



Pharmacy Inventory Procedures and Controls

Magers Health and Wellness Center

September 30, 2019

Office of Internal Audit and Risk Management



Missouri State[™]

U N I V E R S I T Y

DATE: September 30, 2019

TO: Dr. Frederick D. Muegge, Director of Health and Wellness
Randy Bass, Pharmacist

CC: Dr. Dee Sisco, Vice President for Student Affairs
Clifton M. Smart III, University President

FROM: Donna Christian, Director of Internal Audit and Risk Management
Jane Dewberry, Senior Internal Auditor

Pharmacy Inventory Procedures and Controls Magers Health and Wellness Center

BACKGROUND

Magers Pharmacy operates within the Bill and Lucille Magers Family Health and Wellness Center. Completed in March 2018, the new, much larger pharmacy space provides a convenient drive-up window, additional privacy when consulting with the pharmacist, an open, inviting space to purchase over-the-counter products, and a state-of-the-art security system.



The Pharmacy fills approximately 46,000 prescriptions annually for students, employees, retirees, and their families. A variety of over-the-counter products are also available for sale at Magers Pharmacy. During the year ended June 30, 2019 the Pharmacy generated nearly \$3 million in gross revenue.

Magers Pharmacy participates in a national cooperative group purchasing organization for government facilities that provide healthcare services. Contracts negotiated by the group enable Magers to offer prices that are competitive with their much larger competitors.

OBJECTIVE AND SCOPE

The objectives were to review inventory procedures and test the accuracy of the annual physical inventory count of Magers Pharmacy. The scope included, but was not necessarily limited to July 1, 2018 through June 30, 2019.

SUMMARY

No discrepancies were identified during our review of the annual physical inventory.

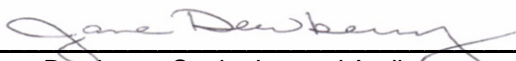
Our review recommended a report be developed showing all inventory adjustments and the reasons for the to provide better control over inventory adjustments.

This report commends pharmacy staff for reducing expenses related to expired inventory which has improved the gross profit percentage.

Although not within the scope of this audit, it was noted that University employees pay less for prescriptions at Magers Pharmacy than at Walgreens, CVS, and Walmart, the pharmacies top three competitors.



Donna K. Christian, CPA, CGFM,
Director of Internal Audit and Risk Management



Jane Dewberry, Senior Internal Auditor
Audit Field Work Completed: September 4, 2019

OBSERVATIONS, RECOMMENDATIONS AND MANAGEMENT RESPONSES

1. Pharmacy Physical Inventory Review

- A. Pharmacy staff performed an annual physical inventory count on June 24 and 25, 2019. The inventory balance at June 30, 2019 was \$136,538. Of this amount, \$8,978 represented over-the-counter products. Internal Audit observed and tested the annual physical inventory on June 25, 2019. A total of 70 items costing \$43,661 (32% of total inventory) were selected to verify physical counts, with no discrepancies observed.
- B. The Pharmacy's inventory management software system tracks adjustments to inventory and allows for the reason for the adjustment (spillage, expired product, etc.) to be documented in the system. However, the system is not programmed to generate a report of all adjustments and the reason for each adjustment. Instead, each drug must be reviewed individually to determine reasons for adjustments to inventory balances.

Pharmacy staff have inquired with the software company about the possibility of preparing such a report but have been met with hesitancy. Another option would be for the Pharmacy to ask for report writing access to the software and write the report themselves. Part of a good inventory control is being able to monitor and track all adjustments to inventory. Such a report would improve inventory control procedures.

Recommendation

- A. None
- B. Continue to work with the software company to develop a report or make database information readily available to facilitate writing a report that would show all inventory adjustments and the reasons for the adjustment.

Management Response

- B. *Thank you for this Pharmacy Audit Recommendation. We took this recommendation to our pharmacy software company and obtained a solution. We can now generate a report listing all pharmacy inventory adjustments and the reason for each adjustment, in any specified date range.*

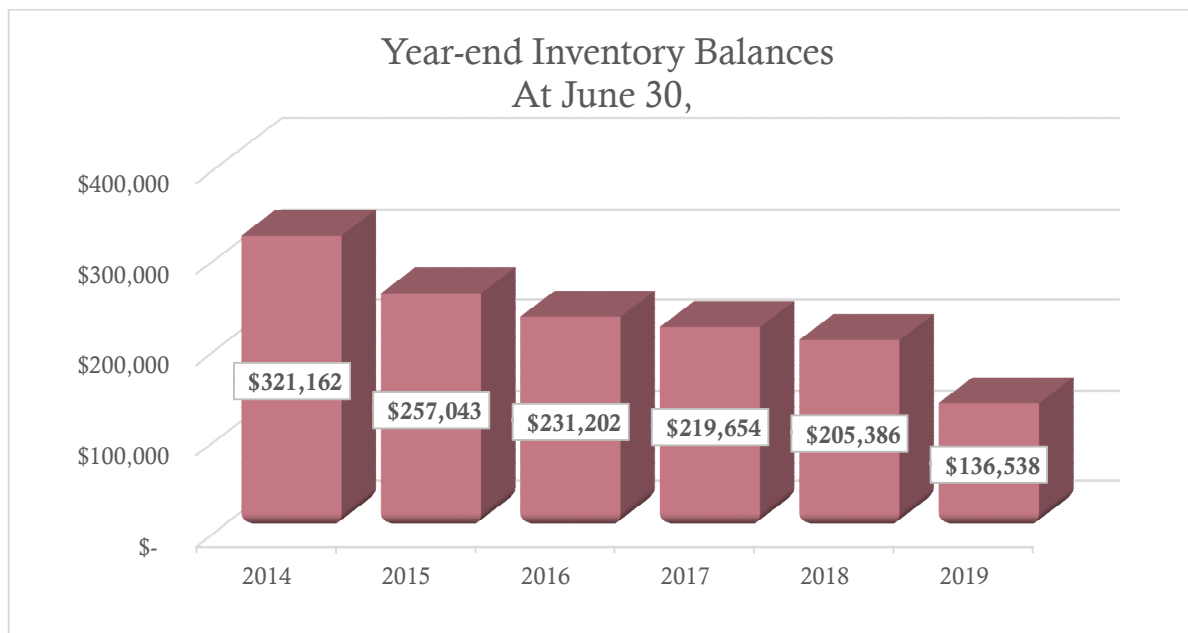
2. Inventory Management

The pharmacy's ability to manage their inventory balance has improved significantly during the last several years.

In 2014 the Pharmacy Services Manager asked the inventory software company to develop a report showing drug expiration dates and filling history. This added report allows pharmacy staff to monitor expiration dates and return applicable drugs to the supplier timely enough to receive full credit. With the creation of this report, the pharmacy has very little expense from expired drugs. During fiscal year 2019, drugs totaling about \$62,500 were returned in time to receive full credit.

In addition to the creation of the new report, pharmacy staff monitor the release of new generic drugs. During fiscal year 2019 several new generic drugs became available replacing expensive brand name drugs. Knowing that most insurance companies will not cover brand name drugs that have an equivalent generic drug, excess brand name drugs were returned in time for full credit.

As a result of these new strategies, year-end inventory amounts have decreased significantly. The chart below shows the decrease since 2014.



Eliminating the expense of drugs expiring before they can be sold lowers the total cost of goods sold which in turn increases the gross profit margin. The effect of the tighter inventory control on gross margin is shown below. There was an immediate increase in fiscal year 2015 gross profit once the added expense of expired drugs was reduced. Gross profit margin increased even further in fiscal years 2016 and 2017 before leveling out in fiscal years 2018 and 2019.

Magers Pharmacy Gross Profits						
Years Ended June 30,						
	2014	2015	2016	2017	2018	2019
Prescriptions	\$ 2,693,601	\$ 2,881,630	\$ 2,831,355	\$ 2,854,073	\$ 2,816,943	\$ 2,907,110
Over the Counter	\$ 58,013	\$ 58,982	\$ 58,035	\$ 44,071	\$ 49,808	\$ 71,189
Total Revenue	<u>\$ 2,751,614</u>	<u>\$ 2,940,612</u>	<u>\$ 2,889,390</u>	<u>\$ 2,898,144</u>	<u>\$ 2,866,751</u>	<u>\$ 2,978,299</u>
Less Cost of Goods	\$(2,317,984)	\$(2,305,358)	\$(2,182,601)	\$(2,106,438)	\$(2,111,404)	\$(2,231,101)
Gross Profit	<u>\$ 433,630</u>	<u>\$ 635,254</u>	<u>\$ 706,789</u>	<u>\$ 791,706</u>	<u>\$ 755,347</u>	<u>\$ 747,198</u>
Gross Profit Margin	15.76%	21.60%	24.46%	27.32%	26.35%	25.09%

Gross profit margins for independent pharmacies have declined from a peak of 24.0% in 2010 to 21.8% in 2017 (source: National Community Pharmacist Association (NCPA) 2017 Digest). Lower gross profits in fiscal years 2018 and 2019 are consistent with the national trend. The ability of the Pharmacy to still exceed national gross profit margins suggests strong controls over the purchasing and management of inventory. With low profit margins on prescription drugs, drugstores depend on the sale of over the counter (OTC) products that typically have much higher profit margins to supplement revenue. Magers is using their new, larger retail space effectively and as shown in the chart above increased OTC sales by 34% in fiscal year 2019.

We commend pharmacy staff for diligently monitoring pharmacy inventory.

Recommendation:

None.

3. Price of Prescription Drugs at Magers Pharmacy

University employee out-of-pocket prescription costs are generally lower at Magers Pharmacy than Walgreens, CVS, and Walmart. We obtained de-identifiable prescription cost data from the University's self-funded insurance plan to perform price comparisons of prescription drugs purchased at Magers Pharmacy to the top three pharmacy competitors, Walgreens, CVS and Walmart. Our review determined:

- Employees filled 7,788 prescriptions at Walgreens during 2018. Had those same employees filled the same prescriptions at Magers Pharmacy instead of Walgreens, those employees could have saved a total of **\$82,518** in out-of-pocket prescription costs, and the University's insurance plan would have saved **\$41,737**. Further, a gross profit of approximately \$108,580 would have remained with Magers Pharmacy instead of this revenue going to Walgreens.
- Employees filled 2,798 prescriptions at Wal-Mart during 2018. Walmart uses a "loss leader" pricing strategy on a select group of drugs that they advertise for sale at \$4/\$10 for a 30/90-day prescription, knowing that the loss of profit on these drugs will be made up by other purchases made while in the store to get prescriptions. We determined Wal-Mart provided a lower out-of-pocket cost to our employees for only 342 of these prescriptions filled; however, had those employees filled the remaining 2,456 prescriptions at Magers Pharmacy, employees could have saved **\$15,080** in out-of-pocket prescription costs. There would have been no added savings to the University's insurance plan.
- Employees filled 1,002 prescriptions at CVS during 2018. We determined CVS provided a lower out-of-pocket cost to our employees for only 8 of these prescriptions filled; however, had those employees filled the remaining 994 prescriptions at Magers Pharmacy, they could have saved **\$6,884** in out-of-pocket prescription costs. There would have been no added savings to the University's insurance plan.

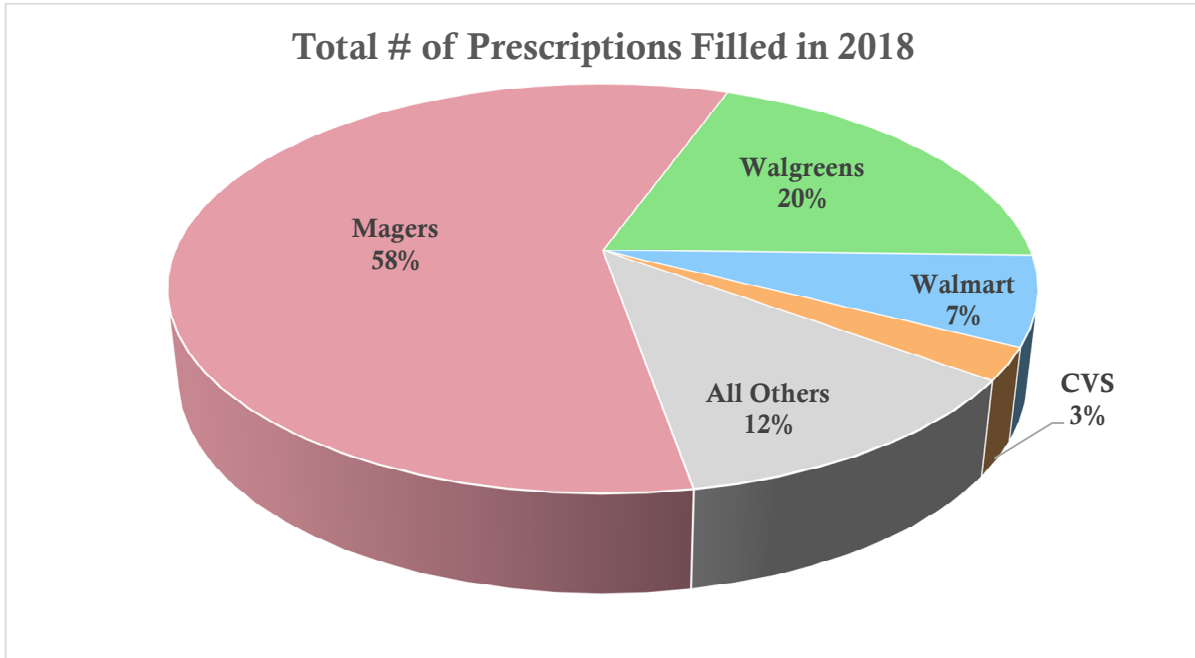
Overall, employee out-of-pocket prescription costs were lower at Magers than at each of these three competitors, especially Walgreens. Employees who fill their prescriptions at pharmacies other than Magers should be encouraged to compare prices with Magers to reduce their out-of-pocket prescription expense.

Recommendation:

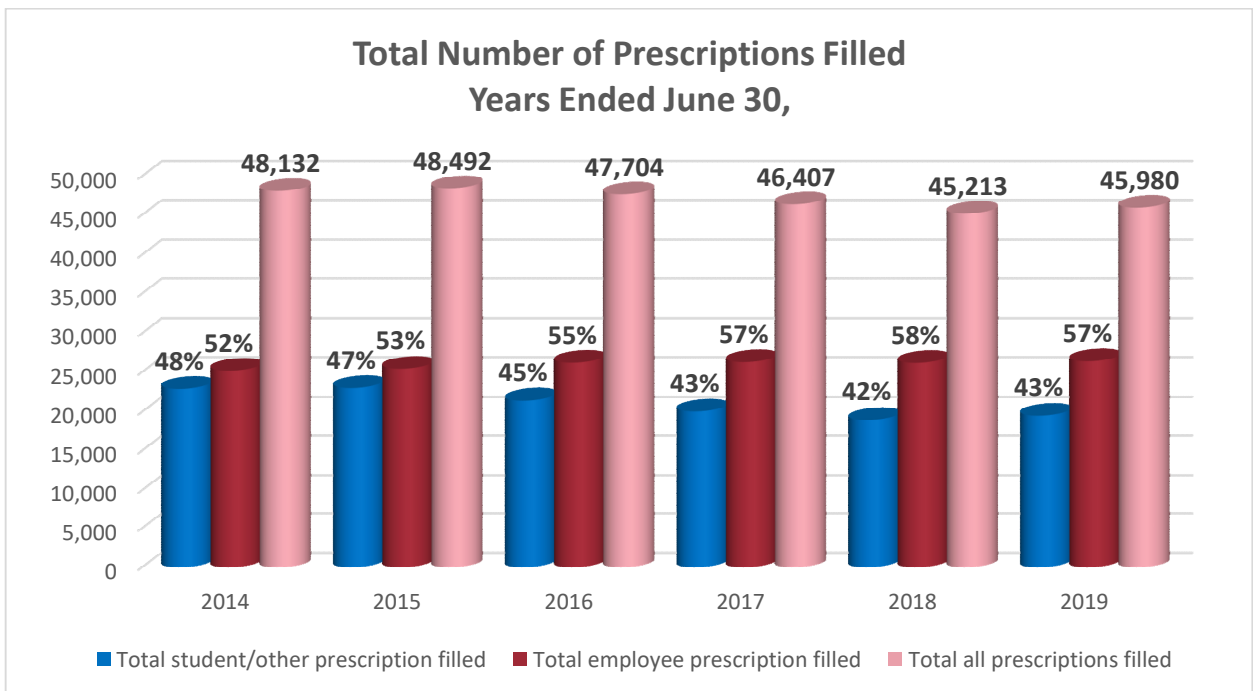
None.

APPENDIX

As shown in the graph below, Magers filled 58% of all prescriptions covered by the University's insurance plan in 2018. Walgreens filled 20% of them, Walmart filled 7%, CVS filled 3%, and the other 12% were filled at 143 various pharmacies.



Magers Pharmacy fills between 48,000 and 46,000 prescriptions annually.



Prescription sales revenue has grown to nearly \$3 million since 2014.

