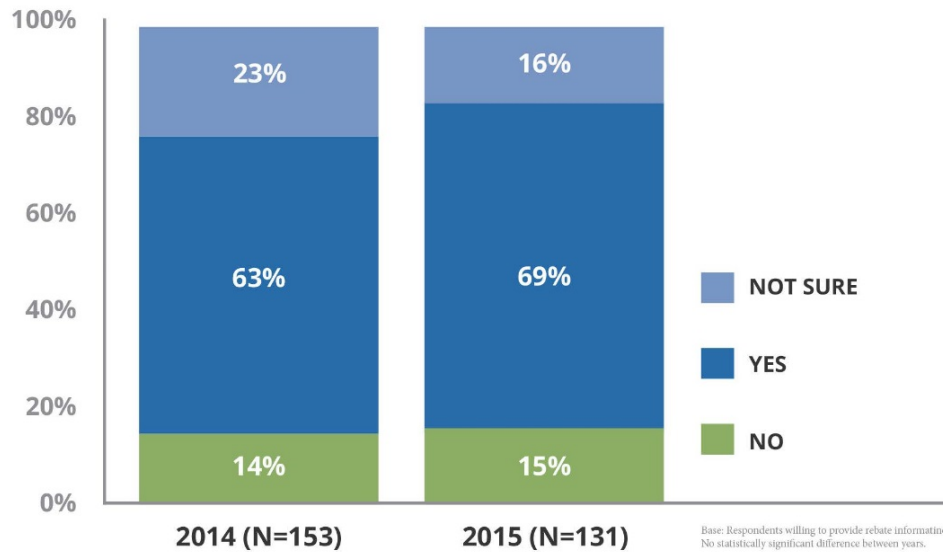
Some PBMs, in an attempt to protect against clients from inflationary prices, have begun to include price cap guarantees within their contracts with manufacturers, setting a cap on the amount that a manufacturer can increase the cost of a drug. According to Pharmacy Benefit Management Institute (Exhibit 11) only 15% of the responding employer plans have price caps in place.<sup>41</sup>

<sup>40</sup> “2015-2016 Prescription Drug Benefit Cost and Plan Design Report,” Pharmacy Benefit Management Institute, 2015

<sup>41</sup> IBID

**Exhibit 11: Price Protection Provisions in PBM Contracts**

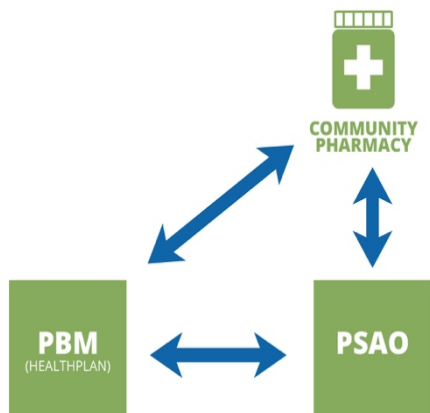
**PRICE PROTECTION PROVISIONS  
IN PBM CONTRACT**



Source: Pharmacy Benefit Management Institute

Manufacturers may provide other discounts through the monetary support of clinical programs established by the PBM; however, the amount of support and rebates provided to PBMs and plans is limited by Medicaid Best Price requirements.

**Pharmacy, PSAO, and PBM Interactions**



Pharmacies profitability is most affected by their relationships with PBMs. As previously noted, the top six PBMs process 96% of all prescription drug claims; therefore, the ability of a pharmacy to cover its costs for goods (drugs) and dispensing is primarily dependent on the reimbursements from PBMs.

PBMs establish networks of pharmacies to meet the access requirements for the health plans they service. These network pharmacies sign contracts agreeing to various network requirements of the PBM. Within these contracts the PBM establishes the reimbursement calculation for brand name and generic drugs.

**PSAO/Pharmacy Relationship**

Large pharmacy chains have the ability to negotiate with PBMs directly. Small independent pharmacies, on the other hand, have to improve their negotiating influence by participating with other pharmacies in PSAOs. PSAOs can provide important services to the small pharmacy such as PBM relations, contracting, financial intermediary, and other business support activities. The PSAO also acts on behalf of the pharmacies to monitor PBM contract compliance and to submit appeals for reimbursement disputes.

The largest PSOs are owned and operated by the three largest drug wholesalers (AmerisourceBergen, Cardinal Health, and McKesson). Although there is no evidence that these entities do not effectively represent their pharmacy clients, informants for the Study have expressed concern regarding a potential conflict of interest.

#### PBM Pharmacy Reimbursement

The rates of reimbursement are very important to independent pharmacies because more than 90% of their total sales come from prescription drugs.<sup>42</sup> Nationally, data from PBMs shows that 88% of claims and 32% of reimbursements are for generic drugs. Prescription reimbursement has two specific components: drug ingredient cost (i.e., the cost of the drug) and dispensing fee. The dispensing fee is, in theory, intended to reimburse the pharmacy for the costs not associated with the purchase of the drug. These costs include:

- + pharmacy license fees;
- + delivery expenses;
- + claims processing computer expenses;
- + prescription containers, labels and other packaging material;
- + a portion of facility costs (e.g. rent, utilities, taxes, insurance); and
- + labor costs including professional pharmacy services performed during the provision of the medication to the recipient.

According to a survey of plan sponsors, the average dispensing fees for retail pharmacies in 2015 ranged from \$1.56 to \$2.17.<sup>43</sup> This range, however, is likely reflective of the average dispensing fee level in the contract between the PBM and health plan and not the amount actually provided to network pharmacies. According to pharmacies surveyed, their reimbursed dispensing fees were significantly lower, around the \$1 mark, and they were seeing more prescriptions being reimbursed with no (i.e. zero) dispensing fee. According to cost to dispense surveys performed by various states and pharmacy organizations, the actual cost to dispense a prescription is in excess of \$10. Washington pharmacies indicated their dispensing costs were in the \$13 to \$16 range. The effect of this discrepancy is discussed under the “Maximum Allowable Cost Reimbursement and Pharmacy Profitability” section of the Study.

The drug cost portion of reimbursement is generally identified relative to the list price benchmark of AWP. Historically, AWP was a benchmark price established by the California Medicaid program for pharmaceutical transactions. It was originally based on actual surveyed invoice data. However, it eventually was changed to a calculated figure based on the WAC price established by manufacturers. Today, AWP is equal to 120% of a drug’s WAC price for brand name drugs or the price published by generic manufacturers.

#### Example of EpiPen Price Increase Across the Supply Chain

The introduction of high-cost drugs and large increases in prices for existing drugs have become significant issues in healthcare. Mylan’s 2016 increase to the cost of EpiPen created a firestorm of interest nationally. As chronicled in the news,<sup>44</sup> the list price of EpiPen was increased by its manufacturer, Mylan, from \$93.88 (2007) to \$608.61 (2016). Per Mylan, the list price increase was

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<sup>42</sup> NCPA 2015 Digest, at <http://www.ncpa.co/pdf/aaaa-2015-digest-sponsored-by-cardinal-health.pdf>

<sup>43</sup> 2015-2016 Prescription Drug Benefit Cost and Plan Design Report,” Pharmacy Benefit Management Institute, 2015.

<sup>44</sup> <http://www.wsj.com/articles/mylans-epipen-price-increases-highlight-its-grip-on-the-market-1472154769>

justified because of the increasing amounts of discounts that must be provided to pharmacies and payers. The increase maintains Mylan’s EpiPen income at a level that is internally determined to be necessary for the company’s business needs.

Exhibit 12 shows Mylan’s view of the supply chain, in which they set a list price of \$608 and then provide \$334 in total price concessions to supply chain partners. The amount of concessions each entity receives is unknown; however, it likely varies considerably within each group. For example, a large chain with high volume may receive larger price concessions than an independent pharmacy. Exhibit 13 shows this in the context of this report’s supply chain diagram (Exhibit 1).

**Exhibit 12: Mylan Pharmaceuticals Description of Why EpiPen’s Price Jumped**

Source: Mylan Pharmaceuticals



### Exhibit 13: The Money Flow for EpiPen in the Supply Chain

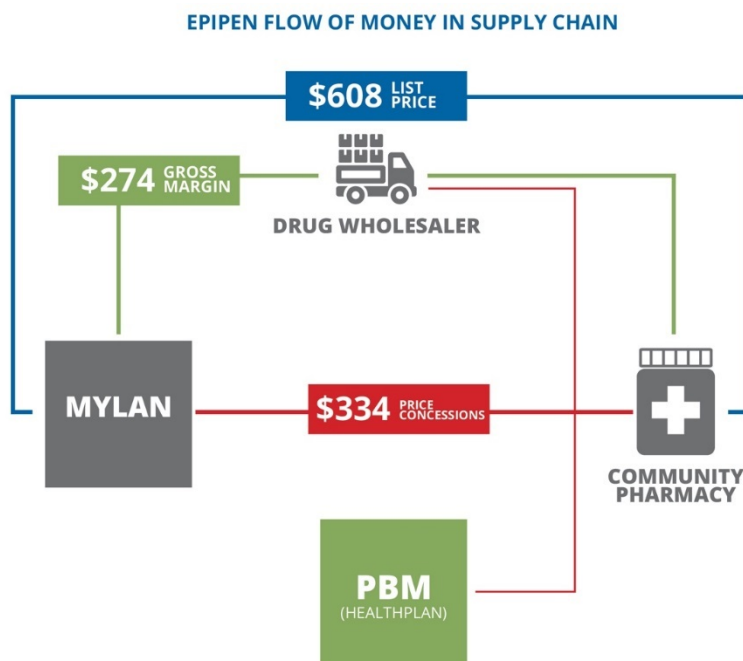


Exhibit 13 provides evidence that Mylan priced the drug in order to reach a specific per-unit revenue amount. The \$608 is a list price, which Mylan controls—each of the listed entities do not directly increase the list price. The exhibit shows instead, the level of monetary incentives Mylan provides to the rest of the supply chain to cover and dispense EpiPen. Mylan, knowing the incentives it was going to provide, increased the price of EpiPen to maintain the target net income. Prior to the EpiPen incident, Mylan pharmaceuticals tried to “corner the market” on two generic drugs in 1999-2000. In that instance, there were willing competitors, but Mylan cut a deal to purchase most or all the raw material for manufacturing. Ultimately, Mylan settled a \$100 million anticompetitive lawsuit filed by the Federal Trade Commission.<sup>45</sup>

### Medicaid Reimbursement

Although the Study is focused on aspects of the private sector pharmaceutical supply chain, it is important to also understand the impact that the Medicaid program may have on individual pharmacies and how changes to Medicaid reimbursement mandated by the federal government may or may not spill over into the private sector.

Like other third party payers, Medicaid programs formerly relied on the use of AWP as a reference price. As previously noted, AWP historically originates in the California Medicaid program in the late 1960’s, as a price derived from surveys of major drug wholesalers. AWP has since evolved into a calculated value based on information supplied solely by drug manufacturers. Due to litigation with drug manufacturers over the accuracy of AWP (and by extension WAC), CMS and Medicaid programs searched for a reasonable alternative benchmark.

<sup>45</sup> <https://www.ftc.gov/news-events/press-releases/2000/11/ftc-reaches-record-financial-settlement-settle-charges-price>



Ultimately, Medicaid Pharmacy Administrators and Medicaid Directors recommended that CMS explore the use of an Actual Acquisition Cost (AAC) model for reimbursement.<sup>46</sup> Based on these recommendations, CMS issued proposed rules in February 2012 that would adopt AAC as the benchmark for reimbursement of drugs in state fee-for-service (FFS) Medicaid programs. These rules were finalized in February 2016, and state Medicaid FFS programs have until April of 2017 to implement the changes from their current reimbursement methodology. (As of June 2016, 10 states have adopted AAC based reimbursement rates.)

In adopting the AAC reimbursement, CMS has been adamant that states must reevaluate their allowed professional dispensing fee to ensure pharmacies are adequately being reimbursed for the services provided. CMS views inadequate reimbursement as a possible violation of federal statute that requires states to reimburse providers in a manner that is sufficient to ensure provider participation and beneficiary access.<sup>47</sup> Accordingly, the states that have adopted the AAC reimbursement for ingredient cost have performed cost of dispensing surveys and currently have dispensing fees that are generally in excess of \$10 per prescription.<sup>48</sup>

Because AAC reimbursement relies on surveying provider invoices, pharmacy representatives are concerned that the process may not be broad enough or updated frequently enough to capture changes in AAC.

CMS provides states with an option to use the NADAC price as opposed to doing their own in-state surveys. Because NADAC is a voluntary process (as opposed to the mandatory requirements for pharmacy invoices in some states) the prices may be skewed by the lower costs of large chain pharmacy purchases.

## Observations

There is a certain opacity within the supply chain of any commodity. The public rarely gets a glimpse at the specifics of how a product and payments pass from one supply chain member to the other. For example, in the auto industry the public knows that a new automobile goes from the factory to specific authorized dealerships with a sticker price that is a retail reference price used to begin the negotiation on the final purchase price. The pharmaceutical supply chain is much more complex with hundreds of manufacturers selling thousands of products through dozens of wholesalers to thousands of pharmacies, with thousands of different confidential monetary transactions occurring for each unique drug product. Underlying this is the consolidation of the supply chain where corporations own multiple channels in the supply chain.

Pharmacy products are then sold to the consumer with the bulk of the payment coming from a third party who also has confidential agreements with both the consumer's insurance company and the pharmacy. This complex nature of the pharmaceutical supply chain and reimbursement has allowed each member to put blame on other members of the supply chain for the rising cost of drugs or to allege financial injury imposed unto them by other supply chain members.

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<sup>46</sup> "Post AWP Pharmacy Pricing and Reimbursement", National Association of State Medicaid Directors, November 2009

<sup>47</sup> Section 1902(a)(30)(A) of the Social Security Act

<sup>48</sup> There is some variation within some states for pharmacy type and preferred vs. non-preferred drugs.

# Maximum Allowable Cost Reimbursement

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## Overview

The MAC list establishes the maximum price a PBM or other payer will reimburse a pharmacy provider for multi-source generics. MAC list reimbursement is designed to incentivize pharmacies to purchase the lowest-priced drugs for their inventories. PBM MAC lists are composed primarily of multi-source generic drugs, but they can also include brand drugs that have generic equivalents. Multiple manufacturers produce multi-source generic drugs, and they are each priced differently. The maximum price is somewhere in the middle of the range of the manufacturers' drugs prices to provide flexibility to accommodate fluctuations in pricing and drug availability. MAC lists are designed to provide reimbursement to pharmacies to cover at least their drug acquisition cost in aggregate. This means some drugs will be over-reimbursed and other drugs will be under-reimbursed. A key question that this Study addresses in this section is whether PBM MAC lists in the state of Washington are fairly designed.

MAC lists vary in breadth (number of drugs included) and depth (level of discount) across PBMs and even within the multiple MAC lists maintained by a PBM. The specific drugs included on a MAC list can vary widely among PBMs as well. The variation reflects different variables including, but not limited to, the timing of MAC list creation and updates, the PBM's preferred drugs, and their reimbursement methodology. It is clear that the MAC lists reflect individual PBM approaches to pharmacy reimbursement.

An analysis was conducted of the six PBMs' generic MAC list claims for calendar year 2015. In 2015, the PBMs reimbursed pharmacies over \$500 million for generic drugs on MAC lists. Using claims information, HMA and its subcontractor compared PBM MAC lists and PBM provider reimbursement for ingredient costs to regional and national generic drug acquisition benchmarks. The analysis included the following components:

- + Number of drugs included on the PBM MAC lists compared to national and regional benchmarks;
- + Depth of PBM MAC lists' WAC discounts compared to national and regional benchmark;
- + Differences in regional (urban/suburban/rural) reimbursement;
- + Difference in type of pharmacy class (chain/independent/institutional/clinic) reimbursement; and
- + Difference in chain status (chain/independent/PSAO reimbursement).

It is important to note that this report is not a financial audit but rather a data review and description of the Study findings.

## Key Findings

- + The number of drugs included on PBM MAC lists varied significantly across PBMs.
- + Aggregate PBM Wholesale Acquisition Cost (WAC) discounts ranged from -27.0% to -43.5%; regional benchmarks and NADAC WAC discounts ranged from -38.3% to -42.1%
- + In general, PBM MAC lists resulted in payments to pharmacies that were higher than what they would have received if the NADAC were used to determine payment, and lower than what they would have received under regional benchmark MAC lists.

- + The higher NADAC reimbursement rate is attributable to the fact that NADAC is an average acquisition cost benchmark whereas MAC lists are designed to reimburse pharmacies slightly more than the lowest available acquisition cost for a drug. This incentivizes the purchase of the least costly generic manufacturer’s product.
- + PBM 3 paid rural pharmacies lower reimbursement than all benchmarks; PBM 5 and 6 paid more.
- + All but PBM 2 paid independent pharmacies more than chain drug stores in the NADAC analysis.
- + PBMs in aggregate paid over 73% of claims to chain pharmacies. Within chain pharmacies there were significant PBM reimbursement variance swings depending on which benchmark (national or regional) the PBM reimbursement is compared to.

## Method

### PBM data

OIC requested detailed data from the six PBMs. The complete data request can be found in Appendix I. The request included the following:

**Pharmacy paid claims data.** Since a claim is generated for each drug sale, the claims data for PBM payments to Washington pharmacies was requested to make it possible to understand reimbursement rates to Washington pharmacies for the period January 1, 2015, through December 31, 2015. Claims data have a tremendous amount of detail on the prescriber, drug, patient, and payer. Elements of the data are enumerated in Exhibit 14 below:

#### Exhibit 14. Claims Data Requested from PBMs

+ Adjudicated date	+ Amount pharmacy billed
+ Amount pharmacy paid	+ AWP unit cost
+ Basis of cost paid (i.e. AWP, MAC, U&C etc.)	+ Carrier number or other number to indicate Fully insured, Medicaid, and Medicare client
+ Compound code	+ Copay
+ Date of service	+ DAW (dispense as written)
+ Days supply	+ Deductible (if applicable)
+ Dispensing fee	+ Drug indicator (generic, single-source, multi-source)
+ Drug name	+ Formulary indicator
+ GCN or GPI	+ Media (POS/mail/paper)
+ Metric decimal quantity	+ NDC
+ PBM reimbursement unit cost (i.e., MAC unit cost, AWP unit cost, other)	+ Pharmacy chain status (independent, chain)
+ Pharmacy class (pharmacy, mail-order, nursing home)	+ Pharmacy demographic (rural, urban, suburban)
+ Pharmacy ID # (NCPDP, NPI)	+ Pharmacy paid ingredient cost
+ Sales tax (if applicable)	+ Transaction status
+ Usual & customary charge	

**MAC Lists.** As described in the overview section, the MAC list is a list of multi-source generics that shows the maximum reimbursement for each drug on the list. The data request called for all MAC lists that a

PBM used to pay pharmacy claims from the period January 1, 2015 thru December 31, 2015. The information included effective and termination dates for drugs found on the MAC lists.

**MAC List Policies.** Policies relating to the construction of MAC list(s) during the same period were also requested. The information should have included frequency of review and update, number of off-cycle updates during the period, and triggers for an off-cycle update.

Ideally, to measure pharmacy profitability, the Study would have benefitted from actual pharmacy drug acquisition cost information to compare those costs to PBM reimbursement. Unfortunately, acquisition cost data specific to Washington pharmacies was not available for this Study. Acquiring actual acquisitions cost data would require reviewing pharmacy drug invoices from each pharmacy provider. Collecting this information was beyond the scope of the Study. Instead, we national and regional acquisition cost benchmarks were proxies for Washington State pharmacy provider drug acquisition costs. NADAC was selected for the national benchmark and two Medicaid MAC lists were selected for the regional benchmark lists.

CMS calculates and publishes the NADAC price list monthly based upon a national survey of retail community drug acquisition costs. The costs are averaged and updated on a weekly basis based on manufacturer price changes and provider inquiries. The NADAC price list is considered the national standard for estimating drug acquisition costs and it serves as the basis of estimated acquisition costs for the analysis presented in the Study.

Since the NADAC price list is based on provider surveys across the nation, two regional MAC lists were included to provide an added level of reimbursement analysis and benchmarking. Benchmark MAC list 1 was chosen for comparison because the region is similar to the makeup of eastern Washington (e.g., rural, independent pharmacy providers).<sup>49</sup> Benchmark MAC list 2 was chosen as a comparison state because the state makeup is similar to the demographics of the entire state of Washington, including urban areas such as King County.

#### Data limitations

When benchmark data sets did not include a price for a particular drug on a particular date, no variance was calculated.<sup>50</sup> The volume of excluded claims is discussed in the following pages.

Exhibit 15 details missing data by PBM and methods used for the Study to work around the missing fields when possible. Missing fields and indicators resulted in data limitations. The Study notes when data limitations impact the analysis.

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<sup>49</sup> Although this was a regional benchmark MAC list, the entire state of Washington payments were compared, not just eastern Washington.

<sup>50</sup> All variances calculated represent a match between drug identifier (GCN) and date of service for the paid claim and effective date on the MAC and NADAC lists.

**Exhibit 15: Missing data by PBM and Issue Resolution Where Possible**

PBM Data Request	Missing Fields	Pharmacy Chain Status	Pharmacy Class	Pharmacy Demographic
PBM 1	Media, Pharmacy Demographic	Provided	Missing, applied class identifier from PBM 5 based on Pharmacy ID	Missing, applied demographic identifier from PBM 6 based on Pharmacy ID
PBM 2	Formulary Indicator, Pharmacy Chain Status, Pharmacy Class, Pharmacy Demographic	Missing, applied chain status identifier from PBM 6 based on Pharmacy ID	Missing, applied class identifier from PBM 5 based on Pharmacy ID	Missing, applied demographic identifier from PBM 6 based on Pharmacy ID
PBM 3	Pharmacy Chain Status, Pharmacy Class, Pharmacy Demographic	Missing, applied chain status identifier from PBM 6 based on Pharmacy ID	Missing, applied class identifier from PBM 5 based on Pharmacy ID	Missing, applied demographic identifier from PBM 6 based on Pharmacy ID
PBM 4	Copay, DAW, Media, Pharmacy Chain Status, Pharmacy Demographic	Missing, applied chain status identifier from PBM 6 based on Pharmacy ID	Provided	Missing, applied demographic identifier from PBM 6 based on Pharmacy ID
PBM 5	Pharmacy Demographic	Provided	Provided	Missing, applied demographic identifier from PBM 6 based on Pharmacy ID
PBM 6	Adjudicated Date, Basis of Cost Paid, Carrier Number, Compound Code, Copay, DAW, Days Supply, Deductible, Formulary Indicator, Media, NDC, PBM Reimbursement Unit Cost, Pharmacy Class, Sales Tax, Transaction Status	Provided	Missing, applied class identifier from PBM 5 based on Pharmacy ID	Provided

**MAC Reimbursement Analysis**

The analysis for this section is focused on ingredient cost reimbursement by PBMs. Exhibit 18 summarizes the number of claims paid in 2015 and the dollar value of MAC-reimbursed ingredient cost by PBM. PBM 6 didn't provide the Basis of Cost Paid field in its data file. Therefore, all generic claims, not just MAC-reimbursed claims, are included in PBM 6's data for this portion of the Study. The impact of having to use all of PBM 6's claims is minimal as analysis shows that PBMs 6's pricing variance magnitudes compared to the national and regional benchmarks are within the reasonable variance range of 10% or less of paid ingredient.

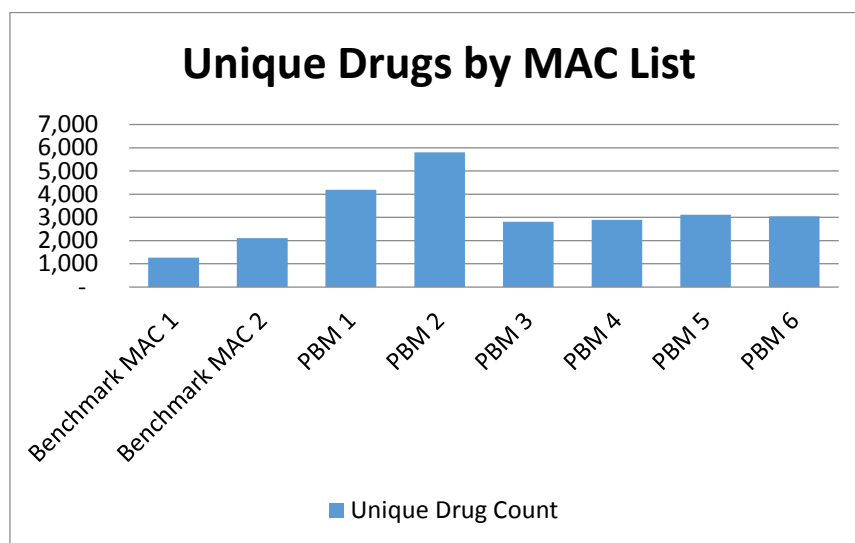
**Analysis Findings**

The following is a review of the data for five components for this section of the Study, followed by observations.

### MAC list breadth analysis

The PBMs' MAC lists were compared to the benchmark regional MAC lists to determine variations in the number of drugs that PBMs included. Each of the PBMs maintained at least one MAC list of generic drug pricing that referenced thousands of individual drugs. Exhibit 16 shows the range of unique drugs on the PBM MAC lists. The range varied from a high of 5,801 individual drugs to a low of 2,814 drugs. Across the board, PBMs had far broader MAC lists than did the benchmarks.

**Exhibit 16: Unique Drug Count by MAC List**



The PBM MAC lists varied significantly from the benchmark MAC lists. PBM MAC lists were broader than the benchmark lists; for example, between 33% and 82% (1,885 – 4,757) of unique drugs listed on PBM MAC lists were missing from the benchmark MAC lists. The percentage of drugs found on benchmark MAC lists but not on PBM MAC lists ranged from 10% to 29% (292 – 499).

Regional Medicaid benchmark MAC lists used in this Study included a much narrower set of drugs and were typically designed to focus on setting MAC reimbursement rates for high-volume generic products that pharmacy providers frequently dispense rather than on all generic products. Medicaid MAC lists may not include a large variety of Over-the-Counter (OTC) or other products not covered by Medicaid programs.

The analysis revealed that PBMs are reimbursing pharmacies fairly for a large number of drugs, likely both high- and low-volume generics and OTC products. However, rates of reimbursement among PBMs for specific drugs varied widely. PBMs are able to implement different strategies by over- and under-paying on different drugs within their large MAC list portfolio to meet a variety of client guarantees.

### MAC List Depth Analysis (WAC Discount)

The MAC list depth analysis compared the level of discounts PBMs applied to their reimbursement to publically available Wholesale Acquisition Cost (WAC) rates, a standard rate list. WAC rates are public information and comparing all of the PBM MAC lists and the benchmark pricing lists to WAC pricing provides a consistent baseline for reimbursement comparison. The weighted WAC effective discount for this Study was calculated at the drug level by comparing the difference between the MAC or NADAC list rate to the WAC rate. Each rate was multiplied by the utilization from the largest three PBMs (PBM 3,

PBM 5 and PBM 6) and then the WAC discount was calculated by comparing the differences in aggregate of the total MAC/NADAC list dollars and the WAC dollars. It should be noted that this analysis was conducted for a singular point in time, specifically 07/01/2015, and is not representative of all of 2015.

Exhibit 17 shows the WAC effective discounts applied by the PBMs who participated in this study as well as the WAC effective discount for the regional benchmarks and NADAC list.

**Exhibit 17: WAC Discount Analysis by PBM and Benchmark Lists**

Weighted WAC Discount Analysis	
PBM	Weighted WAC Discount
PBM 1	-29.4%
PBM 2	-27.0%
PBM 3	-28.0%
PBM 4	-35.3%
PBM 5	-35.2%
PBM 6	-43.5%
Benchmark MAC 1	-38.3%
Benchmark MAC 2	-39.5%
NADAC	-42.1%

The WAC discounts ranged from WAC-27.0% (PBM 2) to WAC-43.5% (PBM 6). The NADAC (WAC-42.1%) and regional MAC list (WAC-38.3%, WAC-39.5%) benchmarks were at the high end of the overall PBM WAC effective discount range. Three of the six PBMs’ (PBMs 4, 5, and 6) WAC effective discounts were within 3% of the three benchmark discounts; however, the other three PBMs’ (PBM 1 – PBM 3) discounts are approximately 10% lower than the benchmarks. The range of PBM WAC effective discounts showed that there were significant differences in how PBMs approached MAC list reimbursements and that PBM MAC lists varied significantly. PBM 6’s WAC effective discount was the most aggressive, but only marginally more aggressive than NADAC. PBM 2 had the lowest WAC effective discount.<sup>51</sup> The NADAC WAC effective discount was expected to be on the high end of the discount range because the NADAC list was based on actual acquisition costs submitted on provider invoices rather than on reimbursement to pharmacies, which in aggregate exceeded acquisition cost. The regional benchmarks included fewer drugs than the PBM MAC lists and NADAC, which was consistent with the fact that the regional benchmark MAC lists were built to provide reimbursement rates for highly utilized generic products, not every drug available in the market. Based on the weighted WAC discount analysis, the regional benchmark WAC effective discounts were not significantly different than NADAC and, were higher than five of the six PBM WAC effective discounts.

**PBM Reimbursement Analysis: Overall**

Similar to the MAC analysis results, the PBM reimbursement analysis revealed results that varied by PBM. Three PBMs (PBM 3, PBM 5, and PBM 6) represented over 87% of the total MAC-reimbursed generic drug spending in calendar year 2015. Although it is important to understand the discount

<sup>51</sup> PBM 2 included the largest number of unique drugs. PBM 2 MAC lists included a large number of low volume and OTC products on their MAC lists. There were data issues that may have also skewed this effective WAC rate.

variances across all PBMs, the variances of the three largest PBMs were typically less than those for PBM 1 and PBM 2.

Exhibit 18 compares PBM reimbursement to NADAC and the benchmark MAC reimbursement. A positive variance indicates that a PBM paid more to pharmacies than what it would have if it had used NADAC or other benchmark ingredient cost rates. Conversely, a negative variance indicates that a PBM paid less than it would have had it paid the benchmark rate.

**Exhibit 18: PBM Generic MAC Data and Reimbursement Variances from NADAC Benchmark**

	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
Total Washington State 2015 Paid Ingredient Cost (PIC): Generic MAC Claims	\$45,394,459	\$ 9,542,320	\$132,439,516	\$11,222,203	\$107,102,259	\$207,281,264
% of Total Washington State 2015 PIC: Generic MAC Claims	8.8%	1.9%	25.8%	2.2%	20.9%	40.4%
Total Number of 2015 Washington State Generic MAC Claims	2,046,704	870,145	7,944,045	517,573	5,100,258	10,612,916
% of Total Washington State 2015 Generic MAC Claims	7.6%	3.2%	29.3%	1.9%	18.8%	39.2%
Variance to NADAC	\$6,100,260	\$(518,866)	\$6,667,203	\$438,791	\$10,599,002	\$8,100,105
Variance to NADAC % of PIC	13.4%	(5.4)%	5.0%	3.9%	9.9%	3.9%
Variance to Benchmark MAC 1	\$9,310,374	\$(2,465,778)	\$(8,969,654)	\$(866,349)	\$(192,364)	\$(21,336,531)
Variance to Benchmark MAC 1 % PIC	20.5%	(25.8)%	(6.8)%	(7.7)%	(0.2)%	(10.3)%
Variance to Benchmark MAC 2	\$10,966,741	\$(2,993,369)	\$(3,596,743)	\$(998,197)	\$4,755,296	\$(18,546,424)
Variance to Benchmark MAC 2 % PIC	24.2%	(31.4)%	(2.7)%	(8.9)%	4.4%	(8.9)%

#### Observations

- + All but one PBM (PBM 2) paid more than what they would have paid had they paid NADAC rates. The variance ranged from 3.9% higher to 13.4% higher.
- + PBM 2's data is suspect because of misclassification of generic drugs. See discussion related to Exhibits 41 and 42.
- + The variances moved from positive to negative when PBM MAC reimbursement was compared to the benchmark MAC lists, which means that the PBM paid less than it would have had it paid MAC 1 and MAC 2 rates. This is not surprising as the benchmark MAC Lists are Medicaid-



specific. As Exhibit 39 shows, pharmacy gross margin per prescription is higher for Medicaid than commercial payers.<sup>52</sup>

- + Only one PBM (PBM1) paid more than what the MAC List 1 would have specified.
- + Two of the six PBMs had positive variances compared to MAC List 2.
- + The three largest PBMs’ (PBM 3, PBM 5, and PBM 6) had a payment variance within a reasonable range<sup>53</sup> of each PBM’s Paid Ingredient Cost.

Overall, most PBMs paid pharmacies more compared to NADAC, and less compared to the benchmark MAC lists. Because the NADAC’s purpose is to reflect the actual acquisition cost paid by pharmacies, it is not surprising that the majority of the PBMs reimbursed pharmacies with rates greater than actual acquisition cost. The variance from the benchmark lists may be the result of the drugs found on each list and the potential limitations of the data.

#### PBM Reimbursement Analysis: Pharmacy Demographic

Washington’s demographics varied significantly across the state. Though major urban areas exist (Seattle, Spokane, Tacoma), much of the state is rural. The goal of the Pharmacy Demographic analysis was to better understand differences in pharmacy reimbursement across three main demographic regions: urban, suburban and rural.<sup>54</sup>

Exhibit 19 shows how each PBM’s total MAC paid ingredient costs break out between regional areas<sup>55</sup>.

**Exhibit 19: Proportion of PBM Paid Ingredient Costs, by Pharmacy Region**

	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
Urban	44.6%	50.3%	38.9%	55.8%	35.1%	23.4%
Suburban	15.3%	20.4%	22.1%	19.3%	17.3%	22.1%
Rural	39.7%	27.9%	37.5%	23.3%	44.5%	26.7%
Not Defined	0.4%	1.5%	1.5%	1.5%	3.0%	27.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

#### Observations

- + For most PBMs at least 76% of paid ingredient costs were paid in urban or rural areas. The remaining balance is represented by payments to suburban pharmacies and a very low amount of paid ingredient costs were paid to pharmacies with an undefined region.
- + PBM 6 had a unique data set with almost 28% of its pharmacies labeled with the Not Defined descriptor.
- + PBMs serving primarily King County (Seattle area) residents will likely have a higher proportion of claims paid to urban pharmacies.

<sup>52</sup> Most of the PBMs couldn’t separate Medicaid claims from fully insured claims; thus there are limitations in really understanding if there is a difference between Medicaid MAC reimbursement and fully insured reimbursement.

<sup>53</sup> Based on the analysis conducted a reasonable range is defined as +/- 10% of the Paid Ingredient Cost.

<sup>54</sup> PBM 6 was the only PBM to provide Pharmacy Demographic labels. HMA’s subcontractor, Mercer, applied this label by Pharmacy ID to the other PBMs in order to maintain consistency for labeling purposes across PBMs.

<sup>55</sup> PBM Demographic determined based off how PBM 6 identified each pharmacy. PBM 6 was the only PBM to provide a demographic identifier so applying their demographic labels keeps the labels consistent throughout the analysis.

- + Four PBMs accounted for a high percentage of payments made to pharmacies in the urban areas.
- + PBM 5 and PBM 6 accounted for the majority of payments paid to rural pharmacies.
- + The suburban pharmacies accounted for the lowest proportion of costs paid for all the PBMs.

As referenced in the overall PBM reimbursement analysis section, all but one PBM paid the Washington pharmacies more for ingredient costs than they would have had they paid NADAC rates. Exhibit 20 displays the dollar difference by PBM and by type of region.

**Exhibit 20: PBM MAC Reimbursement Dollar Variance from NADAC Pricing, by Pharmacy Region**

	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
Urban	\$2,728,556	\$(360,323)	\$2,848,997	\$249,411	\$3,568,311	\$1,570,713
Suburban	\$947,447	\$(109,752)	\$1,426,159	\$61,876	\$1,876,091	\$1,584,310
Rural	\$2,404,210	\$(54,527)	\$2,418,277	\$82,693	\$4,887,067	\$2,370,232
Not Defined	\$20,047	\$5,735	\$(26,230)	\$44,811	\$267,533	\$2,574,850
<b>Total</b>	<b>\$6,100,260</b>	<b>\$(518,866)</b>	<b>\$6,667,203</b>	<b>\$438,791</b>	<b>\$10,599,002</b>	<b>\$8,100,105</b>

Exhibit 21 shows the percentage of paid ingredient cost for each pharmacy region and the variance between paid rate totals and NADAC rate totals.

**Exhibit 21: PBM % of Paid Ingredient Cost Variance from NADAC Pricing, by Pharmacy Region**

	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
Urban	13.5%	-7.5%	5.5%	4.0%	9.5%	3.2%
Suburban	13.6%	-5.6%	4.9%	2.9%	10.1%	3.5%
Rural	13.3%	-2.0%	4.9%	3.2%	10.2%	4.3%
Not Defined	11.2%	4.1%	-1.3%	26.5%	8.2%	4.5%
<b>Total</b>	<b>13.4%</b>	<b>-5.4%</b>	<b>5.0%</b>	<b>3.9%</b>	<b>9.9%</b>	<b>3.9%</b>

#### Observations

- + For most of the PBMs, the regional-specific variance percentages did not vary considerably from total variance percentage.
- + The Demographic Groups variance was typically within one percentage point of the total variance percentage.
- + The PBM with the lowest paid ingredient cost (PBM 2) had slightly more dramatic variation across regions.
- + The number of drugs included on PBM MAC lists varied significantly across PBMs.
- + Aggregate PBM Wholesale Acquisition Cost (WAC) discounts ranged from -27.0% to -43.5%; regional benchmarks and NADAC WAC discounts ranged from -38.3% to -42.1%
- + In general, PBM MAC lists resulted in payments to pharmacies that were higher than they would have been had PBMs paid at NADAC rates, and lower than they would have been had they paid at regional benchmarks MAC list rates.
- + The previous observation is explained by the fact that NADAC is an average acquisition cost benchmark, whereas MAC lists are designed to reimburse pharmacies more than the lowest available acquisition cost for a drug grouping.

- + PBM 3 paid rural pharmacies at lower rates than all benchmarks, and PBM 5 and 6 paid more.
- + All but PBM 2 paid independent pharmacies at higher rates than chain drug stores in the NADAC analysis.
- + Exhibits 22 and 23 provide similar analyses as Exhibits 20 and 21 for PBM reimbursement to Benchmark MAC list 1.

**Exhibit 22: PBM MAC Reimbursement Dollar Variance from Benchmark MAC 1 Pricing, by Pharmacy Region**

	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
Urban	\$4,174,880	\$(1,346,923)	\$(2,377,802)	\$(467,336)	\$(209,870)	\$(5,067,946)
Suburban	\$1,493,860	\$(518,566)	\$(2,107,729)	\$(199,786)	\$(80,620)	\$(4,683,997)
Rural	\$3,612,232	\$(619,518)	\$(3,853,420)	\$(240,964)	\$167,927	\$(5,435,213)
Not Defined	\$29,402	\$19,229	\$(630,703)	\$41,736	\$(69,801)	\$(6,149,375)
<b>Total</b>	<b>\$9,310,374</b>	<b>\$(2,465,778)</b>	<b>\$(8,969,654)</b>	<b>\$(866,349)</b>	<b>\$(192,364)</b>	<b>\$(21,336,531)</b>

**Exhibit 23: PBM % of Paid Ingredient Cost Variance from Benchmark MAC 1 Pricing, by Pharmacy Region**

	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
Urban	20.6%	-28.1%	-4.6%	-7.5%	-0.6%	-10.5%
Suburban	21.5%	-26.7%	-7.2%	-9.2%	-0.4%	-10.2%
Rural	20.0%	-23.3%	-7.8%	-9.2%	0.4%	-9.8%
Not Defined	16.5%	13.7%	-31.6%	24.7%	-2.1%	-10.7%
<b>Total</b>	<b>20.5%</b>	<b>-25.8%</b>	<b>-6.8%</b>	<b>-7.7%</b>	<b>-0.2%</b>	<b>-10.3%</b>

Observations

- + Regional specific variances were more extreme than the total variance.
- + Only PBM 1's ingredient cost variance was positive compared to the benchmark MAC List 1.
- + PBM 2, PBM 5 and PBM 6 paid the rural pharmacies more than other Demographic Groups.

Exhibits 24 and 25 are similar analyses for PBM MAC reimbursement, compared to the Benchmark MAC 2.

**Exhibit 24: PBM MAC Reimbursement Dollar Variance from Benchmark MAC 2 Pricing, by Pharmacy Region**

	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
Urban	\$4,842,174	\$(1,679,579)	\$(616,755)	\$(568,308)	\$1,617,615	\$(4,116,508)
Suburban	\$1,735,675	\$(662,634)	\$(750,632)	\$(224,189)	\$805,638	\$(4,390,663)
Rural	\$4,353,234	\$(683,220)	\$(1,788,473)	\$(291,789)	\$2,262,612	\$(5,044,921)
Not Defined	\$35,658	\$32,065	\$(440,883)	\$86,089	\$69,431	\$(4,994,332)
<b>Total</b>	<b>\$10,966,741</b>	<b>\$(2,993,369)</b>	<b>\$(3,596,743)</b>	<b>\$(998,197)</b>	<b>\$4,755,296</b>	<b>\$(18,546,424)</b>

**Exhibit 25: PBM % of Paid Ingredient Cost Variance to Benchmark MAC 2 Pricing, by Pharmacy Region**

	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
Urban	23.9%	-35.0%	-1.2%	-9.1%	4.3%	-8.5%
Suburban	25.0%	-34.1%	-2.6%	-10.3%	4.4%	-9.6%
Rural	24.1%	-25.7%	-3.6%	-11.1%	4.7%	-9.1%
Not Defined	20.0%	22.8%	-22.1%	50.9%	2.1%	-8.7%
<b>Total</b>	<b>24.2%</b>	<b>-31.4%</b>	<b>-2.7%</b>	<b>-8.9%</b>	<b>4.4%</b>	<b>-8.9%</b>

Observations:

- + Four of the six PBMs paid lower amounts to pharmacies than they would have had they paid according to benchmark MAC 2 pricing.
- + PBM 1 and PBM 2 variances were significantly larger than for the other PBMs: +24.2% to -31.4% versus +4.4% to -8.9%.
- + The variances for the benchmark MAC 2 were less than for benchmark MAC 1.
- + Compared to benchmark MAC 1, the variances within demographic groups were much larger.

#### PBM Reimbursement Analysis: Pharmacy Class

The Pharmacy Class describes the type of pharmacy that the PBMs reimburse in Washington. Exhibit 26 shows that community/retail pharmacies accounted from 85.2% to 100% of PBM MAC-reimbursed dollars. Unsurprisingly, the majority of the remaining reimbursement went to long-term care pharmacies, clinical pharmacies, and institutional pharmacies. A similar detailed analysis as seen earlier in this report for Pharmacy Demographic and will be seen later in this report for Pharmacy Chain Status was prepared for Pharmacy Class, which can be referenced in the Appendix. Analyses are located in Appendix II for several reasons: only community/retail pharmacies are in this Study's scope, the findings are unremarkable, and reimbursement arrangements for the other types of pharmacies often differed from those for community/retail pharmacies.

**Exhibit 26: Proportion of Paid Ingredient Cost Received by Different Pharmacy Types**

	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
Community/Retail Pharmacy	85.2%	90.4%	93.1%	100.0%	89.8%	93.4%
Long Term Care Pharmacy	6.0%	6.7%	4.1%	0.0%	2.9%	2.4%
Clinic Pharmacy	7.3%	1.6%	1.3%	0.0%	1.9%	2.6%
Not Defined	0.0%	0.1%	0.2%	0.0%	0.0%	0.4%
Indian Health Service /Tribal/Urban (I/T/U)	0.1%	0.1%	0.2%	0.0%	0.3%	0.1%
Non-Pharmacy Dispensing Site	0.0%	0.0%	0.1%	0.0%	0.1%	0.1%
Military/ U.S. Coast Guard Pharmacy	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Durable Medical Equipment (DME)	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%

	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
Managed Care Organization Pharmacy	0.0%	0.0%	0.2%	0.0%	1.0%	0.0%
Specialty Pharmacy	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Mail Order Pharmacy	0.0%	0.0%	0.2%	0.0%	3.4%	0.0%
Compounding Pharmacy	0.0%	0.1%	0.1%	0.0%	0.1%	0.1%
Department of Veterans Affairs (VA) Pharmacy	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%
Institutional Pharmacy	1.3%	1.0%	0.6%	0.0%	0.4%	0.9%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

### PBM Reimbursement Analysis: Pharmacy Chain Status

Pharmacy Chain Status is the third of the three detailed analyses performed for the Study. The Pharmacy Chain Status designated whether the pharmacy was a chain, an independent pharmacy, or a pharmacy that submitted claims through a PSAO. To determine the pharmacy chain status, HMA and its subcontractor relied on the information provided by each of the PBMs in their response to the data request. As with the pharmacy demographic comparison, the accuracy of the pharmacy chain status definitions by PBM depended on the accuracy of their self-reporting. Chains consisted of national chains that spanned the country or regional chains that had a small, or nonexistent, footprint outside the state of Washington. The Independent pharmacy designation included pharmacies labeled as independent by the PBMs. The PSAO analysis included payments made to pharmacies through administrative organizations that provided contract and payment efficiencies for both pharmacies and PBMs.

Chains represented the majority of the generic drug claims paid off of MAC lists in the state of Washington. Exhibit 27 shows that at least 70% of MAC claims are paid to chain pharmacies. The pharmacy chain status group accounted for the second largest proportion of paid claims varied by PBM. Half of the PBMs paid the second largest claims amount to independent pharmacies (PBM 1, PBM 3 and PBM 4) while the other half of the PBMs paid their second largest amount of claims to PSAOs/Associations (PBM 2, PBM 5 and PBM 6). The fact that Pharmacy Chain Status contracting mix varied by PBM should emphasize inconsistencies with PBM reporting on their contracts.

### Exhibit 27: MAC Claims Paid Percentages by Pharmacy Chain Status

	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
Independent	18.5%	7.9%	16.4%	2.5%	2.1%	7.0%
Chain	77.4%	74.1%	80.5%	97.5%	73.8%	73.4%
PSAO/ Association	4.1%	16.5%	3.0%	0.0%	23.9%	19.5%
Not Defined	0.0%	1.5%	0.0%	0.0%	0.2%	0.0%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Exhibits 28 and 29 compare PBM reimbursement to NADAC at a pharmacy chain status level.

**Exhibit 28: PBM MAC Reimbursement Dollar Variance from NADAC Pricing –by Pharmacy Chain Status**

	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
<b>Independent</b>	\$1,148,919	\$41,899	\$1,211,916	\$48,302	\$193,671	\$685,896
<b>Chain</b>	\$4,713,291	\$(682,583)	\$5,293,014	\$390,489	\$7,872,485	\$1,890,988
<b>PSAO/ Association</b>	\$238,050	\$116,083	\$162,272	-	\$2,536,413	\$5,523,220
<b>Not Defined</b>	-	\$5,735	-	-	\$(3,567)	-
<b>Total</b>	<b>\$6,100,260</b>	<b>\$(518,866)</b>	<b>\$6,667,203</b>	<b>\$438,791</b>	<b>\$10,599,002</b>	<b>\$8,100,105</b>

**Exhibit 29: Variance to NADAC % of Paid Ingredient Cost – by Pharmacy Chain Status**

	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
<b>Independent</b>	13.7%	5.6%	5.6%	16.9%	8.6%	4.7%
<b>Chain</b>	13.4%	-9.7%	5.0%	3.6%	10.0%	1.2%
<b>PSAO/ Association</b>	12.8%	7.4%	4.0%	0.0%	9.9%	13.6%
<b>Not Defined</b>	0.0%	4.1%	0.0%	0.0%	-1.8%	0.0%
<b>Total</b>	13.4%	-5.4%	5.0%	3.9%	9.9%	3.9%

Observations

- + Five of the six PBMs paid independent pharmacies at higher rates, in some cases significantly higher, than the rates they paid to chains drug stores. This is consistent with HMA’s interview with a PBM informant who stated their contracts with independent pharmacies provided for higher reimbursement rates in recognition of higher cost to dispense.
- + Only PBM 5 reimbursed chain pharmacies more than other designations; however, the variation across the designations was small.
- + The three PBMs (PBM 2, PBM 5, and PBM 6) that paid more claims to PSAOs than to independent pharmacies reimbursed PSAO submitted claims at higher rates than they did for independent pharmacies.

Exhibits 30 and 31 compare PBM reimbursement to the Benchmark MAC 1 at the pharmacy chain status group level.

**Exhibit 30: PBM MAC Reimbursement Dollar Variance to Benchmark MAC 1 Pricing – by Pharmacy Chain Status**

	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
<b>Independent</b>	\$1,725,773	\$(87,241)	\$(1,701,642)	\$31,834	\$(91,483)	\$(1,146,071)
<b>Chain</b>	\$7,333,729	\$(2,212,802)	\$(6,720,872)	\$(898,183)	\$(130,537)	\$(20,536,478)
<b>PSAO/ Association</b>	\$250,873	\$(184,964)	\$(547,119)	-	\$115,367	\$346,018
<b>Not Defined</b>	-	\$19,229	\$(21)	-	\$(85,711)	-
<b>Total</b>	<b>\$9,310,374</b>	<b>\$(2,465,778)</b>	<b>\$(8,969,654)</b>	<b>\$(866,349)</b>	<b>\$(192,364)</b>	<b>\$(21,336,531)</b>

**Exhibit 31: PBM % of Paid Ingredient Cost Variance to Benchmark MAC 1 Pricing – by Pharmacy Chain Status**

	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
Independent	20.5%	-11.6%	-7.8%	11.1%	-4.1%	-7.9%
Chain	20.9%	-31.3%	-6.3%	-8.2%	-0.2%	-13.5%
PSAO/Association	13.5%	-11.7%	-13.6%	0.0%	0.5%	0.9%
Not Defined	0.0%	13.7%	-123.2%	0.0%	-43.0%	0.0%
<b>Total</b>	<b>20.5%</b>	<b>-25.8%</b>	<b>-6.8%</b>	<b>-7.7%</b>	<b>-0.2%</b>	<b>-10.3%</b>

Observations

Due to the variability in reimbursement within a PBM and across PBMs, general observations will be made after comparisons to both Benchmark MAC 1 and 2.

Exhibits 32 and 33 summarize a similar analysis for PBM MAC reimbursement compared to Benchmark MAC 2.

**Exhibit 32: PBM MAC Reimbursement Dollar Variance to Benchmark MAC 2 Pricing – by Pharmacy Chain Status**

	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
Independent	\$ 1,969,559	\$ (189,270)	\$ (1,190,573)	\$ 72,846	\$ 1,548	\$ (1,054,940)
Chain	\$ 8,634,883	\$ (2,635,554)	\$ (1,902,312)	\$ (1,071,043)	\$ 3,798,798	\$ (18,907,788)
PSAO/Association	\$ 362,299	\$ (200,609)	\$ (503,837)	\$ -	\$ 1,048,868	\$ 1,416,304
Not Defined	\$ -	\$ 32,065	\$ (21)	\$ -	\$ (93,918)	\$ -
<b>Total</b>	<b>\$ 10,966,741</b>	<b>\$ (2,993,369)</b>	<b>\$ (3,596,743)</b>	<b>\$ (998,197)</b>	<b>\$ 4,755,296</b>	<b>\$ (18,546,424)</b>

**Exhibit 33: PBM % of Paid Ingredient Cost Variance to Benchmark MAC 2 Pricing – by Pharmacy Chain Status**

	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
Independent	23.4%	-25.2%	-5.5%	25.5%	0.1%	-7.2%
Chain	24.6%	-37.3%	-1.8%	-9.8%	4.8%	-12.4%
PSAO/Association	19.5%	-12.7%	-12.5%	0.0%	4.1%	3.5%
Not Defined	0.0%	22.8%	-123.2%	0.0%	-47.2%	0.0%
<b>Total</b>	<b>24.2%</b>	<b>-31.4%</b>	<b>-2.7%</b>	<b>-8.9%</b>	<b>4.4%</b>	<b>-8.9%</b>

Observations

- + It was difficult to draw conclusions based upon these data due the variation in reimbursement within a PBM's MAC list and across PBMs.
- + Two of the three PBMs (PBM 5 and PBM 6) who had a higher percentages of reimbursement to PSAOs than to independent pharmacies reimbursed PSAOs higher than benchmark MAC lists 1 and 2, similar to NADAC comparisons.
- + In aggregate, the comparison to benchmark MAC 2 was more positive variances that were less dramatic than the comparison to benchmark MAC 1.

# PBM MAC List Update Processes

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## Overview

Price adjustments happen frequently in the generic drug market. How quickly PBMs update their MAC pricing impacts both the pharmacy's and PBM's net incomes. A delay in increasing reimbursement on a drug that has dramatically increased in cost can mean low or negative margins on that drug for a pharmacy. On the other hand, not updating MAC lists when prices decrease will mean over-reimbursement for pharmacies. It is important, again, that MAC lists are designed to reimburse pharmacies for acquisition cost in aggregate. Pursuing that strategy impacts timing of MAC list updates.

A timing study was conducted to understand the PBM reaction to the market shift in price for the Study drugs. Observations of the PBM reaction before, during, and after the price change in the market were documented.

## Key Findings

- + The data varied so much that no direct conclusions can be drawn, nor trends found for any of the six PBMs.
- + Given the analysis that shows that PBMs reimburse above NADAC, the variability appears to have no impact on profitability.
- + PBMs reacted differently on a drug-by-drug basis with regard to how cost changes were handled.
- + PBMs varied in how they reacted to the same cost change on a drug. PBM reimbursement prior to pricing changes varied significantly compared to NADAC drug pricing. The PBM ingredient cost reimbursement differed widely, from being equivalent reimbursement to NADAC to being more than 100% above and below NADAC.
- + PBMs appeared to proactively update reimbursement prior to a pricing change on certain drugs. However, the conclusion that PBMs altered reimbursement prior to a known pricing change was merely an inference that could not be verified as fact through this Study.
- + Very rarely did PBMs react on the exact day of a WAC rate change.
- + There was no clear pattern in the way different PBMs updated prices, and even individual PBMs seemed to have no consistent way of dealing with price changes.
- + The reaction timing of PBM reimbursement updates ranged from one week after a market cost change to no pricing update in the time frame reviewed.

## Method

60 highly utilized generic drugs which had significant cost increases or decreases in 2015 were selected for the timing analysis. The drugs were reviewed individually during the timeframe of September 2015 through December 2015 since most of the drugs considered significant for the Study had increases or decreases from third quarter CY 2015 to fourth quarter CY 2015. The PBMs' timing in making MAC list updates was reviewed whenever WAC price increases and decreases were seen in the market during the Study period. Of the 60 drugs selected for review, 35 drugs experienced significant WAC increases, and the remaining 25 drugs experienced significant WAC cost decreases.

Each drug's acquisition cost history, inferred by using NADAC data, was reviewed in comparison to the PBM reimbursement. The goal was to understand how a PBM reacted once a price change affected the



market. NADAC was used because it is based upon acquisition costs and is updated weekly. The Study reviewed the pricing for the drug before the price change, the time of the price change, and the length of time PBMs took to adjust reimbursement within a reasonable range of the adjusted acquisition cost. A 10% threshold on either side of a NADAC rate was considered reasonable.

### Data Analysis – Timing Study

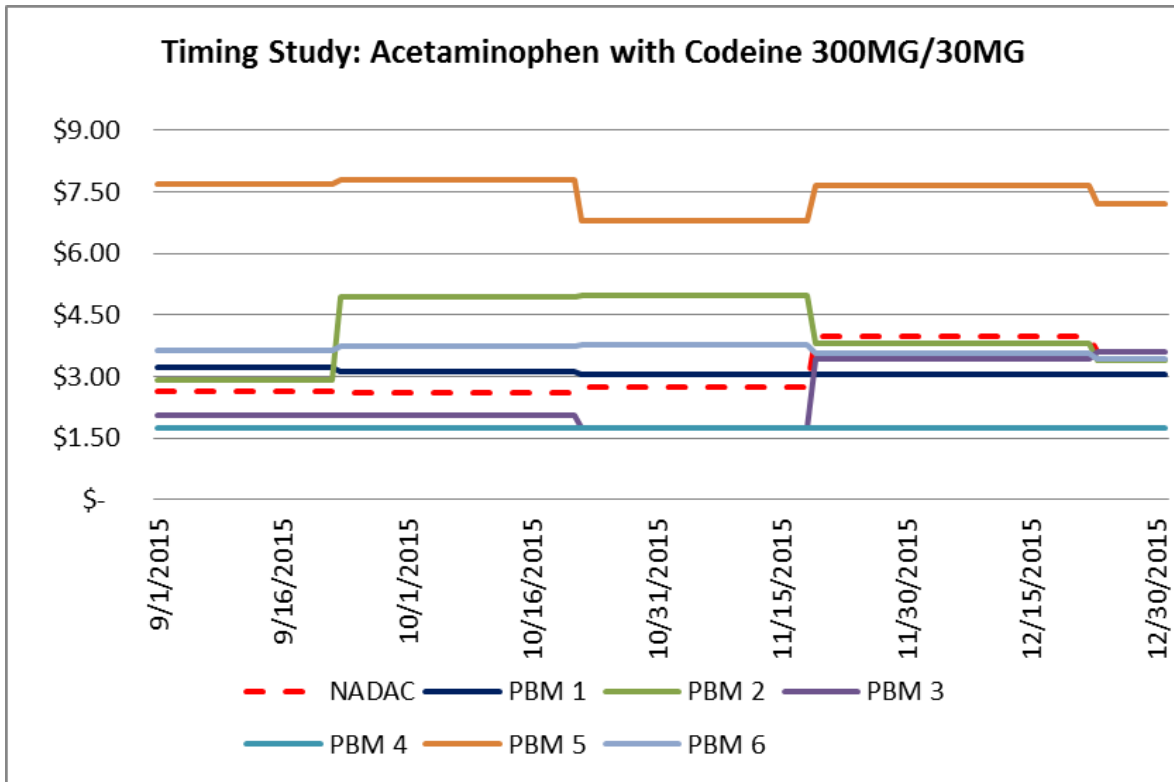
The analysis revealed a data set that would resemble a scatter plot that reflected a lack of consistency in process or reaction time. This could be the result of reviewing a small sample size (60 drugs) of the thousands of generic drugs found in the market at any time. PBM reaction strategies could potentially become more obvious through review of a much larger data set than what was reviewed in this Study.

The analysis was designed to answer the following questions:

- + Does the PBM increase/decrease reimbursement prior to a cost increase/decrease by a manufacturer?
- + Was reimbursement already significantly higher or lower than the change in ingredient cost, which would possibly affect the PBM reaction time to respond to the pricing change?
- + Were there significant differences in PBM MAC list reimbursement prior to the pricing change?

Exhibits 34 and 35 show the reaction time for each of the six PBMs to update their MAC lists. In each Exhibit the per unit average acquisition cost of the drug on the market is represented by the NADAC price (red line). Exhibit 34 represents acetaminophen with codeine 300MG/30MG tablets (dispensing amount of 20) over the time period of September 1, 2015, through December 31, 2015. Acetaminophen with codeine experienced one small (10/22/2015) and one large price increase (11/18/2015) over the time period. The information along the vertical axis represents the dollar range for both NADAC pricing and PBM reimbursements for a dispense count of 20 during the time frame that is labeled on the horizontal axis. Exhibit 35 covers the same time frame and uses the same axis metrics as Exhibit 34 for the drug azithromycin 250MG Pak (dispense amount of 6). Over the time frame, azithromycin Pak experienced two cost decreases (10/20/2015 and 12/22/2015) and the graph evaluates each PBM's reaction.

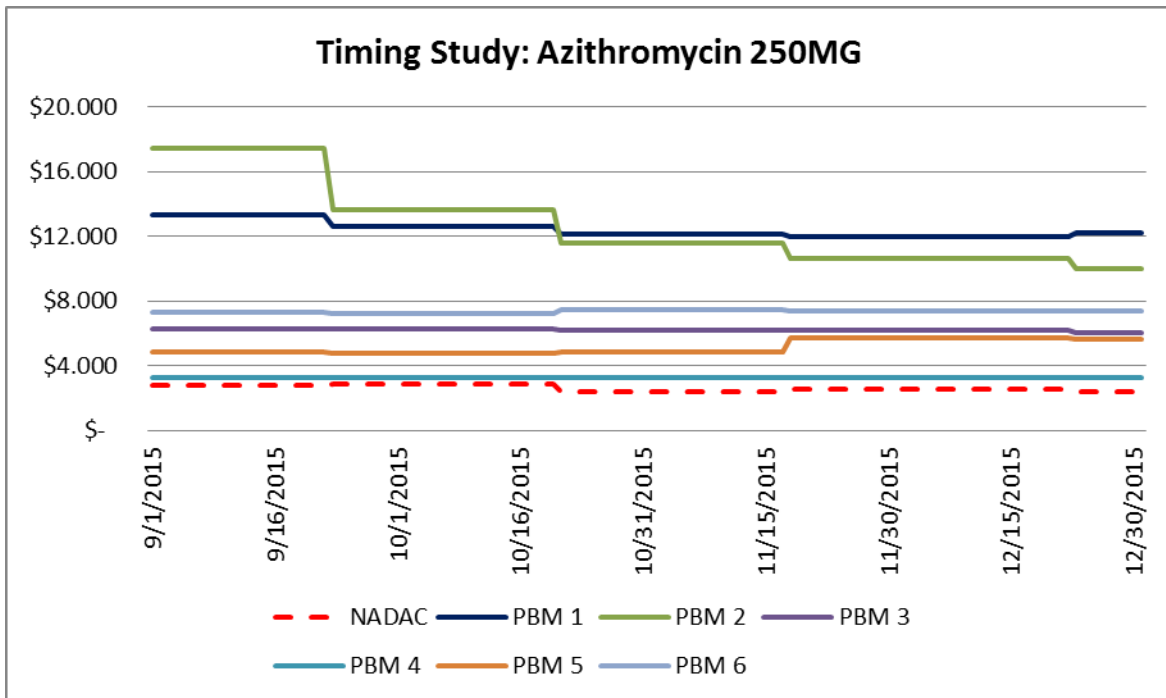
**Exhibit 34: Timing Study of Acetaminophen with Codeine 300MG/30MG Tablets – Price Increase Example**



Observations

- + At the start of the time period reviewed all but two PBMs (PBM 3 and PBM 4) reimbursed more than actual acquisition cost (NADAC) for this particular drug; PBM 5 was paying over two times the NADAC benchmark.
- + The NADAC price fluctuated slightly from the middle of September through middle of November, going down slightly in October and then back up again in November.
- + The PBMs had similar movement to NADAC during this timeframe with PBM 2 being an outlier, nearly doubling its reimbursement.
- + The major price increase took place on November 17. The PBMs at this point reacted very little to the price increase.
- + PBM 5 increased its price most significantly, which was expected as it reimbursed the highest amount out of the six PBMs on this drug.
- + The other five PBMs reimbursed the ingredient cost close to the NADAC price. Some made little or no adjustment at all (PBM 1 and PBM 4) and end up reimbursing less than the actual acquisition cost (NADAC rate) towards the end of the time frame.

**Exhibit 35: Timing Study of Azithromycin 250MG Pak – Price Decrease Example**



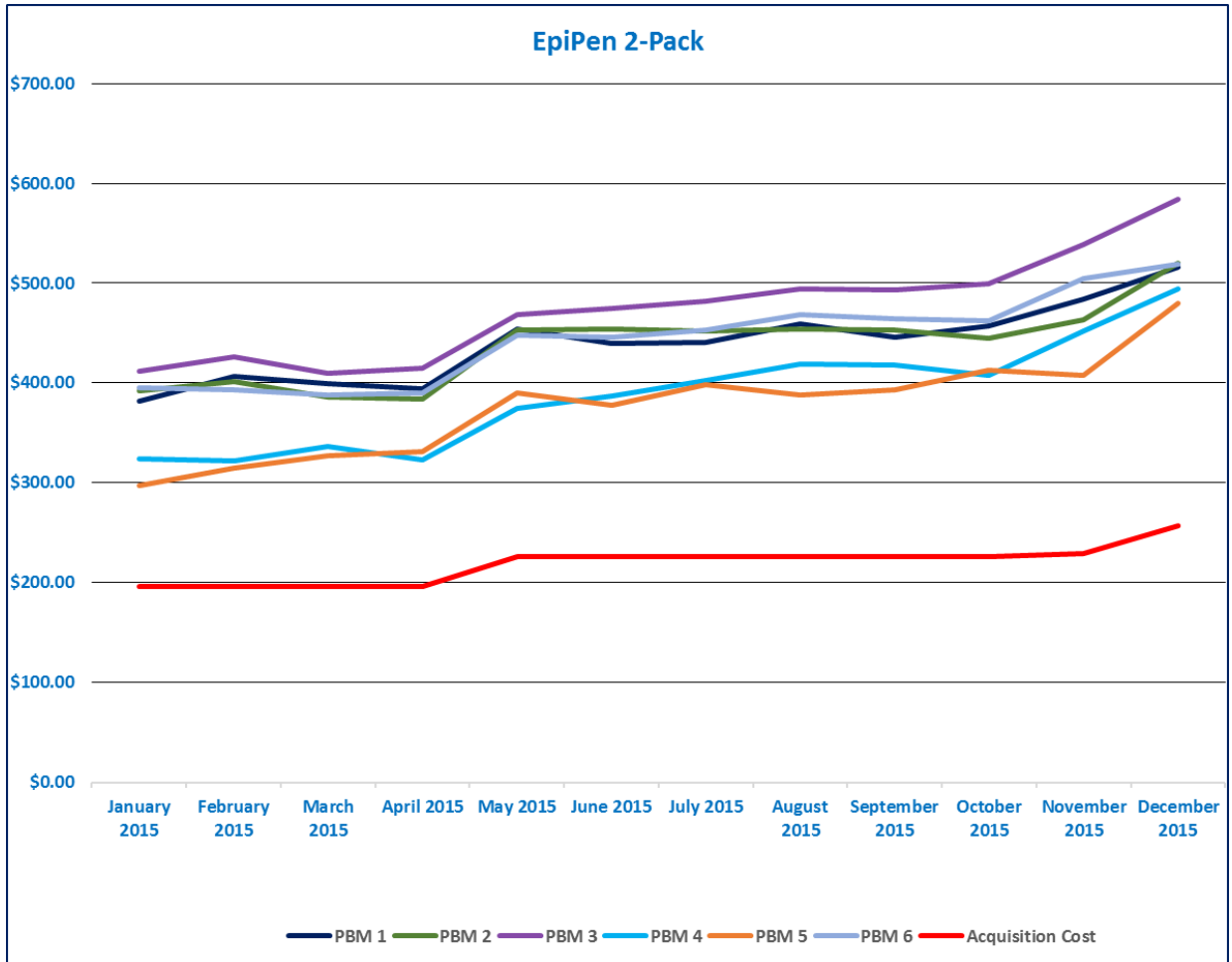
In Exhibit 35 azithromycin 250MG is analyzed as an example of a drug taking a price decrease in the analysis time frame (September 1, 2015 – December 31, 2015).

**Observations**

- + During this time frame the drug took a 17% decrease from a high price (\$2.889; from 9/23/15 – 10/20/15) to a low at the end of the time frame (\$2.407; as of 12/31/15).
- + All of the PBMs analyzed were reimbursing more than the acquisition cost (NADAC) for azithromycin over these four months.
- + Four of the six PBMs raised reimbursement levels or held their reimbursement amounts steady.
- + PBM 2 took aggressive cuts at its reimbursement for this drug; however, they were still reimbursing more than the actual acquisition cost (NADAC) by a factor of four by the end of the year.
- + Azithromycin experienced a 34% decrease in price since Quarter 1 2015 (not seen in this graph). It is unusual that reimbursement by PBMs has not come down further.

Pharmacists interviewed as part of the Study stated that PBMs generally increased the prices of brand name drugs quickly. The Study analyzes EpiPen manufacturer and PBM pricing increases, which validated the informants’ statements (Exhibit 36).

**Exhibit 36: EpiPen Average Reimbursement and Cost by PBM in 2015**



## Pharmacy Profitability

### Overview

Prescription drug reimbursements to independent pharmacies are vitally important because “92 percent of sales for independent pharmacies” are derived from prescription drugs.<sup>56</sup> Unlike large pharmacy chain stores, independent pharmacies cannot off-set drug reimbursement losses with other store sales (e.g., for cosmetics, food, sundries, etc.). Therefore, to definitively determine pharmacy profitability, access to a pharmacy’s actual drug acquisition costs is needed. In the absence of that data (which could be collected in a drug acquisition cost survey which was not included as a part of this Study), this Study addresses the estimated overall profitability of independent pharmacies by comparing actual PBM reimbursements in Washington to national drug acquisition cost benchmarks and to Cost of Dispensing (COD) data reported for Washington.

PBM drug reimbursements to pharmacies have two components: an amount to cover the estimated cost of a drug (the “ingredient cost”) and an amount to cover a pharmacy’s dispensing cost including, for example, the cost of labor, supplies, and the practice management computer (the “dispensing fee”). Historically, pharmacies have made their profit on the spread between the acquisition cost of a drug and the total reimbursement for a related prescription.

The National Community Pharmacists Association (NCPA) notes that overall independent pharmacy profitability has remained relatively stable over the past 10 years. This is partially evidenced by the fact that the number of independent pharmacies nationwide has remained stable in recent years (Exhibit 37).<sup>57</sup> An analysis of NCPA data in 2015 also indicated that average prescription Gross Margins<sup>58</sup> at independent drugstores did not change significantly during the same timeframe (Exhibit 38).<sup>59</sup>

#### Exhibit 37: Number of Independent U.S. Pharmacies, 2010-2014<sup>60</sup>

Number of Independent Community Pharmacies					
Year	2010	2011	2012	2013	2014
No. of Pharmacies	23,064	23,106	23,029	22,814	22,478

<sup>56</sup> NCPA 2015 Digest, National Community Pharmacists Association at <http://www.ncpa.co/pdf/aaaa-2015-digest-sponsored-by-cardinal-health.pdf>

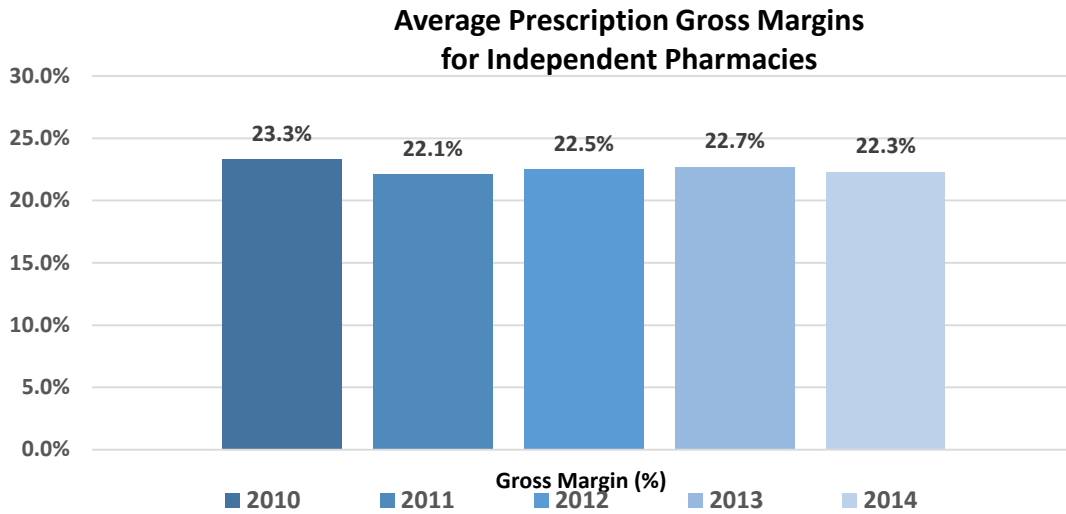
<sup>57</sup> As reported by NCPA in their annual Digest.

<sup>58</sup> Gross Margin is Gross Profit expressed as a percentage of Revenues. Gross profits equal Revenues minus the cost of the drug (net of discounts and returned goods).

<sup>59</sup> Adam J. Fein, Ph.D., “Independent Pharmacy Economics: Profits Steady, but Sales Down (Maybe);” Drug Channels, November 17, 2015.<sup>60</sup> Source: NCPA 2015 Digest.<sup>61</sup> Source: The 2016 Economic Report on Retail, Mail, and Specialty Pharmacies; Pembroke Consulting, Inc. and Drug

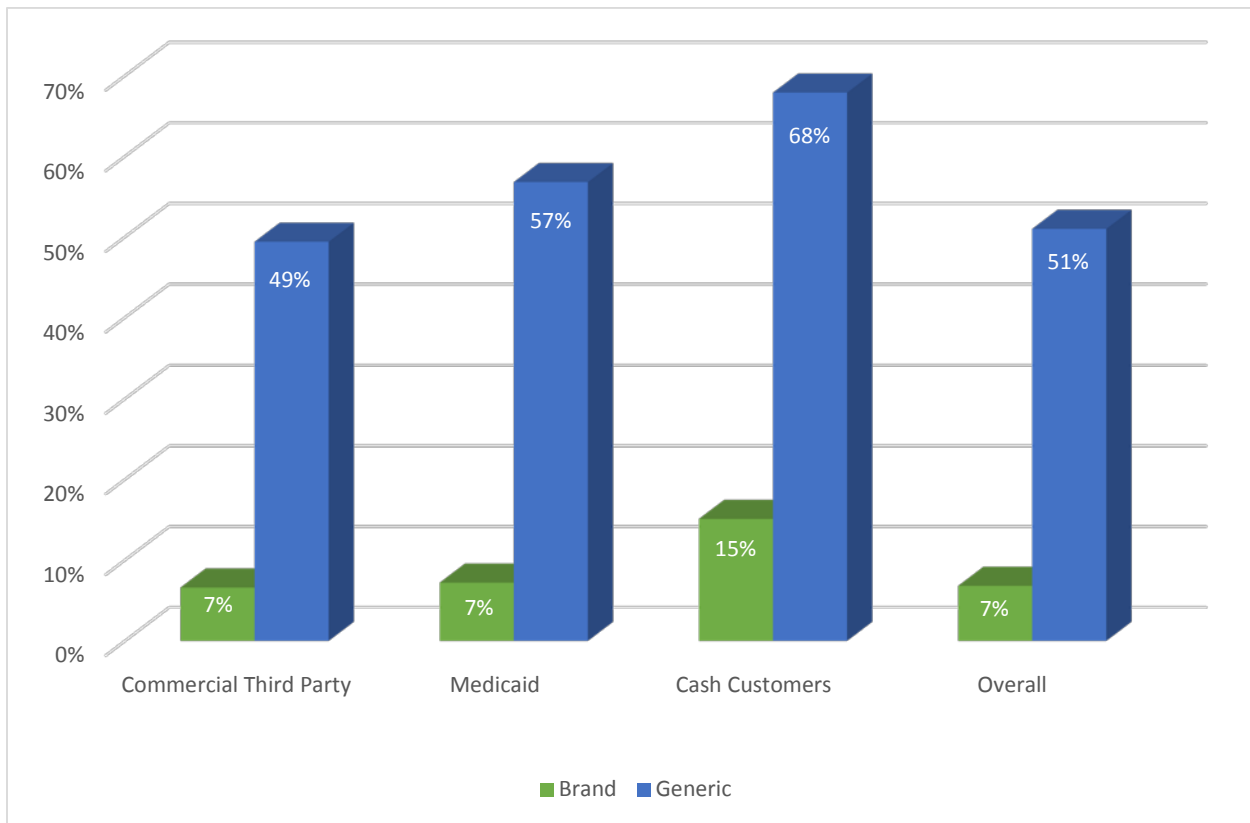
<sup>60</sup> Source: NCPA 2015 Digest.<sup>61</sup> Source: The 2016 Economic Report on Retail, Mail, and Specialty Pharmacies; Pembroke Consulting, Inc. and Drug

**Exhibit 38: U.S. Independent Pharmacy Average Gross Margins, 2010-2014**



When calculated on a per prescription basis, the average Gross Margin for generic drugs was greater than the average Gross Margin for brand drugs (Exhibit 39).

**Exhibit 39: Average U.S. Retail Pharmacy Gross Margin Per Prescription, Brand vs. Generic 2012<sup>61</sup>**



<sup>61</sup> Source: The 2016 Economic Report on Retail, Mail, and Specialty Pharmacies; Pembroke Consulting, Inc. and Drug

The remainder of this section provides a detailed analysis comparing PBM payments to Washington pharmacies to national benchmarks. There is also a case study included which applies the benchmark analysis to one rural independent pharmacy and one urban pharmacy.

### Key Findings

- + In the aggregate, pharmacies showed a positive Gross Profit across the PBMs, but only a positive Gross Profit for PBMs 1 and 4 if a cost of dispensing (COD) of \$10 per prescription was assumed.
- + Dispensing generic drugs was more profitable than dispensing brand drugs, but that profitability was dependent on an individual pharmacy’s COD.
- + In the case study provided, the rural independent pharmacy was more profitable than the urban independent pharmacy.
- + Profitability decreased when the COD assumption increases from \$10 to \$15 per prescription, forcing the Net Income of both case study pharmacies as a percent of Gross Income into the negative range.
- + The case study showed that the rural independent pharmacy was more profitable at a \$10 COD and suffers lower losses at a \$15 COD than the urban independent pharmacy.
- + Pharmacies that could not off-set losses with other store sales had to: rely primarily on prescription drug income, obtain higher or expanded fees than currently paid by PBMs, or maintain a sufficient spread between drug costs and reimbursement to stay profitable.

**Exhibit 40: Rural and Urban Net Income as percent of Gross Income at \$10 and \$15 cost to dispense for Case Study Pharmacies**

Cost to Dispense	Rural Independent Pharmacy Profit	Urban Independent Pharmacy Profit
\$10	3.3%	-0.2%
\$15	-7.0%	-10.9%

### Method

To understand the profitability of filling prescriptions, there must be an understanding of the components that generate a Net Income for a pharmacy. Gross Income related to drugs covered by a PBM is derived from the PBM payment and the patient copayment for any given prescription. Within the PBM reimbursement is an amount allowed by the PBM to cover the cost of the drug and another amount to cover dispensing costs, known as a dispensing fee. This dispensing fee reimbursement and its relationship to a pharmacy’s cost of dispensing a prescription is a significant factor, therefore an analysis of the average dispensing fee provided by the PBMs is an important consideration.

On the pharmacy cost side of the equation there is the cost of the drug they dispense and the costs incurred by the pharmacy (labor, supplies, etc.) to dispense the drug. Drug acquisition costs and costs to dispense vary by pharmacy, therefore to analyze profitability, general assumptions are applied to pharmacy drug acquisition and dispensing costs and then compared to the reimbursement data supplied by the PBMs.

Various studies have shown that the average acquisition cost for brand name drugs is generally around AWP minus 18% and for generic drugs around AWP minus 90%.<sup>62</sup> A 2014 Issue Brief from the Kaiser Family Foundation compared the top 25 (in Medicaid) single source and multiple source brand drugs' prescription-weighted, per-unit average AWP, WAC, NADAC and paid amounts.<sup>63</sup> Kaiser found that the NADAC (\$8.03) was 18% less than AWP (i.e. AWP minus 18%) for single-source brand drugs and similar (\$6.50 NADAC compared to \$7.96 AWP) for multiple source brand drugs (Exhibit 8). Kaiser also compared the same pricing metrics for both the top 25 and 100 generic drugs (Exhibit 9). Kaiser information shows that for the top 25 and 100 generic drugs NADAC equaled approximately AWP minus 93% (\$0.14 NADAC to \$1.88 AWP and \$0.17 NADAC to \$2.56 AWP).

Based on the Kaiser information and on Cost of Dispensing (COD) data for Washington from a 2015 study,<sup>64</sup> pharmacy profitability calculations were developed using the following assumptions:

- + Drug acquisition costs were set at AWP minus 18% for claims data marked as brand and AWP minus 90% for claims data marked as generic.
- + The AWP used was that provided in the PBM data for each claim.
- + Total pharmacy costs were the sum of the drug acquisition cost plus the COD.
- + Multiple COD assumptions were applied (\$10, \$15 and an amount equal to each PBM's average dispensing fee) to show the effect non-drug costs have on profitability.<sup>65</sup>
- + Total income equaled the amount paid by the PBM plus the patient copayment (calculations assumes the patient paid the copayment).
- + The number of negative net income claims (brand, generic and total) was counted to show the percentage of claims on which pharmacies lose money. Negative net income occurred when the gross income for a claim was less than the total pharmacy cost (i.e. drug cost plus COD) for the claim.

## Data analysis

### Aggregate Profitability

An analysis of PBM claims data was performed across all pharmacies attributing a pharmacy dispensing cost for each claim (Exhibits 41 and 42). The results illustrate the difference between Gross Profits (i.e. Gross Income minus Drug Cost) and Net Income (amount remaining after taking into account non-drug COD).

Exhibits 41 and 42 provide estimated net income for Washington pharmacies for each PBM showing an overall Gross Profit of \$202,732,929. After applying the COD, however, the overall profit becomes an overall loss of \$212,196,941.

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<sup>62</sup> Bruen, B & Young, K, Paying for Prescribed Drugs in Medicaid: Current Policy and Upcoming Changes, The Kaiser Commission on Medicaid and the Uninsured, May 2014 Issue Brief.

<sup>63</sup> Weighted average total paid is for Medicaid programs. NADAC represents the pharmacy acquisition cost.

<sup>64</sup> "Cost of Dispensing Study: An Independent Comparative Analysis of U.S. Prescription Dispensing Cost" September 2015.

<sup>65</sup> This range of dispensing fees is based upon the "Cost of Dispensing Study: An Independent Comparative Analysis of U.S. Prescription Dispensing Cost" September 2015.



**Exhibit 41: Total Drug Costs and Income for All Washington Pharmacies Assuming a \$10 COD, CY 2015**

Metric	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Claims	2,623,315	2,896,412	9,907,024	5,100,849	9,339,630	11,625,757	41,492,987
PBM Paid	\$137,983,804	\$125,169,121	\$430,979,063	\$245,215,913	\$580,292,420	\$548,193,906	\$2,067,834,226
Copayment	\$1,577,829	\$7,046,445	\$31,930,224	\$64,678,283	\$112,968,519	\$93,349,287	\$311,550,588
Gross Income	\$139,561,634	\$132,215,566	\$462,909,287	\$309,894,195	\$693,260,939	\$641,543,193	\$2,379,384,814
Drug Cost	\$111,594,558	\$245,156,667	\$372,204,225	\$247,646,886	\$662,205,372	\$537,844,177	\$2,176,651,885
Gross Profit	\$27,967,076	(\$112,941,101)	\$90,705,062	\$62,247,309	\$31,055,567	\$103,699,016	\$202,732,929
Gross Profit % of Gross Income	20%	-85%	20%	20%	4%	16%	9%
Dispensing Cost	\$26,233,150	\$28,964,120	\$99,070,240	\$51,008,490	\$93,396,300	\$116,257,570	\$414,929,870
Net Income	\$1,733,926	(\$141,905,221)	(\$8,365,178)	\$11,238,819	(\$62,340,733)	(\$12,558,554)	(\$212,196,941)

As illustrated in Exhibit 41, the large negative net income reported for PBM 2 adversely affected the overall net income results. The review of the PBM 2 data indicated a likely inconsistency in the way drugs are identified as either brand or generic. PBM 2 marked many generic drugs as brand, yet the reimbursement was low, comparable to a generic drug. Since the calculations assumed standard AWP discounts that differ between brand and generic drugs, this mismarking of the data caused a large negative income effect. Exhibit 42 presents the same data as Exhibit 41, but excludes the PBM 2 data.

**Exhibit 42: Total Drug Costs and Income for All Washington Pharmacies Assuming a \$10 COD, CY 2015 – Without PBM 2**

Metric	PBM 1	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Claims	2,623,315	9,907,024	5,100,849	9,339,630	11,625,757	38,596,575
PBM Paid	\$137,983,804	\$430,979,063	\$245,215,913	\$580,292,420	\$548,193,906	\$1,942,665,105
Copayment	\$1,577,829	\$31,930,224	\$64,678,283	\$112,968,519	\$93,349,287	\$304,504,142
Gross Income	\$139,561,634	\$462,909,287	\$309,894,195	\$693,260,939	\$641,543,193	\$2,247,169,247
Drug Cost	\$111,594,558	\$372,204,225	\$247,646,886	\$662,205,372	\$537,844,177	\$1,931,495,218
Gross Profit	\$27,967,076	\$90,705,062	\$62,247,309	\$31,055,567	\$103,699,016	\$315,674,029
Gross Profit % of Gross Income	20%	20%	20%	4%	16%	14%
Dispensing Cost	\$26,233,150	\$99,070,240	\$51,008,490	\$93,396,300	\$116,257,570	\$385,965,750
Net Income	\$1,733,926	(\$8,365,178)	\$11,238,819	(\$62,340,733)	(\$12,558,554)	(\$70,291,721)

**Observations**

- + All pharmacies, except for PBM 2 (which has significant data anomalies), had a positive Gross Profit (before accounting for the COD). Pharmacies' Gross Profit across all PBM transactions was 14%, which is less than the average prescription Gross Margin for U.S. independent pharmacies illustrated in Exhibit 38.<sup>66</sup>
- + In aggregate, the pharmacies had a negative Net Income after applying a \$10 COD assumption.
- + After subtracting an estimated COD, total pharmacy transactions with only two PBMs (PBM 1 and PBM 4) showed positive Net Incomes. Overall pharmacy Net Income across all PBM transactions was negative.
- + In general, if the actual drug acquisition costs for Washington pharmacies had been equal to the national drug acquisition cost benchmarks used in this analysis, PBM reimbursements may not have been adequate to cover pharmacy costs, assuming a \$10 COD. If the actual COD was higher than \$10, the shortfall would have been greater.

<sup>66</sup> Fein, AJ, "The 2016 Economic Report on Retail, Mail, and Specialty Pharmacies," Pembroke Consulting, Inc., and Drug Channels Institute, January 2016.

## The Dispensing Fee

As noted above, the dispensing fee was intended to reimburse the cost of dispensing an individual prescription. According to a 2015-2016 national survey of employer-sponsored plans, retail pharmacy dispensing fees for a 30-day prescription ranged from \$1.56 to \$2.17 (Exhibit 43). One researcher notes that “for retail, the average dispensing fee declined 37% between 1995 and 2009, from \$2.50 to \$1.57.”<sup>67</sup> Though 37% appears significant, the 93-cent difference is less than two percent of the average drug reimbursement of \$54.<sup>68</sup>

### Exhibit 43: Average U.S. Dispensing Fees Paid – Employer-Sponsored Plans, 2015-16<sup>69</sup>

Dispensing Fee by Pharmacy Channel				
	Smaller Employers	Larger Employers	Overall Average	Median
Generics	\$2.17	\$1.56	\$1.83	\$1.20
Brands	\$1.98	\$1.67	\$1.80	\$1.20

The Study analyzed the dispensing fees associated with the PBM claims data to determine how close they were to the referenced national averages. To avoid artificially increasing average dispensing fee results by products that have higher than regular dispensing fees provided for oral dosage forms (i.e. tablets, capsules and liquids) and for claim data with anomalous information, claims were excluded from review if they were: negative paid amounts, compounded drugs, vaccines, claims with erroneous data (i.e. null values or text in numerical fields), and items specifically marked as other than brand or generic. The claims were aggregated by dispensing fee amount for each PBM and then weighted based on claim volume.

The results of the analysis indicated that the six PBMs had average dispensing fees at or below the national average dispensing fees paid by employer-sponsored plans reflected in Exhibit 43. The dispensing fees (Exhibit 44) ranged from zero to as much as \$200,<sup>70</sup> but were, on average, below \$1.88, with the lowest being \$0.66 (PBM 6). It is important to note that, per pharmacist interviews, pharmacies were typically paid a zero dispensing fee when they dispense a 90-day supply. OIC did not have access to PBM network contracts so the mix of prescription types that would generate a higher dispensing fee versus a \$0 dispensing fee could not be determined for this analysis. Breaking out the average dispensing fees for brand and generic (Exhibit 45) showed very little difference.

<sup>67</sup> Berndt, E & Newhouse, P; Pricing and Reimbursement in U.S. Pharmaceutical Markets, Harvard Kennedy School Faculty Research Working Paper, September 2010.

<sup>68</sup> Average reimbursement calculated using PBM data from dispensing fee analysis.

<sup>69</sup> “2015-2016 Prescription Drug Benefit Cost and Plan Design Report,” Pharmacy Benefit Management Institute, 2015

<sup>70</sup> The \$200 and \$17 fees were for a limited number of product claims and had no significant effect on the average dispensing fees.

**Exhibit 44: PBM Dispensing Fees Paid to Washington Pharmacies - Ranges and Averages<sup>71</sup>**

	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
<b>Total Claims In Sample</b>	2,623,315	2,896,412	9,907,024	5,100,849	9,339,630	11,625,757
<b>Fee Range</b>	\$0 - \$5.78	\$0 - \$2.75	\$0 - \$200.00	\$0 - \$5.00	\$0 - \$17.00	\$0 - \$3.75
<b>Weighted Avg. Dispensing Fee</b>	\$1.88	\$1.05	\$0.89	\$1.26	\$1.75	\$0.66
<b>Total Reimbursement</b>	\$139,561,634	\$132,215,566	\$462,909,287	\$309,894,195	\$693,260,939	\$641,543,193
<b>Total Dispensing Fees Paid</b>	\$4,922,439	\$3,044,950	\$8,826,128	\$6,429,634	\$16,341,998	\$7,722,606
<b>Total Fees % of Total Reimbursement</b>	3.5%	2.3%	1.9%	2.1%	2.4%	1.2%

**Exhibit 45: PBM Dispensing Fees Paid to Washington Pharmacies by Brand and Generic**

		PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
<b>Brand</b>	Weighted Avg Disp. Fee	\$1.83	\$1.05	\$0.97	\$1.25	\$2.11	\$0.64
	Total Reimbursement	\$81,645,272	\$118,774,878	\$269,003,261	\$201,461,973	\$449,765,889	\$438,065,304
	Total Dispensing Fees Paid	\$621,599	\$1,996,001	\$1,103,990	\$816,147	\$2,189,333	\$979,540
	Total Fees % of Total Reimbursement	0.8%	1.7%	0.4%	0.4%	0.5%	0.2%
<b>Generic</b>	Weighted Avg Disp. Fee	\$1.88	\$1.05	\$0.88	\$1.26	\$1.70	\$0.67
	Total Reimbursement	\$57,916,362	\$13,440,688	\$193,906,026	\$108,432,222	\$243,495,050	\$203,477,889
	Total Dispensing Fees Paid	\$4,300,840	\$1,048,949	\$7,722,138	\$5,613,487	\$14,152,666	\$6,743,067
	Total Fees % of Total Reimbursement	7.4%	7.8%	4.0%	5.2%	5.8%	3.3%

As illustrated in Exhibit 46, brand drugs made up a small percentage of claims but a large percentage of total pharmacy reimbursement. While PBM 2 percentages were notably different, a manual review of the PBM 2 claims suggested that PBM 2 mistakenly coded many generic drugs as brand. In the aggregate for the other five PBMs (excluding PBM 2), generic drugs accounted for 88% of the claims and 34% of the reimbursement.<sup>72</sup>

<sup>71</sup> Total claims and reimbursement is inclusive of all claims (brand and generic) and not limited to those paid using a MAC price list.

<sup>72</sup> In these tables, "Reimbursement" does not include the copayments made by patients. Copayments are used in the assessment of profitability later in this report.

**Exhibit 46: Percentage of Total Pharmacy Claims and Reimbursement for Washington Pharmacies by Brand and Generic<sup>73</sup>**

		PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6	All PBMs
Brand	% of Claims	13%	65%	11%	13%	11%	13%	16%
	% of Reimbursement	59%	90%	58%	65%	65%	68%	66%
Generic	% of Claims	87%	35%	89%	87%	89%	87%	84%
	% of Reimbursement	41%	10%	42%	35%	35%	32%	34%

Observations

- + PBM dispensing fees paid to Washington pharmacies were generally lower than national averages.
- + PBM 6 paid the lowest average dispensing fee at \$.66 per claim.
- + The difference in average dispensing fees for brand versus generic drugs was negligible.
- + Current dispensing fees provided by PBMs were significantly lower than the \$11.65 average COD found in the 2015 study<sup>74</sup>. If the ingredient cost reimbursement of drugs were reduced, the spread pharmacies have relied upon to remain profitable would begin to disappear.
- + As the spread disappears, the pharmacy is unable to make up for the discrepancy between their cost to dispense and the dispensing fees paid by the PBMs. Therefore, eliminating the spread for most drugs dispensed by a pharmacy will cause that pharmacy to be less profitable and potentially less viable as a business entity.

**Washington State Pharmacy Profitability Case Studies**

To further assess the effect of PBM reimbursement on pharmacy profitability, an analysis of PBM reimbursements to two pharmacies randomly selected from the six PBMs’ data was conducted. The two pharmacies were both non-chain independent pharmacies, one rural and one urban. Since actual drug acquisition costs and COD costs were not obtained from the pharmacies, the analysis compared actual PBM reimbursements to these pharmacies to the national discounted Average Wholesale Price (AWP) benchmarks (for brand and generic drugs) used in our earlier analysis. The analysis included the following components:

- + Changes in profitability were analyzed under two different COD assumptions: a \$10 dispensing fee and a \$15 dispensing fee.
- + Profitability of dispensing brand versus generic drugs was assessed.
- + The number of negative net income claims was assessed.

As discussed in the Method section above, the assumptions used in the analysis included the following:

<sup>73</sup>Note: PBM 2’s outlier percentages are due to the reporting anomalies.

<sup>74</sup> “Cost of Dispensing Study: An Independent Comparative Analysis of U.S. Prescription Dispensing Cost” September 2015.

- + Drug acquisition costs were assumed to be AWP minus 18% for claims data marked as brand and AWP minus 90% for claims data marked as generic.
- + Varied Cost of Dispensing (COD) assumptions were applied to show the effect non-drug costs have on profitability including dispensing fees of \$10 and \$15 and an amount equal to each PBM's average dispensing fee.
- + Total income equaled the amount paid by the PBM plus the patient copayment (because there is no record of whether the pharmacy collected the patient copayment, the calculations assume the patient paid the copayment as listed in the data).
- + The number of negative net income claims were counted as well as the percentage that were brand or generic drugs.

### Profitability: \$10 versus \$15 cost to dispense

Exhibit 47 provides estimated net income for the two pharmacies assuming a per prescription COD of \$10. At this amount, only the Rural pharmacy had a positive net income which is approximately 1.4% of gross income.

**Exhibit 47: Total Costs and Income by PBM for Case Study Pharmacies**

COD \$10	Metric	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Independent Rural Pharmacy	Claims	2,177	1,124	27,246	1,685	7,037	13,974	53,243
	PBM Paid	\$147,944	\$69,368	\$995,970	\$141,993	\$331,039	\$712,463	\$2,398,778
	Copayment	\$1,946	\$870	\$20,950	\$16,869	\$49,556	\$123,059	\$213,250
	<b>Gross Income</b>	<b>\$149,890</b>	<b>\$70,238</b>	<b>\$1,016,920</b>	<b>\$158,862</b>	<b>\$380,594</b>	<b>\$835,523</b>	<b>\$2,612,028</b>
	Drug Cost	\$116,521	\$107,030	\$749,782	\$138,638	\$286,419	\$645,690	\$2,044,080
	Dispensing Cost	\$21,770	\$11,240	\$272,460	\$16,850	\$70,370	\$139,740	\$532,430
	<b>Total Cost</b>	<b>\$138,291</b>	<b>\$118,270</b>	<b>\$1,022,242</b>	<b>\$155,488</b>	<b>\$356,789</b>	<b>\$785,430</b>	<b>\$2,576,510</b>
	<b>Net Income</b>	<b>\$11,598</b>	<b>(\$48,032)</b>	<b>(\$5,322)</b>	<b>\$3,374</b>	<b>\$23,806</b>	<b>\$50,093</b>	<b>\$35,518</b>
	<b>Net Income % of Gross Income</b>	<b>7.7%</b>	<b>-68.4%</b>	<b>-0.5%</b>	<b>2.1%</b>	<b>6.3%</b>	<b>6.0%</b>	<b>1.4%</b>
COD \$10	Metric	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Independent Urban Pharmacy	Claims	3,115	1,992	19,823	570	825	13,758	40,083
	PBM Paid	\$124,808	\$89,443	\$858,756	\$44,794	\$28,743	\$685,207	\$1,831,751
	Copayment	\$1,075	\$260	\$4,145	\$7,596	\$5,678	\$19,359	\$38,113
	<b>Gross Income</b>	<b>\$125,883</b>	<b>\$89,703</b>	<b>\$862,901</b>	<b>\$52,389</b>	<b>\$34,422</b>	<b>\$704,566</b>	<b>\$1,869,864</b>
	Drug Cost	\$76,790	\$210,851	\$670,178	\$41,972	\$24,738	\$588,680	\$1,613,209
	Dispensing Cost	\$31,150	\$19,920	\$198,230	\$5,700	\$8,250	\$137,580	\$400,830
	<b>Total Cost</b>	<b>\$107,940</b>	<b>\$230,771</b>	<b>\$868,408</b>	<b>\$47,672</b>	<b>\$32,988</b>	<b>\$726,260</b>	<b>\$2,014,039</b>
	<b>Net Income</b>	<b>\$17,943</b>	<b>(\$141,068)</b>	<b>(\$5,508)</b>	<b>\$4,718</b>	<b>\$1,433</b>	<b>(\$21,694)</b>	<b>(\$144,176)</b>
	<b>Net Income % of Gross Income</b>	<b>14.3%</b>	<b>-157.3%</b>	<b>-0.6%</b>	<b>9.0%</b>	<b>4.2%</b>	<b>-3.1%</b>	<b>-7.7%</b>

When PBM 2 was removed from the data (Exhibit 48), net income for both pharmacies increased to \$83,550 for the rural pharmacy and resulted in a small \$3,108 loss for the urban pharmacy. Because of PBM 2's data anomalies, PBM 2 was excluded from the remaining calculations. It is also important to note that total copayments differed significantly between PBMs as well as between the two pharmacies. Copayments was determined by health plan design, therefore, copayments should not be considered a specific driver of profitability since they are a component of the total reimbursement established by the PBM.

**Exhibit 48: Total Costs and Income Assuming a \$10 COD (without PBM 2) for Case Study Pharmacies**

COD \$10	Metric	PBM 1	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Independent Rural Pharmacy	Claims	2,177	27,246	1,685	7,037	13,974	52,119
	PBM Paid	\$147,944	\$995,970	\$141,993	\$331,039	\$712,463	\$2,329,410
	Copayment	\$1,946	\$20,950	\$16,869	\$49,556	\$123,059	\$212,380
	<b>Gross Income</b>	<b>\$149,890</b>	<b>\$1,016,920</b>	<b>\$158,862</b>	<b>\$380,594</b>	<b>\$835,523</b>	<b>\$2,541,789</b>
	Drug Cost	\$116,521	\$749,782	\$138,638	\$286,419	\$645,690	\$1,937,050
	Dispensing Cost	\$21,770	\$272,460	\$16,850	\$70,370	\$139,740	\$521,190
	<b>Total Cost</b>	<b>\$138,291</b>	<b>\$1,022,242</b>	<b>\$155,488</b>	<b>\$356,789</b>	<b>\$785,430</b>	<b>\$2,458,240</b>
	<b>Net Income</b>	<b>\$11,598</b>	<b>(\$5,322)</b>	<b>\$3,374</b>	<b>\$23,806</b>	<b>\$50,093</b>	<b>\$83,550</b>
	<b>Net Income % of Gross Income</b>	<b>7.7%</b>	<b>-0.5%</b>	<b>2.1%</b>	<b>6.3%</b>	<b>6.0%</b>	<b>3.3%</b>
COD \$10	Metric	PBM 1	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Independent Urban Pharmacy	Claims	3,115	19,823	570	825	13,758	38,091
	PBM Paid	\$124,808	\$858,756	\$44,794	\$28,743	\$685,207	\$1,742,308
	Copayment	\$1,075	\$4,145	\$7,596	\$5,678	\$19,359	\$37,853
	<b>Gross Income</b>	<b>\$125,883</b>	<b>\$862,901</b>	<b>\$52,389</b>	<b>\$34,422</b>	<b>\$704,566</b>	<b>\$1,780,160</b>
	Drug Cost	\$76,790	\$670,178	\$41,972	\$24,738	\$588,680	\$1,402,358
	Dispensing Cost	\$31,150	\$198,230	\$5,700	\$8,250	\$137,580	\$380,910
	<b>Total Cost</b>	<b>\$107,940</b>	<b>\$868,408</b>	<b>\$47,672</b>	<b>\$32,988</b>	<b>\$726,260</b>	<b>\$1,783,268</b>
	<b>Net Income</b>	<b>\$17,943</b>	<b>(\$5,508)</b>	<b>\$4,718</b>	<b>\$1,433</b>	<b>(\$21,694)</b>	<b>(\$3,108)</b>
	<b>Net Income % of Gross Income</b>	<b>14.3%</b>	<b>-0.6%</b>	<b>9.0%</b>	<b>4.2%</b>	<b>-3.1%</b>	<b>-0.2%</b>

The average generic drug reimbursement (Gross Income) was significantly lower at \$20 to \$30 per claim when compared to the reimbursement for brand drugs at \$200 to \$500 per claim (Exhibit 49).

**Exhibit 49: Brand and Generic - Percent of Total Claims and Average Gross Income/Claim by PBM for Case Study Pharmacies**

	Metric	PBM 1	PBM 3	PBM 4	PBM 5	PBM 6	All PBMs	
Independent Rural Pharmacy	BRAND	Percent of Total Claims	14%	10%	21%	9%	9%	10%
		Avg. Gross Income per claim	\$321	\$201	\$355	\$310	\$408	\$283
	GENERIC	Percent of Total Claims	86%	90%	79%	91%	91%	90%
		Avg. Gross Income per claim	\$26	\$20	\$25	\$30	\$24	\$23
Independent Urban Pharmacy	BRAND	Percent of Total Claims	8%	12%	11%	8%	14%	12%
		Avg. Gross Income per claim	\$203	\$211	\$514	\$263	\$239	\$227
	GENERIC	Percent of Total Claims	92%	88%	89%	92%	86%	88%
		Avg. Gross Income per claim	\$27	\$21	\$39	\$23	\$21	\$22

With apparent slim margins, it is easy to predict that a higher dispensing fee assumption would have a significant negative impact on the pharmacies' net income. As Exhibit 50 shows, increasing the COD assumption from \$10 to \$15, dropped the total net income of both pharmacies into the red, with net income as a percent of gross income decreasing to negative 7% for the rural pharmacy and negative 11% for the urban pharmacy.

**Exhibit 50: Brand and Generic - Percent of Total Claims and Average Gross Income/Claim by PBM for Case Study Pharmacies**

COD \$15	Metric	PBM 1	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Independent Rural Pharmacy	Claims	2,177	27,246	1,685	7,037	13,974	52,119
	PBM Paid	\$147,944	\$1,016,920	\$141,993	\$331,039	\$835,523	\$2,473,418
	Copayment	\$1,946	\$20,950	\$16,869	\$49,556	\$123,059	\$212,380
	<b>Gross Income</b>	<b>\$149,890</b>	<b>\$1,037,870</b>	<b>\$158,862</b>	<b>\$380,594</b>	<b>\$958,582</b>	<b>\$2,685,798</b>
	Drug Cost	\$116,521	\$749,782	\$138,638	\$286,419	\$645,690	\$1,937,050
	Dispensing Cost	\$32,655	\$408,690	\$25,275	\$105,555	\$209,610	\$781,785
	<b>Total Cost</b>	<b>\$149,176</b>	<b>\$1,158,472</b>	<b>\$163,913</b>	<b>\$391,974</b>	<b>\$855,300</b>	<b>\$2,718,835</b>
	<b>Net Income</b>	<b>\$713</b>	<b>(\$120,602)</b>	<b>(\$5,051)</b>	<b>(\$11,379)</b>	<b>\$103,282</b>	<b>(\$33,036)</b>
COD \$15	Metric	PBM 1	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Independent Urban Pharmacy	Claims	3,115	19,823	570	825	13758	38,091
	PBM Paid	\$124,808	\$862,901	\$44,794	\$28,743	\$704,566	\$1,765,812
	Copayment	\$1,075	\$4,145	\$7,596	\$5,678	\$19,359	\$37,853
	<b>Gross Income</b>	<b>\$125,883</b>	<b>\$867,045</b>	<b>\$52,389</b>	<b>\$34,422</b>	<b>\$723,925</b>	<b>\$1,803,664</b>
	Drug Cost	\$76,790	\$670,178	\$41,972	\$24,738	\$588,680	\$1,402,358
	Dispensing Cost	\$46,725	\$297,345	\$8,550	\$12,375	\$206,370	\$571,365
	<b>Total Cost</b>	<b>\$123,515</b>	<b>\$967,523</b>	<b>\$50,522</b>	<b>\$37,113</b>	<b>\$795,050</b>	<b>\$1,973,723</b>
	<b>Net Income</b>	<b>\$2,368</b>	<b>(\$100,478)</b>	<b>\$1,868</b>	<b>(\$2,692)</b>	<b>(\$71,125)</b>	<b>(\$170,059)</b>

Exhibit 51 compares the data in Exhibits 48 and 50 for ease in comparison.

**Exhibit 51: Net Income as a Percent of Total Income, Comparison of \$10 and \$15 COD for Case Study Pharmacies**

Independent Rural Pharmacy	Metric	PBM 1	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Cost to Dispense \$10	<b>Total Income</b>	\$149,890	\$1,037,870	\$158,862	\$380,594	\$958,582	\$2,685,798
	<b>Net Income</b>	\$11,598	\$15,628	\$3,374	\$23,806	\$173,152	\$227,559
	<b>% of Total Income</b>	7.7%	1.5%	2.1%	6.3%	18.1%	8.5%
Cost to Dispense \$15	<b>Total Income</b>	\$149,890	\$1,037,870	\$158,862	\$380,594	\$958,582	\$2,685,798
	<b>Net Income</b>	\$713	(\$120,602)	(\$5,051)	(\$11,379)	\$103,282	(\$33,036)
	<b>% of Total Income</b>	0.5%	-11.6%	-3.2%	-3.0%	10.8%	-1.2%
Independent Urban Pharmacy	Metric	PBM 1	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Cost to Dispense \$10	<b>Total Income</b>	\$125,883	\$867,045	\$52,389	\$34,422	\$723,925	\$1,803,664
	<b>Net Income</b>	\$17,943	(\$1,363)	\$4,718	\$1,433	(\$2,335)	\$20,396
	<b>% of Total Income</b>	14.3%	-0.2%	9.0%	4.2%	-0.3%	1.1%
Cost to Dispense \$15	<b>Total Income</b>	\$125,883	\$867,045	\$52,389	\$34,422	\$723,925	\$1,803,664
	<b>Net Income</b>	\$2,368	(\$100,478)	\$1,868	(\$2,692)	(\$71,125)	(\$170,059)
	<b>% of Total Income</b>	1.9%	-11.6%	3.6%	-7.8%	-9.8%	-9.4%

**Observations**

- + The rural pharmacy was profitable and the urban pharmacy was marginally in the red when a \$10 COD was assumed.
- + Both the rural and urban pharmacies had negative net incomes when the COD assumption increased to \$15. The rural pharmacy, however, was still more profitable than the urban pharmacy.
- + If a \$15 COD was assumed, the rural pharmacy had a positive net income from PBM 1.

- + If a \$15 COD was assumed, the urban pharmacy had positive net income from PBM 1 and PBM 4.

### Profitability: brand versus generic

A separate analysis was performed for the net income derived from brand and generic drugs at these differing COD assumptions. At a \$10 COD, brand drugs appeared to be a negative influence on net income while generic drugs were shown to have a positive effect on net income across all but one of the PBMs (PBM 6 for the urban pharmacy) (Exhibits 52 and 53).

**Exhibit 52: Brand Drug Costs and Income Assuming a \$10 COD for the Case Study Pharmacies**

COD \$10	Brand Drugs	PBM 1	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Independent Rural Pharmacy	Claims	314	2,667	354	616	1,300	5,251
	PBM Paid	\$100,046	\$527,729	\$112,765	\$163,605	\$491,277	\$1,395,422
	Copayment	\$670	\$9,337	\$12,804	\$27,527	\$39,061	\$89,398
	<b>Gross Income</b>	<b>\$100,716</b>	<b>\$537,066</b>	<b>\$125,569</b>	<b>\$191,132</b>	<b>\$530,337</b>	<b>\$1,484,820</b>
	Drug Cost	\$97,852	\$538,650	\$122,036	\$193,042	\$519,899	\$1,471,479
	Dispensing Cost	\$3,140	\$26,670	\$3,540	\$6,160	\$13,000	\$52,510
	<b>Total Cost</b>	<b>\$100,992</b>	<b>\$565,320</b>	<b>\$125,576</b>	<b>\$199,202</b>	<b>\$532,899</b>	<b>\$1,523,989</b>
	<b>Net Income</b>	<b>(\$276)</b>	<b>(\$28,254)</b>	<b>(\$8)</b>	<b>(\$8,070)</b>	<b>(\$2,562)</b>	<b>(\$39,169)</b>
<b>Net Income % of Gross Income</b>	<b>-0.27%</b>	<b>-5.26%</b>	<b>-0.01%</b>	<b>-4.22%</b>	<b>-0.48%</b>	<b>-2.64%</b>	
COD \$10	Brand Drugs	PBM 1	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Independent Urban Pharmacy	Claims	235	2,365	64	64	1,928	4,656
	PBM Paid	\$47,074	\$496,829	\$27,026	\$13,771	\$453,722	\$1,038,422
	Copayment	\$637	\$2,600	\$5,846	\$3,065	\$7,717	\$19,864
	<b>Gross Income</b>	<b>\$47,711</b>	<b>\$499,429</b>	<b>\$32,871</b>	<b>\$16,836</b>	<b>\$461,439</b>	<b>\$1,058,286</b>
	Drug Cost	\$46,285	\$497,550	\$31,941	\$16,798	\$456,079	\$1,048,652
	Dispensing Cost	\$2,350	\$23,650	\$640	\$640	\$19,280	\$46,560
	<b>Total Cost</b>	<b>\$48,635</b>	<b>\$521,200</b>	<b>\$32,581</b>	<b>\$17,438</b>	<b>\$475,359</b>	<b>\$1,095,212</b>
	<b>Net Income</b>	<b>(\$924)</b>	<b>(\$21,770)</b>	<b>\$290</b>	<b>(\$602)</b>	<b>(\$13,920)</b>	<b>(\$36,926)</b>
<b>Net Income % of Gross Income</b>	<b>-1.9%</b>	<b>-4.4%</b>	<b>0.9%</b>	<b>-3.6%</b>	<b>-3.0%</b>	<b>-3.5%</b>	

**Exhibit 53: Generic Drug Costs and Income Assuming a \$10 COD for the Case Study Pharmacies**

COD \$10	Generic Drugs	PBM 1	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Independent Rural Pharmacy	Claims	1,863	24,579	1,331	6,421	12,674	46,868
	PBM Paid	\$47,898	\$468,242	\$29,228	\$167,434	\$221,187	\$933,988
	Copayment	\$1,276	\$11,613	\$4,066	\$22,029	\$83,999	\$122,982
	<b>Gross Income</b>	<b>\$49,174</b>	<b>\$479,854</b>	<b>\$33,294</b>	<b>\$189,462</b>	<b>\$305,186</b>	<b>\$1,056,970</b>
	Drug Cost	\$18,669	\$211,132	\$16,602	\$93,377	\$125,791	\$465,571
	Dispensing Cost	\$18,630	\$245,790	\$13,310	\$64,210	\$126,740	\$468,680
	<b>Total Cost</b>	<b>\$37,299</b>	<b>\$456,922</b>	<b>\$29,912</b>	<b>\$157,587</b>	<b>\$252,531</b>	<b>\$934,251</b>
	<b>Net Income</b>	<b>\$11,874</b>	<b>\$22,933</b>	<b>\$3,382</b>	<b>\$31,875</b>	<b>\$52,654</b>	<b>\$122,719</b>
<b>Net Income % of Gross Income</b>	<b>24.15%</b>	<b>4.78%</b>	<b>10.16%</b>	<b>16.82%</b>	<b>17.25%</b>	<b>11.61%</b>	
COD \$10	Generic Drugs	PBM 1	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Independent Urban Pharmacy	Claims	2,880	17,458	506	761	11,830	33,435
	PBM Paid	\$77,734	\$361,927	\$17,768	\$14,972	\$231,484	\$703,886
	Copayment	\$438	\$1,544	\$1,750	\$2,614	\$11,643	\$17,988
	<b>Gross Income</b>	<b>\$78,172</b>	<b>\$363,472</b>	<b>\$19,518</b>	<b>\$17,586</b>	<b>\$243,127</b>	<b>\$721,874</b>
	Drug Cost	\$30,505	\$172,629	\$10,030	\$7,941	\$132,601	\$353,706
	Dispensing Cost	\$28,800	\$174,580	\$5,060	\$7,610	\$118,300	\$334,350
	<b>Total Cost</b>	<b>\$59,305</b>	<b>\$347,209</b>	<b>\$15,090</b>	<b>\$15,551</b>	<b>\$250,901</b>	<b>\$688,056</b>
	<b>Net Income</b>	<b>\$18,868</b>	<b>\$16,263</b>	<b>\$4,428</b>	<b>\$2,035</b>	<b>(\$7,774)</b>	<b>\$33,818</b>
<b>Net Income % of Gross Income</b>	<b>24.1%</b>	<b>4.5%</b>	<b>22.7%</b>	<b>11.6%</b>	<b>-3.2%</b>	<b>4.7%</b>	



When, however, the COD assumption was increased to \$15 (Exhibits 54 and 55), generic drugs decreased the overall net income more (higher dollar decrease) than brand drugs. For the rural pharmacy, total net income was decreased an additional \$26,000 by brand drugs and \$234,000 by generic drugs and for the urban pharmacy there was a decrease of \$23,000 by brand drugs and \$167,000 by generic drugs.

**Exhibit 54: Brand Drug Costs and Income Assuming a \$15 COD for the Case Study Pharmacies**

COD \$15	Brand Drugs	PBM 1	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Independent Rural Pharmacy	Claims	314	2,667	354	616	1,300	5,251
	PBM Paid	\$100,046	\$527,729	\$112,765	\$163,605	\$491,277	\$1,395,422
	Copayment	\$670	\$9,337	\$12,804	\$27,527	\$39,061	\$89,398
	<b>Gross Income</b>	<b>\$100,716</b>	<b>\$537,066</b>	<b>\$125,569</b>	<b>\$191,132</b>	<b>\$530,337</b>	<b>\$1,484,820</b>
	Drug Cost	\$97,852	\$538,650	\$122,036	\$193,042	\$519,899	\$1,471,479
	Dispensing Cost	\$4,710	\$40,005	\$5,310	\$9,240	\$19,500	\$78,765
	<b>Total Cost</b>	<b>\$102,562</b>	<b>\$578,655</b>	<b>\$127,346</b>	<b>\$202,282</b>	<b>\$539,399</b>	<b>\$1,550,244</b>
	<b>Net Income</b>	<b>(\$1,846)</b>	<b>(\$41,589)</b>	<b>(\$1,778)</b>	<b>(\$11,150)</b>	<b>(\$9,062)</b>	<b>(\$65,424)</b>
	<b>Net Income % of Gross Income</b>	<b>-1.83%</b>	<b>-7.74%</b>	<b>-1.42%</b>	<b>-5.83%</b>	<b>-1.71%</b>	<b>-4.41%</b>
COD \$15	Brand Drugs	PBM 1	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Independent Urban Pharmacy	Claims	235	2,365	64	64	1,928	4,656
	PBM Paid	\$47,074	\$496,829	\$27,026	\$13,771	\$453,722	\$1,038,422
	Copayment	\$637	\$2,600	\$5,846	\$3,065	\$7,717	\$19,864
	<b>Gross Income</b>	<b>\$47,711</b>	<b>\$499,429</b>	<b>\$32,871</b>	<b>\$16,836</b>	<b>\$461,439</b>	<b>\$1,058,286</b>
	Drug Cost	\$46,285	\$497,550	\$31,941	\$16,798	\$456,079	\$1,048,652
	Dispensing Cost	\$3,525	\$35,475	\$960	\$960	\$28,920	\$69,840
	<b>Total Cost</b>	<b>\$49,810</b>	<b>\$533,025</b>	<b>\$32,901</b>	<b>\$17,758</b>	<b>\$484,999</b>	<b>\$1,118,492</b>
	<b>Net Income</b>	<b>(\$2,099)</b>	<b>(\$33,595)</b>	<b>(\$30)</b>	<b>(\$922)</b>	<b>(\$23,560)</b>	<b>(\$60,206)</b>
	<b>Net Income % of Gross Income</b>	<b>-4.4%</b>	<b>-6.7%</b>	<b>-0.1%</b>	<b>-5.5%</b>	<b>-5.1%</b>	<b>-5.7%</b>

**Exhibit 55: Generic Drug Costs and Income Assuming a \$15 COD for the Case Study Pharmacies**

COD \$15	Generic Drugs	PBM 1	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Independent Rural Pharmacy	Claims	1,863	24,579	1,331	6,421	12,674	46,868
	PBM Paid	\$47,898	\$468,242	\$29,228	\$167,434	\$221,187	\$933,988
	Copayment	\$1,276	\$11,613	\$4,066	\$22,029	\$83,999	\$122,982
	<b>Gross Income</b>	<b>\$49,174</b>	<b>\$479,854</b>	<b>\$33,294</b>	<b>\$189,462</b>	<b>\$305,186</b>	<b>\$1,056,970</b>
	Drug Cost	\$18,669	\$211,132	\$16,602	\$93,377	\$125,791	\$465,571
	Dispensing Cost	\$27,945	\$368,685	\$19,965	\$96,315	\$190,110	\$703,020
	<b>Total Cost</b>	<b>\$46,614</b>	<b>\$579,817</b>	<b>\$36,567</b>	<b>\$189,692</b>	<b>\$315,901</b>	<b>\$1,168,591</b>
	<b>Net Income</b>	<b>\$2,559</b>	<b>(\$99,962)</b>	<b>(\$3,273)</b>	<b>(\$230)</b>	<b>(\$10,716)</b>	<b>(\$111,621)</b>
	<b>Net Income % of Gross Income</b>	<b>5.20%</b>	<b>-20.83%</b>	<b>-9.83%</b>	<b>-0.12%</b>	<b>-3.51%</b>	<b>-10.56%</b>
COD \$15	Generic Drugs	PBM 1	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Independent Urban Pharmacy	Claims	2,880	17,458	506	761	11,830	33,435
	PBM Paid	\$77,734	\$361,927	\$17,768	\$14,972	\$231,484	\$703,886
	Copayment	\$438	\$1,544	\$1,750	\$2,614	\$11,643	\$17,988
	<b>Gross Income</b>	<b>\$78,172</b>	<b>\$363,472</b>	<b>\$19,518</b>	<b>\$17,586</b>	<b>\$243,127</b>	<b>\$721,874</b>
	Drug Cost	\$30,505	\$172,629	\$10,030	\$7,941	\$132,601	\$353,706
	Dispensing Cost	\$43,200	\$261,870	\$7,590	\$11,415	\$177,450	\$501,525
	<b>Total Cost</b>	<b>\$73,705</b>	<b>\$434,499</b>	<b>\$17,620</b>	<b>\$19,356</b>	<b>\$310,051</b>	<b>\$855,231</b>
	<b>Net Income</b>	<b>\$4,468</b>	<b>(\$71,027)</b>	<b>\$1,898</b>	<b>(\$1,770)</b>	<b>(\$66,924)</b>	<b>(\$133,357)</b>
	<b>Net Income % of Gross Income</b>	<b>5.7%</b>	<b>-19.5%</b>	<b>9.7%</b>	<b>-10.1%</b>	<b>-27.5%</b>	<b>-18.5%</b>

## Observations

- + If a \$10 COD was assumed, generic drugs were more profitable than brand drugs (consistent with the national data reported in Exhibit 39 above).
- + If a \$15 COD was assumed, generic drugs generated a greater net loss than brand drugs.
- + The significantly lower net income totals that resulted from changing the COD assumption from \$10 to \$15 were attributable to the lower average reimbursement and larger volume of generic drug claims when compared to brand drugs.
- + Generic drugs ranged from 79% to 92% of claims for the case study pharmacies.

## Number of negative net income claims

Another examined metric is the number of negative Net Income claims generated at the \$10 and \$15 COD levels. Without considering the COD (Exhibit 56), i.e. at the gross profit level, generic drugs accounted for almost all negative claims. When adding a COD, the results showed that at a \$10 COD (Exhibit 57) both pharmacies took a loss on the majority of their claims. This high negative claim volume (loss) was driven primarily by generic claims.

### Exhibit 56: Volume of Negative Net Income Claims (Generic, Brand and Total) for the Case Study Pharmacies – No COD Assumed

No COD		PBM 1	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Independent Rural Pharmacy	All Claims Total	2,177	27,246	1,685	7,037	13,974	52,119
	No. Negative Generic Claims	243	7,119	453	2,281	2,982	13,078
	% of All Claims	11%	26%	27%	32%	21%	25%
	No. Negative Brand Claims	15	162	21	111	309	618
	% of All Claims	1%	1%	1%	2%	2%	1%
	Total Negative Claims	258	7,281	474	2,392	3,291	13,696
	% of All Claims	12%	27%	28%	34%	24%	26%
No COD		PBM 1	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Independent Urban Pharmacy	All Claims Total	3,115	19,823	570	825	13,758	38,091
	No. Negative Generic Claims	406	6,313	199	225	4,483	11,626
	% of All Claims	13%	32%	35%	27%	33%	31%
	No. Negative Brand Claims	12	35	4	4	1	56
	% of All Claims	0%	0%	1%	0%	0%	0%
	Total Negative Claims	418	6,348	203	229	4,484	11,682
	% of All Claims	13%	32%	36%	28%	33%	31%

**Exhibit 57: Volume of Negative Net Income Claims (Generic, Brand and Total) for the Case Study Pharmacies - \$10 COD Assumed**

COD \$10		PBM 1	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Independent Rural Pharmacy	All Claims Total	2,177	27,246	1,685	7,037	13,974	52,119
	No. Negative Generic Claims	1,237	20,130	912	4,264	9,436	35,979
	% of All Claims	57%	74%	54%	61%	68%	69%
	No. Negative Brand Claims	227	2,591	204	534	1,016	4,572
	% of All Claims	10%	10%	12%	8%	7%	9%
	Total Negative Claims	1,464	22,721	1,116	4,798	10,452	40,551
	% of All Claims	67%	83%	66%	68%	75%	78%
COD \$10		PBM 1	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Independent Urban Pharmacy	All Claims Total	3,115	19,823	570	825	13,758	38,091
	No. Negative Generic Claims	1,878	14,193	367	473	9,093	26,004
	% of All Claims	60%	72%	64%	57%	66%	68%
	No. Negative Brand Claims	211	2,359	33	58	1,846	4,507
	% of All Claims	7%	12%	6%	7%	13%	12%
	Total Negative Claims	2,089	16,552	400	531	10,939	30,511
	% of All Claims	67%	83%	70%	64%	80%	80%

By increasing the COD to \$15 (Exhibit 58) negative income claims increased, with generic claims primarily responsible for increasing their overall percentage of the total. For example, the rural pharmacy generic negative claims increased from 69% to 75% of all of the pharmacy's claims, a 6 percentage point increase, while the negative brand claim percentage remained unchanged at 9%.

**Exhibit 58: Volume of Negative Net Income Claims (Generic, Brand and Total) for the Case Study Pharmacies - \$15 COD Assumed**

COD \$15		PBM 1	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Independent Rural Pharmacy	All Claims Total	2,177	27,246	1,685	7,037	13,974	52,119
	No. Negative Generic Claims	1,417	21,004	1,011	4,759	8,292	36,483
	% of All Claims	65%	77%	60%	68%	59%	70%
	No. Negative Brand Claims	263	2,437	287	579	453	4,019
	% of All Claims	12%	9%	17%	8%	3%	8%
	Total Negative Claims	1,680	23,441	1,298	5,338	8,745	40,502
	% of All Claims	77%	86%	77%	76%	63%	78%
COD \$15		PBM 1	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Independent Urban Pharmacy	All Claims Total	3,115	19,823	570	825	13,758	38,091
	No. Negative Generic Claims	2,144	15,027	394	565	9,464	27,594
	% of All Claims	69%	76%	69%	68%	69%	72%
	No. Negative Brand Claims	222	2,343	46	58	1,779	4,448
	% of All Claims	7%	12%	8%	7%	13%	12%
	Total Negative Claims	2,366	17,370	440	623	11,243	32,042
	% of All Claims	76%	88%	77%	76%	82%	84%

The impact of a \$15 COD showed that generic drug reimbursement was too small to absorb increases in unreimbursed dispensing costs. This can be seen in Exhibit 59, which shows most of the average Net Incomes per claim were at or below \$5 if a \$10 COD was assumed.

**Exhibit 59: Average Net Income per Claim for the Case Study Pharmacies if a \$10 COD Assumed**

COD \$10		Metric	PBM 1	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Independent Rural Pharmacy	Total Claims		2,177	27,246	1,685	7,037	13,974	52,119
	Net Income		\$11,598	(\$5,322)	\$3,374	\$23,806	\$50,093	\$83,550
	Avg. Net Income/Claim		\$5.33	(\$0.20)	\$2.00	\$3.38	\$3.58	\$1.60
COD \$10		Metric	PBM 1	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Independent Urban Pharmacy	Total Claims		3,115	19,823	570	825	13,758	38,091
	Net Income		\$17,943	(\$5,508)	\$4,718	\$1,433	(\$21,694)	(\$3,108)
	Avg. Net Income/Claim		\$5.76	(\$0.28)	\$8.28	\$1.74	(\$1.58)	(\$0.08)

The impact of COD assumptions on pharmacy profitability were further illustrated by limiting COD as a factor. This was accomplished by setting the COD equal to the average dispensing fee paid by each PBM. If a \$10 COD was assumed, the Net Income as a percentage of Gross Income for the target pharmacies was below 10% for most of the individual PBMs as well as in the aggregate for all PBMs in total (Exhibit 60).

**Exhibit 60: Net Income as a Percent of Gross Income for the Case Study Pharmacies if a \$10 COD Assumed**

COD \$10	Metric	PBM 1	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Independent Rural Pharmacy	Claims	2,177	27,246	1,685	7,037	13,974	52,119
	PBM Paid	\$147,944	\$995,970	\$141,993	\$331,039	\$712,463	\$2,329,410
	Copayment	\$1,946	\$20,950	\$16,869	\$49,556	\$123,059	\$212,380
	<b>Gross Income</b>	<b>\$149,890</b>	<b>\$1,016,920</b>	<b>\$158,862</b>	<b>\$380,594</b>	<b>\$835,523</b>	<b>\$2,541,789</b>
	Drug Cost	\$116,521	\$749,782	\$138,638	\$286,419	\$645,690	\$1,937,050
	Dispensing Cost	\$21,770	\$272,460	\$16,850	\$70,370	\$139,740	\$521,190
	<b>Total Cost</b>	<b>\$138,291</b>	<b>\$1,022,242</b>	<b>\$155,488</b>	<b>\$356,789</b>	<b>\$785,430</b>	<b>\$2,458,240</b>
	<b>Net Income</b>	<b>\$11,598</b>	<b>(\$5,322)</b>	<b>\$3,374</b>	<b>\$23,806</b>	<b>\$50,093</b>	<b>\$83,550</b>
<b>Net Income % of Gross Income</b>	<b>7.7%</b>	<b>-0.5%</b>	<b>2.1%</b>	<b>6.3%</b>	<b>6.0%</b>	<b>3.3%</b>	
COD \$10	Metric	PBM 1	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Independent Urban Pharmacy	Claims	3,115	19,823	570	825	13,758	38,091
	PBM Paid	\$124,808	\$858,756	\$44,794	\$28,743	\$685,207	\$1,742,308
	Copayment	\$1,075	\$4,145	\$7,596	\$5,678	\$19,359	\$37,853
	<b>Gross Income</b>	<b>\$125,883</b>	<b>\$862,901</b>	<b>\$52,389</b>	<b>\$34,422</b>	<b>\$704,566</b>	<b>\$1,780,160</b>
	Drug Cost	\$76,790	\$670,178	\$41,972	\$24,738	\$588,680	\$1,402,358
	Dispensing Cost	\$31,150	\$198,230	\$5,700	\$8,250	\$137,580	\$380,910
	<b>Total Cost</b>	<b>\$107,940</b>	<b>\$868,408</b>	<b>\$47,672</b>	<b>\$32,988</b>	<b>\$726,260</b>	<b>\$1,783,268</b>
	<b>Net Income</b>	<b>\$17,943</b>	<b>(\$5,508)</b>	<b>\$4,718</b>	<b>\$1,433</b>	<b>(\$21,694)</b>	<b>(\$3,108)</b>
<b>Net Income % of Gross Income</b>	<b>14.3%</b>	<b>-0.6%</b>	<b>9.0%</b>	<b>4.2%</b>	<b>-3.1%</b>	<b>-0.2%</b>	

When the cost to dispense was negated by setting the cost to dispense at each PBM's average dispensing fee, the Net Income as a percentage of Gross Income increased significantly (Exhibit 61 below) ranging from 9 to 23 percentage points across the six PBMs. In the aggregate, the rural pharmacy values increased by 18 percentage points and the urban pharmacy values increased by 19 percentage points.

**Exhibit 61: Net Income as a Percent of Gross Income at PBM Average Dispensing Fee for the Case Study Pharmacies**

At Avg. PBM Fee	Metric	PBM 1	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Independent Rural Pharmacy	Claims	2,177	27,246	1,685	7,037	13,974	52,119
	PBM Paid	\$147,944	\$995,970	\$141,993	\$331,039	\$712,463	\$2,329,410
	Copayment	\$1,946	\$20,950	\$16,869	\$49,556	\$123,059	\$212,380
	<b>Gross Income</b>	<b>\$149,890</b>	<b>\$1,016,920</b>	<b>\$158,862</b>	<b>\$380,594</b>	<b>\$835,523</b>	<b>\$2,541,789</b>
	Drug Cost	\$116,521	\$749,782	\$138,638	\$286,419	\$645,690	\$1,937,050
	Dispensing Cost	\$4,093	\$23,976	\$2,123	\$12,315	\$9,223	\$51,730
	<b>Total Cost</b>	<b>\$120,614</b>	<b>\$773,758</b>	<b>\$140,761</b>	<b>\$298,734</b>	<b>\$654,913</b>	<b>\$1,988,780</b>
	<b>Net Income</b>	<b>\$29,275</b>	<b>\$243,162</b>	<b>\$18,101</b>	<b>\$81,861</b>	<b>\$180,610</b>	<b>\$553,010</b>
<b>Net Income % of Gross Income</b>	<b>19.5%</b>	<b>23.9%</b>	<b>11.4%</b>	<b>21.5%</b>	<b>21.6%</b>	<b>21.8%</b>	
At Avg. PBM Fee	Metric	PBM 1	PBM 3	PBM 4	PBM 5	PBM 6	Total of PBMs
Independent Urban Pharmacy	Claims	3,115	19,823	570	825	13,758	38,091
	PBM Paid	\$124,808	\$858,756	\$44,794	\$28,743	\$685,207	\$1,742,308
	Copayment	\$1,075	\$4,145	\$7,596	\$5,678	\$19,359	\$37,853
	<b>Gross Income</b>	<b>\$125,883</b>	<b>\$862,901</b>	<b>\$52,389</b>	<b>\$34,422</b>	<b>\$704,566</b>	<b>\$1,780,160</b>
	Drug Cost	\$76,790	\$670,178	\$41,972	\$24,738	\$588,680	\$1,402,358
	Dispensing Cost	\$5,856	\$17,444	\$718	\$1,444	\$9,082	\$34,544
	<b>Total Cost</b>	<b>\$82,646</b>	<b>\$687,622</b>	<b>\$42,690</b>	<b>\$26,182</b>	<b>\$597,762</b>	<b>\$1,436,902</b>
	<b>Net Income</b>	<b>\$43,237</b>	<b>\$175,278</b>	<b>\$9,700</b>	<b>\$8,239</b>	<b>\$106,804</b>	<b>\$343,258</b>
<b>Net Income % of Gross Income</b>	<b>34.3%</b>	<b>20.3%</b>	<b>18.5%</b>	<b>23.9%</b>	<b>15.2%</b>	<b>19.3%</b>	

**Summary**

The weighted average dispensing fees (\$0.66 - \$1.88) paid by the six PBMs were significantly lower than the surveyed \$11.65 average actual cost to dispense for Washington pharmacies. Based on the two pharmacy case study profiles, the issue of pharmacy profitability was tied to the declining ability of the spread to compensate for the under reimbursement of pharmacy dispensing costs. This was illustrated by the Average Net Incomes being below \$5.00 in the aggregate for the two target pharmacies at a COD level of \$10. Increased costs cut into these slim margins, making it difficult for pharmacies to maintain profitability.

To compensate for declining profitability, pharmacies had to find ways to improve income levels. However, pharmacies that had to rely heavily on prescription drug income essentially had two choices, they either must obtain higher or expanded fees or they must maintain a sufficient spread on drug costs and reimbursement.

The Office of the Insurance Commissioner can assist on the latter by reviewing PBM reimbursement complaints, but it will be up to the pharmacies and their PSAO representatives to obtain improved cost of delivery (COD) fees. Any actions taken will result in increased costs being passed to the consumer through copayments or increases in premiums.

## Pharmacy MAC Appeals Analysis

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### Overview

The objective of the appeals review was to review data submitted to the Department of Revenue under RCW 19.340.100(4)(b), if any, for patterns or trends in the denials of internal pharmacy benefit manager appeals involving pharmacies with fewer than 15 retail outlets within the State of Washington under their corporate umbrellas (hereafter referred to as “SMALL pharmacies”). In absence of this data from the Department of Revenue, the Data was obtained directly from the PBMs for this analysis. The scope of our review included the following components:

- + For calendar years 2014 and 2015, Maximum Allowable Cost (MAC) appeals were analyzed along with the frequency of successful appeals and the types of pharmacies most likely to generate appeals.
- + The analysis estimated the percentage of transactions which are likely to generate appeals under the provisions of ESSB 5857.
- + The analysis considered and made recommendations regarding what documentation OIC should require from the parties to facilitate the OIC resolution of submitted appeals.

### Key Findings

- + OIC is likely to receive 13,500 – 15,500 appeals on average annually. This estimate assumes that PBMs do not change their current business practices, which, if they do, could affect the appeals volume they receive.
- + SMALL pharmacies generated a range of appeals, as a percentage of total claims volume, from 0.02% – 2.24% with an overall average of 0.19%.
- + Of the SMALL pharmacies that submitted an appeal, 17% (44) generated 80% of the appeals.
- + These 44 SMALL pharmacies received PBM ingredient cost reimbursement that exceeded NADAC rates in aggregate; however, this variance represented less than 7% of the overall statewide positive variance to NADAC.
- + Comparing reimbursement of these 44 SMALL pharmacies to benchmark MAC List 1, five of the six PBMs reimbursed the 44 SMALL pharmacies at a more favorable rate than the statewide average. Comparing reimbursement of these 44 SMALL pharmacies to benchmark MAC List 2, four of the six PBMs reimbursed the 44 SMALL pharmacies at a more favorable rate than the statewide average.
- + All but one PBM had reimbursement variances to benchmark MAC List 1 that were significantly more positive for the 44 pharmacies than for all Washington pharmacies. Four of the six pharmacies’ reimbursement variances to benchmark MAC List 2 were significantly more positive for the 44 pharmacies than for all Washington pharmacies.
- + Of the 44 pharmacies, nine were urban locations, five were in suburban locations, and 30 were in rural locations. By geography, 12 were in Eastern Washington (east of the Cascade Mountains), 10 were in the Central I-5 corridor (defined as King, Pierce, Snohomish, and Thurston Counties), and 22 were in the rest of western Washington.
- + Of the SMALL pharmacies that submitted an appeal, 37% (108) submitted fewer than 10 appeals over the Study period.

- + PBM 4 accounted for 59% of the appeal volume for SMALL pharmacies over the study period, with a notable increase over the study period.
- + PBM denials ranged from 77% to 94% of MAC appeals, with an average of 87%.
- + The majority of appeals related to lower cost drugs. The vast majority of appeals (89%) came from claims where the ingredient cost amount reimbursed was less than \$50.00. Ingredient cost ranged from pennies to over \$500 per prescription.

## Method

### Data Request

OIC solicited appeals data for calendar years 2014 and 2015 from the six PBMs that account for the largest volume of pharmacy claims for fully-insured health plan enrollees in the state of Washington. The appeals data request was limited to the scope of OIC oversight as specified in WA Senate Bill ESSB 5857 including appeals for MAC multi-source generic drugs dispensed by pharmacies in the state of Washington with utilization limited to fully-insured, commercial health plans.

Exhibit 62 lists the data elements requested and data received by each PBM (see Appendix II for the data request).

### Exhibit 62: PBM Appeals Data Request

Appeals Data Type	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
A. A full listing of pharmacy pricing appeals for the January 1, 2014 through December 31, 2015 period. The list should include, but is not limited to:	Provided 7/1/14–12/31/15 <sup>1</sup>	X	Provided 6/12/14–12/31/15 <sup>1</sup>	X	X	X
i. Explanation of all form fields	X	X	X	X	X	X
ii. Data required from the pharmacy by the PBM <sup>2</sup>	X	X	X	X	X	X
iii. Type of appeal	X	X	X	X	X	X
iv. Appeal determination	X	X	X	X	X	X
v. Appeal comments	X	X	X	X	X	X
vi. Appeal date	X	X	X	X	X	X
vii. Determination date	X	X	X	X	X	No <sup>1</sup>
viii. Determination letter/notification	X	X	X	X	X	X
ix. Pharmacy type	No <sup>1</sup>	X	X	X	X	X
x. If determination was denied, include the reason for the denial and the NDC of the drug that may be purchased by similarly situated pharmacies at a price that is equal to or less than the MAC (RCW 19.340.100[4][c])	X	X	X	X	X	X

Appeals Data Type	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
xi. If the appeal was upheld, include verification that an adjustment was made no later than one day after the date of determination and that all similarly situated pharmacies in the state were updated as well (RCW 19.340.100[4][c])	No <sup>1</sup>	X	X	X	X	X
B. Provide a copy of appeals policy, including the process for appeals, the internal timing requirements and the teams that manage the process.	X	X	X	X	X	X

**Notes:**

<sup>1</sup> Exhibits and analysis were adjusted to account for these discrepancies and noted.

<sup>2</sup> Data was not consistent across PBMs.

Exhibit 63 shows the total number of reported appeals for the Study period.

**Exhibit 63. Total Appeals Reported, CYs 2014 and 2015**

	PBM 1	PBM 2	PBM 3*	PBM 4	PBM 5	PBM 6	TOTAL
Appeals Submitted	3,048	11,444	9,486	78,015	779	8,944	111,716
Removed claims	379	1,460	0	5,180	0	0	7,019
NET Appeal for Study Set	2,669	9,984	9,486	72,835	779	8,944	104,697

\*Note: PBM 3 provided only one MAC list due to the size and complexity of providing all of them. The MAC list they provided is the one that generated the greatest number of appeals.

Upon review, 7,019 of the reported appeals were excluded from our analysis for the following reasons:

- + Some PBMs provided “non-MAC” appeals, which were not part of the Study.
- + Some PBMs provided duplicate submissions of appeals or appeals on claims that had been reversed. These were viewed as administrative errors and were excluded them from this Study.

To conduct the analysis, the appeals data was partitioned into the following two data sets:

- + **SMALL Pharmacies:** Appeals from independent and chain pharmacies with fewer than 15 chain store locations in the state of Washington. This set aligned to the oversight of OIC’s authority under ESSB 5857 and the Study focused on these pharmacies through the analysis in this section.
- + **LARGE Pharmacies:** Appeals from pharmacy chains with 15 or more pharmacies in the state of Washington. For purposes of this Study, different pharmacy chains with the same ownership were grouped together.



In the submitted appeals data, the PBMs generally identified three types of appeals: independent, Pharmacy Services Administrative Organizations (PSAO), and chains. PSAO appeals appeared to contain both independent and chain pharmacies. The analysis allocated the PSAO appeals based on a best estimate of which pharmacy chains contained more than 15 pharmacies in the state of Washington. Where it was unclear whether a pharmacy chain may contain 15 or more stores in the State of Washington, the pharmacy's website listing of locations was referenced to make the determination.

Other than the excluded appeals described above, all other reported appeals were counted as relevant in this Study, including multiple appeals submitted by a pharmacy relating to a single prescription that includes an initial dispensing and subsequent refills. In these cases, the analysis identified two appeal approaches used by pharmacies:

- + For a single prescription (which could include the initial fill and refills), some pharmacies submitted appeals on the initial fill and the subsequent refills. Because each refill did reflect a different date of service (fill date), they were counted as a unique interaction with a PBM and thus a unique appeal
- + Some pharmacies submitted multiple appeals for the same prescription and date of service. When provided, these were all treated as unique appeals in the analysis.

## Data Analysis

### Appeal Types, Frequency, and Estimated Number of Expected OIC Appeals

Control totals

To calculate the rate of appeals as a percent of total claims during the Study period, the analysis compared the aggregate appeals data to the aggregate claims data submitted for the MAC pricing analysis portion of this Study. Only aggregate numbers were compared; actual claims were not linked to individual appeals for this analysis. Because different data sets were used, the following adjustments were applied:

- + **Time period:** As requested, the PBMs submitted appeals data for calendar years 2014 and 2015; however, claims data request was for only calendar year 2015. For purposes of determining the rate of appeals as a percent of total claims, only 2015 appeals data was utilized.
- + **Funding type/Line of business:** The appeals data request was limited to fully-insured, commercial-based claims appeals. PBM 1 was unable to separate the appeals by funding type and line of business, so its data reflects other appeals that might not be subject to OIC's appeals process and may result in an overstated appeals incidence rate for this PBM.

The claims data also presented some analytical challenges, as PBM 3 and PBM 6 were unable to delineate the fully-insured, commercial claims. As a result, their appeal incidence rates may be understated.

All data are shown in the aggregate, and split between the LARGE pharmacy and SMALL pharmacy categories (Exhibit 64).

**Exhibit 64. Claims and Appeals total for Study Set, partitioned by SMALL / LARGE pharmacies**

	PBM1	PBM2	PBM3	PBM4	PBM5	PBM6	TOTAL
<b>Time Period of Claims</b>	1/1/15 - 12/31/15	1/1/15 - 12/31/15	1/1/15 - 12/31/15	1/1/15 - 12/31/15	1/1/15 - 12/31/15	1/1/15 - 12/31/15	
<b>Claims Type</b>	FI Only	FI Only	FI + Other	FI Only	FI only	FI + Other	
<b>TOTAL Rx's to Study Set (FI Comm)</b>	250,801	444,285	10,042,278	2,283,121	7,990,629	12,263,692	33,274,806
<b>Rx for LARGE pharmacies</b>	191,263	398,565	7,444,500	1,896,528	6,491,283	9,193,392	25,615,531
<b>Rx for SMALL pharmacies</b>	59,538	45,720	2,597,778	386,593	1,499,346	3,070,300	7,659,275
<b>percent Small Pharmacies</b>	24%	10%	26%	17%	19%	25%	23%
<b>Time Period of Appeals</b>	6/12/14 - 12/31/15	1/1/14 - 12/31/15	1/1/14 - 12/31/15	1/1/14 - 12/31/15	1/1/14 - 12/31/15	7/1/14 - 12/31/15	
<b>TOTAL Appeals to Study Set (FI Comm)</b>	2,669	9,984	9,486	72,835	779	8,944	104,697
<b>2014 Appeals</b>	959	4,139	2,039	11,881	376	3,450	22,844
<b>2015 Appeals</b>	1,710	5,845	7,447	60,954	403	5,494	81,853
<b>2015 Appeals</b>	1,710	5,845	7,447	60,954	403	5,494	81,853
<b>Large Pharmacies</b>	425	5,344	6,050	52,276	124	2,910	67,129
<b>Small Pharmacies</b>	1,285	501	1,397	8,678	279	2,584	14,724
<b>SMALL as a percent</b>	75%	9%	19%	14%	69%	47%	18%
<b>Appeals as percent of claims for:</b>							
<b>TOTAL Study Set (FI Comm)</b>	0.68%	1.32%	0.07%	2.67%	0.01%	0.04%	0.25%
<b>SMALL pharmacies</b>	2.16%	1.10%	0.05%	2.24%	0.02%	0.08%	0.19%

**Observations**

- Given the volume of prescriptions in the state of Washington, different PBMs generated different level of appeals in calendar year 2015. Across the six PBMs, between 0.01% – 2.67% of all claims produced appeals at an average rate of 0.25%. The rate was lower when viewing only the SMALL pharmacies, which produced a rate of 0.02% – 2.24% of claims generated appeals and an overall average rate of 0.19%.
- Appeals generated by PBMs had varying levels of exposure to SMALL pharmacies, which could reflect MAC management practices. For example, PBM 1 had 75% of appeals coming from SMALL pharmacies while PBM 2 had only 9% coming from SMALL pharmacies.

Given the above observations, the Study concludes that OIC is likely to receive more appeals for some PBMs than others. If so, OIC may wish to reaching out individually to PBMs with higher appeal incidence rates to identify root-causes for the purpose of reducing the number of future appeals.

**PBM Denial Rates**

To calculate appeal denial rates, the self-reported PBM appeals data for the two-year Study period was reviewed and partitioned into two study sets: one for LARGE pharmacies and another for SMALL pharmacies. The appeal denial rates were calculated as the ratio of the denied appeals to total appeals (Exhibit 65).

**Exhibit 65. PBM Appeal Denial Rates, CYs 2014 and 2015**

	PBM1*	PBM2	PBM3	PBM4	PBM5	PBM6	TOTAL
Time Period of Appeals	6/12/14 - 12/31/15	1/1/14 - 12/31/15	1/1/14 - 12/31/15	1/1/14 - 12/31/15	1/1/14 - 12/31/15	7/1/14 - 12/31/15	
<b>TOTAL Appeals for Study Set (FI Comm)</b>	2,669	9,984	9,486	72,835	779	8,944	104,697
Appeals for LARGE Pharmacies	846	9,517	7,563	62,176	151	2,975	83,228
Appeals for SMALL Pharmacies	1,823	1,010	1,923	10,659	628	5,969	22,012
Chain	66	181	213	1,988	22	114	2,584
PSAO	22	15	13	6	-	529	585
Independent	1,699	811	1,697	8,665	606	5,326	18,804
Unknown	36	3	-	-	-	-	39
<b>Appeals Denied</b>							
TOTAL Study Set (FI Comm)	2,016	8,957	8,598	67,420	688	7,942	95,621
LARGE Pharmacies (15+ Pharmacies)	610	8,103	6,788	57,768	142	2,966	76,377
SMALL Pharmacies (<15 Pharmacies)	1,406	854	1,810	9,652	546	4,976	19,244
Chain	37	161	197	1,738	16	110	2,259
PSAO	13	14	9	6	-	313	355
Independent	1,333	676	1,604	7,908	530	4,553	16,604
Unknown	23	3	-	-	-	-	26
<b>Denial Rates</b>							
TOTAL Study Set (FI Comm)	76%	90%	91%	93%	88%	89%	91%
LARGE Pharmacies (15+ pharmacies)	72%	85%	90%	93%	94%	100%	92%
SMALL Pharmacies (<15 pharmacies)	77%	85%	94%	91%	87%	83%	87%

\*PBM 1 could not provide the breakout between FI Commercial appeals and other (Medicare/Medicaid), so might be overstated.

**Observations:**

- + While appeal denial rates varied by PBM, most were 85% or higher with the exception of PBM 1 which had a notably lower aggregate denial rate of 76%.
- + The majority of SMALL pharmacy appeals came from independent pharmacies.
- + No clear pattern emerged regarding the difference in denial rates between SMALL and LARGE pharmacies. Two of the six PBMs, however, had higher denial rates for SMALL pharmacies than for LARGE pharmacies.

**Appeals Over Time**

Exhibit 66 shows the appeal volume over time for all six PBMs during the two-year Study period. Two PBMs, however, did not submit appeal data for the entire Study period:

- + PBM 1 did not report appeals data for the January 1, 2014 – July 1, 2014 time period.
- + PBM 3 did not report appeals data for the January 1, 2014 – June 12, 2014 time period.

**Exhibit 66: Number of SMALL Pharmacy Appeals By Month, CYs 2014 and 2015**

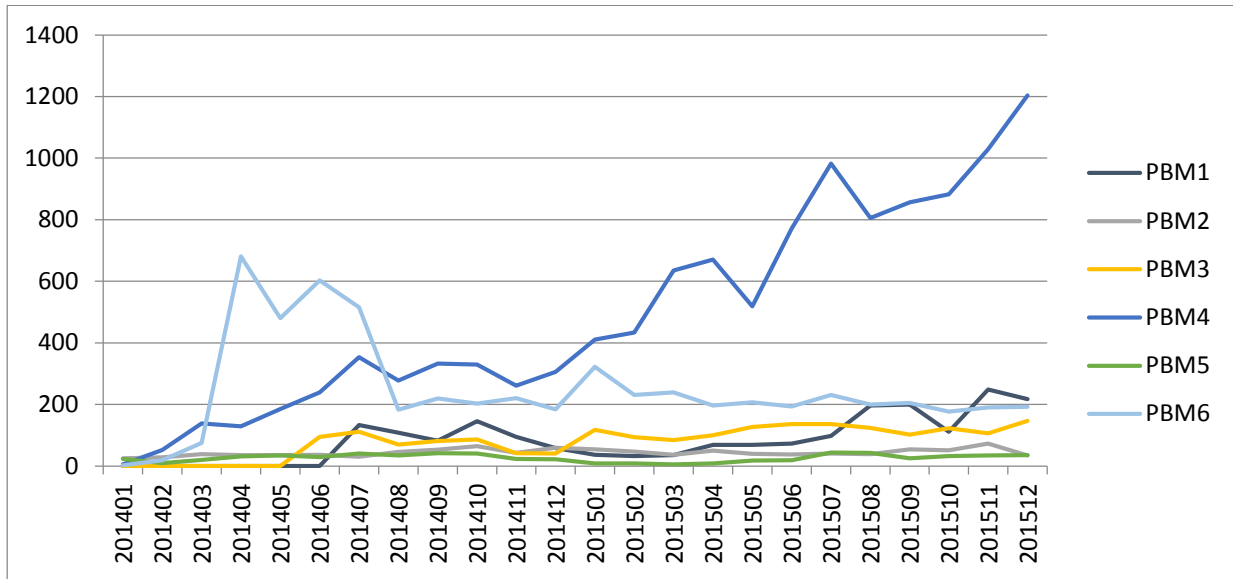
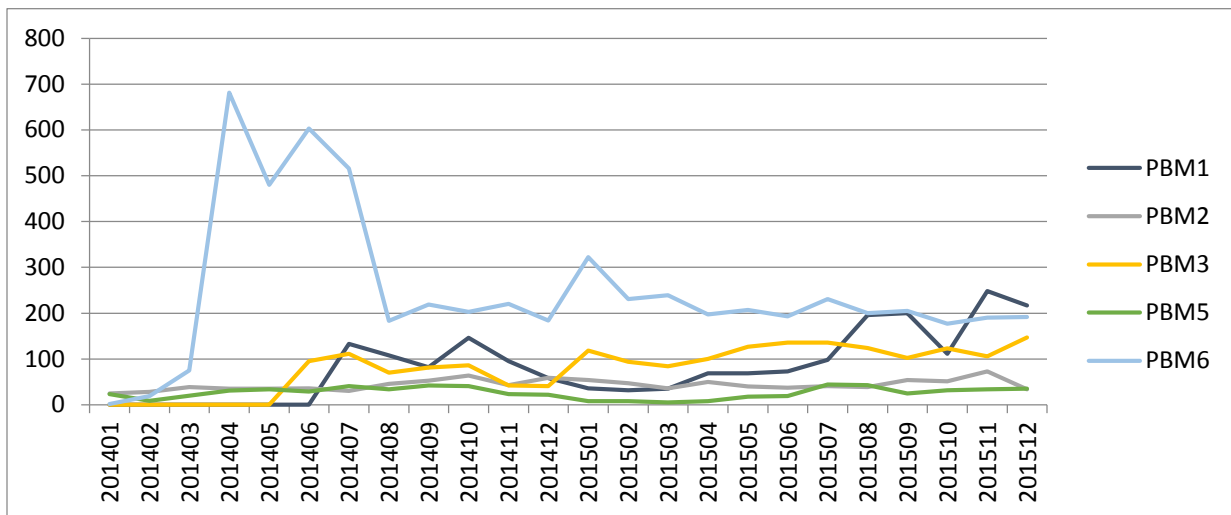


Exhibit 66 shows that PBM 4 had a large increase in the number of appeals per month starting in June 2015 – the same time ESSB 5857 was adopted – and continuing through the end of 2015.

Exhibit 67 presents the same data as Exhibit 66 but excludes the data for PBM 4 to better show the variation across the other PBMs that is less visible in Exhibit 66 due to the scale of the PBM 4 results.

**Exhibit 67: Number of SMALL Pharmacy Appeals By Month (Excluding PBM 4), CYs 2014 and 2015**

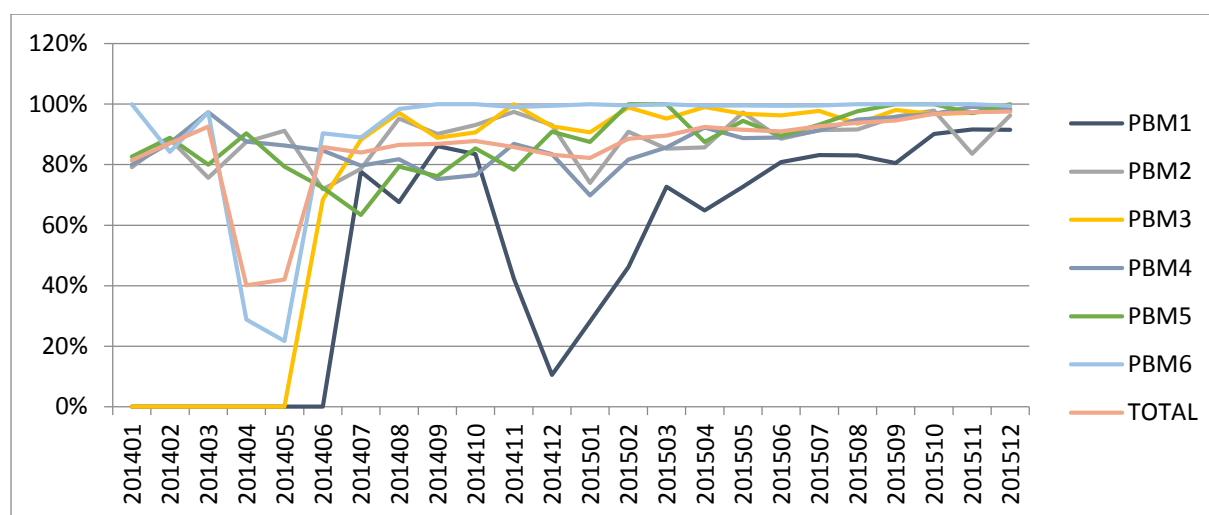


## Observations

- + Appeal volumes for PBM 1 were initially higher than 100 per month, then fell below 100 for a 9-month period. During the second half of 2015, PBM 1 had notably higher appeals volume compared to its appeals volume in 2014 and the first half of 2015.
- + Compared to the other PBMs, PBM 2 and PBM 5 maintained low appeal volume throughout the Study period.
- + PBM 3 saw slow growth through 2015 in the volume of appeals.
- + Appeal volumes for PBM 6 quickly grew to a high level by April 2014. Shortly after implementation of SB 6137 in June 2014, appeals volume for PBM6 subsided to a level that it sustained for the remainder of the study period.

The analysis calculated and reviewed the monthly appeal denial rates for each PBM to determine if there were any seasonal patterns. Exhibit 68 shows the monthly denial rates for SMALL pharmacies only over the Study period.

**Exhibit 68: SMALL Pharmacy Denial Rates, CYs 2014 and 2015**



## Observations:

- + Denial rates for PBM 1, PBM 2 and PBM 4 each fell around January 2015 and increased thereafter.
- + While PBM 2 and PBM 4 returned to their normal denial-rates rather quickly, PBM 1 took longer to do so.

There was no seasonal pattern found for appeal denial rates. While experience of HMA and its subcontractor tells them that a PBM's management of its MAC list and/or quarterly changes in manufacturer pricing may impact the number of appeals submitted, this is not clearly apparent in the data nor chart above.

## Appeal Concentration

The analysis also reviewed the appeals generated by different pharmacies in Washington state to determine whether appeals were spread evenly across all pharmacies or whether a subset of

pharmacies generated a larger number of appeals. Exhibit 69 shows the number and percentage of LARGE and SMALL pharmacies in Washington that submitted appeals.

**Exhibit 69: Number of SMALL and LARGE Pharmacies in Washington**

	Pharmacies Submitting No Appeals	Pharmacies with Appeals Submitted	TOTAL	Percent Submitting Appeal
LARGE	480	291	771	38%
SMALL	291	254	545	47%
TOTAL	771	545	1,316	41%

For SMALL pharmacies, the appeals were summarized at a pharmacy level, and that data set was organized in a descending order. Manipulating the data in this way allowed for a review of the concentration of appeals by SMALL pharmacies.

With roughly 79% of the total appeal volume coming from LARGE pharmacies, further analysis was conducted to determine whether appeals from SMALL pharmacies were concentrated in several pharmacies or dispersed among the group (Exhibit 70). 80% of the appeals submitted by SMALL pharmacies came from only 44 (17%) of the SMALL pharmacies.

**Exhibit 70: SMALL Pharmacy Appeal Concentration, CYs 2014 and 2015**

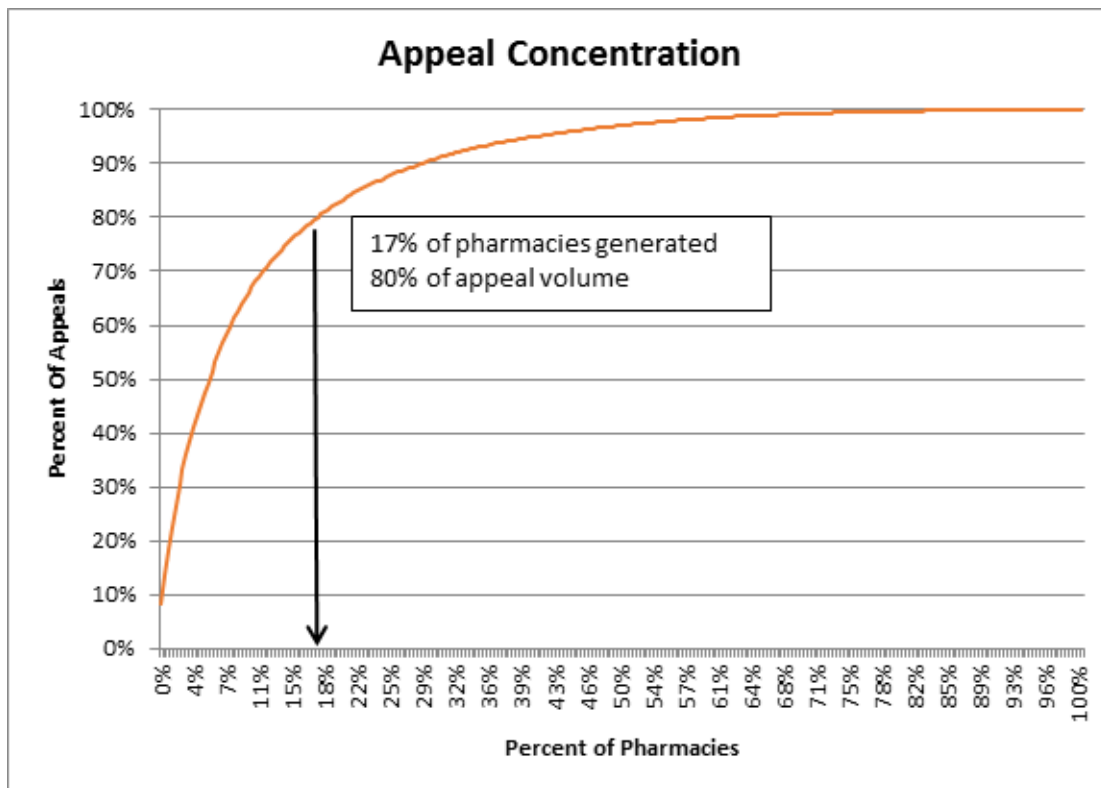


Exhibit 71 shows the distribution of appeals for the top 44 appealing SMALL pharmacies across the six PBMs.

**Exhibit 71: PBM Distribution of Appeals From Top 44 Appealing SMALL pharmacies, CYs 2014 and 2015**

	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6	TOTAL
<b>Top 44 Pharmacies</b>	1,141	560	1,367	8,473	436	5,604	17,581
<b>Distribution</b>	6%	3%	8%	48%	2%	32%	100%

Exhibit 72 compares the magnitude of reimbursement variances between the top 44 appealing SMALL pharmacies and all pharmacies in Washington. The percentages represent the variance in the paid ingredient cost to the pharmacy and the benchmark price relative to the paid ingredient cost.

**Exhibit 72: Ingredient Cost Reimbursement by PBM Paid to the Top 44 Appealing SMALL Pharmacies Compared to All Pharmacies, CYs 2014 and 2015**

Comparison of the Top Appeals SMALL Pharmacies to All Pharmacies						
	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
<b>Top Appeals SMALL Pharmacy Group Variance to NADAC % of Paid Ingredient Cost (PIC)</b>	0.4%	0.2%	0.2%	0.1%	0.5%	0.6%
<b>All Pharmacies Variance to NADAC % of PIC</b>	13.4%	-5.4%	5.0%	3.9%	9.9%	3.9%
<b>Top Appeals SMALL Pharmacy Group to Benchmark MAC 1 % of PIC</b>	0.6%	-0.3%	-0.2%	-0.3%	0.0%	0.1%
<b>All Pharmacies Variance to Benchmark MAC 1 % of PIC</b>	20.5%	-25.8%	-6.8%	-7.7%	-0.2%	-10.3
<b>Top Appeals SMALL Pharmacy Group to Benchmark MAC 2 % of PIC</b>	0.8%	-0.3%	-0.1%	-0.3%	0.2%	0.1%
<b>All Pharmacies Variance to Benchmark MAC 2 % of PIC</b>	24.2%	-31.4%	-2.7%	-8.9%	4.4%	-8.9%

Due to data limitations, that analysis was unable to match appeal claims to the NADAC price list for further analysis.

Observations:

- + Of all the SMALL pharmacies that submitted appeals to the PBMs, 17% (or 44 pharmacies) generated roughly 80% of all the appeals volume. If the appeals volume had been evenly distributed across all pharmacies submitting appeals, Exhibit 69 would have presented a 45-degree line.
- + The top 44 appealing SMALL pharmacies were primarily appealing reimbursements from PBM 4 and PBM 6 (with 48% and 32% of the volume respectively).
- + For drugs subject to NADAC pricing, all of the top 44 appealing SMALL pharmacies were paid, in aggregate, at higher rates than NADAC, but at a lower rate than the average for all Washington pharmacies.

- + For drugs included on the benchmark MAC List 1, all but one PBM paid the top 44 appealing SMALL pharmacies' ingredient costs at a higher rate than the average for all pharmacies statewide.
- + For drugs included on the benchmark MAC List 2, four of the six PMBs paid the top 44 appealing SMALL pharmacies' ingredient costs at a higher rate than the average statewide pharmacies.
- + Of the top 44 appealing SMALL pharmacies, 35 were independents, eight were considered chains and one was considered a PSAO.
- + Of the top 44 appealing SMALL pharmacies, nine were in urban locations, five were in suburban locations, and 30 were in rural locations. By geography, 12 were in eastern Washington (east of the Cascades), 10 were in the central I-5 corridor (defined as King, Pierce, Snohomish, and Thurston Counties), and 22 were in the rest of western Washington.
- + Of SMALL pharmacies submitting appeals, 37% (108) submitted fewer than 10 appeals over the Study period.

OIC should consider individualized outreach to the relatively small number of pharmacies that appear to be submitting the majority of appeals to identify root causes and solutions that might reduce the number of future appeals from these pharmacies.

#### Price Review of Appeals

Using the claims data provided for the MAC pricing analysis when available, the analysis matched appeals to the claims payment data set and reviewed the reimbursement paid to the pharmacies on those claims. The mapping of the appeals and claims data presented the following challenges:

- + Claims data could not be matched to appeals data for PBM 3 and PBM 6 due to the limitations of the data fields that were provided in the appeals data set.
- + Approximately 5,170 appeal records from 2015 could not be tied to the claim files. Data such as date-of-service, National Drug Code (NDC), and National Counsel for Prescription Drug Programs (NCPDP) number was used to match claims, but there were inconsistencies in these two data sets that did not allow all claims to be matched.
- + Because the claims file only contained claims with dates of service from 2015, only the appeals with 2015 dates of service were reviewed.

Exhibit 73 summarizes the distribution of appeals by the ingredient cost amount paid to the pharmacy.

#### Exhibit 73: Distribution of Appeals Based on Pharmacy Reimbursement (All Pharmacies), CY 2015

Paid Ingredient Amount to Pharmacy	Total Appeals	Appeal Distribution	Appeal Distribution (Cumulative)	Total Denied Appeals	Denied Appeal Distribution	Denied Appeal Distribution (Cumulative)	Denial Rate
\$0-\$4	8,988	14.1%	14.1%	8,050	13.5%	13.5%	90%
\$4-\$8	7,085	11.1%	25.2%	6,314	10.6%	24.1%	89%
\$8-\$12	18,145	28.4%	53.6%	17,500	29.3%	53.4%	96%
\$12-\$16	8,342	13.1%	66.7%	7,912	13.3%	66.7%	95%
\$16-\$20	4,121	6.5%	73.2%	3,844	6.4%	73.2%	93%
\$20-\$30	5,187	8.2%	81.3%	4,843	8.1%	81.3%	93%
\$30-\$40	3,374	5.3%	86.6%	3,213	5.4%	86.7%	95%



Paid Ingredient Amount to Pharmacy	Total Appeals	Appeal Distribution	Appeal Distribution (Cumulative)	Total Denied Appeals	Denied Appeal Distribution	Denied Appeal Distribution (Cumulative)	Denial Rate
\$40-\$50	1,584	2.5%	89.1%	1,490	2.5%	89.2%	94%
\$50-\$60	1,242	1.9%	91.1%	1,186	2.0%	91.2%	95%
\$60-\$70	874	1.4%	92.4%	810	1.4%	92.5%	93%
\$70-\$80	908	1.4%	93.9%	850	1.4%	93.9%	94%
\$80-\$90	338	0.5%	94.4%	295	0.5%	94.4%	86%
\$90-\$100	450	0.7%	95.1%	405	0.7%	95.1%	89%
\$100-\$125	642	1.0%	96.1%	609	1.0%	96.1%	94%
\$125-\$150	570	0.9%	97.0%	526	0.9%	97.0%	92%
\$150-\$175	275	0.4%	97.5%	238	0.4%	97.4%	86%
\$175-\$200	353	0.6%	98.0%	326	0.5%	98.0%	91%
\$200-\$225	408	0.6%	98.7%	396	0.7%	98.6%	97%
\$225-\$250	114	0.2%	98.8%	112	0.2%	98.8%	98%
\$250-\$275	79	0.1%	99.0%	71	0.1%	98.9%	90%
\$275-\$300	113	0.2%	99.1%	105	0.2%	99.1%	93%
\$300-\$325	40	0.1%	99.2%	36	0.1%	99.2%	90%
\$325-\$350	35	0.1%	99.3%	33	0.1%	99.2%	94%
\$350-\$375	101	0.2%	99.4%	100	0.2%	99.4%	98%
\$375-\$400	43	0.1%	99.5%	41	0.1%	99.5%	95%
\$400-\$425	18	0.0%	99.5%	18	0.0%	99.5%	100%
\$425-\$450	46	0.1%	99.6%	46	0.1%	99.6%	100%
\$450-\$475	27	0.0%	99.6%	26	0.0%	99.6%	96%
\$475-\$500	17	0.0%	99.7%	16	0.0%	99.6%	94%
\$500 +	223	0.3%	100.0%	215	0.4%	100.0%	96%
<b>TOTAL</b>	<b>63,742</b>	<b>100.0%</b>		<b>59,626</b>	<b>100.0%</b>		<b>93%</b>

Observations:

- + The majority of appeals were on lower cost drugs: 89% of the appeals came from claims where the pharmacy was reimbursed less than \$50.00 for the ingredient cost of the drug. It is important to note that this cost distribution represented the PBM reimbursement paid to the pharmacy – not necessarily the cost that the pharmacy requested for reimbursement.
- + The appeal denial distribution followed the appeal distribution closely, generally within one percentage point at every band of drug cost.
- + There was no discernable pattern of differing denial rates at different price levels. The denial rates were almost always above 90%.

Estimate of the Number of appeals OIC will receive

The Study estimates that OIC is likely to receive 13,500 – 15,500 appeals on average annually. This estimate is based on the following assumptions:

- + All denied appeals will come to OIC and all pharmacies will use the second-level appeals process. While some pharmacies might reconsider their appeal based on information provided by the PBM, the Study conservatively assumed the OIC appeal process would be used for all denied appeals. Although PBMs provide an alternate NDC roughly 90% of the time when denying an appeal, the pharmacy could disagree and utilize the OIC process. No reduction in potential appeals due to pharmacies feeling satisfied with PBM responses was assumed.
- + PBMs will maintain the business practices that generated the appeals during the Study period.
- + The total number of denied appeals reported for calendar years 2014 and 2015 for SMALL pharmacies was 19,244 with a majority of these coming from Independent pharmacies. Although this study period spans 24 months, the Study only analyzed the ending 18-months of data. This was because two PBMs did not submit appeals data for first six months of 2014, which was prior to implementation of SB 6137. This yielded an average of 1,069 denied appeals per month, or roughly 12,828 annually. Although PBM 1 was unable to separate fully-insured commercial appeals from non-fully insured appeals, they only made up 7% of the total appeals over the Study period.
- + The fully-insured population will remain relatively stable from 2015 to 2017. Large swings in the insured population, including growth in individual health care plans, can affect the estimate. If there is large growth in these areas, the appeal growth would be in-line with growth of membership in these plans.
- + There will be modest growth in the number of drugs that are subject to the MAC appeals process. Industry utilization trends for generic drugs are in the low single digits. Increases in generic dispensing rates have stabilized due to fewer blockbuster patent expirations. the Study estimates that these two factors combined produce an estimated increase of 5%–10% of generic drug utilization for 2017.
- + The high rate of appeals for PBM 4, compared to the other PBMs, will continue. The Study does not assume that PBM 4 will adjust its business practices to change the rate of appeals from rate observed during the Study period. If PBM 4 changes business practices, this could substantially decrease the number of appeals that the OIC receives.
- + A 10% margin was added to the upper end of the estimate to account for appeal volatility. Also, because the study set of appeals came only from six PBMs (which cover 98% of the fully-insured commercial business in Washington state), the Study’s margin assumption of 10% should provide additional coverage for the remaining portion of fully-insured commercial business not analyzed in this Study.

[Recommendations on the most useful documents for OIC to require from parties to an appeal](#)

The Study reviewed the types of data that each PBM reported that it requests from a pharmacy to support the appeals process as well as what the PBM reports back to the pharmacy following a determination. Exhibits 74 and 75 illustrate each of the data types reported.

**Exhibit 74: PBM Required Data from Pharmacies to Support PBM Appeal Process**

Data Element	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
Pharmacy Name, Chain/Affiliation Code	X		X	X		

Data Element	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
Pharmacy Contact Information	X		X	X		
NPI/NCPDP	X	X	X	X		X
Prescription Number	X	X	X	X		X
Date of Service	X	X	X	X		X
Drug Identification (i.e., NDC, GPI, Name, Strength) - <i>Not all items required by all PBMs</i>	X	X		X	X	
BIN/PCN		X		X		
Patient Information			X			
Pharmacy Comments			X	X		
Pharmacy Drug Acquisition Cost (may also require invoice copy)	X	X		X		X

**Exhibit 75: PBM Data Returned to the Pharmacy Following Appeal Determination**

Data Returned to Pharmacy	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
Appeal Date	X	X	X	X	X	X
Appeal Determination Date	X	X	X	X	X	X
Appeal Determination	X	X	X	X	X	X
Appeal Comments	X	X	X	X	X	X
Alternate NDC	X	X	X	X		X
Effective Date of New MAC Price	X	X	X	X		X

Based on a review of the materials provided and taking into consideration what OIC will need to make a reasonable determination on an appeal, we have included as Appendix III to this report a sample OIC Appeals Form that specifies the data and documentation submissions that we believe OIC should require from the parties to an appeal.

## PBM MAC-Related Appeals Processing

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### Overview

The Study includes a review of the PBM MAC appeals processes to provide the OIC with baseline information. Areas reviewed include:

- + Timeframe for appeals resolution by the PBM (in accordance with RCW 19.340.100(3));
- + Provision of an alternative National Drug Code (NDC) for denied appeals (in accordance with RCW 19.340.100(4)(b));
- + Updates of the MAC pricing within one day (in accordance with RCW 19.340.100(5)(a));
- + PBM telephone contacts for submitting MAC appeals (in accordance with RCW 19.340.100(4)(a)); and
- + General PBM MAC appeals policy review.

The analysis in this section is intended to be informational only and in no way should be considered a compliance audit. In some cases, the PBM did not provide sufficient data or information to allow the reviewers to gain a full understand of the PBM's processes. Absence of data does not imply that a PBM is not in compliance with the terms of the regulation, but instead is a limitation of the dataset or PBM reporting capabilities. Further, the observations in this report are not intended to be used for enforcement purposes, but merely to show our conclusions based on the information reported.

Further, the appeal data set contains appeal records prior to the enactment of so data may not reflect compliance practices of the PBMs.

### Key Findings

- + PBMs reported faster resolution of denied appeals than upheld appeals: 84% of denied appeals were processed in 10 days and 4% were not completed within 30 days; 58% of upheld appeals were processed in 10 days and 10% were not completed within 30 days.
- + For SMALL pharmacies, the timeframes were longer with 55% processed within 10 days and 85% processed within 30 days.
- + Three of the six PBMs provided the alternate NDC greater than 90% of the time.
- + Only three PBMs provided information relating to the requirement to update their MAC list pricing within one day of a pricing change. Of those three, MAC lists updates within the one-day timeframe were made between 87% and 100% from the determination date.
- + Each PBM in the Study had a telephone contact number for pharmacies to use to speak with PBM personnel, although direct contact with a live PBM representative was not always available on the first call. The majority of the call center hours of operation observed in the Study were 24 hours a day, seven days per week.
- + Each PBM provided policies and procedures or a summary of processes that indicated that the PBM had an appeals resolution timeframe within the requirement of the regulation (30 days).
- + The PBMs' response times for appeals ranged from three to 30 days
- + The window of time a pharmacy had to submit an eligible MAC appeal varied by PBM.
- + The Study found that PBMs have sufficient policies and procedures or processes to fulfill the telephonic contact center requirements of RCW 19.340.100.

- + All but one PBM in the Study had specific policies and procedures for handling MAC pricing inquiries and appeals, and response times within the parameters required by regulation. Depending on day of the week and time that a placed a call, live assistance was not always available but callers had the option of leaving a voice message. At the time this report was prepared, not all calls were returned.
- + In some cases, the administrative intermediaries working on behalf of pharmacies, or, Pharmacy Services Administrative Organizations (PSAOs), aggregated MAC inquiries for submission to PBMs. The “batching” of these requests potentially extended the overall wait time for a pharmacy to receive a response to its MAC appeal.

## Method

### Data Request

After relevant appeals from “SMALL” pharmacies (defined as pharmacies with fewer than 15 chain store locations) were identified, a subset of MAC appeals data was studied to determine the following:

- + Whether the PBM sent an alternative NDC for denied appeals; and
- + The timing of MAC list pricing updates based upon approved appeals.

Exhibit 76 lists the subset of MAC appeals data and PBM submission of that data.

#### Exhibit 76: PBM Data Request and Received

Appeals Data Type	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
i. Appeal determination	Yes	Yes	Yes	Yes	Yes	Yes
ii. Appeal comments	Yes	Yes	Yes	Yes	Yes	Yes
iii. Appeal date	Yes	Yes	Yes	Yes	Yes	Yes
iv. Determination date	Yes	Yes	Yes	Yes	Yes	No <sup>1</sup>
v. Determination letter/notification	Yes	Yes	Yes	Yes	Yes	Yes
vi. If determination was denied, include the reason for the denial and the NDC of the drug that may be purchased by similarly situated pharmacies at a price that is equal to or less than the MAC (RCW 19.340.100[4][c])	Yes	Yes	Yes	Yes	Yes	Yes
vii. If the appeal was upheld, include verification that an adjustment was made no later than one day after the date of determination and that all similarly situated pharmacies in the state were updated as well (RCW 19.340.100 [4][c])	No <sup>1</sup>	Yes	Yes	Yes	Yes	Yes

#### Notes:

<sup>1</sup> Exhibits and analysis were adjusted to account for these discrepancies and noted.

PBMs were asked to submit all policies and procedures related to the MAC appeals process. All but one PBM (PBM 4) submitted specific internal policies and/or procedures addressing appeals, investigations, and disputes over MAC pricing. PBM 4 instead provided a written summary describing its current appeals process. Further, two PBMs submitted excerpts from provider manuals on MAC appeals which serve as general instructions to pharmacies. Every PBM provided telephonic hours of operation and three provided website and email addresses for the submission of appeals. Five PBMs provided data on call center metrics, but they were not specific to MAC appeals. Two PBMs provided call logs, but only one was specific to MAC appeals.

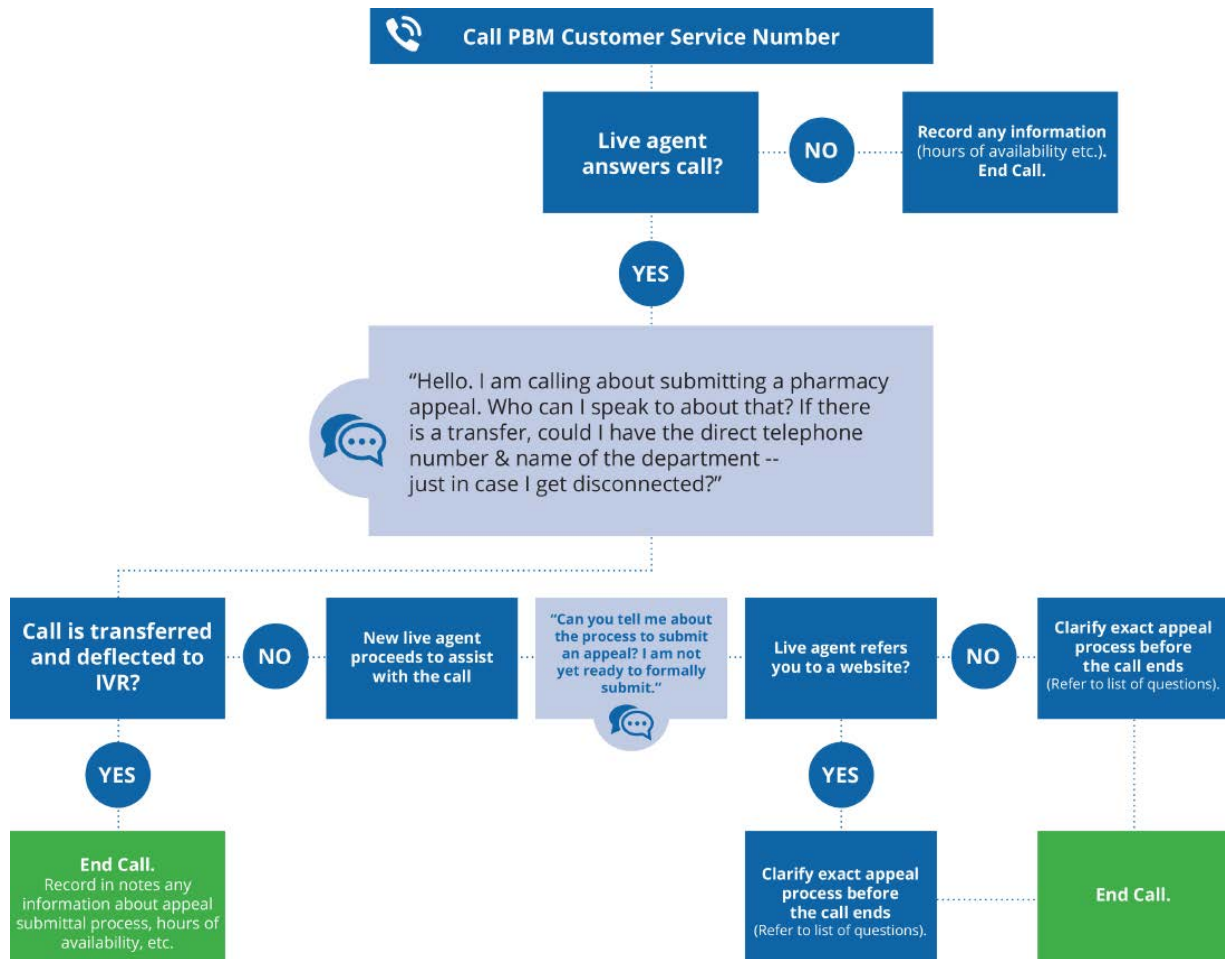
Exhibit 77 summarizes the data request and information from the selected PBMs.

**Exhibit 77: Data Request and Information Received**

PBM Data Request	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
MAC Appeals P&Ps	Yes	Yes	Yes	No, informal summary	Yes	Yes
Telephonic Contact Info and Availability	Daytime hours/7 days a week	24 hours/7 days a week	24 hours/7 days a week	24 hours/7 days a week	24 hours/7 days a week	24 hours/7 days a week
Call Center Standards and Metrics for Appeals Process	P&Ps submitted, not actual performance data	No, general Pharmacy Help Desk standards,	No	No, customer Service metrics but not specific to appeals.	No, aggregate book of business for 2014 and 2015	Yes
Call Logs	Yes	No	No	No	Yes	Yes

In addition to reviewing the policies and procedures, a total of 18 secret shopper calls were made (three calls per PBM). Each PBM received calls during regular business hours, after hours, and on the weekend. A process diagram for the secret shopper calls is provided as Exhibit 76 below. The secret shopper presented himself as an assistant calling on behalf of a pharmacist preparing for a MAC appeal. The secret shopper called into the phone number provided by the PBM and verified the hours of operation. Where possible, the secret shopper outlined a process in order to compare to the standards described in that particular PBM’s policies and procedures. The secret shopper was not provided with a pharmacy NCPDP/NPI number, specific RX number for a prescription, or patient number and thus was unable to pursue the call as a complete MAC pricing appeal.

**Exhibit 78: Flowchart for Secret Shopper Call**



**Data Analysis**

**Timeframes for adjudicating MAC appeals**

The Study reviewed the number of days that elapsed between the date of appeal and the determination date and sorted the results into four 10-day increment categories summarized in Exhibit 79. (Note: For 8,945 claims, incomplete data prevented us from measuring the time between submission and resolution.)

**Exhibit 79: Distribution of Appeals Based on Determination Timing (All Pharmacies), CYs 2014 and 2015**

TOTAL Pharmacies	Successful Appeals	Distribution	Unsuccessful Appeals	Distribution	TOTAL	Distribution
0 – 10 days	4,679	58%	73,245	84%	77,924	81%
10 – 20 days	1,867	23%	7,583	9%	9,450	10%
20 – 30 days	736	9%	3,278	4%	4,014	4%
30 or more days	792	10%	3,572	4%	4,364	5%

TOTAL Pharmacies	Successful Appeals	Distribution	Unsuccessful Appeals	Distribution	TOTAL	Distribution
TOTAL	8,074	100%	87,678	100%	95,752	100%

Exhibit 80 summarizes these results for the SMALL pharmacies only.

**Exhibit 80. Distribution of Appeals Based on Determination Timing (SMALL Pharmacies), CYs 2014 and 2015**

SMALL Pharmacies	Successful Appeals	Distribution	Unsuccessful Appeals	Distribution	TOTAL	Distribution
0 – 10 days	956	55%	11,987	84%	12,943	81%
10 – 20 days	386	22%	1,268	9%	1,654	10%
20 – 30 days	152	9%	457	3%	609	4%
30 or more days	256	15%	565	4%	821	5%
TOTAL	1,750	100%	14,277	100%	16,027	100%

Observations

- + From a distribution perspective, PBMs appeared to respond more rapidly to unsuccessful appeals, with a determination in about 84% of unsuccessful appeals occurring in the first 10 days after an appeal was initiated.
- + SMALL pharmacies tended to follow the same patterns as all pharmacies.
- + Approximately 10% of all successful appeals were determined after the 30-day mark. Under the provisions of ESSB 5857, all of these determinations would be appealable and could add to the numbers of second level appeals to OIC.

[Review of providing NDCs for denied appeals and updating MAC lists within one day for upheld appeals](#)

Exhibit 81 summaries PBM results with respect to the following components of ESSB 5857:

- + Update the MAC price when the appeal was approved, within one day
- + Provide the NDC of an alternate drug that the pharmacy can purchase, when the appeal is denied.

Note: PBM 1, PBM 5, and PBM 6 did not provide enough data to determine if they were adjusting MAC prices within one day.

**Exhibit 81: Adherence to Other Requirements, CYs 2014 and 2015**

	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
Providing alternative NDC for Denied appeal	50%	93%	97%	93%	77%	59%
Adjusting MAC price within 1 day	n/a	100%	87%	100%	n/a	n/a



Observations:

- + PBM 1 and PBM 6 had a low rate of compliance with respect to providing a similar NDC that could be purchased by a pharmacy at or below a MAC price. PBMs 2, 3, and 4 appeared to have high rates of compliance.
- + When the data was provided, PBMs 2, 3, and 4 had a reasonably high rate of adjusting the MAC prices within one day.

### Call Center Operations

The scope of the Study called for a review of Contact Center/Pharmacy Help Desk availability. The analysis included a review of MAC policies and procedures for submitting appeals, response time standards, and telephonic availability of each PBM in the Study. All but one PBM submitted formal policies and procedures pertaining to Maximum Allowable Cost (MAC) pricing appeals.

### Key findings:

- + Each PBM in the Study had a telephone contact number for pharmacies to speak with PBM personnel, although direct contact with a live PBM representative was not always available on the first call. The majority of the call center hours of operation observed in the Study were 24 hours a day, seven days per week.
- + Each PBM's policy and procedure or summary of processes indicated it had an appeals resolution timeframe within the requirement of the regulation (30 days).
- + The PBMs' response times ranged from three to 30 days.
- + The window of time a pharmacy had to submit an eligible MAC appeal varied by PBM.

In some cases, the administrative intermediaries working on behalf of pharmacies, or, Pharmacy Services Administrative Organizations (PSAOs), aggregated MAC inquiries for submission to PBMs. The "batching" of these requests potentially extended the overall wait time for a pharmacy to receive a response to its MAC appeal.

Secret shopper calls confirmed each call center's available hours. Qualitative observation revealed that wait times varied widely after calls were answered. Although telephone contacts were available, PBMs activated a "leave message" function, requiring a pharmacy to request a call-back on a specific inquiry. Of the three PBMs where a voicemail was left, only one returned the call at the time this report was prepared.

### Telephonic Contacts

Of the PBMs that provided specific information on their MAC appeals processes, the majority described a telephonic pharmacy inquiry process involving pharmacy help desk staff as the first line of contact. PBM help desk staff were not typically responsible for handling or resolving the appeals. Instead, they would triage a call by identifying the issue as specific to MAC pricing and then forward the call to a MAC team within the PBM for resolution.

Although telephonic contacts were available for all PBMs in the Study, many encouraged or required other modes for contacting the PBM for submission of MAC pricing appeals. One PBM directed the secret shopper to an online portal for submission of appeals. Other PBMs provided a fax number or email address as alternatives to a telephonic appeal submission. Pharmacies were required to fill out a PBM-specific MAC pricing inquiry form with specific information to facilitate the investigation process.

### Time Limit for Submission of Appeals, Timeframe for Resolution, and MAC Effective Date

Each PBM required a specific timeframe for pharmacies to submit appeals on MAC pricing, although the timeframes varied widely from ten to 60 business days. The initiation of the timeframe was defined as the claims fill-date or date of service.

PBM appeals resolution times as indicated in policies and procedures ranged from seven to 30 business days. Each PBM outlined a formal response process (once an appeal determination is made) in their policies or summary. Two PBMs indicated that the response to an appeal is provided to the submitting party in electronic format; four PBMs did not specify the method of how a response is delivered.

In addition to PBM response time, the policies and procedures or summary of processes for the effective date of MAC change after an appeals determination is formalized were analyzed. Four PBMs had the practice of adjusting the MAC pricing one calendar day after the date of determination; two provided no commentary or information on this request.

### Call Center Availability

Five of the PBMs provided access to pharmacies 24 hours a day, seven days a week and one (identified in this report as PBM 1) only offered daytime operating hours, seven days a week. When a live person was not available and given the option to leave a voicemail, the secret shopper left a message articulating a general question about the process for filing MAC pricing appeals and left a call back number. Of the four voicemails left with three PBMs, only one call was returned (within 20 hours). The other three calls had not been returned at the time this report was prepared.

### Call Center Performance

Actual call center statistics were submitted by four of the six PBMs. One PBM submitted target statistics but not actual performance data. Another PBM did not submit either target or performance measures. None of the PBMs were able to separate call statistics specific to the appeals process. Additionally, data revealed that calls are not identifiable by call type or client. The statistics submitted on average speed to answer, call abandonment rates, and service levels showed performance close or better than industry standards (benchmark for average speed to answer is 28 to 30 seconds; abandonment rates of 5% and service level 80% of calls answered under 20 seconds<sup>75</sup>). However, caution should be used when interpreting and comparing these results to other data sets since the data provided for this Study were gathered from different time periods. The data also represented a broad array of call requests and used inconsistent definitions of specific metrics. The secret shopper calls revealed anecdotal experience that is inconsistent with the metrics described in the following section (see “Secret Shopper Calls” below). To draw more definitive conclusions, further review and analysis of call center activity and performance metrics is recommended.

### Secret Shopper Calls

Every PBM in the Study received secret shopper calls. When a PBM was contacted, a staff member requested specific information on the member (e.g., member name, ID number, date of birth, etc.) and provider (e.g., NCPDP/NPI number, Rx number, member information, etc.) to properly process the appeal. All of the calls were initiated with pharmacy help desks or customer service call centers and

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<sup>75</sup> Call Center Performance Benchmarks, Feb 27, 2015. Accessed at: <https://www.talkdesk.com/blog/call-center-performance-benchmarks/>

subsequently directed to a department that could manage the appeal over the phone. When a live representative was not available to manage the appeal, the caller was directed to a voicemail queue or suggested email or web submission of the appeal.

Every PBM call center was available for live assistance. Some offered the caller an option to leave voicemail messages during the hours specified in the data request. Some of the PBMs required specific data input (e.g., the member or provider data described above) before the calls are further directed. The secret shopper let four voicemails with three PBMs. These voicemails included a message with a general MAC pricing inquiry and a call back number. Qualitatively, there was wide variability in call quality. After the calls were answered, the wait times ranged from 0 to approximately 12 minutes. Caution should be used when attempting to general conclusions from these calls as they are a small subset of the large volume of calls that PBMs typically receive. Further reviews such as sampling calls already made on specific MAC inquiries across a number of independent pharmacies may be a better way to assess experience specific to the MAC pricing appeals processes. Making these calls would require collaboration and permission from pharmacies and was not within the scope of this Study. Exhibit 82 summarizes this section’s findings.

**Exhibit 82: Summary of PBM Operational Policies for Submitting and Responding to Pharmacy Appeals**

Areas Assessed	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
Dedicated MAC Appeals Staff	Yes	Yes	Yes	Yes	Yes	Yes
Modes of submitting an appeal other than by phone	Email Fax Website	None provided	Web	None provided	Email	Email Website
Time frame for submitting a MAC appeal	60 days from date of service	30 days from date of service	30 days from date of service	30 days from date of service	60 days from date of service	30 calendar days
PBM Appeals Resolution time	7 days	Range from 3 to 30 days depending on stage	7 business days	30 days	Earlier of seven business days or ten calendar days of receipt	7 business days
PBM response mechanism	Not specified	Not specified	Not specified	Not specified	Email	Email

## Pharmacy Services Administrative Organizations

One notable Study finding is the impact of Pharmacy Services Administrative Organizations, or PSAOs, on PBM MAC appeal response times. PSAOs are organizations that provide a broad range of services on behalf of independent or chain pharmacies. In 2013, U.S. Government Accountability Office (GAO) conducted a study on the number, role and ownership of PSAOs.<sup>76</sup> The study found that PSAOs generally provide PBM and supplier contract negotiation, as well as help-desk services. PSAOs negotiate and enter into agreements with third party payers on behalf of member pharmacies, including PBMs. Among the PBM related services, PSAOs often aggregate appeals and inquiries on behalf of pharmacies. For pharmacies affiliated with PSAOs, the inquiries may be sent to a centralized area. These are then triaged and reviewed prior to submission to the PBMs.

Through interviews with PBM officials and a review of PBM documents the analysis confirmed that PBMs permit the submission of appeals from independent pharmacies through PSAO representatives. All organizations surveyed indicated that they would allow independent pharmacies to submit appeals either directly or through their PSAOs. In the latter scenario, the PBMs would not have the opportunity to address the appeal until the PSAO submitted the appeal. Thus, the submitting pharmacy experienced a longer turnaround time by submitting through an intermediary. This delay in response potentially affected PBM turnaround times for processing MAC appeals.

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<sup>76</sup> United States Government Accountability Office. Report to the Ranking Member, Committee on Energy and Commerce, House of Representatives. Prescription Drugs: The Number, Role, and Ownership of Pharmacy Services Administrative Organizations. January 2013.

# APPENDIX

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## I. PBM Data Request Form

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# STATE OF WASHINGTON OFFICE OF INSURANCE COMMISSIONER: STUDY OF PHARMACY CHAIN OF SUPPLY

## Data Request

### **HOW TO SUBMIT YOUR DATA**

Please send the email address of the submitter of the data to:

[awinter@healthmanagement.com](mailto:awinter@healthmanagement.com)

Anne Winter will send you a link to join the secure share website. Once you receive the link, you will be able to log in to submit your data files. Please contact Anne Winter at 480-229-0418 if you have questions.

**PLEASE NOTE: The following data request pertains to insured pharmacy claims transactions within the State of Washington and for State of Washington pharmacies only. It's also important to have the files denote if the claims were paid for fully insured individuals, Medicaid individuals, and Medicare individuals.**

1. **Claims Data:** Please provide a claims file extract – via secure FTP with all claims transactions incurred during the period of January 1, 2015 through December 31, 2015 using a National Council for Prescription Drug Programs (NCPDP) version 5.1 or later compliant layout. Table A below includes the required fields we need to conduct the review. If the file includes reversal records, please indicate the method for adjusting claims with reversals. Please include:
  - A. Record layout and detailed data dictionary
  - B. Claims control report, including: record counts, total submitted expenses, total allowed expense, and total paid expenses.
  - C. Clarification as to what types of records the data set include. (check all that apply)
    - Paid claims only, already adjusted
    - Paid claims, adjustments not yet applied
    - Reversal records
    - Denied claims
    - Other (please specify):
  - D. Please confirm if the claims file contains records based on the audit period invoice date or date of service.
  - E. If the file includes adjustment records, please explain how the adjustment records should be processed to result in accurate paid claims? What fields are required to uniquely identify a claim and match it to relevant reversals?

**Table A: Claims Data Elements Required (ALL fields requested below should be based on pharmacy NOT carrier/client reimbursement)**

+ Adjudicated date	+ Formulary indicator
+ Amount pharmacy billed	+ GCN or GPI
+ Amount pharmacy paid	+ Media (POS/mail/paper)
+ AWP unit cost	+ Metric decimal quantity
+ Basis of cost paid (i.e. AWP, MAC, U&C etc.)	+ NDC
+ Carrier number or other number to indicate Fully insured, Medicaid, and Medicare client	+ PBM reimbursement unit cost (i.e., MAC unit cost, AWP unit cost, other)
+ Compound code	+ Pharmacy chain status (independent, chain)
+ Copay	+ Pharmacy class (pharmacy, mail-order, nursing home)
+ Date of service	+ Pharmacy demographic (rural, urban, suburban)
+ DAW (dispense as written)	+ Pharmacy ID # (NCPDP, NPI)
+ Days supply	+ Pharmacy paid ingredient cost
+ Deductible (if applicable)	+ Sales tax (if applicable)
+ Dispensing fee	+ Transaction status
+ Drug indicator (generic, single-source, multi-source)	+ Usual & customary charge
+ Drug name	

**2. Maximum Allowable Cost (MAC) List:** A MAC list with GPIs/GCNs/NDCs, including effective and termination dates. Please ensure that the MAC list has been reviewed to ensure it is de-duplicated and accurate for the January 1, 2015 through December 31, 2015 period. Provide all policies relating to the construction of your MAC list(s) during the same period. Include frequency of review and update, number of off cycle updates during the period, triggers for an off cycle update.

**3. Pharmacy Appeals Listing**

**A.** A full listing of pharmacy pricing appeals for the January 1, 2014 through December 31, 2015 period. The list should include, but is not limited to:

- + Explanation of all form fields
- + Data required from the pharmacy by the PBM
- + Type of appeal
- + Appeal determination
- + Appeal comments
- + Appeal date
- + Determination data
- + Determination letter/notification
- + Pharmacy type

- + If determination is denial, include the reason for the denial and the NDC of the drug that may be purchased by similarly situated pharmacies at a price that is equal to or less than the MAC (RCW 19.340.100[4][c])
  - + If the appeal is upheld, include verification that an adjustment was made no later than one day after the date of determination and that all similarly situated pharmacies in the state were updated as well (RCW 19.340.100[4][c])
- B.** Provide a copy of your appeals policy, including the process for appeals, the internal timing requirements and the teams that manage the process.

Due to HIPAA requirements, claim history data that includes confidential information should only be sent to Mercer via e-mail if the data is encrypted (e.g., encrypt feature of WinZip 9.0 or more recent version). Alternatively, a CD or DVD containing the data can be sent to Mercer via overnight delivery. Or, the data file can be placed on a secure FTP site, which requires prior arrangement between Mercer and the claims administrator.

*Note: If password protected files are provided, passwords should be provided separately by telephone.*

#### **4. Pharmacy Call Center Information**

- A.** PBM Call Center Data: (Need data by caller type, i.e., pharmacy vs. provider. If possible provide subcategory of caller types, i.e., specialist vs Primary Care Physicians)
- + Documented P&Ps related to call center standards and metrics on appeals process
  - + PBM call center metrics related to inquiries and appeals required by the contract and service level agreement (e.g., average handling time, service level, customer satisfaction, etc.)
  - + Call logs
  - + First response and final response time to an appeal
  - + Availability for telephone inquiry and appeals
  - + Number of inquiries by provider and pharmacy
  - + Number of calls to resolution
  - + Description of the inquiry categories
  - + Number of inquiries that lead to appeals
  - + Time from inquiry to appeals resolution



## II. Detail Level Tables for Pharmacy Class MAC Reimbursement Analysis

The information contained in this Appendix are detail level tables for the MAC reimbursement analysis for Pharmacy Class. As mentioned, it's not useful to make comparisons of pricing for these breakouts because reimbursement for the non-community/retail pharmacies may be effectuated differently, including 340B pricing.

### PBM MAC Reimbursement Dollar Variance to NADAC Pricing – Pharmacy Class

PBM MAC Reimbursement Dollar Variance to NADAC Pricing - Pharmacy Class						
	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
COMMUNITY/RETAIL PHARMACY	\$ 5,209,254	\$ (565,719)	\$ 6,026,711	\$ 438,793	\$ 9,568,495	\$ 7,112,285
LONG TERM CARE PHARMACY	\$ 345,019	\$ 37,395	\$ 504,061	\$ -	\$ 300,400	\$ 594,393
CLINIC PHARMACY	\$ 455,592	\$ 7,439	\$ 62,517	\$ -	\$ 266,546	\$ 536,577
INSTITUTIONAL PHARMACY	\$ 76,419	\$ 2,094	\$ 18,832	\$ -	\$ 35,985	\$ (245,186)
<b>Total</b>	<b>\$ 6,100,260</b>	<b>\$ (518,866)</b>	<b>\$ 6,667,203</b>	<b>\$ 438,791</b>	<b>\$ 10,599,017</b>	<b>\$ 8,100,105</b>

### Variance to NADAC % of Paid Ingredient Cost – Pharmacy Class

Variance to NADAC % of Paid Ingredient Cost - Pharmacy Class						
	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
COMMUNITY/RETAIL PHARMACY	13.5%	-6.6%	4.9%	3.9%	9.9%	3.7%
LONG TERM CARE PHARMACY	12.8%	5.8%	9.4%	0.0%	9.6%	11.9%
CLINIC PHARMACY	13.8%	5.0%	3.6%	0.0%	13.1%	10.0%
INSTITUTIONAL PHARMACY	12.5%	2.2%	2.4%	0.0%	8.1%	-13.6%
<b>Total</b>	<b>13.4%</b>	<b>-5.4%</b>	<b>5.0%</b>	<b>3.9%</b>	<b>9.9%</b>	<b>3.9%</b>

### PBM MAC Reimbursement Dollar Variance to Benchmark MAC 1 Pricing – Pharmacy Class

PBM MAC Reimbursement Dollar Variance to Benchmark MAC 1 Pricing - Pharmacy Class						
	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
COMMUNITY/RETAIL PHARMACY	\$ 8,037,298	\$ (2,401,978)	\$ (8,582,163)	\$ (866,294)	\$ (216,697)	\$ (20,703,897)
LONG TERM CARE PHARMACY	\$ 484,764	\$ (23,598)	\$ 136,307	\$ -	\$ 27,031	\$ (129,751)
CLINIC PHARMACY	\$ 703,720	\$ (19,022)	\$ (219,415)	\$ -	\$ 139,844	\$ (177,482)
INSTITUTIONAL PHARMACY	\$ 65,374	\$ (17,063)	\$ (186,447)	\$ -	\$ (45,130)	\$ (190,671)
<b>Total</b>	<b>\$ 9,310,374</b>	<b>\$ (2,465,778)</b>	<b>\$ (8,969,654)</b>	<b>\$ (866,349)</b>	<b>\$ (192,308)</b>	<b>\$ (21,336,531)</b>

### Variance to Benchmark MAC 1 % of Paid Ingredient Cost – Pharmacy Class

Variance to Benchmark MAC 1 % of Paid Ingredient Cost - Pharmacy Class						
	PBM 1	PBM 2	PBM 3	PBM 4	PBM 5	PBM 6
COMMUNITY/RETAIL PHARMACY	20.8%	-27.8%	-7.0%	-7.7%	-0.2%	-10.7%
LONG TERM CARE PHARMACY	17.9%	-3.7%	2.5%	0.0%	0.9%	-2.6%
CLINIC PHARMACY	21.3%	-12.7%	-12.6%	0.0%	6.9%	-3.3%
INSTITUTIONAL PHARMACY	10.7%	-18.2%	-23.8%	0.0%	-10.1%	-10.5%
<b>Total</b>	<b>20.5%</b>	<b>-25.8%</b>	<b>-6.8%</b>	<b>-7.7%</b>	<b>-0.2%</b>	<b>-10.3%</b>

**PBM MAC Reimbursement Dollar Variance to Benchmark MAC 2 Pricing – Pharmacy Class**

<b>PBM MAC Reimbursement Dollar Variance to Benchmark MAC 2 Pricing - Pharmacy Class</b>						
	<b>PBM 1</b>	<b>PBM 2</b>	<b>PBM 3</b>	<b>PBM 4</b>	<b>PBM 5</b>	<b>PBM 6</b>
COMMUNITY/RETAIL PHARMACY	\$ 9,484,914	\$ (2,837,083)	\$ (3,323,055)	\$ (998,159)	\$ 4,222,100	\$ (17,980,653)
LONG TERM CARE PHARMACY	\$ 444,533	\$ (114,564)	\$ 119,355	\$ -	\$ 105,878	\$ (294,563)
CLINIC PHARMACY	\$ 913,203	\$ (17,946)	\$ (144,946)	\$ -	\$ 233,132	\$ 25,481
INSTITUTIONAL PHARMACY	\$ 99,958	\$ (18,843)	\$ (175,339)	\$ -	\$ (15,327)	\$ (165,643)
<b>Total</b>	<b>\$ 10,966,744</b>	<b>\$ (2,993,369)</b>	<b>\$ (3,596,743)</b>	<b>\$ (998,197)</b>	<b>\$ 4,757,374</b>	<b>\$ (18,546,424)</b>

**Variance to Benchmark MAC 2 % of Paid Ingredient Cost – Pharmacy Class**

<b>Variance to Benchmark MAC 2 % of Paid Ingredient Cost - Pharmacy Class</b>						
	<b>PBM 1</b>	<b>PBM 2</b>	<b>PBM 3</b>	<b>PBM 4</b>	<b>PBM 5</b>	<b>PBM 6</b>
COMMUNITY/RETAIL PHARMACY	24.5%	-32.9%	-2.7%	-8.9%	4.4%	-9.3%
LONG TERM CARE PHARMACY	16.4%	-17.9%	2.2%	0.0%	3.4%	-5.9%
CLINIC PHARMACY	27.7%	-12.0%	-8.3%	0.0%	11.5%	0.5%
INSTITUTIONAL PHARMACY	16.4%	-20.1%	-22.3%	0.0%	-3.4%	-9.2%
<b>Total</b>	<b>24.2%</b>	<b>-31.4%</b>	<b>-2.7%</b>	<b>-8.9%</b>	<b>4.4%</b>	<b>-8.9%</b>

### III. Sample Recommend OIC Appeals Form

Sections 1 – 3 to be completed by the submitting pharmacy		
<b>Section 1: Pharmacy Information</b>		
Pharmacy Name:	National Provider Identifier (NPI):	
Street Address:	City:	Zip:
Contact Name:	Contact Email:	
Contact Phone:	Chain Affiliation:	
<b>Section 2: Appeal Information</b>		
Pharmacy Benefit Manager (PBM):	PBM Appeal Date: Click here to enter a date.	
PBM Contact Name:	PBM Contact Email:	PBM Contact Phone:
PBM Appeal Determination Date: Click here to enter a date.	PBM Provided Alternate National Drug Code (NDC):	
PBM Reason for Denial ( <i>please include a copy of PBM notification</i> ):		
<b>Section 3: Drug Information</b>		
Drug Name:	Drug Strength:	
Date of Service: Click here to enter a date.	Prescription Number:	
Invoice Unit Acquisition Cost ( <i>please include a copy of the invoice for this drug</i> ):		
Invoice Date: Click here to enter a date.	Units Dispensed:	
PBM Maximum Allowable Cost (MAC) unit rate allowed:		
Reason Unable to Purchase PBM Alternate NDC At PBM Reimbursement Rate:		
Additional Comments:		
<b>Sections 4 – 6 to be completed by OIC</b>		
<b>Section 4: Intake</b>		
Date Received: Click here to enter a date.	Method of Appeal:	
<b>Section 5: OIC Determination</b>		
Determination:	Reason:	
Unit Cost Approved:	Date Pharmacy Notified of Determination: Click here to enter a date.	
Date Unit Cost Effective: Click here to enter a date.	Date PBM Notified of Determination: Click here to enter a date.	
<b>Section 6: PBM Change Verification</b>		
Date PBM Confirmed Unit Cost Updated: Click here to enter a date.		
PBM Confirmed Pharmacy Was Notified to Resubmit Claim(s):		
Date Closed: Click here to enter a date.		

## IV. Appeals Processes in Other States

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### Overview

In the past few years, states have increasingly passed legislation design to improve transparency with MAC pricing. PBM MAC pricing appeals laws are one of the actions that states have taken to provide increased transparency. The appeals process helps ensure that pharmacies are reimbursed fairly. MAC pricing transparency and appeals regulations in other states were reviewed and compared with Washington's for the OIC's review.

### Key Findings

- + OIC's 30-day submission window is an average length of submission time and OIC's 30-day response time is generous compared to like states.
- + The outcome of approved and denied appeals was very similar across comparable states and Washington.
- + OIC has three significant standards that go above and beyond the standards set by comparable states.

### Method

A scan of MAC pricing transparency regulations was performed to compare other states' regulations to Washington's. 29 states have MAC transparency laws in some phase of development. Fourteen states have passed PBM MAC appeals process laws. Key requirements were summarized and can be found in Exhibit 84. Four states that are similar to Washington in size and population were chosen and additional analysis was conducted. Those states include:

- + Colorado
- + Minnesota
- + Oregon
- + Utah

### Data Analysis

Exhibit 83 lists key MAC pricing appeals process requirements in Washington and the four selected states. The components include:

- + Submission of appeal timeline
- + PBM response timelines
- + PBM response requirements

**Exhibit 83: Select States' MAC Appeals Requirements**

Washington State Compared to Other States					
Criteria	WA	CO	MN	OR	UT
Appeal Window	Not Addressed	21 days following initial claim	15 business days following initial claim	30 days after the claim is submitted	21 days following initial claim adjudication
Submitted To	PBM	PBM	PBM	PBM	PBM
Threshold	Pharmacy paid amount that is greater than the reimbursement rate	Not Addressed	Not Addressed	Pharmacy paid amount that is greater than the reimbursement rate	Not Addressed
Appeal Decision Made	Within 30 days of submission	Within 21 days after appeal	Within 7 business days after appeal is received	7 business days	Within 14 business days
If Appeal Approved	PBM makes reasonable adjustment the day after the appeal is approved	PBM makes adjustment to a date not later than one day after the date of determination	PBM makes adjustment to a date not later than one day after the date of determination; adjusts price to similarly situated pharmacies as defined by the plan sponsor	PBM makes an adjustment for the pharmacy that filed the appeal from date of original claim adjudication forward	Not Addressed
If Appeal Disapproved	PBM must provide reason for denial and NDC of drug within MAC rate	PBM must provide reason for denial and NDC of drug at or below benchmark price	PBM must provide reason for denial and NDC of drug within MAC rate	PBM must provide reason for denial and NDC of drug within MAC rate	PBM must provide reason for denial and NDC of drug within MAC rate

**Observations**

- + Washington's requirement's for approved and denied MAC appeals is similar to the four states selected.
- + Generally, when appeals are approved, states require the PBM to reimburse the pharmacy within a short time frame.

OIC had three standards that are not required in the comparison group states:

- + The requirement to have a second level appeals process at OIC for denied appeals
- + The automatic denial of an appeal if the PBM does not respond to an appeal within 30 days
- + A limitation on who can file a second level appeal to pharmacies with fewer than 15 stores

Exhibit 84 provides a summary of the fourteen state MAC appeals laws. The exhibit provides the following:

- + Legislation citation
- + Effective date
- + Summary of the legislation
- + Website to locate the legislation

**Exhibit 84: Summary of 14 States’ MAC Appeals Laws**

States with MAC Rate Appeal Laws				
State	Law	Date	Excerpt	Site
CO	HB 14-1213 Colorado Revised Statute 25-37-102(13)	6/6/2014	Each contract between a pharmacy benefit manager and a pharmacy must include a process to appeal, investigate, and resolve disputes regarding maximum allowable cost pricing.	<a href="http://www.leg.state.co.us/clics/clics2014a/csl.nsf/f\$billcont2/563FCE3875CA50E087257C3000067611/\$FILE/1213_enr.pdf">http://www.leg.state.co.us/clics/clics2014a/csl.nsf/f\$billcont2/563FCE3875CA50E087257C3000067611/\$FILE/1213_enr.pdf</a>
GA	HB 470 Georgia Annotated Codes; Title 26 Chapter 4 Article 6 and Title 33 Chapter 64	7/1/2015	All contracts between a pharmacy benefits manager and a contracted pharmacy are between a pharmacy benefits manager and a pharmacy's contracting representative or agent, such as a pharmacy services administrative organization, shall include a process to internally appeal, investigate, and resolve disputes regarding multi-source generic drug pricing.	<a href="http://www.legis.ga.gov/Legislation/en-US/display/20152016/HB/470">http://www.legis.ga.gov/Legislation/en-US/display/20152016/HB/470</a>
KY	KY SB117 KRS 304.17A-162	4/9/2016	Establish a process for contracted pharmacies, pharmacy services administration organizations, or group purchasing organizations, to appeal, investigate, and resolve disputes regarding the maximum allowable cost pricing.	<a href="https://legiscan.com/KY/bills/SB117/2016">https://legiscan.com/KY/bills/SB117/2016</a>
LA	SB 410 Subpart C-1 of Part II of Chapter 6 of Title 22 of the Louisiana Revised Statutes	8/1/2014	The pharmacy benefits manager shall provide a reasonable administrative appeal procedure to allow pharmacies to challenge maximum allowable costs for a specific NDC or NDCs as not meeting the requirements of this Subpart or being below the cost at which the pharmacy may obtain the NDC.	<a href="https://legiscan.com/LA/text/SB410/2014">https://legiscan.com/LA/text/SB410/2014</a>
MI	SB 0656 (2013) 1939 PA 280	7/12/2014 Effective 91 days after session adjourns	The department of community health and contracted health plans shall utilize a process for maximum allowable cost pricing <u>reconsiderations</u> that must be	<a href="http://www.legislature.mi.gov/documents/2013-2014/publicact/pdf/2014-PA-0167.pdf">http://www.legislature.mi.gov/documents/2013-2014/publicact/pdf/2014-PA-0167.pdf</a>

States with MAC Rate Appeal Laws				
State	Law	Date	Excerpt	Site
			available and provided to providers and pharmacists.	
MN	2016 Minnesota Statutes 151.71	2014	Each contract between a pharmacy benefit manager and a pharmacy must include a process to appeal, investigate, and resolve disputes regarding maximum allowable cost pricing.	<a href="https://www.revisor.mn.gov/statutes/?id=151.71">https://www.revisor.mn.gov/statutes/?id=151.71</a>
MT	Montana Code Annotated 2015 33-22-173	2015	In contracting with a pharmacy, a plan sponsor or pharmacy benefit manager shall provide a procedure by which a pharmacy may appeal the price of a drug or drugs on the maximum allowable cost list.	<a href="http://leg.mt.gov/bills/mca/33/22/33-22-173.htm">http://leg.mt.gov/bills/mca/33/22/33-22-173.htm</a>
ND	HB 1363 chapter 19-02.1 of the North Dakota Century Code	4/12/2013	Provide a reasonable administrative appeals procedure to allow a dispensing pharmacy provider to contest a listed maximum allowable price rate.	<a href="https://legiscan.com/ND/text/1363/id/697653">https://legiscan.com/ND/text/1363/id/697653</a>
NY	Senate Bill 3346-B § 280-a to the Public Health Law	12/11/2015	A pharmacy benefit manager shall, with respect to contracts between a pharmacy benefit manager and a pharmacy or, alternatively, a pharmacy benefit manager and a pharmacy's contracting agent, such as a pharmacy services administrative organization, include a reasonable process to appeal, investigate and resolve disputes regarding multi-source generic drug pricing.	<a href="https://www.nysenate.gov/legislation/bills/2015/S3346/amendment/B">https://www.nysenate.gov/legislation/bills/2015/S3346/amendment/B</a>
OR	ORS 735.534	2016	A pharmacy benefit manager must establish a process by which a network pharmacy may appeal its reimbursement for a drug subject to maximum allowable cost pricing.	<a href="http://www.oregonlaws.org/ors/735.534">http://www.oregonlaws.org/ors/735.534</a>
TN	SB 1789 Amends TCA Title 56, Chapter 7, Part 31	3/31/2016, signed 3/23/2016	If a pharmacy chooses to contest the listed maximum allowable cost for a particular drug or medical product or device, the pharmacy shall have the right to designate a pharmacy services administrative organization or other agent to file and handle its appeal of the maximum allowable cost of the drug or medical product or device.	<a href="https://legiscan.com/TN/bill/SB1789/2015">https://legiscan.com/TN/bill/SB1789/2015</a>

States with MAC Rate Appeal Laws				
State	Law	Date	Excerpt	Site
UT	H.B. 113 Amends 31A-22-640	3/31/2014	Provide a process for the contracted pharmacy to appeal the maximum allowable cost.	<a href="http://le.utah.gov/~2014/bills/static/hb0113.html">http://le.utah.gov/~2014/bills/static/hb0113.html</a>
VA	HB 2031 Adds Virginia Code 38.2-3407.15:2	3/23/2015	Any contract between a carrier and its intermediary, pursuant to which the intermediary has the right or obligation to establish a maximum allowable cost, and any provider contract between a carrier and a participating pharmacy provider or its contracting agent, pursuant to which the carrier has the right or obligation to establish a maximum allowable cost, shall contain specific provisions that require the intermediary or carrier to provide a process for an appeal, investigation, and resolution of disputes regarding maximum allowable cost drug pricing.	<a href="https://legiscan.com/VA/text/HB2031/2015">https://legiscan.com/VA/text/HB2031/2015</a>
WI	SB 21 2015 Wisconsin Act 55	7/12/2015	A pharmacy benefit manger shall include in each contract with a pharmacy a process to appeal, investigate, and resolve disputes regarding maximum allowable cost pricing.	<a href="http://docs.legis.wisconsin.gov/2015/related/acts/55.pdf">http://docs.legis.wisconsin.gov/2015/related/acts/55.pdf</a>



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