

# The Cost of Dispensing Study

An independent comparative analysis of U.S. prescription dispensing costs

August 2015



Commissioned by:



COALITION *for* COMMUNITY  
PHARMACY ACTION

**NATIONAL COST OF DISPENSING (COD) STUDY**  
**FINAL REPORT**  
**AUGUST 2015**

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## I. Executive Summary

### A. Objective and Overview of the National Cost of Dispensing Study

The MPI Group was engaged by the Coalition for Community Pharmacy Action (CCPA) on behalf of the National Association of Chain Drug Stores (NACDS) and the National Community Pharmacists Association (NCPA), to perform an independent study to identify and quantify the costs incurred by pharmacies across the United States in dispensing prescriptions. The primary purpose of the study was to provide a comparative analysis of dispensing costs across all states and types of payers, including Medicaid.

Data were submitted for nearly 25,300 pharmacies, of which 24,271 provided complete and usable data. The survey requested data for the calendar year 2013. The 24,271 pharmacies reported filling more than 1.9 billion prescriptions during this time, of which approximately 157 million were paid by Medicaid. National computations include data from all states, the District of Columbia, Guam, Puerto Rico and the U.S. Virgin Islands. Data in this report were adjusted for non-response bias and cover 19,179 pharmacies filling more than 1.2 billion prescriptions in 2013, of which 18,174 pharmacies filled approximately 105 million prescriptions paid by Medicaid.

The Cost of Dispensing Model uses five cost elements, which are explained in detail in the full report:

- Prescription department salaries and benefits
- Other prescription department costs
- Facilities costs
- Other store/location costs
- Allocated corporate overhead, where applicable

The overall cost of dispensing for all prescriptions reported by the pharmacies was computed first. The cost of dispensing specific to Medicaid prescriptions was then calculated by adjusting the overall COD to reflect differences in time required to fill Medicaid prescriptions, as reported by pharmacists, and the interest costs associated with carrying Medicaid receivables. Costs associated with marketing expenses, bad debt, and charitable contributions were subtracted from any costs to fill Medicaid prescriptions.

This report focuses on four views of the overall COD and the Medicaid COD:

- Cost of dispensing on a per-prescription basis.
- Cost of dispensing on a per-store basis (that is, every store is counted equally, regardless of its prescription volume).
- Cost of dispensing for prescriptions filled by stores in rural locations and in urban locations.
- Cost of dispensing on a per-prescription basis and a per-store basis by state.

The full report provides detailed information about development of the survey instrument, distribution and tabulation of surveys, review of the data, confidentiality considerations, and the computational model for determining the cost of dispensing.

## **B. Summary of Findings**

The overall COD was calculated for more than 1.2 billion prescriptions dispensed by 19,179 pharmacies in all 50 states, the District of Columbia, Guam, Puerto Rico, and the U.S. Virgin Islands. The average (mean) overall COD per prescription in 2013 was \$10.55; the average overall COD per pharmacy was \$11.54. This difference indicates there are substantial variations in the number of prescriptions filled per pharmacy and that pharmacies with the greatest volume of prescriptions have significantly lower dispensing costs compared with pharmacies with the lowest volumes.

Most charts in the report show cost of dispensing (COD) in two ways – per prescription and per pharmacy. One reason these numbers can vary is that high-volume pharmacies typically have a lower COD than low-volume pharmacies. Therefore, the COD per prescription can be lower than the COD per pharmacy because lower-cost prescriptions make up a larger proportion of the population used to compute the COD. On the other hand, the COD per pharmacy treats every pharmacy equally, regardless of its prescription volume; a lower-volume, higher-cost pharmacy has the same impact on the COD per pharmacy as a higher-volume, lower-cost pharmacy. The COD per pharmacy provides the reader with information about the costs of the stores, regardless of how many prescriptions each store dispensed.

<b>Overall Cost of Dispensing, 2013</b>					
	<b>Frequency</b>	<b>Mean <sup>3</sup></b>	<b>Median <sup>4</sup></b>	<b>25<sup>th</sup> Percentile <sup>5</sup></b>	<b>75<sup>th</sup> Percentile <sup>5</sup></b>
COD per prescription <sup>1</sup>	1,250,213,034	\$10.55	\$10.08	\$8.48	\$11.94
COD per pharmacy <sup>2</sup>	19,179	\$11.54	\$10.84	\$9.07	\$13.03

<sup>1</sup>. Weighted data by volume of prescriptions; each prescription COD as one value (i.e., a pharmacy with 5,000 prescriptions has 5,000 values in the array of COD data).

<sup>2</sup>. Unweighted data; each pharmacy's COD as one value, regardless of the pharmacy's prescription volume.

<sup>3</sup>. Mean is the average value

<sup>4</sup>. Median is the midpoint value of responses

<sup>5</sup>. Percentiles: The 25th percentile is the value below which 25% of responses fall. The 75th percentile is the value below which 75% of responses fall.

The Medicaid cost of dispensing was similarly computed for more than 105 million prescriptions filled by the 18,174 pharmacies that reported Medicaid prescriptions and for which a Medicaid COD could be computed. Medicaid computations were based on fee-for-service Medicaid prescriptions only. Medicaid COD removes three costs that are not allowable under Medicaid: bad debts, marketing expenses, and charitable contributions. These costs accounted for \$0.17 per prescription. The national average Medicaid COD in 2013 was \$10.30 per prescription and \$11.47 per pharmacy. The average Medicaid COD per prescription is \$0.25 lower than the overall COD per prescription shown in the previous table. However, the Medicaid COD per pharmacy is only \$0.07 lower than the overall COD per pharmacy.

Medicaid Cost of Dispensing, 2013					
	Frequency	Mean	Median	25 <sup>th</sup> Percentile	75 <sup>th</sup> Percentile
Medicaid COD per prescription <sup>1</sup>	105,001,921	\$10.30	\$9.88	\$8.45	\$11.61
Medicaid COD per pharmacy <sup>2</sup>	18,174 <sup>3</sup>	\$11.47	\$10.83	\$8.95	\$13.03

1. Weighted data by volume of Medicaid prescriptions for which a Medicaid COD could be computed; each Medicaid prescription COD as one value.
2. Unweighted data; each pharmacy's Medicaid COD as one value, regardless of its Medicaid prescription volume.
3. 1,005 pharmacies for which an overall cost of dispensing could be reported did not provide Medicaid prescription volume, reported they did accept Medicaid prescriptions, and/or did not provide sufficient information to compute a Medicaid COD.

Of the 19,179 pharmacies in the database, 16,403 were classified as urban and 2,775 as rural by matching the stores' zip codes with Metropolitan Statistical Areas (1 pharmacy could not be classified by MSA). Rural stores' overall COD and Medicaid COD, per prescription, were approximately 6% below the COD's of urban pharmacies, but the average prescription volume, per store, was about the same for both the urban and rural pharmacies – 64,839 vs. 67,223, respectively. On the other hand, rural pharmacies filled 51% more average Medicaid prescriptions per store than urban pharmacies.

Survey respondents were asked to estimate the average work time for all activities required to dispense a prescription for each type of payer. Survey respondents for which a Medicaid COD could be computed, reported that, on average, prescriptions took the following amount of time to fill:

- Medicaid (9.3 minutes)
- Other third-party prescription (9.0 minutes)
- Prescriptions paid for by customer (8.5 minutes).

Similarly, the survey asked respondents to report the average time to receive payment for Medicaid, other third-party (including Medicare Part D), and customer-paid prescriptions. The responses for Medicaid varied significantly from one state to another, but on average, the pharmacies reported receiving payment from Medicaid 24 days after billing, compared with 21.9 days for other third parties. On a state-by-state basis, the survey shows that Medicaid programs' days to pay range from a high of 45.5 days average in New Hampshire to a low of 15.8 days average in the District of Columbia. The COD model used in this study added approximately \$.004 per day to the COD for each day payment was outstanding, based on the average prescription selling price and interest rates applicable during the study period.

The full report presents more detailed data nationally and for most states. Individual state-level information is omitted for certain states for one of two reasons. Either the number of pharmacies

for which an overall COD could be computed was too few, or the predominance of one organization's data in the sample created the potential for confidentiality concerns if the data were presented. For those states that do not have sufficient state-level data available, findings were presented for the state combined with nearby states if possible. Seven states (Arkansas, Delaware, Montana, New Mexico, North Dakota, South Dakota, and Wyoming) use combined data.

## II. Cost of Dispensing Study Methodology

### A. Overview

The MPI Group was engaged by the Coalition for Community Pharmacy Action (CCPA) on behalf of the National Association of Chain Drug Stores (NACDS) and the National Community Pharmacists Association (NCPA) to perform an independent study to identify and quantify the costs incurred by pharmacies across the United States in dispensing prescriptions. The primary purpose of the study was to provide a comparative analysis of dispensing costs by considering different states, population densities, and types of payers, including Medicaid.

### B. Survey Development

The 2014 National Cost of Dispensing (COD) Study focused on collecting the actual costs incurred by community retail pharmacies in calendar year 2013 that were related to dispensing prescription drugs. Data were gathered to identify costs that could be dependent on the type of payer, including Medicaid, and encompassed both independent and chain retail pharmacies across all states.

In preparation for the study, the CCPA obtained input from state Medicaid agencies on the design of the survey and elements to be included. Participating individuals were Linda Wiant, Georgia; Chris Johnson, Indiana; Cathy Traugott, Colorado; Cynthia Denmark, Delaware; Sara Drake, Minnesota; Susan Parker, Iowa; and Suzette Bridges, Arkansas.<sup>1</sup>

In designing the study, The MPI Group performed the following steps:

1. Analyzed prior studies performed at the request of state agencies to ensure that the methodology would be compatible with the needs of the state agencies.
2. Reviewed the methodology and results of a comparable study for CCPA, conducted in 2006 by Grant Thornton with the assistance of The MPI Group.
3. With minor variations, modeled the 2014 study on the survey methodology used for the 2006 study, including:
  - a. Mathematical model for computing the cost of dispensing,
  - b. Use of an online survey site, and
  - c. Creation of a spreadsheet version of the survey instrument that could be used by retail pharmacy chains that were reporting data for multiple locations.
4. Communicated with several independent pharmacies and chain retail pharmacies during and after the fielding of the study, to assist them in providing complete and accurate data for the study.
5. Modeled the 2014 report on the 2006 study report.

<sup>1</sup> Participants suggested to CCPA that the following categories be *excluded* from Medicaid COD: adherence packaging, extra packaging services, delivery, bad debts, charitable contributions, marketing, and 2% wholesaler tax (Minnesota). The following categories were suggested as additional units of analysis: volume impact, specialty pharmacy, infusion, compounding, 340B prescriptions, share of prescriptions e-prescribed, share of prescriptions for which refills were approved electronically, share of prescriptions with unit of use packaging, and share of prescriptions filled via central fill. It was determined that costs that are not legally allowable for Medicaid would be subtracted from the Medicaid COD. Data were not requested on share of prescriptions e-prescribed, share of prescriptions for which refills were approved electronically, share of prescriptions with unit of use packaging, and share of prescriptions filled via central fill.

### **C. Distribution and Tabulation of Surveys**

After the design of the survey was completed, the survey was distributed starting on June 18, 2014. NACDS and NCPA, which represent the retail pharmacies operating in the United States, notified their membership, as well as retail pharmacy chains that are not members, of the COD study. The two organizations also conducted a webcast to help pharmacy executives understand the information needed to complete the survey, and made available the COD Study questionnaire, a COD Study instruction sheet, a spreadsheet that enabled organizations to submit data on multiple pharmacies in one electronic document, and a Cost of Dispensing Q&A document.

Initial results from the 2014 COD Study were collected up to Sept. 10, 2014. Options for completing the survey were provided to the respondents:

1. The survey could be accessed and completed on-line for each individual store.
2. The survey could be completed and mailed or faxed for each individual store.
3. A spreadsheet version for reporting multiple stores within a group could be completed and sent electronically.

In total, the spreadsheet version of the survey was used by 42 organizations with multiple pharmacies, providing data on 24,585 pharmacies. There were 678 surveys submitted by individual pharmacies using mail, fax or online surveys.

During this time, The MPI Group responded to participants' questions to ensure that the information submitted by respondents was as complete and accurate as possible.

### **Review of Data**

The MPI Group reviewed the data for completeness and reasonableness. To finalize the data, The MPI Group performed the following procedures after loading data into a COD database:

- Made corrections where the nature of the error was apparent. For example, zeroes were inserted where clearly appropriate for certain data elements that had been left blank and obvious arithmetic errors were corrected. Contacted chain respondents regarding data that were missing and/or appeared unusual for their stores. The MPI Group communicated these apparent anomalies with the identified contacts at the organization and in most cases was able to resolve the questions — accepting data as correct, receiving revised data from the chain, or revising the data based on chain input.
- After the above process was completed, The MPI Group computed a COD for 24,427 pharmacies (i.e., cost of dispensing could be calculated for all of these pharmacies). Of these, 13 extreme outliers were removed due to implausible CODs, reducing the database to 24,414 pharmacies. From this total, 24,271 pharmacies were kept within the database if their CODs were within four standard deviations of the mean, based on cost of dispensing per pharmacy. Analyses of Medicaid COD findings were done using the database of 24,271 for those pharmacies for which a Medicaid COD could be computed (23,132 pharmacies).
- Based on analysis of the previous step, The MPI Group contacted 20 chains that provided blank or "\$0" data for the variable of "Corporate costs allocated to the prescription



department.” Of these, seven chains responded with revised data for 13,467 pharmacies; two chains responded that their original submission was correct for 429 pharmacies; and 11 chains did not comment on correctness of the variable, so their data for 205 pharmacies was left as originally received.

- The database of 24,271 pharmacies was adjusted for a non-response bias (i.e., an adjustment required when a group of potential respondents is underrepresented in a study sample; in the COD Study sample, lower-volume pharmacies were underrepresented). The adjustment was based on a comparison of the average total prescriptions per pharmacy in the COD Study database at a state-by-state level to the actual average total prescription data per pharmacy, based on PHAST® Prescription Monthly and CMS Drug Utilization Data.

The COD Study database was then revised upward or downward for each state to more accurately match the actual average prescription volumes per pharmacy in each state. To adjust, pharmacies by state were removed at the extremes of the distribution:

- If the COD Study state average was higher than actual average, the highest volume pharmacy was removed from the database, the total prescription average compared, and the process repeated until the COD Study average prescription volume was as close to possible to the actual prescription volume for a state.
- If the COD Study average was lower than actual average, the lowest volume pharmacy was removed from the database, the total prescription average compared, and the process repeated until the COD Study average prescription volume was as close to possible to the actual prescription volume for a state.
- Forty-six states and the District of Columbia had higher-volume pharmacies removed from the COD Study database, and four states had lower volume pharmacies removed. This process removed 21% of pharmacies from the overall database (new total of 19,179 pharmacies for which a COD could be computed and 18,174 pharmacies for which a Medicaid COD could be computed). The national findings for COD and Medicaid COD prior to the non-response bias adjustment can be found in Appendix H.

## **Confidentiality**

To secure participation by a large number of pharmacies, potential respondents to the COD Study were informed that all data would be kept confidential, and data would be reported and shared only in aggregate form to protect confidentiality. Where this report includes state-level data, some states have been excluded to ensure confidentiality of respondents. Upon completion of the analysis, contact information fields, zip codes, and other information that might make it possible to identify a specific pharmacy and/or retail chain will be purged from the database.

## **D. Computation Model for Determining Cost of Dispensing**

The 2014 Cost of Dispensing (COD) study was designed to generate the following:

- The overall cost of dispensing for all prescriptions filled during the 2013 calendar year.
- The cost of dispensing prescriptions that were billed specifically to a state's Medicaid program.
- A cost of dispensing for pharmacies in urban and in rural areas.

### **Time Period Covered by the Study**

The time period covered by this study was calendar year 2013. A few respondents provided data that covered a 12-month fiscal year ending in the second half of 2013 with start and end dates different from the actual calendar year.

### **Overall Cost of Dispensing**

The overall cost of dispensing computed for this study comprises the following cost elements:

#### 1. Prescription Department Payroll (including compensation, benefits, and payroll taxes)

This cost element includes all compensation for employees working in the prescription department. The payroll costs for employees who divide their time between the prescription department and other departments within the store are pro-rated to include only the percentage of their time applicable to the prescription department. Any payroll costs for employees who spend all of their time working outside of the prescription department (for example, in the cosmetics department) are excluded.

#### 2. Prescription Department Costs

This cost element includes costs other than payroll that are incurred only by the prescription department. These costs are not shared with other departments within the store. The survey provided nine subcategories of costs that could be included in this category:

- Prescription containers, labels, and other pharmacy supplies
- Professional liability insurance for pharmacists
- Prescription department licenses, permits, and fees
- Dues, subscriptions, and continuing education for the prescription department
- Delivery expenses (only prescription-related)
- Computer systems, including web services (related only to the prescription department)
- Pharmacy-specific equipment (e.g., automated dispensing systems) depreciation, rental, and/or lease costs
- Transaction fees

- Other prescription-department-specific costs

### 3. Facilities Costs

These facility costs include costs that are shared with other departments within the store. Facilities costs are allocated to the cost of dispensing based on the percentage of the store building's total square footage that is occupied by the prescription department. It includes storage, waiting/counseling area, prescription counter, etc. The survey provided eight subcategories of costs that could be included in this category:

- Rent
- Utilities (gas, electric, water, and sewer)
- Real estate taxes
- Facility insurance
- Maintenance and cleaning
- Depreciation
- Mortgage interest
- Other facility costs

### 4. Other Store/Location Costs

There are other store costs that are not solely associated with the prescription department and not included in facilities costs. These costs are allocated to the cost of dispensing based on prescription sales as a percentage of total store sales. The survey provided 13 subcategories of costs that could be included in this category:

- Marketing and advertising
- Professional services (e.g., accounting, legal, consulting)
- Telephone and data communications
- Computer systems and support
- Other depreciation and amortization
- Office supplies
- Other insurance
- Taxes other than real estate, payroll, or sales taxes
- Franchise fees, if applicable
- Bad debts
- Charitable contributions
- Other interest
- Other costs not included elsewhere

### 5. Corporate Costs Allocated to the Prescription Department

This cost element applies only to stores that are part of a group of stores or larger business enterprise for which centralized services are performed at district, regional or central corporate locations. Individual stores that are not part of a larger business group would have no costs included in this category, because all of their costs should be captured in the first

four categories. The survey instructions defined a method to calculate the appropriate portion of these costs applicable to each store/location by dividing these costs into three categories:

- Central or corporate costs that were incurred totally in support of the prescription departments of the stores, such as corporate pharmaceutical procurement, third-party payment processing or compliance with pharmacy regulations. These costs are allocated 100% to the cost of dispensing.
- Corporate costs that support only non-prescription products and services. None of these costs are included in the cost of dispensing.
- Central or corporate costs that can be related to both the prescription departments and other store/location operations, such as general administration, accounting, human resources, information systems, general marketing, etc. These costs are allocated to the cost of dispensing based on the group's prescription sales as a percentage of total sales.

The total of the corporate costs applicable to all stores' prescription departments, as computed in the previous steps, is then allocated to each individual store based on that store's prescription sales as a percentage of all stores' prescription sales.

### **Medicaid Cost of Dispensing**

The scope of this study included the calculation of the cost of dispensing related specifically to those prescriptions paid by state Medicaid programs. Medicaid computations were done on fee-for-service Medicaid prescriptions only, as those are the only ones that can be identified as Medicaid by retail pharmacies. The computation of this cost of dispensing differs from the overall cost of dispensing in three categories – payroll, interest costs, and the *exclusion of marketing and advertising expenses, bad debts, and charitable contributions (which are included in Other Store/Location Costs in the overall COD)*. All other elements of the overall cost of dispensing are calculated in the same way for the Medicaid cost of dispensing.

#### **1. Prescription Department Payroll (including compensation, benefits, and payroll taxes)**

Prescription department payroll allocated to the overall cost of dispensing is adjusted to reflect pharmacists' estimates of the difference in work time typically required to dispense Medicaid prescriptions as compared with prescriptions covered by other third parties and prescriptions for customers paying with cash, check, credit card or store account (i.e., no insurance plan is involved). It should be noted that this study relied on the pharmacists' time estimates for this allocation; The MPI Group did not perform time studies or other procedures to validate the estimates. Some of the pharmacies and retail chains may have performed time studies to develop their estimates, whereas others consulted with their more experienced pharmacists to make these estimates.

The Medicaid payroll cost component is calculated using the minutes to fill each type of prescription and the number of prescriptions of each type filled by the store. Store payroll costs are then allocated proportionately to Medicaid prescriptions based on Medicaid minutes as a percentage of total minutes. This computation can result in a reduction, increase, or no change in the payroll cost per prescription assigned to Medicaid when compared with the store's overall cost of dispensing.

## 2. Interest Costs Related to Carrying Accounts Receivable for Medicaid Prescriptions

Carrying receivables for unpaid insurance claims creates actual or implicit interest and other costs. In this study, these costs may be included either in other store/location costs or in the corporate costs. Different states' Medicaid programs have different payment cycles; compared with other insurance payers, Medicaid programs may pay their claims in fewer days, about the same, or more days. Survey respondents reported the average days that receivables were outstanding for each type of payer.

Using an estimated average interest rate charged to retailers for the year covered by the survey, costs were reallocated from the overall cost of dispensing to the Medicaid cost of dispensing to reflect each state's payment cycle as experienced by the stores. Recognizing that retailers' short-term borrowing rates vary depending on their size, credit history, debt ratios and other factors, the rate used was a LIBOR short-term rate plus 200 basis points, which averaged 2.4% for the period covered by the study. No other carrying costs that might be attributable to accounts receivable were added. In some states, this allocation increased the Medicaid cost of dispensing as compared with the overall cost of dispensing, whereas in other states the opposite was true. This approach resulted in allocating approximately four-tenths of one cent (\$0.004) of interest to the COD for each day payment was outstanding.

## 3. Exclusion of Marketing Expenses, Bad Debt, And Charitable Contributions

These three cost elements are included in the overall cost of dispensing for all prescriptions (as part of Other Store/Location Costs) but were removed before calculating the Medicaid COD because these are not currently considered allowable costs by Medicaid programs.

### **Urban and Rural Cost of Dispensing**

The survey requested respondents to identify the zip code for each store for which data were submitted. These zip codes were matched to the Metropolitan Statistical Areas as defined by the United States Office of Management and Budget (OMB). The computation of the cost of dispensing for urban and rural stores is the same so that costs can be compared for the two types of regions.

### **Computation of National and State Costs of Dispensing**

In the primary aggregation of individual stores' cost of dispensing into national or state costs, every prescription was given equal weight; that is, the COD of stores with high prescription volumes contribute more prescriptions to the national and statewide per-prescription averages and other statistics than stores with small volumes. For example, a store reporting 80,000 total prescriptions filled during 2013 would have twice the impact on a given mean compared to a store with 40,000 total prescriptions.

In addition to these per-prescription statistics, this report shows cost of dispensing per store, where each pharmacy in the survey receives equal weight, regardless of the number of prescriptions dispensed. Using the example above, in the per-store statistics, the small-volume store and the large-volume store would carry equal weight.

Both sets of results provide important information because they reflect two ways of thinking about cost of dispensing among retail pharmacies. Weighting by prescription reflects the costs of dispensing where most prescriptions are filled. The per-prescription mean could be used, for example, to compute the total cost of dispensing for all prescriptions in the nation or in a state by multiplying this average by the number of prescriptions filled.

However, giving equal weight to each pharmacy provides insights into the variation of costs by pharmacies, whether they fill large or small volumes of prescriptions. The per-store statistics illustrate that some pharmacies serve a smaller customer base, which tends to make their COD higher.

### III. Findings

#### A. Findings – National Data

The overall cost of dispensing (COD) was calculated for more than 1.2 billion prescriptions dispensed by 19,179 pharmacies, with data submitted from pharmacies in all 50 states, the District of Columbia, Guam, Puerto Rico, and the U.S. Virgin Islands. These prescriptions represent total dispensing activity for the calendar year 2013 for the pharmacies participating in the study. Mean and median values are shown in each table; mean values are the average while the median is the midpoint, with half of all values higher and half lower than the median. Both mean and median are shown to illustrate the distribution of the data. When these two numbers are similar, it usually suggests that the data has a relatively symmetrical distribution. For many tables in this report, the mean exceeds the median. This suggests that the CODs are somewhat asymmetrically distributed, with values below the mean clustered more closely together than values above the mean.

Most tables also show the 25<sup>th</sup> and 75<sup>th</sup> percentiles. The 25<sup>th</sup> percentile is the point in the data where one quarter of the values are lower and three quarters are higher; the 75<sup>th</sup> percentile is the reverse. The median and the 25<sup>th</sup> and 75<sup>th</sup> percentiles can provide interesting perspectives on the data beyond the information conveyed by the simple mean. They help the reader understand how the values are dispersed around the average – whether, for example, the values are tightly clustered around the mean, widely scattered, or skewed in one direction.

#### Overall Cost of Dispensing – All Prescriptions

Table 1 shows that the mean national overall COD per prescription was \$10.55; the average overall COD per pharmacy was \$11.54. This difference indicates that there are substantial variations in the number of prescriptions filled per pharmacy, with higher-cost pharmacies filling fewer prescriptions. The difference between the mean and median for CODs per pharmacy is greater than the difference between the mean and median per prescription, suggesting that the per-pharmacy values are more skewed than the per-prescription values. In addition, the 25<sup>th</sup> and 75<sup>th</sup> percentiles suggest that pharmacies with the greatest volume of prescriptions have significantly lower dispensing costs compared with pharmacies with the lowest volumes.

Table 1: Overall Cost of Dispensing					
	Frequency	Mean	Median	25 <sup>th</sup> Percentile	75 <sup>th</sup> Percentile
COD per prescription <sup>1</sup>	1,250,213,034	\$10.55	\$10.08	\$8.48	\$11.94
COD per pharmacy <sup>2</sup>	19,179	\$11.54	\$10.84	\$9.07	\$13.03

<sup>1</sup>. Weighted data by volume of prescriptions; each prescription COD as one value (i.e., a pharmacy with 5,000 prescriptions has 5,000 values in the array of COD data).

<sup>2</sup>. Unweighted data; each pharmacy's COD as one value, regardless of the pharmacy's prescription volume.

## Cost of Dispensing – Medicaid Prescriptions Only

The Medicaid cost of dispensing was similarly computed for more than 105 million prescriptions filled by the 18,174 pharmacies that reported Medicaid prescriptions and for which a Medicaid COD could be computed. As shown in Table 2, the national average Medicaid COD in 2013 was \$10.30 per prescription and \$11.47 per pharmacy. The average Medicaid COD per prescription is \$0.25 lower than the overall COD shown in the previous table. However, the Medicaid COD per pharmacy is only \$0.07 lower than the overall COD per pharmacy.

	<b>Frequency</b>	<b>Mean</b>	<b>Median</b>	<b>25<sup>th</sup> Percentile</b>	<b>75<sup>th</sup> Percentile</b>
Medicaid COD per prescription <sup>1</sup>	105,001,921	\$10.30	\$9.88	\$8.45	\$11.61
Medicaid COD per pharmacy <sup>2</sup>	18,174 <sup>3</sup>	\$11.47	\$10.83	\$8.95	\$13.03

- <sup>1</sup> Weighted data by volume of Medicaid prescriptions for which a Medicaid COD could be computed; each Medicaid prescription COD as one value.
- <sup>2</sup> Unweighted data; each pharmacy's Medicaid COD as one value, regardless of its Medicaid prescription volume.
- <sup>3</sup> 1,005 pharmacies for which an overall cost of dispensing could be reported did not provide Medicaid prescription volume, reported they did accept Medicaid prescriptions, and/or did not provide sufficient information to compute a Medicaid COD.

## Cost of Dispensing Components – Overall and Medicaid

The mean CODs presented above in Tables 1 and 2 are presented in Table 3 showing the five major cost components of the COD model. This table shows that payroll costs are approximately two-thirds of the total costs of each COD. Payroll costs also are the principal factor causing the COD per pharmacy to exceed the COD per prescription, most likely because higher-volume pharmacies can spread their payroll costs over a larger number of prescriptions than lower-volume pharmacies. Facilities costs and other store/location costs show a similar pattern, although the impact on COD is much smaller.

	<b>Overall COD per Prescription- Mean</b>	<b>Overall COD per Pharmacy - Mean</b>	<b>Medicaid COD per Prescription - Mean</b>	<b>Medicaid COD per Pharmacy - Mean</b>
Payroll Costs	\$6.99	\$7.71	\$6.92	\$7.88
Prescription Dept. Costs	\$0.46	\$0.53	\$0.44	\$0.50
Facilities Cost Allocation	\$0.50	\$0.58	\$0.43	\$0.57
Other Store/Location Costs	\$1.24	\$1.34	\$1.04	\$1.37
Corporate Cost Allocation	\$1.36	\$1.38	\$1.62	\$1.40
Adjustments (expenses not allowed under Medicaid)	-	-	-\$0.17	-\$0.27
<b>Total</b>	<b>\$10.55</b>	<b>\$11.54</b>	<b>\$10.30</b>	<b>\$11.47</b>

<sup>1</sup> Columns may not sum precisely due to rounding of decimals.



## Relationship of Pharmacies' Overall Cost of Dispensing to Pharmacy Prescription Volume

Tables 4 and 5 show mean and median CODs for the 25% of highest-volume pharmacies (4,795 pharmacies), accounting for 38% of prescription volume in the study) and for the 25% of lowest volume pharmacies (4,795 pharmacies), accounting for 13% of prescription volume. In Table 4, the highest-volume pharmacies had a mean COD per prescription of \$8.81. At the other end of the spectrum, the lowest-volume pharmacies had a mean COD per prescription of \$14.63. Table 5 shows similar results when the mean COD is computed per pharmacy rather than per prescription – \$8.90 compared with \$15.34.

<b>Table 4: Overall COD per prescription by volume</b>			
	<b>Frequency - Prescriptions</b>	<b>Mean</b>	<b>Median</b>
Pharmacies with prescription volume of more than 81,029.5 — per prescription <sup>1</sup>	477,588,473	\$8.81	\$8.48
Pharmacies with prescription volume of more than 63,306.01 to 81,029.5 — per prescription <sup>2</sup>	344,934,388	\$10.21	\$10.01
Pharmacies with prescription volume of 46,461.5 to 63,306.01 — per prescription <sup>3</sup>	263,866,500	\$11.63	\$11.41
Pharmacies with prescription volume of less than 46,461.5 — per prescription <sup>4</sup>	163,823,668	\$14.63	\$13.90
<b>Table 5: Overall COD per store by volume</b>			
	<b>Frequency - Pharmacies</b>	<b>Mean</b>	<b>Median</b>
Pharmacies with prescription volume of more than 81,029.5 — per prescription <sup>5</sup>	4,795	\$8.90	\$8.57
Pharmacies with prescription volume of more than 63,306.01 to 81,029.5 — per prescription <sup>6</sup>	4,794	\$10.23	\$10.04
Pharmacies with prescription volume of 46,461.5 to 63,306.01 — per prescription <sup>7</sup>	4,795	\$11.67	\$11.46
Pharmacies with prescription volume of less than 46,461.5 — per prescription <sup>8</sup>	4,795	\$15.34	\$14.35

1. Pharmacies with more than 81,029.5 prescriptions account for 38% of prescription volume; data are weighted by prescription volume.
2. Pharmacies with 63,306.01 to 81,029.5 prescriptions account for 28% of prescription volume; data are weighted by prescription volume.
3. Pharmacies with 46,461.5 to 63,306.01 prescriptions account for 21% of prescription volume; data are weighted by prescription volume.
4. Pharmacies with less than 46,461.5 prescriptions account for 13% of prescription volume; data are weighted by prescription volume.
5. Pharmacies with more than 81,029.5 prescriptions account for 25% of pharmacies; each pharmacy's COD appears as one value, regardless of prescription volume.
6. Pharmacies with 63,306.01 to 81,029.5 prescriptions account for 25% of pharmacies; each pharmacy's COD appears as one value, regardless of prescription volume.
7. Pharmacies with 46,461.5 to 63,306.01 prescriptions account for 25% of pharmacies; each pharmacy's COD appears as one value, regardless of prescription volume.
8. Pharmacies with less than 46,461.5 prescriptions account for 25% of pharmacies; each pharmacy's COD appears as one value, regardless of prescription volume.

## Cost of Dispensing for Urban and Rural Pharmacies – Overall and Medicaid COD’s

Of the 19,179 pharmacies in the database, 16,403 were classified as urban and 2,775 as rural by matching the stores’ zip codes with Metropolitan Statistical Areas (1 pharmacy could not be classified by MSA). Rural stores’ overall COD and Medicaid COD, per prescription, were approximately 6% below the COD’s of urban pharmacies, as shown in Tables 8 and 9. However, the average prescription volume, per store, was about the same for both the urban and rural pharmacies – 64,839 vs. 67,223, respectively. On average, rural pharmacies filled 51% more Medicaid prescriptions per store than did urban pharmacies.

Table 6: COD per prescription for urban and rural pharmacies <sup>1</sup>					
	Frequency - Prescriptions	Mean	Median	25 <sup>th</sup> Percentile	75 <sup>th</sup> Percentile
Urban COD per prescription <sup>2</sup>	1,063,561,006	\$10.68	\$10.19	\$8.62	\$12.03
Rural COD per prescription <sup>3</sup>	186,572,4632	\$9.86	\$9.34	\$7.82	\$11.36
Table 7: COD per store for urban and rural pharmacies					
	Frequency - Pharmacies	Mean	Median	25 <sup>th</sup> Percentile	75 <sup>th</sup> Percentile
Urban COD per pharmacy <sup>4</sup>	16,403	\$11.66	\$10.95	\$9.20	\$13.15
Rural COD per pharmacy <sup>5</sup>	2,775	\$10.78	\$10.15	\$8.38	\$12.28

<sup>1</sup>. 19,178 pharmacies for which a COD is computed by urban/rural groups; 1 pharmacy with a computed COD could not be classified into urban/rural groups.

<sup>2</sup>. Pharmacies in urban areas as classified by zip codes into MSAs; data are weighted by prescription volume.

<sup>3</sup>. Pharmacies in rural areas as classified by zip codes outside of MSAs; data are weighted by prescription volume.

<sup>4</sup>. Pharmacies in urban areas as classified by zip codes into MSAs; each pharmacy’s COD is one value.

<sup>5</sup>. Pharmacies in rural areas as classified by zip codes outside of MSAs; each pharmacy’s COD is one value.

It is noteworthy that pharmacy payroll costs account for the majority of the difference between urban and rural CODs. The average payroll component of the COD per pharmacy was \$7.80 for urban stores and \$7.15 for rural pharmacies. This lower payroll cost in rural pharmacies was the primary factor in explaining the COD difference between urban and rural stores.

Similarly, the average Medicaid COD was higher for urban pharmacies than for rural pharmacies on a per-prescription or per-pharmacy basis. The average volume of Medicaid prescriptions, per store, was 51% higher among rural pharmacies (7,941) than urban pharmacies (5261), indicating that rural stores fill disproportionately more Medicaid prescriptions, relative to their number, than urban pharmacies.

<b>Table 8: Medicaid COD per prescription for urban and rural pharmacies <sup>1</sup></b>					
	<b>Frequency - Medicaid Prescriptions</b>	<b>Mean</b>	<b>Median</b>	<b>25<sup>th</sup> Percentile</b>	<b>75<sup>th</sup> Percentile</b>
Urban Medicaid COD per prescription <sup>2</sup>	86,294,543	\$10.42	\$10.03	\$8.56	\$11.71
Rural Medicaid COD per prescription <sup>3</sup>	22,035,970	\$9.82	\$9.38	\$8.00	\$11.12
<b>Table 9: Medicaid COD per store for urban and rural pharmacies</b>					
	<b>Frequency – Pharmacies</b>	<b>Mean</b>	<b>Median</b>	<b>25<sup>th</sup> Percentile</b>	<b>75<sup>th</sup> Percentile</b>
Urban Medicaid COD per pharmacy <sup>4</sup>	15,499	\$11.59	\$10.94	\$9.06	\$13.13
Rural Medicaid COD per pharmacy <sup>5</sup>	2,674	\$10.79	\$10.19	\$8.31	\$12.28

1. 18,173 pharmacies for which a Medicaid COD are computed by urban/rural groups; 1 pharmacy with a computed Medicaid COD could not be classified into urban/rural groups.
2. Pharmacies in urban areas as classified by zip codes into MSAs; data are weighted by Medicaid prescriptions.
3. Pharmacies in rural areas as classified by zip codes outside of MSAs; data are weighted by Medicaid prescriptions.
4. Pharmacies in urban areas as classified by zip codes into MSAs; each pharmacy's Medicaid COD is one value.
5. Pharmacies in rural areas as classified by zip codes outside of MSAs; each pharmacy's Medicaid COD is one value.

## Time Required to Dispense Prescription by Type of Payer

Survey respondents were asked to estimate the average work time for all activities required to dispense a prescription for each type of payer – Medicaid, other third-party plans, and customers with no third-party payer. As shown in Table 14, survey respondents for which a Medicaid COD could be computed reported that, on average, prescriptions paid by Medicaid (9.3 minutes) are the most time-consuming, followed by other third-party payers (9.0 minutes) and prescriptions paid directly by customers (8.5 minutes).

It should be noted that the numbers in Table 14 are estimates provided by survey respondents, and that The MPI Group did not perform time studies or other procedures to validate them. Some pharmacies and retail chains may have performed time studies to develop these estimates, whereas others consulted with their more experienced pharmacists to make these estimates.

Table 10: Time to Dispense — Minutes <sup>1</sup>					
	Frequency - Pharmacies	Mean	Median	25 <sup>th</sup> Percentile	75 <sup>th</sup> Percentile
Medicaid prescriptions	18,174	9.3	9.5	6.6	11.16
Other third-party prescriptions	18,174	9.0	9.1	6.6	11.0
Prescriptions paid for by customers	18,174	8.5	8.0	6.6	9.8

<sup>1</sup> Includes only those pharmacies that reported filling Medicaid prescriptions and for which a Medicaid COD could be computed.

Data in Appendix F provide additional insights into the differences in dispensing time between Medicaid and other third-party prescriptions. The appendix shows statistics related to Table 14; respondents were asked to identify steps in the dispensing process that required more time, about the same time, or less time for one type of prescription compared to another. For example, 58.6% of respondents indicated that obtaining prior authorization took longer for Medicaid than other third parties. (Statistics presented on the dispensing process as well as dispensing-time and time-to-receive payment questions are based on those pharmacies for which a Medicaid COD could be computed.)

## Time to Receive Payment for Prescriptions by Type of Payer

Similarly, the survey asked respondents to report the average time to receive payment for Medicaid, other third-party, and customer-paid prescriptions. Table 15 shows that pharmacies reported receiving payment from Medicaid an average of 24 days after billing, compared with 21.9 days for other third parties.

On a state-by-state basis, the survey shows that Medicaid programs' days to pay range from a high of 45.5 days average in New Hampshire to a low of 15.8 days average in the District of Columbia. (Complete state-by-state data are presented in the following section and Table 21.) The COD model used in this study added approximately \$.004 per day to the COD for each day payment was outstanding, based on the average prescription selling price and interest rates applicable during the study period.

Table 11: Time to Receive Payment after Prescription Was Dispensed — Days <sup>1</sup>					
	Frequency - Pharmacies	Mean	Median	25 <sup>th</sup> Percentile	75 <sup>th</sup> Percentile
Medicaid prescriptions	18,174	24.0	22.2	22.0	25.0
Other third-party prescriptions	18,174	21.9	21.0	18.0	26.0

<sup>1</sup> Includes only those pharmacies that reported filling Medicaid prescriptions and for which a Medicaid COD could be computed.

## Effect of New Prescriptions on Cost of Dispensing

The following table shows the effect of filling new prescriptions on the overall COD when calculated by pharmacy. There was no consistent relationship between the percentage of new prescriptions and the overall COD.

Table 12: COD per pharmacy for New Prescriptions as a percent of the Total Prescriptions Volume — Quartile Groups			
	Frequency - Prescriptions	Mean	Median
Less than 49%	4,760	\$11.58	\$10.98
49% - 52.51%	4,780	\$11.16	\$10.70
52.51% - 56.38%	4,760	\$11.44	\$10.83
More than 56.38%	4,757	\$12.00	\$10.86

## **Other Variables**

Specialty pharmacies were not included in the targeted respondents, which were limited to pharmacies identified as retail. Data were collected on 340B prescriptions, compounded prescriptions, and infused prescriptions. The volume of these prescriptions was very small. The mean number of prescriptions dispensed per pharmacy was 65,187; of this, 86 were compounded, 196 infused, and 348 dispensed to 340B patients. Because of the minimal volume of these prescriptions, no further analysis was done to attempt to quantify their impact on the overall COD.

## **B. Findings – State Data**

In this section of the report, state-level data are presented for certain statistics. State-level information is omitted for certain states for one of two reasons. First, for nine states – Alaska (14 pharmacies), Arkansas (60 pharmacies), Delaware (47 pharmacies), Hawaii (45 pharmacies), Montana (51 pharmacies), New Mexico (61 pharmacies), North Dakota (36 pharmacies), South Dakota (30 pharmacies), and Wyoming (27 pharmacies) – as well as the Virgin Islands (1 pharmacy) and Guam (1 pharmacy), the number of pharmacies for which an overall COD could be computed was small. Second, in Puerto Rico, the predominance of one organization’s data in the sample created the potential for confidentiality concerns if the data were presented. Small-sample states, except Hawaii and Alaska, have been grouped with nearby states to offer a regional perspective of cost of dispensing.

Table 13: Overall COD per prescription <sup>1</sup>					
	Frequency - Prescriptions	Mean	Median	25 <sup>th</sup> Percentile	75 <sup>th</sup> Percentile
Alabama	19,004,183	\$9.59	\$9.17	\$8.00	\$10.66
Alaska					
Arizona	23,930,067	\$10.18	\$10.01	\$8.91	\$11.15
Arkansas <sup>2</sup>	43,993,816	\$10.12	\$9.59	\$8.71	\$11.06
California	104,101,870	\$12.65	\$12.14	\$10.64	\$13.88
Colorado	13,283,041	\$11.73	\$11.22	\$10.28	\$12.56
Connecticut	23,152,296	\$10.13	\$9.48	\$7.93	\$11.83
District of Columbia	4,341,713	\$12.61	\$12.20	\$11.00	\$13.40
Delaware <sup>3</sup>	73,919,566	\$10.15	\$9.43	\$7.86	\$11.49
Florida	60,295,694	\$11.27	\$10.76	\$9.61	\$12.06
Georgia	44,413,982	\$10.24	\$9.72	\$8.12	\$11.89
Hawaii					
Idaho	6,448,721	\$12.52	\$12.25	\$10.31	\$14.38
Illinois	65,293,891	\$11.37	\$10.65	\$9.47	\$12.80
Indiana	34,937,164	\$9.63	\$9.09	\$7.29	\$11.35
Iowa	11,286,412	\$10.40	\$9.47	\$8.86	\$11.43
Kansas	10,192,251	\$10.44	\$9.97	\$8.73	\$11.50
Kentucky	21,380,582	\$9.23	\$8.77	\$7.46	\$10.65
Louisiana	20,676,164	\$9.77	\$9.29	\$8.46	\$10.69
Maine	7,134,902	\$10.77	\$10.07	\$8.93	\$12.28
Maryland	22,775,854	\$10.57	\$9.72	\$8.24	\$11.65
Massachusetts	57,068,414	\$8.92	\$8.00	\$7.01	\$9.86
Michigan	35,625,520	\$10.70	\$10.31	\$8.90	\$12.05
Minnesota	21,475,527	\$12.25	\$11.71	\$10.66	\$13.66
Mississippi	8,227,040	\$9.70	\$9.41	\$8.50	\$10.31
Missouri	19,243,758	\$10.39	\$9.90	\$8.82	\$11.31
Montana <sup>4</sup>	42,014,119	\$11.60	\$11.28	\$9.61	\$13.22
Nebraska	7,007,871	\$10.62	\$10.20	\$9.15	\$11.47
Nevada	11,697,575	\$10.19	\$9.50	\$8.40	\$11.46
New Hampshire	9,098,930	\$10.62	\$9.49	\$8.58	\$11.65
New Jersey	33,890,627	\$11.70	\$10.92	\$9.20	\$13.16
New Mexico <sup>5</sup>	41,839,337	\$10.67	\$10.38	\$9.20	\$11.65
New York	70,972,623	\$11.07	\$10.31	\$8.68	\$12.45
North Carolina	46,063,733	\$10.04	\$9.66	\$7.84	\$11.50



Table 13: Overall COD per prescription <sup>1</sup>					
	Frequency - Prescriptions	Mean	Median	25 <sup>th</sup> Percentile	75 <sup>th</sup> Percentile
North Dakota <sup>4</sup>	42,014,119	\$11.60	\$11.28	\$9.61	\$13.22
Ohio	64,594,303	\$9.19	\$8.66	\$7.39	\$10.39
Oklahoma	4,894,920	\$10.22	\$10.05	\$9.03	\$10.94
Oregon	14,753,939	\$10.90	\$10.26	\$8.91	\$12.61
Pennsylvania	75,059,896	\$9.31	\$8.36	\$7.32	\$10.40
Rhode Island	12,505,693	\$8.28	\$7.37	\$6.79	\$9.10
South Carolina	20,887,678	\$9.94	\$9.42	\$7.76	\$11.76
South Dakota <sup>4</sup>	42,014,119	\$11.60	\$11.28	\$9.61	\$13.22
Tennessee	32,471,198	\$9.57	\$9.03	\$8.24	\$10.48
Texas	68,865,587	\$10.79	\$10.36	\$9.28	\$11.82
Utah	6,026,627	\$11.59	\$11.00	\$9.31	\$12.86
Vermont	3,796,156	\$11.33	\$10.37	\$9.15	\$12.66
Virginia	47,184,318	\$10.01	\$9.33	\$7.75	\$11.47
Washington	21,968,765	\$11.65	\$11.32	\$9.66	\$13.19
West Virginia	11,156,126	\$9.26	\$8.66	\$7.70	\$10.34
Wisconsin	14,916,946	\$11.37	\$10.87	\$10.03	\$11.76
Wyoming <sup>4</sup>	42,014,119	\$11.60	\$11.28	\$9.61	\$13.22
Puerto Rico					

<sup>1</sup> Weighted data by volume of prescriptions; each prescription COD as one value. One pharmacy could not be identified by state.

<sup>2</sup> Midwest group (two states plus Arkansas)

<sup>3</sup> Eastern group (two states plus Delaware)

<sup>4</sup> Plains group (two states plus Montana, North Dakota, South Dakota, and Wyoming)

<sup>5</sup> Southwest group (two states plus New Mexico)

Table 14: Overall COD per pharmacy <sup>1</sup>						
	Frequency - Pharmacies	Mean	Median	25 <sup>th</sup> Percentile	75 <sup>th</sup> Percentile	Total prescriptions
Alabama	283	\$10.35	\$9.67	\$8.35	\$11.35	19,004,183
Alaska						
Arizona	341	\$10.64	\$10.44	\$9.14	\$11.70	23,930,067
Arkansas <sup>2</sup>	610	\$10.97	\$10.38	\$9.01	\$12.01	43,993,816
California	1,760	\$13.48	\$12.70	\$11.06	\$14.97	104,101,870
Colorado	217	\$12.57	\$11.72	\$10.66	\$13.50	13,283,041
Connecticut	346	\$11.01	\$10.46	\$8.31	\$12.67	23,152,296
District of Columbia	87	\$13.25	\$12.46	\$11.21	\$13.86	4,341,713
Delaware <sup>3</sup>	1,183	\$11.26	\$10.27	\$8.37	\$12.58	73,919,566
Florida	1,043	\$12.01	\$11.13	\$9.86	\$12.84	60,295,694
Georgia	695	\$11.23	\$10.59	\$8.75	\$13.15	44,413,982
Hawaii						
Idaho	97	\$13.07	\$12.96	\$10.62	\$14.81	6,448,721
Illinois	966	\$12.15	\$11.33	\$9.84	\$13.69	65,293,891
Indiana	452	\$10.52	\$10.12	\$7.87	\$12.27	34,937,164
Iowa	179	\$11.28	\$10.20	\$9.04	\$12.59	11,286,412
Kansas	153	\$11.52	\$10.81	\$9.22	\$12.73	10,192,251
Kentucky	281	\$10.01	\$9.64	\$7.91	\$11.33	21,380,582
Louisiana	272	\$10.41	\$9.85	\$8.85	\$11.43	20,676,164
Maine	116	\$11.56	\$11.01	\$9.31	\$12.99	7,134,902
Maryland	412	\$11.72	\$10.45	\$8.59	\$12.78	22,775,854
Massachusetts	730	\$10.22	\$9.15	\$7.55	\$11.57	57,068,414
Michigan	661	\$11.35	\$10.86	\$9.41	\$12.74	35,625,520
Minnesota	372	\$13.04	\$12.21	\$10.97	\$14.50	21,475,527
Mississippi	121	\$10.46	\$9.79	\$8.80	\$11.55	8,227,040
Missouri	278	\$11.39	\$10.74	\$9.16	\$12.65	19,243,758
Montana <sup>4</sup>	695	\$12.62	\$12.07	\$10.32	\$14.19	42,014,119
Nebraska	113	\$11.53	\$10.45	\$9.48	\$12.82	7,007,871
Nevada	168	\$11.04	\$10.25	\$8.68	\$12.37	11,697,575
New Hampshire	148	\$12.15	\$10.39	\$9.03	\$13.28	9,098,930
New Jersey	636	\$12.84	\$11.82	\$9.81	\$14.47	33,890,627
New Mexico <sup>5</sup>	619	\$11.31	\$10.92	\$9.61	\$12.32	41,839,337
New York	1,190	\$12.05	\$11.08	\$9.20	\$13.58	70,972,623
North Carolina	683	\$11.03	\$10.39	\$8.44	\$12.31	46,063,733

Table 14: Overall COD per pharmacy <sup>1</sup>						
	Frequency - Pharmacies	Mean	Median	25 <sup>th</sup> Percentile	75 <sup>th</sup> Percentile	Total prescriptions
North Dakota <sup>4</sup>	695	\$12.62	\$12.07	\$10.32	\$14.19	42,014,119
Ohio	868	\$10.19	\$9.38	\$7.87	\$11.78	64,594,303
Oklahoma	80	\$10.82	\$10.27	\$9.26	\$11.53	4,894,920
Oregon	203	\$11.59	\$11.02	\$9.31	\$13.21	14,753,939
Pennsylvania	1,168	\$10.43	\$9.30	\$7.77	\$11.67	75,059,896
Rhode Island	141	\$9.52	\$8.60	\$7.24	\$11.20	12,505,693
South Carolina	317	\$10.93	\$10.53	\$8.29	\$12.68	20,887,678
South Dakota <sup>4</sup>	695	\$12.62	\$12.07	\$10.32	\$14.19	42,014,119
Tennessee	432	\$10.27	\$9.66	\$8.53	\$11.39	32,471,198
Texas	1,032	\$11.50	\$10.84	\$9.56	\$12.65	68,865,587
Utah	95	\$12.52	\$11.43	\$9.98	\$14.07	6,026,627
Vermont	68	\$12.49	\$10.80	\$9.63	\$14.11	3,796,156
Virginia	724	\$11.06	\$10.25	\$8.32	\$12.81	47,184,318
Washington	344	\$12.32	\$11.67	\$10.11	\$13.98	21,968,765
West Virginia	173	\$10.15	\$9.09	\$7.99	\$11.39	11,156,126
Wisconsin	229	\$11.99	\$11.09	\$10.14	\$12.62	14,916,946
Wyoming <sup>4</sup>	695	\$12.62	\$12.07	\$10.32	\$14.19	42,014,119
Puerto Rico						

<sup>1</sup> Unweighted data; each pharmacy's COD as one value, regardless of the pharmacy's prescription volume. One pharmacy could not be identified by state.

<sup>2</sup> Midwest group (two states Arkansas)

<sup>3</sup> Eastern group (two states plus Delaware)

<sup>4</sup> Plains group (two states plus Montana, North Dakota, South Dakota, and Wyoming)

<sup>5</sup> Southwest group (two states plus New Mexico)

Similarly for Tables 15 and 16, states and U.S. territories for which the number of pharmacies for which COD could be computed were small and, thus, also excluded from the state Medicaid COD tables: Alaska, Arkansas, Delaware, Hawaii, Montana, New Mexico, North Dakota, South Dakota, and Wyoming as well as the Virgin Islands and Guam. Second, in Puerto Rico, the predominance of one organization's data in the sample created the potential for confidentiality concerns if the data were presented. Small-sample states, except Hawaii and Alaska, have been grouped with nearby states to offer a regional perspective of cost of dispensing and Medicaid cost of dispensing.

<b>Table 15: Medicaid COD per Prescription <sup>1</sup></b>					
	<b>Frequency - Prescriptions</b>	<b>Mean</b>	<b>Median</b>	<b>25<sup>th</sup> Percentile</b>	<b>75<sup>th</sup> Percentile</b>
Alabama	1,853,423	\$9.22	\$8.98	\$7.63	\$10.27
Alaska					
Arizona	179,165	\$11.82	\$11.27	\$10.82	\$12.47
Arkansas <sup>2</sup>	4,609,712	\$10.05	\$9.59	\$8.72	\$11.00
California	6,943,290	\$12.44	\$12.07	\$10.88	\$13.50
Colorado	1,449,057	\$11.28	\$10.96	\$10.16	\$12.03
Connecticut	3,470,984	\$10.16	\$9.89	\$7.70	\$11.86
District of Columbia	753,952	\$12.27	\$12.02	\$10.88	\$13.12
Delaware <sup>3</sup>	4,823,031	\$9.97	\$9.61	\$7.96	\$11.09
Florida	3,654,878	\$11.15	\$10.71	\$9.39	\$11.98
Georgia	3,087,884	\$9.96	\$9.55	\$7.89	\$11.46
Hawaii					
Idaho	795,571	\$11.88	\$10.87	\$10.13	\$13.29
Illinois	6,285,716	\$10.66	\$10.35	\$9.16	\$11.67
Indiana	4,861,956	\$9.59	\$9.28	\$7.06	\$11.45
Iowa	1,210,926	\$10.17	\$9.18	\$8.57	\$10.41
Kansas	305,651	\$11.84	\$11.61	\$10.02	\$13.14
Kentucky	1,618,677	\$8.63	\$8.00	\$7.15	\$9.42
Louisiana	1,869,488	\$9.88	\$9.45	\$8.59	\$10.85
Maine	1,540,586	\$10.64	\$10.14	\$8.94	\$11.98
Maryland	2,692,628	\$10.27	\$10.12	\$8.51	\$11.33
Massachusetts	5,451,465	\$9.01	\$8.44	\$7.20	\$9.96
Michigan	3,648,142	\$10.08	\$9.79	\$8.61	\$11.27
Minnesota	1,009,310	\$11.92	\$11.35	\$10.49	\$12.69
Mississippi	622,529	\$9.66	\$9.54	\$8.43	\$10.67
Missouri	2,317,511	\$10.10	\$9.75	\$8.82	\$11.11
Montana <sup>4</sup>	2,888,731	\$11.07	\$10.69	\$8.98	\$12.22
Nebraska	829,091	\$10.03	\$9.51	\$8.74	\$10.43

Table 15: Medicaid COD per Prescription <sup>1</sup>					
	Frequency - Prescriptions	Mean	Median	25 <sup>th</sup> Percentile	75 <sup>th</sup> Percentile
Nevada	568,249	\$10.08	\$9.53	\$8.40	\$11.38
New Hampshire	818,556	\$10.70	\$9.70	\$9.12	\$11.75
New Jersey	1,450,924	\$12.51	\$11.60	\$10.35	\$13.99
New Mexico <sup>5</sup>	1,691,096	\$11.31	\$11.00	\$10.20	\$12.04
New York	11,654,038	\$10.63	\$10.04	\$8.74	\$11.99
North Carolina	5,038,265	\$9.96	\$9.65	\$7.69	\$11.39
North Dakota <sup>4</sup>	2,888,731	\$11.07	\$10.69	\$8.98	\$12.22
Ohio	2,828,275	\$8.91	\$8.33	\$7.32	\$9.87
Oklahoma	621,769	\$10.23	\$9.88	\$9.08	\$10.92
Oregon	467,744	\$10.42	\$9.85	\$8.13	\$11.74
Pennsylvania	6,989,380	\$9.08	\$8.55	\$7.78	\$9.93
Rhode Island	477,406	\$8.92	\$8.64	\$7.87	\$9.65
South Carolina	1,174,759	\$10.02	\$9.62	\$7.85	\$11.42
South Dakota <sup>4</sup>	2,888,731	\$11.07	\$10.69	\$8.98	\$12.22
Tennessee	4,099,567	\$9.50	\$9.04	\$8.39	\$10.06
Texas	1,518,562	\$11.11	\$10.65	\$9.26	\$12.09
Utah	330,424	\$11.15	\$10.73	\$9.47	\$12.35
Vermont	863,412	\$11.54	\$10.57	\$9.35	\$12.72
Virginia	1,796,053	\$9.73	\$9.47	\$7.86	\$10.86
Washington	1,745,556	\$10.48	\$10.09	\$8.87	\$11.63
West Virginia	2,393,061	\$9.50	\$8.99	\$8.05	\$10.60
Wisconsin	2,044,842	\$11.30	\$10.65	\$9.91	\$11.63
Wyoming <sup>4</sup>	2,888,731	\$11.07	\$10.69	\$8.98	\$12.22
Puerto Rico					

<sup>1</sup> Weighted data by volume of Medicaid prescriptions; each Medicaid prescription COD as one value. One pharmacy could not be identified by state; 1,005 pharmacies for which an overall cost of dispensing could be reported did not provide Medicaid prescription volume and/or did not provide sufficient information to compute a Medicaid COD

<sup>2</sup> Midwest group (two states plus Arkansas)

<sup>3</sup> Eastern group (two states plus Delaware)

<sup>4</sup> Plains group (two states plus Montana, North Dakota, South Dakota, and Wyoming)

<sup>5</sup> Southwest group (two states plus New Mexico)

Table 16: Medicaid COD per Pharmacy <sup>1</sup>						
	Frequency - Pharmacies	Mean	Median	25 <sup>th</sup> Percentile	75 <sup>th</sup> Percentile	Medicaid prescriptions
Alabama	276	\$10.11	\$9.66	\$8.24	\$11.11	1,853,423
Alaska						
Arizona	114	\$11.09	\$11.09	\$9.65	\$12.02	179,165
Arkansas <sup>2</sup>	601	\$10.97	\$10.35	\$8.91	\$11.99	4,609,712
California	1,669	\$13.48	\$12.80	\$11.09	\$14.96	6,943,290
Colorado	204	\$12.31	\$11.72	\$10.64	\$13.09	1,449,057
Connecticut	341	\$10.79	\$10.38	\$7.96	\$12.59	3,470,984
District of Columbia	85	\$13.16	\$12.50	\$11.37	\$13.94	753,952
Delaware <sup>3</sup>	1,150	\$10.96	\$10.15	\$8.05	\$12.29	4,823,031
Florida	1,019	\$11.74	\$11.06	\$9.66	\$12.67	3,654,878
Georgia	685	\$11.05	\$10.53	\$8.55	\$13.18	3,087,884
Hawaii						
Idaho	92	\$13.08	\$12.74	\$10.56	\$14.52	795,571
Illinois	946	\$12.04	\$11.21	\$9.72	\$13.63	6,285,716
Indiana	448	\$10.39	\$9.91	\$7.54	\$12.33	4,861,956
Iowa	177	\$11.33	\$10.02	\$8.82	\$12.47	1,210,926
Kansas	149	\$11.53	\$10.84	\$9.28	\$12.51	305,651
Kentucky	274	\$10.12	\$9.66	\$7.95	\$11.43	1,618,677
Louisiana	270	\$10.54	\$9.91	\$8.77	\$11.35	1,869,488
Maine	116	\$11.57	\$11.20	\$9.49	\$13.02	1,540,586
Maryland	402	\$11.32	\$10.33	\$8.28	\$12.29	2,692,628
Massachusetts	730	\$10.19	\$9.11	\$7.32	\$11.53	5,451,465
Michigan	652	\$11.18	\$10.77	\$9.23	\$12.63	3,648,142
Minnesota	364	\$13.01	\$12.02	\$10.89	\$14.31	1,009,310
Mississippi	118	\$10.12	\$9.68	\$8.61	\$11.08	622,529
Missouri	272	\$11.23	\$10.76	\$9.01	\$12.45	2,317,511
Montana <sup>4</sup>	679	\$12.51	\$11.81	\$10.24	\$14.03	2,888,731
Nebraska	111	\$11.44	\$10.42	\$9.28	\$12.49	829,091
Nevada	162	\$10.84	\$10.07	\$8.42	\$12.20	568,249
New Hampshire	146	\$12.28	\$10.64	\$9.37	\$13.33	818,556
New Jersey	626	\$12.92	\$11.83	\$9.83	\$14.60	1,450,924
New Mexico <sup>5</sup>	375	\$11.67	\$11.25	\$10.16	\$12.67	1,691,096
New York	1,175	\$12.25	\$11.44	\$9.27	\$13.96	11,654,038
North Carolina	674	\$10.93	\$10.40	\$8.25	\$12.29	5,038,265

Table 16: Medicaid COD per Pharmacy <sup>1</sup>						
	Frequency - Pharmacies	Mean	Median	25 <sup>th</sup> Percentile	75 <sup>th</sup> Percentile	Medicaid prescriptions
North Dakota <sup>4</sup>	679	\$12.51	\$11.81	\$10.24	\$14.03	2,888,731
Ohio	715	\$10.16	\$9.37	\$7.60	\$11.94	2,828,275
Oklahoma	80	\$10.79	\$10.29	\$9.14	\$11.58	621,769
Oregon	126	\$12.60	\$11.86	\$10.14	\$14.26	467,744
Pennsylvania	1,152	\$10.34	\$9.34	\$7.73	\$11.70	6,989,380
Rhode Island	140	\$9.49	\$8.93	\$7.01	\$11.05	477,406
South Carolina	314	\$10.92	\$10.57	\$8.07	\$12.56	1,174,759
South Dakota <sup>4</sup>	679	\$12.51	\$11.81	\$10.24	\$14.03	2,888,731
Tennessee	427	\$10.14	\$9.60	\$8.45	\$11.17	4,099,567
Texas	1,011	\$11.39	\$10.80	\$9.40	\$12.58	1,518,562
Utah	88	\$12.42	\$11.45	\$10.03	\$13.65	330,424
Vermont	67	\$13.19	\$11.67	\$10.18	\$15.82	863,412
Virginia	703	\$10.83	\$10.08	\$8.00	\$12.46	1,796,053
Washington	298	\$12.40	\$11.77	\$10.33	\$13.70	1,745,556
West Virginia	173	\$10.23	\$9.20	\$8.05	\$11.51	2,393,061
Wisconsin	222	\$11.84	\$11.05	\$10.18	\$12.41	2,044,842
Wyoming <sup>4</sup>	679	\$12.51	\$11.81	\$10.24	\$14.03	2,888,731
Puerto Rico						

<sup>1</sup> Unweighted data; each pharmacy's Medicaid COD as one value, regardless of the pharmacy's Medicaid prescription volume. One pharmacy could not be identified by state; 1,005 pharmacies for which an overall cost of dispensing could be reported did not provide Medicaid prescription volume and/or did not provide sufficient information to compute a Medicaid COD

<sup>2</sup> Midwest group (two states Arkansas)

<sup>3</sup> Eastern group (two states plus Delaware)

<sup>4</sup> Plains group (two states plus Montana, North Dakota, South Dakota, and Wyoming)

<sup>5</sup> Southwest group (two states plus New Mexico)

Survey respondents reported the average number of days from billing Medicaid prescriptions until payment was received from the state’s Medicaid program. Table 17 summarizes the results for each state (only those pharmacies that reported Medicaid prescriptions and for which a Medicaid COD could be computed are included). Data are not shown for states and U.S. territories for reasons noted earlier. Payment times ranged from an average 45.5 days in New Hampshire to a low of 15.8 days average in the District of Columbia.

<b>Table 17: Time to Receive Payment after Medicaid Prescription Was Dispensed - Days<sup>1</sup></b>			
	<b>Frequency - Pharmacies</b>	<b>Mean</b>	<b>Median</b>
Alabama	276	20.9	22.0
Alaska			
Arizona	114	26.2	25.0
Arkansas			
California	1,669	24.5	24.2
Colorado	204	25.2	25.0
Connecticut	341	16.9	22.0
District of Columbia	85	15.8	11.0
Delaware			
Florida	1,019	24.2	25.0
Georgia	685	19.4	22.0
Hawaii			
Idaho	92	16.4	18.0
Illinois	946	35.3	25.0
Indiana	448	23.4	22.0
Iowa	177	18.0	18.0
Kansas	149	23.9	25.0
Kentucky	274	24.6	24.5
Louisiana	270	21.6	22.0
Maine	116	19.0	18.0
Maryland	402	22.9	22.0
Massachusetts	730	24.2	24.0
Michigan	652	17.7	22.0
Minnesota	364	21.8	25.0
Mississippi	118	19.6	22.0
Missouri	272	23.7	25.0
Montana			
Nebraska	111	21.6	22.0
Nevada	162	22.1	22.0
New Hampshire	146	45.5	25.0



<b>Table 17: Time to Receive Payment after Medicaid Prescription Was Dispensed - Days<sup>1</sup></b>			
	<b>Frequency - Pharmacies</b>	<b>Mean</b>	<b>Median</b>
New Jersey	626	43.3	22.0
New Mexico			
New York	1,175	27.5	25.0
North Carolina	674	20.4	22.0
North Dakota			
Ohio	715	21.6	22.0
Oklahoma	80	23.8	25.0
Oregon	126	19.4	25.0
Pennsylvania	1,152	20.7	22.0
Rhode Island	140	24.2	22.0
South Carolina	314	21.3	22.0
South Dakota			
Tennessee	427	22.2	25.0
Texas	1,011	22.3	25.0
Utah	88	20.2	25.0
Vermont	67	17.7	14.5
Virginia	703	20.4	22.0
Washington	298	18.8	25.0
West Virginia	173	38.2	40.4
Wisconsin	222	23.1	25.0
Wyoming			
Puerto Rico			

<sup>1</sup> Pharmacies for which a Medicaid COD could be computed and that could be identified by state or U.S. territory.

### C. Definitions

**Frequency (N):** Frequency is the number or count of responses for a variable as asked for on the COD Study or a computed variable.

**Mean:** The average value of responses (sum of total responses divided by the number of responses).

**Median:** The midpoint value of responses — the value above which and below which half the responses fall; equivalent to the 50<sup>th</sup> percentile. The median is frequently the most reliable statistic upon which to base comparisons.

**Percentage:** The percentage of responses for a specific answer category based on all responses for that particular question. (*Note: This is not necessarily based on the total number of respondents for the survey*). For cross-tabulated data, the percentage is based on those that responded to *both* the question being analyzed and the cross-tabulation question.

**Percentiles:** The 25<sup>th</sup> percentile is the value below which 25% of responses fall. The 75<sup>th</sup> percentile is the value below which 75% of responses fall.

### **III. Service Providers and Sponsors for Cost of Dispensing Study**

#### **The MPI Group**

The MPI Group is composed of the Manufacturing Performance Institute, the Management Performance Institute, and the Marketing Performance Institute. These entities serve corporate leaders with research, advice, and performance-targeted solutions that provide a competitive advantage in today's fierce global marketplace. We combine the disciplines of research, strategic advice, marketing, knowledge development, and hands-on leadership to create a difference — in performance, in profits, and in the people who make them possible.

#### **CCPA**

The Coalition for Community Pharmacy Action (CCPA) is an alliance between the National Association of Chain Drug Stores (NACDS) and the National Community Pharmacists Association (NCPA), which together represent more than 55,000 community pharmacies. CCPA's mission is to ensure that patients have continued access to affordable medicines and prescription care from their trusted and accessible health professional - the community pharmacist.

CCPA's sponsorship of this project was made possible by a significant financial contribution from the Community Pharmacy Foundation. The Community Pharmacy Foundation is an organization whose primary purpose is to assist community pharmacy practitioners by providing resources for research and development to encourage new capabilities and continuous improvements in the delivery of patient care. CCPA acknowledges the generosity of the Foundation and its directors for this support.

#### **NCPA**

The National Community Pharmacists Association (NCPA®) represents the interests of America's community pharmacists, including the owners of nearly 23,000 independent community pharmacies. Together they represent an \$88.8 billion health care marketplace, dispense nearly 40% of all retail prescriptions, and employ more than 300,000 individuals, including over 62,000 pharmacists. To learn more, go to [www.ncpanet.org](http://www.ncpanet.org), visit [facebook.com/commpharmacy](https://facebook.com/commpharmacy), or follow NCPA on Twitter @Commpharmacy.

#### **NACDS**

NACDS represents traditional drug stores and supermarkets and mass merchants with pharmacies. Chains operate more than 40,000 pharmacies, and NACDS' chain member companies include regional chains, with a minimum of four stores, and national companies. Chains employ more than 3.8 million individuals, including 175,000 pharmacists. They fill over 2.7 billion prescriptions yearly, and help patients use medicines correctly and safely, while offering innovative services that improve patient health and healthcare affordability. NACDS members also include more than 800 supplier partners and nearly 40 international members representing 13 countries. For more information, visit [www.NACDS.org](http://www.NACDS.org).

## IV. Appendices

### A. Survey – Hard-copy Version



COALITION *for* COMMUNITY  
PHARMACY ACTION

## 2014 Cost of Dispensing Study

*Sponsored by the Coalition for Community Pharmacy Action. The Coalition is an alliance between the National Association of Chain Drug Stores (NACDS) and the National Community Pharmacists Association (NCPA).*

Please provide a response to each question based on a **prescription department** (the area where prescriptions are filled) and the store/facility in which it is located. Please refer to the accompanying Instruction Sheet when answering the questionnaire.

Complete the questionnaire by **July 9, 2014** using one of the following formats:

- **Online:** go to [www.2014CostofDispensing.com](http://www.2014CostofDispensing.com) to submit your responses.
- **Spreadsheet:** If you are answering for multiple pharmacies, a spreadsheet questionnaire is available by sending an email request to [CODsupport@mpi-group.net](mailto:CODsupport@mpi-group.net).
- **Mail:** mail responses to Cost of Dispensing Study, P.O. Box 4330, Dublin, OH 43016
- **Fax:** fax responses to 614-389-3816

*Do not* send your answers to the Coalition, NACDS, or NCPA.

If you have any questions about completing the survey, email for support to [CODsupport@mpi-group.net](mailto:CODsupport@mpi-group.net).

Please also include contact information requested at the end of the survey in the event we need to follow up with you. Your responses are *confidential*, but if you wish to remain anonymous, you may leave contact information blank.

**Note:** If you do not provide contact information we may not be able to clarify any questions that we have about your responses.

CCPA has contracted with an independent survey organization, The MPI Group, to conduct this survey and provide CCPA with a summarized analysis of survey findings. No survey data from individual pharmacies or pharmacy chains will be shared with CCPA, NACDS, NCPA, or other third party. Data will only be reported in aggregate. Only the name of pharmacies/organizations that respond will be shared with CCPA, NACDS, and NCPA.

### PROFILE INFORMATION



9. How many prescriptions in 2013 were *compounded*? ..... 18

10. How many prescriptions in 2013 were *infused* medicines? ..... 101

11. How many prescriptions in 2013 were dispensed to 340B patients? ..... 102

12. How has each activity below affected the time it takes to dispense a Medicaid prescription compared to other third-party prescriptions? (check one in each row)

	Takes more time	No difference	Takes less time
a. Obtaining plan number/qualifying the patient	20-1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
b. Obtaining prior authorization	21-1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
c. Adjudication	22-1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
d. Patient counseling	23-1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
e. Other dispensing activities	24-1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>

13. How much work time did it typically take in 2013 to dispense each of the following types of prescriptions (per prescription)? Count the time contributed by all employees: pharmacists, technicians, clerks, etc.

- a. Medicaid prescriptions minutes 30
- b. Other third-party prescriptions minutes 32
- c. Prescriptions paid for by customers minutes 33

14. How long did it typically take to receive payment after the prescription was dispensed for the following types of prescriptions? (refer to Instruction Sheet)

- a. Medicaid-covered prescriptions days 34
- b. Other third-party prescriptions days 35
- c. Prescriptions paid for by customers using store accounts days 36

**SALES AND COSTS**

15. What were sales for this location for the following categories in 2013? (excluding sales tax)

a. Prescription sales (not including over-the-counter sales)	\$	37
b. Retail sales	\$	38
c. Other sales (e.g., services)	\$	39
d. Total sales (sum of the above)	\$	40

16. What were sales of Medicaid prescriptions (included in #15a) for this location in 2013? ..... \$ ..... 41

17. What were the following costs and expenses for this location for 2013? (refer to Instruction Sheet)

	U.S. dollars	
<b>a. Prescription department payroll (including compensation, benefits, and payroll taxes)</b> If necessary, use the worksheet on the Instruction Sheet to calculate an accurate prescription department figure.	\$	42
<b>b. Prescription department costs (not including compensation, benefits, and payroll taxes)</b> (should equal the sum of b1 through b9)	\$	43
1. Prescription containers, labels, and other pharmacy supplies	\$	44
2. Professional liability insurance for pharmacists	\$	45
3. Prescription department licenses, permits, and fees	\$	46
4. Dues, subscriptions, and continuing education for the prescription department	\$	47
5. Delivery expenses (only prescription-related)	\$	48
6. Computer systems, including web services (related only to the prescription department)	\$	50
7. Pharmacy-specific equipment (e.g., automated dispensing systems) depreciation, rental, and/or lease costs	\$	103
8. Transaction fees	\$	51
9. Other prescription-department-specific costs	\$	52
<b>c. Total facility costs</b> (should equal the sum of c1 through c8)	\$	53
1. Rent	\$	54
2. Utilities (gas, electric, water, and sewer)	\$	55
3. Real estate taxes	\$	56
4. Facility insurance	\$	57
5. Maintenance and cleaning	\$	58
6. Depreciation	\$	59
7. Mortgage interest	\$	60
8. Other facility costs	\$	61
<b>d. Other store/location costs</b> <ul style="list-style-type: none"> <li>• Report only specific costs of the store/location; do not include any corporate costs allocated to the store</li> <li>• Do not report any costs reported above</li> </ul> (should equal the sum of d1 through d13)	\$	62
1. Marketing and advertising	\$	63
2. Professional services (e.g., accounting, legal, consulting)	\$	64
3. Telephone and data communications	\$	65
4. Computer systems and support	\$	66
5. Other depreciation and amortization	\$	67
6. Office supplies	\$	68
7. Other insurance	\$	69
8. Taxes other than real estate, payroll, or sales taxes	\$	70
9. Franchise fees, if applicable	\$	71
10. Bad debts	\$	104
11. Charitable contributions	\$	105
12. Other interest	\$	72
13. Other costs not included elsewhere	\$	73
<b>e. Corporate costs allocated back to the prescription department at this store/location</b> (refer to Instruction Sheet)	\$	74

## ACCESS TO COMPARISONS & CONTACT INFORMATION

- 18. Please list a unique 8-character passcode and email address that will allow you to confidentially compare your pharmacy data online to aggregate groupings of pharmacies based on survey characteristics (e.g., prescription volumes).**

**Passcode:** \_\_\_\_ \_\_\_\_ \_\_\_\_ \_\_\_\_ \_\_\_\_ \_\_\_\_ \_\_\_\_ \_\_\_\_ <sup>76</sup>

**Email address:** \_\_\_\_\_ <sup>77</sup>

When the online comparison site is activated, you will be notified at the email address above. Both a passcode and an email are necessary in the event that two respondents list identical passcodes.

- 19. Contact information: (optional)**

Name: \_\_\_\_\_ Title: \_\_\_\_\_

Company: \_\_\_\_\_ Phone #: \_\_\_\_\_

Address, City, State , ZIP: \_\_\_\_\_



## B. Survey – Spreadsheet Example

This Appendix demonstrates how the hard-copy survey instrument shown in Appendix A was translated into a spreadsheet for respondents providing data for multiple pharmacies. The first 13 variables are shown in this example.

1. Which of the following best describes this pharmacy location? (select one)	2. How many pharmacies (including this one) were in your organization as of December 31, 2013? (select one answer and apply to all of your pharmacies)	3. Is one or more of the pharmacists who fill prescriptions at this location also an owner of the store or chain? (select one)	4. In which ZIP code is the pharmacy located? (five-digit code)
1 = Traditional pharmacy 2 = Grocery store or mass merchandiser 3 = Long-term care pharmacy 4 = Other	1 = 1 pharmacy 2 = 2 to 3 pharmacies 3 = 4 to 25 pharmacies 4 = 26 to 100 pharmacies 5 = More than 100 pharmacies	1 = Yes 2 = No	five-digit zip code
<b>var00001</b>	<b>var00002</b>	<b>var00003</b>	<b>var00004</b>

5. Was this pharmacy open for the full calendar year 2013?  1 = Yes 2 = No	6. What is the square footage for the following areas of the store/location? (report square footage within the physical location: i.e., do not include parking lots)		
	6a. Prescription-department space (include storage, waiting/counseling area, prescription counter, etc.)  square feet	6b. All other space (include non-prescription-department storage)  square feet	6c. Store/location total space (should equal sum of the two categories to the left)  square feet
<b>var00005</b>	<b>var00006</b>	<b>var00007</b>	<b>var00008</b>

7. What was the number of prescriptions filled by this pharmacy for the following categories for the 2013 calendar year? (for dual-coverage prescriptions, base your count on the primary payer)				
7a. Medicaid-covered prescriptions (prescriptions covered by state Medicaid programs)	7b. Other third-party prescriptions (prescriptions covered by other third parties, including Medicare part D)	7c. Prescriptions paid for by customer with cash, check, credit card, or store account	7d. Other prescriptions	7e. Total prescriptions (should be sum of all prescription categories to the left)
<b>var00009</b>	<b>var00010</b>	<b>var00011</b>	<b>var00012</b>	<b>var00013</b>

### C. Survey Instructions



COALITION *for* COMMUNITY  
PHARMACY ACTION

## 2014 Cost of Dispensing Study

### Instructions

The table below offers specific instructions for each question in the 2014 Cost of Dispensing Study, which must be completed by July 9, 2014.

*Time period:* Many of the questions in the survey ask for data for calendar year 2013. If your accounting period does not correspond exactly to the calendar year (e.g., your books close a few days prior to yearend) use the accounting period that most closely aligns with this time period to answer the survey.

*Support:* If you have any questions about completing the survey, email for support to: [CODsupport@mpi-group.net](mailto:CODsupport@mpi-group.net).

Question	Instructions
1	Select one answer.  This data will not appear in the study report and will be removed from the database after the frequency and percentage for each answer have been tabulated.
2	Select one answer.  This data will not appear in the study report and will be removed from the database after the frequency and percentage for each answer have been tabulated.
3	Select one answer.  This data will not appear in the study report and will be removed from the database after the frequency and percentage for each answer have been tabulated.
4	Enter a ZIP code — use five-digit codes.  The ZIP code field will be removed from the study database once pharmacy data has been regrouped by state.
Question	Instructions

<b>5</b>	Select one answer.
<b>6</b>	Enter actual square footages for prescription department, non-prescription department, and total store, if possible. Do not include space outside of the physical building (e.g., parking lot). If the space at this location is used only for prescriptions, enter a zero (0) in 6b (All other space).
<b>7</b>	Enter the number of prescriptions for each category for the calendar year 2013.  There should be no overlap among the categories, and the sum of all categories should equal the answer for “total prescriptions”.  For dual-coverage prescriptions, base your count on the primary payer.  If all of your prescriptions are included in 7a, 7b, and 7c, enter a zero (0) in 7d.
<b>8</b>	Enter the number of prescriptions for each category. The sum of these two categories should be equal to the total for 7e.
<b>9</b>	Enter the number of compounded prescriptions.
<b>10</b>	Enter the number of prescriptions that were infused medicines.
<b>11</b>	Enter the number of prescriptions dispensed to 340B patients.
<b>12</b>	Select one answer in each row by comparing Medicaid prescriptions to prescriptions paid by other third parties.  Base your answer on time studies, if available; otherwise, make your best estimate for an average Medicaid prescription compared with an average prescription paid by other third parties.  <i>Multiple-pharmacy respondents:</i> If unable to provide an answer unique to each location, develop answers by state: Ask key pharmacists in each state of operation to answer the question, and then apply those answers to all your pharmacies in that particular state.
<b>13</b>	Base your answer on time studies, if available; otherwise, make your best estimate of the average work time required to dispense each type of prescription. To determine average work time, consider all the activities required to process a prescription. These activities include, but are not limited to, obtaining plan, physician and patient information; obtaining prior authorizations; evaluating DURs; printing labels; verifying correct medication; adjudication and readjudication; patient counseling; patient payments; and prescription paperwork and filing.  <i>Multiple-pharmacy respondents:</i> If unable to provide unique times for each location, develop answers by state: Ask key pharmacists in each state of operation to define the times, and then apply those times to all your pharmacies in that particular state.

Question	Instructions
14	<p>Provide the average time period from date of service until payment is received for each prescription category. Do not provide ranges; if ranges exist, take the midpoint.</p> <p>If rebilling occurs for a prescription category, adjust the time period to reflect the average impact of rebills.</p> <p>For example, if you know the percentage of rebills for a particular category, use that percentage to calculate additional total payment days that should then be distributed to a typical payment period: Multiply the percentage of rebilled prescriptions by the typical additional days to collect due to rebilling, and then add that new figure to the payment period for the prescription category.</p> <p>For example, assume that in your state Medicaid pays claims in 30 days when there is no rebilling. However, 20% of your claims require rebilling, which typically adds another 60 days to the payment time. To reflect these rebills, add 12 days (20% X 60 additional days) to the typical 30 days, and enter the result in 14a: 42 days (30 days + 12 days). Follow a similar thought process when answering 14b and 14c.</p> <p><i>Alternative method:</i> If you track accounts receivable separately for the three types of payers listed in 14, you can compute the average days to receive payment as follows:</p> <ol style="list-style-type: none"> <li>1. Determine the total sales for the calendar year 2013 for the payer type.</li> <li>2. Divide by the number of days in the period (365 calendar days) to compute average sales per day.</li> <li>3. Compute the average outstanding receivables balance for the payer type during the calendar year.</li> <li>4. Divide the average outstanding receivable by the average sales per day to get the average days to receive payment.</li> <li>5. Make sure that the result looks reasonable to you based on your experience.</li> </ol> <p><i>Multiple-pharmacy respondents:</i> If unable to provide unique payment periods for each location, develop answers by state: Ask key pharmacists in each state of operation or corporate accounts receivable supervisors to define the times, and then apply those times to all your pharmacies in that particular state.</p>
15	<p>Enter the dollar figure for each sales category that applies to this store for the calendar year 2013.</p> <p>Round dollar figures to the nearest dollar (i.e., do not include cents).</p> <p>Exclude sales tax.</p> <p><b>Total store sales will be removed from the study database once intermediate calculations have been developed.</b></p>
16	<p>Enter the dollar figure for Medicaid prescriptions for the calendar year 2013.</p> <p>Round dollar figures to the nearest dollar (i.e., do not include cents).</p> <p>Exclude sales tax.</p>

Question	Instructions
<b>17</b>	<p>Review the list of costs in 17 carefully prior to starting in order to avoid any double-counting of store/location costs.</p> <p>Answer all major categories (17a, 17b, 17c and 17d — and 17e, if applicable).</p> <p>Do not double count any costs.</p> <p>Round dollar figures to the nearest dollar (i.e., do not include cents).</p> <p><b>IMPORTANT NOTE:</b> Costs that typically are considered a component of “inventory carrying costs” are accounted for throughout sections of question 17 and in the study formula to determine cost of dispensing. For example, insurance and interest are identified elsewhere. Any application of carrying costs to other areas of this question, such as 17b9 (Other prescription-department-specific costs), will result in double counting.</p>
<b>17a</b>	<p>The worksheet that follows these instructions may be useful when completing 17a. Include the full costs of payroll for people working in the prescription department. For people who spend part of their time in the prescription department and the rest of their time working elsewhere in the store, allocate their payroll costs to the prescription department based on the approximate percentage of their time spent working there.</p>
<b>17b and 17c</b>	<p>Answer subcategories (the shaded lines such as 17b3) as thoroughly as possible. The total of the subcategories in each group must equal the major category. For example, the prescription department costs listed in subcategories 17b1 through 17b9 must equal the major category 17b.</p>
<b>17d</b>	<p>Answer subcategories (shaded lines such as 17d3) as thoroughly as possible. The total of the subcategories in each group must equal the major category. <i>Do not</i> include corporate costs for multipharmacy organizations in 17d; these costs will be entered in 17e.</p>

Question	Instructions
<p><b>17e</b></p>	<p>If this store is a part of a group of stores or larger business enterprise, some activities may be performed at district, regional, or central corporate locations. The appropriate portion of these costs applicable to each store/location should be calculated as follows, with the total entered in 17e:</p> <p><b>Step 1. Identify central or corporate costs 100% in support of the prescription department.</b> If possible, identify corporate costs that are 100% in support of the store’s prescription departments (such as a corporate pharmaceutical procurement, third-party payment processing, or compliance with state regulations).</p> <p>Also identify corporate costs that support only non-prescription products — do not include them in the allocation of central costs.</p> <p><b>Step 2. Central or corporate costs related to both prescription departments and other store/location operations.</b> For corporate costs that support both the prescription departments and other store operations (such as general administration, accounting, human resources, information systems, etc.), multiply the total of these costs times the chain’s prescription sales as a percentage of the group’s total sales.</p> <p><b>Step 3: Central costs applicable to all stores’ prescription departments.</b> Add together the amounts computed in Step 1 and Step 2.</p> <p><b>Step 4: Central costs applicable to a single store’s prescription department.</b> Multiply the total from Step 3 times this store/location’s prescription sales as a percentage of the group’s total prescription sales. Enter the result in 17e.</p> <p>See the following sample calculation:</p>

<p><b>17e sample calculation</b></p>	<p>The Anytown Drug Store is part of a group of 25 stores, MultiStore Inc. For the calendar year 2013, Anytown’s financial statements showed \$6 million in total sales, of which \$4 million (or 67%) were sales of prescriptions.</p> <p>During the same period, total sales for MultiStore Inc. were \$100 million, of which \$64 million — or 64% — were sales of prescriptions. Anytown Drug Store’s prescription sales were 6.25% of the group’s prescription sales (\$4 million ÷ \$64 million).</p> <p>MultiStore Inc. performs a number of functions at its headquarters, including purchasing, finance, legal and regulatory, human resources, information systems, and general administration. For the calendar year 2013, these central costs totaled \$1 million.</p> <p>MultiStore’s accounting system allows it to classify its central costs into three categories:</p> <ol style="list-style-type: none"> <li>1. Departments that are 100% dedicated to supporting prescriptions (\$300,000).</li> <li>2. Departments that are 100% dedicated to non-prescription products (\$200,000) — because these costs are unrelated to prescriptions, none of them are allocated.</li> <li>3. Departments that support both prescription and non-prescription operations (\$1,500,000).</li> </ol> <p>MultiStore Inc. will compute the corporate costs allocated to Anytown’s prescription department as follows, using the steps defined in this instruction sheet for 17e:</p> <p><b>Step 1:</b> 100% of \$300,000 = \$300,000</p> <p><b>Step 2:</b> 64% of \$1,500,000 = \$960,000</p> <p><b>Step 3:</b> Total corporate allocation to all MultiStore prescription departments = \$1,260,000 (Step 1 + Step 2)</p> <p><b>Step 4:</b> Anytown Drug Store’s portion of this allocation is based on its share of MultiStore’s total prescription sales, which is 6.25%. Anytown’s portion of the prescription department allocation is \$78,750 (6.25% X \$1,260,000). This number should be entered for 17e for Anytown Drug Store.</p> <p>Note: If MultiStore Inc. has no functions dedicated 100% to prescription or to non-prescription support, then it would allocate its central costs in a two-step process, as follows:</p> <ol style="list-style-type: none"> <li>1. Allocate total central costs to all stores’ prescription departments: \$2 million X 64% = \$1,280,000.</li> <li>2. Allocate the total computed in Step 1 to Anytown Drug Store’s prescription department (\$1,280,000 X 6.25% = \$80,000). This number would be entered for 17e for Anytown Drug Store.</li> </ol>
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Question	Instructions
<p><b>Passcode and email address</b></p>	<p>The passcode and email address are necessary if you wish to compare your pharmacy or one of your pharmacies (multiple-pharmacy respondent) to aggregate groupings of pharmacies by characteristics such as prescription volumes. This incentive is offered via an online comparison site.</p> <p>Additionally, if you are entering your answers at the online survey site, a passcode and email address will be requested upon entering the survey site. Applying a passcode and email at the site will enable you to leave your survey unfinished and return to it at another time to complete. You may leave the login blank and enter data anonymously, but you will then need to complete your online survey in one session. We ask for both a passcode and email address in the event that identical passcodes are selected by different respondents (e.g., 12345678).</p> <p><i>Online comparison site:</i> The comparison site presents findings in a manner that keeps respondent data confidential — i.e., it will not be possible to identify a specific pharmacy or a chain of pharmacies or their results.</p>
<p><b>Contact information</b></p>	<p>Provide contact information (<i>optional</i>).</p>



# Prescription Department Payroll Worksheet

The following form was provided to COD Study respondents as an Excel worksheet:

Prescription Department Payroll Worksheet							
To separate out prescription department payroll costs for calendar year 2013, please use the worksheet below:							
Employee group	Total compensation (\$) for employee group (excluding benefits)	+	Total benefits (\$) for employee group	X	% of employee group work time dedicated to:		Prescription department costs per employee group type (\$)
					a. Prescriptions	b. Non-prescription work	
Pharmacist-Owner		+		X		=	\$ -
							100%
Pharmacists		+		X		=	\$ -
							100%
Technicians		+		X		=	\$ -
							100%
Clerks		+		X		=	\$ -
							100%
Delivery drivers		+		X		=	\$ -
							100%
Others		+		X		=	\$ -
							100%
Total (sum of all prescription department costs per employee group type)						=	\$ -
Also enter this total on line 17a of the survey.							

#### **D. COD Study Q&A**

These were questions from respondents about how to complete the survey at an initial webinar about the study.

Question 7. For the Medicaid covered prescriptions, should Medicaid Managed Care prescriptions be included here?

**No. Medicaid Managed Care prescriptions should be included in other 3<sup>rd</sup> party. We believe that the majority of Medicaid Managed Care prescriptions cannot be identified as such and that they are processed like other 3<sup>rd</sup> party prescriptions.**

Question 7. For other prescriptions, should that include ADAP and State Pharmacy Assistant Programs (SPAP) that are secondary payers after Part D?

**If these prescriptions are counted in 3<sup>rd</sup> party prescriptions (under their primary payer, Medicare Part D), they should not be counted again under their secondary payer. Other prescriptions should include only those prescriptions that are not counted in any of the other categories.**

Question 11. How do 340B prescriptions factor into this survey? In other words, what is the need for their inclusion? On 340B does this involve just traditional 340B or does it also include the after the fact 340B?

**340B patients may be sicker or have more conditions than ordinary patients in a pharmacy. We wanted to test the idea that pharmacies serving 340B patients have higher costs than pharmacies that do not. Treat all 340B prescriptions identically.**

Question 14. Shouldn't there be a question about payments schedule for Medicare Part D or should that just be factored into other in 14b?

**Medicare Part D prescriptions should be included in other 3<sup>rd</sup> party prescriptions in question 14b.**

Question 17a. Do we include administrative support staff salary and benefits that support the chain in administrative oversight, reconciliation, billing, scheduling, etc.? Or is payroll only those staff who are processing prescriptions?

**This question specifically asks for prescription department payroll. If administrative support staff are paid at the store level by the prescription department, they should be included here. If they are employees at another location, their salaries and benefits should be allocated back to the store in 17e (Corporate costs). Instructions for 17e show how to allocate those costs back to individual pharmacies.**

Question 17a. Please address how an owner should address his salary, rent when he owns the store, his wife working for him. Costs where the money exchanged is not the true value of the goods or services.

**Respondents with such conditions should estimate a market rate when they are not paying themselves or a family member a formal salary. If they own the store and are not charging the business any rent, then they might apply a market rate or use the depreciation and mortgage interest they are actually paying, even if they are reporting it for tax purposes as part of a separate legal entity. If necessary, please contact us directly about your unique situation.**

Question 17b. Should equipment costs include equipment purchased in 2013 or % of all equipment?

**For purchased equipment, this should be the depreciation expense and maintenance costs associated with that equipment, regardless of the year purchased.**

Question 17b: Where should regulatory compliance time and transaction costs be listed in Section 17b (i.e. State BOP Rx audit trail, State PMP)?

**Assuming that these costs relate only to prescriptions and no other functions of the store, they are likely to be accounted for in 17a (Prescription department payroll) or as professional services fees in 17b9 (Other prescription department costs).**

Question 17: Where would you put unreimbursed cost losses for damages to store & product (i.e. Superstorm Sandy)?

**If the pharmacy was not in business for the full calendar year as the result of damages, you should not submit a survey. If operations continued despite damage, it should be included in 17c9 and/or 17d13.**

Where do you recommend stores account for carry costs of drugs, including pickup bin items, restocked items?

**Costs that are often described as “carrying costs” are accounted for in various parts of the survey – they could be part of personnel costs (17a) and prescription department costs 17b (such as interest, insurance, rent or other costs).**

Where to account for the costs to return drugs through reverse distributors? Also, how do they account for net revenues for drug returns?

**Resulting changes in the costs of goods for those drugs are not considered with the COD survey, but any service costs related to reverse distributors would be accounted for in 17b5 (Delivery expenses) or 17b9 (Other prescription-department-specific costs).**

How will outliers be treated? How will you define which observations are outliers?

**In the past, outliers were determined based on a standard deviation from the mean, which was set once all pharmacy submissions were received and the array of data analyzed.**

## E. Example of Cost of Dispensing Computation

The following definitions show the calculation of the overall COD and the Medicaid COD as performed for this study, along with a numerical example. This example shows three sets of values:

- Variables entered by survey respondents on the survey instruments that are used to compute COD (only variables actually used in the COD computation are shown in this example)
- Three constants that were used in the COD
- Computations using the variables and constants for calculating the COD

Example values are shown for the variables, constants, and computations to assist the reader in understanding the model. The example values are strictly for illustrative purposes and are not based on the actual results of the survey presented in this report.

Variables entered on the survey used in computing the cost of dispensing (an example of the survey instrument is included in Appendix A):

Description	Survey Question	Example of Variable Entered from Survey
Prescription department space in square feet	6a.	800
Store/location total space in square feet	6c.	10,000
Number of Medicaid prescriptions filled during period covered by survey	7a.	5,000
Number of 3rd party prescriptions filled during period	7b.	90,000
Number of customer-paid prescriptions filled during period	7c.	3,000
Other prescriptions	7d.	2,000
Total prescriptions filled during period	7e.	100,000
Estimated minutes required to fill a typical Medicaid prescription	13a.	10
Estimated minutes required to fill a typical other third-party prescription	13b.	9
Estimated minutes required to fill a typical customer-paid prescription	13c.	8
Average payment days for Medicaid prescriptions	14a.	25
Average payment days for other third party prescriptions	14b.	20
Average payment days for prescriptions paid with store accounts	14c.	5
Total prescription sales during period covered by survey	15a.	\$6,000,000
Total sales for the store	15d.	\$10,000,000
Prescription department payroll	17a.	\$650,000
Other prescription department costs (including supplies, insurance, etc.)	17b.	\$45,000
Total facility costs (including rent, taxes, utilities, etc.)	17c.	\$500,000
Other store/location costs (including advertising, accounting services, etc.)	17d.	\$200,000
Marketing and advertising costs	17d1.	\$45,000
Bad debts	17d10.	\$3,000
Charitable contributions	17d11.	\$2,000
Corporate costs allocated to the prescription department	17e.	\$60,000

Constants used in the calculation of the cost of dispensing for all pharmacies:

Constant	Additional Description	Example
Number of calendar days in period covered by the survey	Calendar days from January 1 through December 31, 2013	365
Number of days in the calendar year	Same as above	365
Average short-term interest rate paid by retail businesses during period	Average LIBOR + 200 basis points used as a typical short-term rate for retailers.	2.4%

Computations made to arrive at the cost of dispensing, using the survey variables and constants shown above:

Computation of Overall Cost of Dispensing		
Computed Numbers	Additional Description	Example
Prescription department square footage as a percentage of total store square footage		8%
Facility cost allocated to prescription department based on relative square footage	Square footage percentage multiplied by total facility cost.	\$40,000
Prescription department sales as a percentage of total store sales		60%
Other store/location costs allocated to prescription department based on relative sales	Prescription sales percentage multiplied by total other store/location costs.	\$120,000
Total cost of prescription department	Sum of prescription department payroll, other prescription department costs, facility cost allocation, other store/location cost allocation and corporate allocation	\$915,000
Overall cost of dispensing	Total cost of prescription department divided by total number of prescriptions filled	\$9.15

Computation of Medicaid Cost of Dispensing		
<b>To compute payroll costs for Medicaid prescriptions:</b>		
Total Medicaid prescription minutes in period	Number of Medicaid prescriptions multiplied by estimated minutes to fill per prescription	50,000
Total third-party prescription minutes in period	Estimated third-party prescriptions multiplied by estimated minutes to fill per prescription (see Note 1 below)	828,000
Total customer-paid prescription minutes in period	Number of customer-paid prescriptions multiplied by estimated minutes to fill per prescription	24,000
Total prescription minutes – all prescriptions	Sum of minutes for all prescription types	902,000
Percentage of minutes for Medicaid prescriptions	Medicaid prescription minutes as percentage of total prescription minutes	5.54%
Prescription department payroll applicable to Medicaid prescriptions	Prescription department payroll multiplied by percentage of minutes for Medicaid prescriptions	\$36,031
Medicaid payroll cost per prescription	Payroll applicable to Medicaid prescriptions divided by number of Medicaid prescriptions	\$7.21
<b>To compute interest expense to impute to Medicaid prescriptions:</b>		
Average selling price per prescription	Total prescription sales divided by total number of prescriptions	\$60.00
Average Daily Receivable - Medicaid	Average prescription selling price multiplied by number of Medicaid prescriptions multiplied by average payment days for Medicaid divided by days in period.	\$20,548

<b>Computation of Medicaid Cost of Dispensing</b>		
Average Daily Receivable - Other 3rd Party	Average prescription selling price multiplied by number of third-party prescriptions multiplied by average payment days for other third-party prescriptions divided by days in period.	\$295,890
Average Daily Receivable - Customer Paid	Average prescription selling price multiplied by number of customer-paid prescriptions multiplied by average payment days for customer-paid prescriptions divided by days in period.	\$2,466
Average Daily Receivable - All Prescriptions	Sum of average daily receivable for Medicaid, third-party and customer prescriptions	\$318,904
Imputed Interest Expense – Total for Period	Average daily receivable (all prescriptions) multiplied by average short-term interest rate multiplied by days in period divided by days in year.	\$7,654
Imputed interest cost per prescription	Imputed interest expense total for period divided by total number of prescriptions	\$0.08
Imputed Interest Expense – Medicaid – Total for Period	Average daily receivable (Medicaid) multiplied by average short-term interest rate multiplied by days in period divided by days in year.	\$493
Imputed interest cost per Medicaid prescription	Imputed interest expense (Medicaid) for period divided by number of Medicaid prescriptions	\$0.10
Increase (decrease) in interest cost per prescription – overall vs. Medicaid	Imputed interest cost per Medicaid prescription less imputed interest cost per prescription	\$0.02
Medicaid cost of dispensing (see Note below)	Sum of: <ul style="list-style-type: none"> <li>• Medicaid payroll cost per Medicaid prescription (see above)</li> <li>• Overall prescription department cost per prescription</li> <li>• Allocated facility cost per prescription</li> <li>• Allocated store/location cost per prescription</li> <li>• Corporate cost per prescription</li> <li>• Increase (decrease) in interest cost per prescription – overall vs. Medicaid (see above)</li> </ul> Less: <ul style="list-style-type: none"> <li>• Marketing and advertising</li> <li>• Bad debts</li> <li>• Charitable contributions</li> </ul>	\$9.58

Note: The differences between the overall COD and the Medicaid COD are for prescription department payroll costs, imputed interest expense, and the subtraction of the expenses for marketing and advertising, bad debts, and charitable contributions. All other costs per prescription (other prescription department costs, facility costs, most store/location costs and corporate costs) are computed to be the same for all prescriptions, including Medicaid.



## F. COD Study Results by Question Number

Data are unweighted (i.e., every pharmacy counted equally, regardless of prescription volume) and tabulated based on full database unless otherwise indicated.

5. Was this pharmacy open for the full calendar year 2013?		
	Pharmacies	Percent of Pharmacies
Yes	19,051	99.4%
No	125	0.6%
Total	19,176	100.0%

6. What is the square footage for the following areas of the store/location? (report square footage within the physical location: i.e., do not include parking lots)					
	Pharmacies	Mean	Median	25th percentile	75th percentile
a. Prescription-department space (include storage, waiting/counseling area, prescription counter, etc.)	19,179	807	808	582	984
b. All other space (include non-prescription-department storage)	19,179	25,454	10,767	9,834	15,380
c. Store/location total space (should equal the sum of the two categories)	19,179	26,261	11,694	10,661	16,141

7. What was the number of prescriptions filled by this pharmacy for the 2013 calendar year? (for dual-coverage prescriptions, base your count on the primary payer)					
	Pharmacies	Mean	Median	25th percentile	75th percentile
a. Medicaid-covered prescriptions (prescriptions covered by state Medicaid programs) <sup>1</sup>	18,174	5,778	3,140	1,129	7,639
b. Other third-party prescriptions (prescriptions covered by other third parties, including Medicare part D)	19,179	55,748	53,125	37,741	70,863
c. Prescriptions paid for by customer with cash, check, credit card, or store account	19,179	3,720	3,060	2,076	4,354
d. Other prescriptions	19,179	64	0	0	0
e. Total prescriptions	19,179	65,187	63,306	46,462	81,030

<sup>1</sup> Pharmacies for which a Medicaid COD could be computed.

8. Of the total prescriptions reported in 7e, what percentage were?					
	Pharmacies	Mean	Median	25th percentile	75th percentile
a. New prescriptions	19,057	52.8%	52.5%	49.0%	56.4%
b. Refill prescriptions	19,057	47.2%	47.5%	43.6%	51.0%

9. How many prescriptions in 2013 were <i>compounded</i> ? <sup>1</sup>					
	Pharmacies	Mean	Median	25th percentile	75th percentile
	19,155	86	37	17	71

<sup>1</sup> 682 pharmacies answered 0, and 18,473 reported a figure greater than 0.

10. How many prescriptions in 2013 were <i>infused</i> medicines? <sup>1</sup>					
	Pharmacies	Mean	Median	25th percentile	75th percentile
	17,458	196	0	0	444

<sup>1</sup> 11,911 pharmacies answered 0, and 5,547 reported a figure greater than 0.

11. How many prescriptions in 2013 were dispensed to 340B patients? <sup>1</sup>					
	Pharmacies	Mean	Median	25th percentile	75th percentile
	12,687	348	0	0	19

<sup>1</sup> 8,810 pharmacies answered 0, and 3,877 reported a figure greater than 0.

<b>12. How has each activity below affected the time it takes to dispense a Medicaid prescription compared to other third-party prescriptions? <sup>1</sup></b>		
a. Obtaining plan number/qualifying the patient		
	<b>Pharmacies</b>	<b>Percent of Pharmacies</b>
Takes more time	5,052	27.8%
No difference	13,085	72.0%
Takes less time	55	0.3%
Total	18,173	100.0%
b. Obtaining prior authorization		
	<b>Pharmacies</b>	<b>Percent of Pharmacies</b>
Takes more time	10,649	58.6%
No difference	7,487	41.2%
Takes less time	36	0.2%
Total	18,173	100.0%
c. Adjudication		
	<b>Pharmacies</b>	<b>Percent of Pharmacies</b>
Takes more time	4,870	26.8%
No difference	13,301	73.2%
Takes less time	18	0.1%
Total	18,171	100.0%
d. Patient counseling		
	<b>Pharmacies</b>	<b>Percent of Pharmacies</b>
Takes more time	1,090	6.0%
No difference	17,083	94.0%
Takes less time	-	0.0%
Total	18,173	100.0%
e. Other dispensing activities		
	<b>Pharmacies</b>	<b>Percent of Pharmacies</b>
Takes more time	998	5.5%
No difference	17,170	94.5%
Takes less time	4	0.0%
Total	18,171	100.0%

<sup>1</sup> Pharmacies for which a Medicaid COD could be computed.

13. How much work time did it typically take in 2013 to dispense each of the following types of prescriptions (per prescription)? Count the time contributed by all employees: pharmacists, technicians, clerks, etc. (minutes) <sup>1</sup>					
	Pharmacies	Mean	Median	25th percentile	75th percentile
a. Medicaid prescriptions	18,174	9.3	9.5	6.6	11.6
c. Other third-party prescriptions	18,174	9.0	9.1	6.6	11.0
d. Prescriptions paid for by customers	18,174	8.5	8.0	6.6	9.8

<sup>1</sup> Pharmacies for which a Medicaid COD could be computed.

14. How long did it typically take to receive payment after the prescription was dispensed for the following types of prescriptions? (days) <sup>1</sup>					
	Pharmacies	Mean	Median	25th percentile	75th percentile
a. Medicaid-covered prescriptions	18,174	24.0	22.2	22.0	25.0
b. Other third-party prescriptions	18,174	21.9	21.0	18.0	26.0
c. Prescriptions paid for by customers using store accounts	18,174	2.1	0.0	0.0	0.0

<sup>1</sup> Pharmacies for which a Medicaid COD could be computed.

15. What were sales for this location for the following categories in 2013? (excluding sales tax)					
	Pharmacies	Mean	Median	25th percentile	75th percentile
a. Prescription sales (not including over-the-counter sales)	19,179	\$3,892,875	\$3,685,921	\$2,623,849	\$4,885,055
b. Retail sales	19,179	\$8,131,930	\$3,625,252	\$1,564,880	\$8,091,672
c. Other sales (e.g., services)	19,179	\$5,972	\$0	\$0	\$0
d. Total sales (sum of above)	19,179	\$12,030,777	\$8,022,567	\$5,478,483	\$13,008,375

16. What were sales of Medicaid prescriptions (included in #15a) for this location in 2013?					
	Pharmacies	Mean	Median	25th percentile	75th percentile
	19,160	\$347,710	\$202,254	\$73,480	\$463,425

17. What were the following costs and expenses for this location in 2013?					
	Pharmacies	Mean	Median	25th percentile	75th percentile
a. Prescription department payroll (including compensation, benefits, and payroll taxes)	19,179	\$455,404	\$441,625	\$370,498	\$509,560
b. Prescription department costs (not including compensation, benefits, and payroll taxes)	19,179	\$30,155	\$24,251	\$15,427	\$35,647
c. Total facility costs	19,179	\$775,370	\$507,115	\$356,587	\$711,291
d. Other store/location costs	19,179	\$305,035	\$154,250	\$69,660	\$340,124
e. Corporate costs allocated back to the prescription department at this store/location	19,179	\$88,739	\$80,465	\$36,866	\$135,998

## **G. COD Study Metropolitan Statistical Areas (MSAs)**

This table presents the Metropolitan Statistical Areas used for the urban/rural classification of the pharmacies that participated in the COD study. As noted in the report, of the 19,179 pharmacies in the database for which a cost of dispensing could be computed, 16,403 in 336 MSAs were classified as urban based on their zip codes. There were 2,775 pharmacies classified as rural because their zip codes did not appear within an MSA (1 pharmacy could not be classified by MSA).

Abilene, TX	Boise City, ID	Davenport-Moline-Rock Island, IA-IL
Aguadilla, PR	Boston, MA-NH	Daytona Beach, FL
Akron, OH	Boulder-Longmont, CO	Dayton-Springfield, OH
Albany, GA	Brazoria, TX	Decatur, AL
Albany-Schenectady-Troy, NY	Bremerton, WA	Decatur, IL
Albuquerque, NM	Bridgeport, CT	Denver, CO
Alexandria, LA	Brockton, MA	Des Moines, IA
Allentown-Bethlehem-Easton, PA	Brownsville-Harlingen-San Benito, TX	Detroit, MI
Altoona, PA	Bryan-College Station, TX	Dothan, AL
Amarillo, TX	Buffalo-Niagara Falls, NY	Dover, DE
Anchorage, AK	Burlington, VT	Dubuque, IA
Ann Arbor, MI	Caguas, PR	Duluth-Superior, MN-WI
Anniston, AL	Canton-Massillon, OH	Dutchess County, NY
Appleton-Oshkosh-Neenah, WI	Casper, WY	Eau Claire, WI
Arecibo, PR	Cedar Rapids, IA	El Paso, TX
Asheville, NC	Champaign-Urbana, IL	Elkhart-Goshen, IN
Athens, GA	Charleston, WV	Elmira, NY
Atlanta, GA	Charleston-North Charleston, SC	Enid, OK
Atlantic-Cape May, NJ	Charlotte-Gastonia-Rock Hill, NC-SC	Erie, PA
Auburn-Opelika, AL	Charlottesville, VA	Eugene-Springfield, OR
Augusta-Aiken, GA-SC	Chattanooga, TN-GA	Evansville-Henderson, IN-KY
Austin-San Marcos, TX	Cheyenne, WY	Fargo-Moorhead, ND-MN
Bakersfield, CA	Chicago, IL	Fayetteville, NC
Baltimore, MD	Chico-Paradise, CA	Fayetteville-Springdale-Rogers, AR
Bangor, ME	Cincinnati, OH-KY-IN	Fitchburg-Leominster, MA
Barnstable-Yarmouth, MA	Clarksville-Hopkinsville, TN-KY	Flagstaff, AZ-UT
Baton Rouge, LA	Cleveland-Lorain-Elyria, OH	Flint, MI
Beaumont-Port Arthur, TX	Colorado Springs, CO	Florence, AL
Bellingham, WA	Columbia, MO	Florence, SC
Benton Harbor, MI	Columbia, SC	Fort Collins-Loveland, CO
Bergen-Passaic, NJ	Columbus, GA-AL	Fort Lauderdale, FL
Billings, MT	Columbus, OH	Fort Myers-Cape Coral, FL
Biloxi-Gulfport-Pascagoula, MS	Corpus Christi, TX	Fort Pierce-Port St. Lucie, FL
Binghamton, NY	Corvallis, OR	Fort Smith, AR-OK
Birmingham, AL	Cumberland, MD-WV	Fort Walton Beach, FL
Bismarck, ND	Dallas, TX	Fort Wayne, IN
Bloomington, IN	Danbury, CT	Fort Worth-Arlington, TX
Bloomington-Normal, IL	Danville, VA	Fresno, CA

Gadsden, AL	Lafayette, IN	New Bedford, MA
Gainesville, FL	Lafayette, LA	New Haven-Meriden, CT
Galveston-Texas City, TX	Lake Charles, LA	New London-Norwich, CT-RI
Gary, IN	Lakeland-Winter Haven, FL	New Orleans, LA
Glens Falls, NY	Lancaster, PA	New York, NY
Goldsboro, NC	Lansing-East Lansing, MI	Newark, NJ
Grand Forks, ND-MN	Laredo, TX	Newburgh, NY-PA
Grand Junction, CO	Las Cruces, NM	Norfolk-Virginia Beach-Newport News, VA-NC
Grand Rapids-Muskegon-Holland, MI	Las Vegas, NV-AZ	Oakland, CA
Great Falls, MT	Lawrence, KS	Ocala, FL
Greeley, CO	Lawrence, MA-NH	Odessa-Midland, TX
Green Bay, WI	Lawton, OK	Oklahoma City, OK
Greensboro--Winston-Salem--High Point, NC	Lewiston-Auburn, ME	Olympia, WA
Greenville, NC	Lexington, KY	Omaha, NE-IA
Greenville-Spartanburg-Anderson, SC	Lima, OH	Orange County, CA
Hagerstown, MD	Lincoln, NE	Orlando, FL
Hamilton-Middletown, OH	Little Rock-North Little Rock, AR	Owensboro, KY
Harrisburg-Lebanon-Carlisle, PA	Longview-Marshall, TX	Panama City, FL
Hartford, CT	Los Angeles-Long Beach, CA	Parkersburg-Marietta, WV-OH
Hattiesburg, MS	Louisville, KY-IN	Pensacola, FL
Hickory-Morganton-Lenoir, NC	Lowell, MA-NH	Peoria-Pekin, IL
Honolulu, HI	Lubbock, TX	Philadelphia, PA-NJ
Houma, LA	Lynchburg, VA	Phoenix-Mesa, AZ
Houston, TX	Macon, GA	Pittsburgh, PA
Huntington-Ashland, WV-KY-OH	Madison, WI	Pittsfield, MA
Huntsville, AL	Manchester, NH	Pocatello, ID
Indianapolis, IN	Mansfield, OH	Ponce, PR
Iowa City, IA	Mayaguez, PR	Portland, ME
Jackson, MI	McAllen-Edinburg-Mission, TX	Portland-Vancouver, OR-WA
Jackson, MS	Medford-Ashland, OR	Portsmouth-Rochester, NH-ME
Jackson, TN	Melbourne-Titusville-Palm Bay, FL	Providence-Fall River-Warwick, RI-MA
Jacksonville, FL	Memphis, TN-AR-MS	Provo-Orem, UT
Jacksonville, NC	Merced, CA	Pueblo, CO
Jamestown, NY	Miami, FL	Punta Gorda, FL
Janesville-Beloit, WI	Middlesex-Somerset-Hunterdon, NJ	Racine, WI
Jersey City, NJ	Milwaukee-Waukesha, WI	Raleigh-Durham-Chapel Hill, NC
Johnson City-Kingsport-Bristol, TN-VA	Minneapolis-St. Paul, MN-WI	Rapid City, SD
Johnstown, PA	Missoula, MT	Reading, PA
Jonesboro, AR	Mobile, AL	Redding, CA
Joplin, MO	Modesto, CA	Reno, NV
Kalamazoo-Battle Creek, MI	Monmouth-Ocean, NJ	Richland-Kennewick-Pasco, WA
Kankakee, IL	Monroe, LA	Richmond-Petersburg, VA
Kansas City, MO-KS	Montgomery, AL	Riverside-San Bernardino, CA
Kenosha, WI	Muncie, IN	Roanoke, VA
Killeen-Temple, TX	Myrtle Beach, SC	Rochester, MN
Knoxville, TN	Naples, FL	Rochester, NY
Kokomo, IN	Nashua, NH	Rockford, IL
La Crosse, WI-MN	Nashville, TN	Rocky Mount, NC
	Nassau-Suffolk, NY	

Sacramento, CA	Tucson, AZ
Saginaw-Bay City-Midland, MI	Tulsa, OK
Salem, OR	Tuscaloosa, AL
Salinas, CA	Tyler, TX
Salt Lake City-Ogden, UT	Utica-Rome, NY
San Angelo, TX	Vallejo-Fairfield-Napa, CA
San Antonio, TX	Ventura, CA
San Diego, CA	Victoria, TX
San Francisco, CA	Vineland-Millville-Bridgeton, NJ
San Jose, CA	Visalia-Tulare-Porterville, CA
San Juan-Bayamon, PR	Waco, TX
San Luis Obispo-Atascadero-Paso Robles, CA	Washington, DC-MD-VA-WV
Santa Barbara-Santa Maria-Lompoc, CA	Waterbury, CT
Santa Cruz-Watsonville, CA	Waterloo-Cedar Falls, IA
Santa Fe, NM	Wausau, WI
Santa Rosa, CA	West Palm Beach-Boca Raton, FL
Sarasota-Bradenton, FL	Wheeling, WV-OH
Savannah, GA	Wichita Falls, TX
Scranton--Wilkes-Barre--Hazleton, PA	Wichita, KS
Seattle-Bellevue-Everett, WA	Williamsport, PA
Sharon, PA	Wilmington, NC
Sheboygan, WI	Wilmington-Newark, DE-MD
Sherman-Denison, TX	Worcester, MA-CT
Shreveport-Bossier City, LA	Yakima, WA
Sioux City, IA-NE	Yolo, CA
Sioux Falls, SD	York, PA
South Bend, IN	Youngstown-Warren, OH
Spokane, WA	Yuba City, CA
Springfield, IL	Yuma, AZ
Springfield, MA	
Springfield, MO	
St. Cloud, MN	
St. Joseph, MO	
St. Louis, MO-IL	
Stamford-Norwalk, CT	
State College, PA	
Steubenville-Weirton, OH-WV	
Stockton-Lodi, CA	
Sumter, SC	
Syracuse, NY	
Tacoma, WA	
Tallahassee, FL	
Tampa-St. Petersburg-Clearwater, FL	
Terre Haute, IN	
Texarkana, TX-Texarkana, AR	
Toledo, OH	
Topeka, KS	
Trenton, NJ	



## H. COD Study Tables 1-3 prior to Non-Response Bias Adjustment

Table 1: Overall Cost of Dispensing					
	Frequency	Mean	Median	25 <sup>th</sup> Percentile	75 <sup>th</sup> Percentile
COD per prescription <sup>1</sup>	1,948,805,237	\$9.96	\$9.47	\$8.14	\$11.12
COD per pharmacy <sup>2</sup>	24,271	\$11.01	\$10.28	\$8.65	\$12.41

<sup>3</sup> Weighted data by volume of prescriptions; each prescription COD as one value (i.e., a pharmacy with 5,000 prescriptions has 5,000 values in the array of COD data).

<sup>4</sup> Unweighted data; each pharmacy's COD as one value, regardless of the pharmacy's prescription volume.

Table 2: Medicaid Cost of Dispensing					
	Frequency	Mean	Median	25 <sup>th</sup> Percentile	75 <sup>th</sup> Percentile
Medicaid COD per prescription <sup>1</sup>	157,457,211	\$9.82	\$9.44	\$8.19	\$10.96
Medicaid COD per pharmacy <sup>2</sup>	23,132 <sup>3</sup>	\$10.92	\$10.24	\$8.50	\$12.39

<sup>4</sup> Weighted data by volume of Medicaid prescriptions for which a Medicaid COD could be computed; each Medicaid prescription COD as one value.

<sup>5</sup> Unweighted data; each pharmacy's Medicaid COD as one value, regardless of its Medicaid prescription volume.

<sup>6</sup> 1,139 pharmacies for which an overall cost of dispensing could be reported did not provide Medicaid prescription volume, reported they did accept Medicaid prescriptions, and/or did not provide sufficient information to compute a Medicaid COD.

Table 3: Components of Overall and Medicaid Mean Costs of Dispensing <sup>1</sup>				
	Overall COD per Prescription- Mean	Overall COD per Pharmacy - Mean	Medicaid COD per Prescription - Mean	Medicaid COD per Pharmacy - Mean
Payroll Costs	\$6.59	\$7.34	\$6.57	\$7.50
Prescription Dept. Costs	\$0.43	\$0.49	\$0.42	\$0.47
Facilities Cost Allocation	\$0.44	\$0.53	\$0.39	\$0.53
Other Store/Location Costs	\$1.19	\$1.29	\$1.04	\$1.32
Corporate Cost Allocation	\$1.32	\$1.35	\$1.57	\$1.37
Adjustments (expenses not allowed under Medicaid)	—	—	- \$0.17	- \$0.27
<b>Total</b>	<b>\$9.96</b>	<b>\$11.01</b>	<b>\$9.82</b>	<b>\$10.92</b>

<sup>1</sup> Columns may not sum precisely due to rounding of decimals.