



Internal Audit Report

Maricopa Medical Center Medical Supplies Inventory

May 2003



Audit Team Members

Eve Murillo, Audit Manager

Richard Chard, Audit Senior

Christina Black, Associate Auditor

Protiviti, Independent Risk Consulting



Maricopa County

Internal Audit Department

301 West Jefferson St
Suite 1090
Phx, AZ 85003-2143
Phone: 602-506-1585
Fax: 602-506-8957
www.maricopa.gov

May 5, 2003

Fulton Brock, Chairman, Board of Supervisors
Don Stapley, Supervisor, District II
Andrew Kunasek, Supervisor, District III
Max W. Wilson, Supervisor, District IV
Mary Rose Wilcox, Supervisor, District V

We have completed our FY 2003 review of Maricopa County Integrated Health System (MIHS) medical supplies inventory. The audit was performed in accordance with the annual audit plan that was approved by the Board of Supervisors.

The highlights of this report include the following:

- The MIHS financial system inventory balance did not agree with an actual count of MIHS warehouse inventory by \$64,000, a 15 percent variance. A significant variance (\$136,000 or 30 percent) was also found between the MIHS Finance General Ledger balance and the inventory system balance. These discrepancies indicate a need for corrective action.
- Various hospital units report that warehouse customer service has improved but that areas of dissatisfaction still exist. Filling hospital and patient supply needs quickly and efficiently is important for successful operations.

Attached are the report summary, detailed findings, recommendations, and department management response. We have reviewed this information with the department director and appreciate the excellent cooperation provided by management and staff. If you have questions, or wish to discuss items presented in this report, please contact Eve Murillo at 602-506-7245.

Sincerely,

A handwritten signature in cursive script that reads "Ross L. Tate".

Ross L. Tate
County Auditor

Table of Contents

Executive Summary	1
Introduction	2
Physical Inventory Adjustment.	4
Customer Service	6
Department Response	7

Executive Summary

Physical Inventory Adjustment (Page 4)

The Maricopa Medical Center inventory system balance differed from a warehouse inventory physical count by 15 percent. A discrepancy of this size may indicate that medical supply inventory records are not reliable and that misappropriations of inventories could occur without timely detection.

There was also a 30 percent discrepancy between the MIHS Finance general ledger balance and the inventory system balance. MIHS Finance should periodically investigate material differences between the general ledger and the inventory system in order to timely investigate potential errors or other problems.

Customer Service (Page 6)

Respondents to our customer service survey indicate that warehouse customer service has significantly improved, but that areas of dissatisfaction still exist. Filling hospital and patient supply needs quickly and efficiently is important for successful operations. Materials Management should evaluate customer feedback and initiate corrective actions as appropriate.



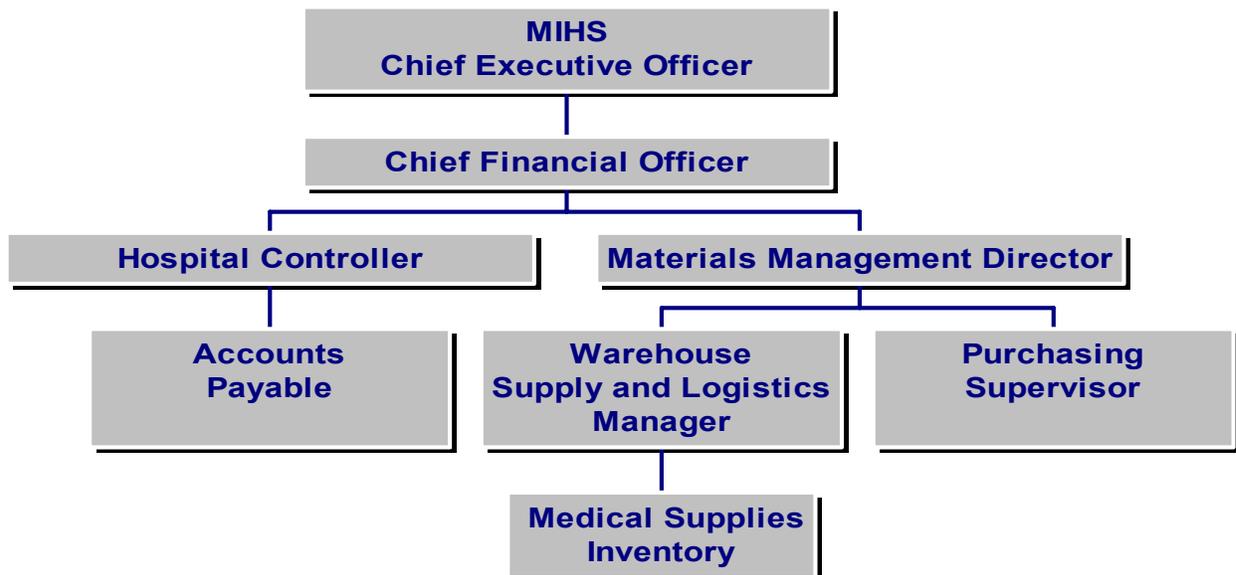
Introduction

Background

MIHS Materials Management manages medical supplies for the Maricopa Medical Center. Medical supplies inventory consists primarily of non-reusable medical, surgical, laboratory, respiratory, and burn items. Materials Management does not handle pharmaceuticals. The value of the inventory was \$452,500 as of December 16, 2002. The warehouse operates seven days per week and is located on the Medical Center campus at 2611 E. Pierce Street. Small amounts of supplies are maintained at the hospital and clinics. The warehouse replenishes these ancillary inventories through daily electronic requisitions.

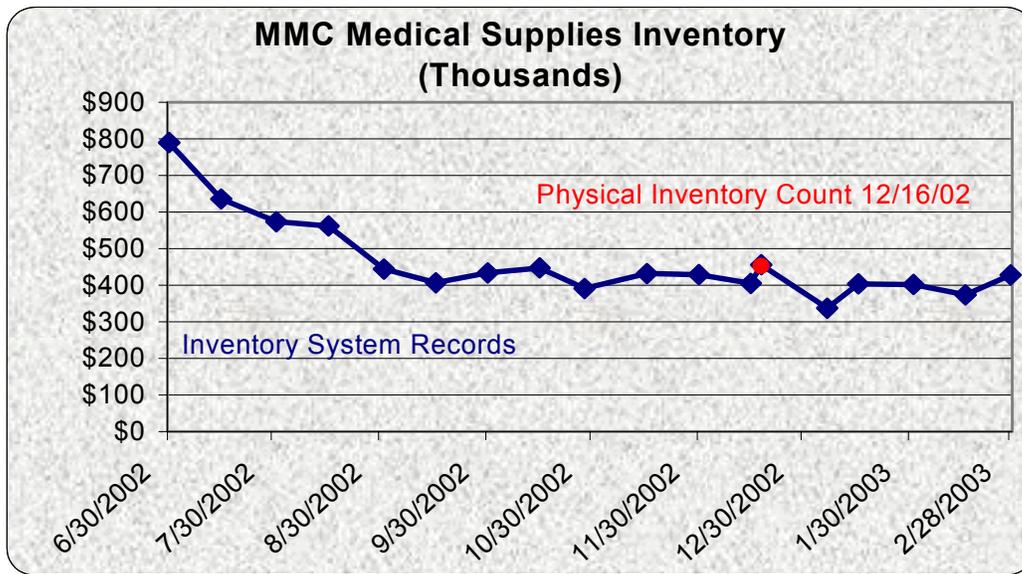
Purchasing and warehouse operations report to the Materials Management Director, as shown in the chart below. Accounts payable operations report to the Hospital Controller. Separation of these functions enhances safeguards over inventory assets.

MARICOPA MEDICAL CENTER WAREHOUSE MEDICAL SUPPLIES INVENTORY ORGANIZATION CHART



Inventory Activity

Medical supplies purchased and used for the period July 2002 through February 2003 total \$8.2 million and \$8.4 million, respectively. At the December inventory count date, the warehouse stocked approximately 1,200 inventory items with a value of \$452,000. Inventory balances over the same period are shown in the following chart.



Source: MIHS inventory records for period ending 2/28/03.

Significant Reduction in Inventory

The chart above shows that MIHS has reduced the carrying balance of Medical Supplies inventories by 41 percent over the FY 2002 year-end balance. Materials Management reports that they began using data features in the MIHS STAR information system to “right-size” its warehouse inventory. Relying on historical usage data and adjusting appropriate parameters (lead time, safety stock, desired days of stock, etc.), the system calculated respective re-order points and re-order quantities for 1,187 items stocked within the warehouse. This effort reduced the warehouse inventory from over \$800,000 to levels averaging \$400,000 within the first five months of FY 2003.

Materials Management reports they relocated approximately 90 percent of the inventory to new locations within the warehouse. This increased the efficiency of material flow and reduced the number of active stock aisles by 25 percent. Additionally, several vulnerable items were relocated to a locked cage to deter theft.

Scope and Methodology

The objectives of this audit were to:

- Verify the physical existence of inventory
- Verify inventory price valuation
- Evaluate internal controls over inventory purchasing and handling
- Determine the level of customer satisfaction with inventory delivery

This audit was performed in accordance with generally accepted government auditing standards.

Issue 1 Physical Inventory Adjustment

Summary

The Maricopa Medical Center inventory system balance differed from a warehouse inventory physical count by 15 percent. A discrepancy of this size may indicate that medical supply inventory records are not reliable and that misappropriations of inventories could occur without timely detection.

There was also a 30 percent discrepancy between the MIHS Finance general ledger balance and the inventory system balance. MIHS Finance should periodically investigate material differences between the general ledger and the inventory system in order to timely investigate potential errors or other problems.

Requirements

Under best business practices, the valuation and quantity of physical quantities on hand should be reasonably close to the amounts reported in the inventory system. In addition, the financial system general ledger should agree with amounts reported in the inventory system.



Review Results

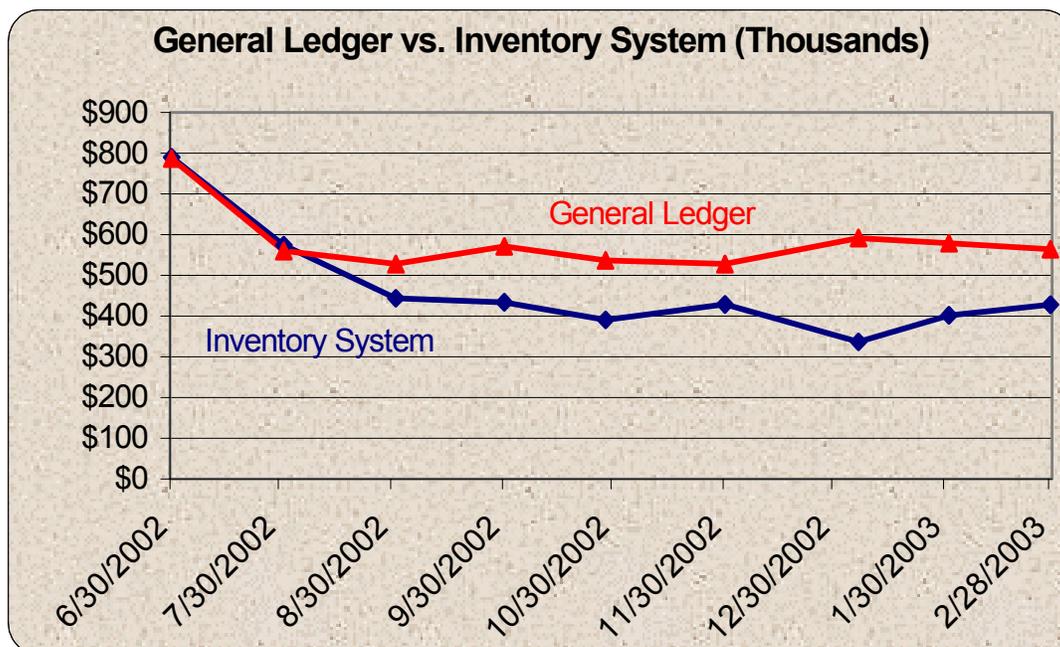
Inventory System Records Adjusted to Agree with Inventory Count

The warehouse inventory on hand exceeded the amounts recorded in the inventory system. Materials Management counted 1,187 items in their December 2002 physical inventory. Of the total items, 321 items required a \$26,524 write down and 530 items required a \$90,665 write up, resulting in a \$64,141 net upward adjustment of inventory system records.

According to management, December was the first total warehouse inventory count since the warehouse was reorganized in early FY 2003 to increase operating efficiency and reduce inventory levels. Approximately 90 percent of warehouse inventory was relocated during this reorganization. Management also explained that recording wrong inventory units (e.g., boxes vs. cases) may have contributed to differences between inventory on hand and inventory system records. Once the inventory adjustments were posted, the inventory system properly reflected the actual inventory on hand.

Financial System General Ledger Does Not Agree with Inventory System Records

The MIHS Finance department does not reconcile the general ledger with the medical supplies inventory system, but does adjust the general ledger to agree with the year-end physical inventory count. Significant differences between the general ledger and inventory system may indicate errors or other problems. As of February 28, 2003, the general ledger balance exceeded the inventory system balance by \$136 thousand as shown in the following graph:



Recommendation

MIHS Materials Management should use the December 2002 physical inventory adjustment as a starting point for future inventory system versus physical count comparisons and should continue to conduct frequent cycle counts in addition to scheduled complete counts.

Significant variations between inventory system and physical records should be investigated, and causes identified and corrected.



Issue 2 Customer Service

Summary

Respondents to our customer service survey indicate that warehouse customer service has significantly improved, but that areas of dissatisfaction still exist. Filling hospital and patient supply needs quickly and efficiently is important for successful operations. Materials Management should evaluate customer feedback and initiate corrective actions as appropriate.

Customer Satisfaction

Although customer surveys indicate improved service, respondents stated that the warehouse does not notify customers of back-ordered or out-of-stock items. Customers are then unaware of the status of these items. Respondents also indicated that special-order items are not stocked in the warehouse. These inefficiencies consume time and therefore money.

Customer suggestions include the following:

- Update ordering information and procedures (Supply lists should be updated and be easier to search by key words)
- Support customer requests “24/7”
- Provide a warehouse contact that has a medical background
- Make the process to adjust inventory to the par level more efficient
- Decentralize the ordering process (allow nurses to order)
- Stock special order items that customers use regularly.

Recommendation

MIHS Materials Management should initiate regular dialogue with medical supplies users and initiate corrective actions as appropriate.

Department Response



MARICOPA
INTEGRATED
HEALTH SYSTEM

Count on us to care.

MEMORANDUM

TO: Ross Tate, County Auditor

FROM: Pat Walz, Chief Financial Officer

CC: Steve Ellis, Materials Management Director
Lisa Gardner, Controller

DATE: April 16, 2003

SUBJECT: RESPONSE TO INTERNAL AUDIT REPORT:
Maricopa Integrated Health System (MIHS) Medical Supplies Inventory

Issue #1: The MIHS financial system inventory balance did not agree with an actual count of MIHS warehouse inventory by 15 percent.

Response: Concur.

Recommendation A: MIHS Materials Management should use the December 2002 physical inventory adjustment as a starting point for future inventory system vs. physical count comparisons and should continue to conduct frequent cycle counts in addition to scheduled complete counts. Significant variations between inventory system and physical records should be investigated, and causes identified and corrected.

Response: Concur - - In Process. MIHS Materials Management is cycle counting inventory and a physical inventory will be planned to coincide with the end of the fiscal year.

Target Completion Date: 7/1/03

Issue #2: A 30 percent variance was also found between the MIHS Finance General Ledger balance and the inventory system balance. These discrepancies indicate a need for corrective action.

Response: Concur

Recommendation A: Under best business practices, the valuation and quantity of physical quantities on hand should be reasonably close to the amounts reported in the inventory system. In addition the financial system general ledger should agree with amounts reported in the inventory system.

Response: Concur. MIHS Finance & Materials Management will investigate the cause of variance with the Information Technology Department to determine corrective action(s) required. Additionally, MIHS Finance

previously reconciles to the inventory system once per year. In the future, MIHS Finance will reconcile the General Ledger balance to the inventory system balance semi-annually to coincide with the physical inventory.

Target Completion Date: 1/1/04

Issue #3: Various hospital units' report that warehouse customer service has improved but that areas of dissatisfaction still exist. Filling hospital and patient supply needs quickly and efficiently is important for successful operations

Response: Concur

Recommendation A: Materials Management should initiate regular dialogue with medical supplies users and initiate corrective actions as appropriate.

Response: Concur - - In process

Target Completion Date: Requires on-going attention with undetermined completion date.

Approved By:

 _____ Chief Financial Officer	<u>4/25/03</u> Date
 _____ Chief Executive Officer	<u>4/25/03</u> Date
 _____ County Administrative Officer	<u>4/29/03</u> Date