

City of Austin



**A Report to the
Austin City Council**

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**Office of the
City Auditor**

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AUDIT REPORT

Austin-Travis County Emergency Medical Services (ATCEMS) Inventory Management Audit

February 2014



REPORT SUMMARY

ATCEMS does not have adequate controls to ensure it accurately accounts for and properly manages its inventory of disposable medical supplies against the risks of waste, abuse, or potential fraud. As a result, ATCEMS has experienced significant discrepancies between the inventory balances recorded on its books and the actual physical count of inventory.

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GOVERNMENT AUDITING STANDARDS COMPLIANCE

We conducted this performance audit in accordance with Generally Accepted Government Auditing Standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

AUDIT TEAM

Walton Persons, CPA, CICA, Assistant City Auditor
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February 2014



Audit Report Highlights

Why We Did This Audit

This audit is a carryover project from the Fiscal Year 2013 Strategic Audit Plan.

What We Recommend

ATCEMS management should: create a team (including the Financial Services Department) to evaluate the shortcomings of the current process and to design and implement an effective, efficient, and economical process to manage its disposable medical supplies. ATCEMS should also identify and implement an inventory tracking system that is integrated with the City's financial system and the department's ePCR billing system, providing for a single point of entry and effective tracking and monitoring.



For more information on this or any of our reports, email oca_auditor@austintexas.gov

ATCEMS INVENTORY MANAGEMENT AUDIT

Mayor and Council,

I am pleased to present this audit on Austin-Travis County Emergency Medical Services (ATCEMS) inventory management.

BACKGROUND

- ATCEMS expended \$4.4 million during fiscal years 2012 and 2013 for supplies needed to carry out its services to the community.
- ATCEMS operates a central warehouse where the inventory is received and housed before supplies are transferred to ATCEMS paramedics, stations, ambulances, and hospital supply cabinets. Examples of supplies include sterile gauze, ibuprofen, tourniquets, syringes, disposable blankets, electrolyte beverages, and catheters.
- ATCEMS generally maintains inventory worth between \$590,000 to \$980,000 worth of inventory in their warehouse.

OBJECTIVE AND SCOPE

The objective of the audit was to evaluate whether ATCEMS management accurately accounts for and properly manages its inventory of disposable medical supplies. The audit scope included ATCEMS inventory activities for Fiscal Years 2012 and 2013.

WHAT WE FOUND

ATCEMS does not have adequate controls to ensure it accurately accounts for and properly manages its inventory of disposable medical supplies against the risks of waste, abuse, or potential fraud. In particular, with the exception of narcotics, management has not established formal written policies and procedures that require employees to follow an adequate process for receiving, maintaining, distributing, and accounting for inventory items. As a result, ATCEMS has experienced significant discrepancies between the inventory balances recorded on its books and the actual physical count of inventory.

City policy requires departments to implement policies and procedures that ensure financial transactions, including inventory transactions, are handled appropriately.

We appreciate the cooperation and assistance we received from EMS staff during this audit.


Kenneth J. Mory, City Auditor

BACKGROUND

Austin-Travis County Emergency Medical Services (ATCEMS) expended \$4.4 million during fiscal years 2012 and 2013 for medical and pharmaceutical supplies needed to carry out its services to the community. ATCEMS operates a central warehouse where the inventory is received and housed before supplies are transferred to ATCEMS paramedics, stations, ambulances, and hospital supply cabinets. ATCEMS generally maintains inventory worth \$590,000 to \$980,000 in the warehouse at any one time.

As shown in Exhibit 1, this is the fourth audit conducted by the Office of the City Auditor (OCA) of ATCEMS in the past two years.

EXHIBIT 1
Recent OCA Audits of ATCEMS Operations

Report No.	Date	Title
AU13014	September 2013	ATCEMS Outcomes Audit
AU12123C	February 2013	ATCEMS Worker Safety Audit
AU12108	October 2012	ATCEMS Collections Control Audit

SOURCE: Office of the City Auditor, December 2013

OBJECTIVE, SCOPE, AND METHODOLOGY

The ATCEMS Inventory Audit is a carryover project from the Fiscal Year 2013 Strategic Audit Plan.

Objective

The objective of the audit was to evaluate whether ATCEMS management accurately accounts for and properly manages its inventory of disposable medical supplies.

Scope

The audit scope included ATCEMS inventory activities for fiscal years 2012 and 2013.

Methodology

To accomplish our audit objectives, we performed the following steps:

- observed ATCEMS warehouse staff on inventory delivery runs to hospitals and stations;
- observed ATCEMS warehouse staff performing essential inventory functions;
- interviewed ATCEMS financial staff, warehouse employees, operations personnel, and paramedics;
- reviewed City financial policies related to inventory;
- discussed ATCEMS inventory practices with peer EMS operations, including Mecklenburg County, North Carolina and San Antonio, Texas;
- reviewed ATCEMS inventory transactions recorded in the City's general ledger;
- analyzed inventory physical count accuracy reports prepared by ATCEMS;
- evaluated the risk of fraud, waste, and abuse relevant to the audit objective; and
- evaluated information technology risks relevant to the audit objective.

AUDIT RESULTS

Finding: ATCEMS does not have adequate controls to ensure it accurately accounts for and properly manages its inventory of disposable medical supplies.

ATCEMS has not established sufficient controls to protect most of its inventory of disposable medical supplies against the risks of waste, abuse, or potential fraud. In particular, with the exception of narcotics, management has not established formal written policies and procedures that require employees to follow an adequate process for receiving, maintaining, distributing, and accounting for inventory items. As a result, ATCEMS has experienced significant discrepancies between the inventory balances recorded on its books and the actual physical count of inventory. Also, there was not sufficient and appropriate evidence to determine the basis for the discrepancies. Consequently, there is potential for reporting errors as well as possible loss and waste of resources.

One of ATCEMS's four "Pillars of Excellence" is **FINANCE** – "Because we are a publicly funded organization, it is our responsibility to act prudently with the community's money and conduct business in a fiscally responsible manner. We continuously seek innovative ways to maximize the return on the dollars we spend and ensure our spending best meets the needs of our community."

We found that ATCEMS has a separate, system in place to track narcotics from purchase to receipt through use on a patient or disposal. In addition, narcotics are subject to strict Federal regulations. Based on our preliminary analysis, disposable medical supplies appeared to be at greater risk. For these reasons, we did not test controls over narcotics.

According to the City of Austin's financial policies, departments shall implement policies and procedures that ensure financial transactions, including inventory transactions, are handled appropriately. The policies also require departments to establish and maintain internal controls that provide assurance that City funds are safeguarded and handled appropriately.

Numerous inventory practices performed by ATCEMS employees make it difficult to account for and properly manage inventory. For example:

- Unused supplies returned by paramedics are not returned to inventory or recorded in the inventory tracking system. Instead, the items are placed in bins at the warehouse where they are available for use by paramedics, the Austin Fire Department, and Emergency Service Districts.
- ATCEMS does not have a system for documenting and tracking the disposal of expired supplies and medications. Nor do they document the disposal of damaged, contaminated, or unusable supplies.
- ATCEMS does not track inventory from receipt until disposal. Instead, employees track inventory items until they are delivered to paramedics, stations, ambulances, or hospitals. Once delivered, the inventory is expensed and no longer tracked.
- There are no physical access controls protecting the warehouse during operating hours.
- One ATCEMS employee delivers supplies and records the amount and type of supplies delivered on a piece of paper. The employee turns in the paper to the warehouse staff for recording in the inventory tracking system. There are no audits or reviews performed of supplies delivered to satellite locations.

In addition, ATCEMS has not developed a system to document and track manual adjustments and discrepancies for its warehouse inventory. For instance, ATCEMS does not document and track explanations for manual inventory adjustments and does not maintain documented explanations for discrepancies between the inventory balances and physical counts of inventory.

In the absence of sufficient controls over its inventory, ATCEMS has experienced significant discrepancies. For instance, ATCEMS conducts physical inventory counts at the warehouse periodically throughout the year. These counts identified discrepancies between the value of inventory on hand and what was recorded in the financial records. According to our analysis, the cumulative error rates were 5.7% in fiscal year 2012 and 9.5% in fiscal year 2013.

According to ATCEMS management, the process that was being used to record inventory purchases into the financial system was not complete, and therefore did not generate all of the system entries necessary to correctly account for the inventory balance, resulting in significant discrepancies. Specifically, in fiscal year 2012 the Controller's Office made a year-end adjustment of \$312,683 that reduced the inventory balance by 32%. According to management, ATCEMS changed its process in fiscal year 2013 to correct the system entry problem. Although the year-end adjustment was significantly smaller in FY 2013, the physical inventory counts indicate weaknesses still exist in the department's management of its warehouse inventory. In addition, without supporting documentation for discrepancies and adjustments, ATCEMS cannot establish what portion of the discrepancies and adjustments were due to the process deficiencies described above.

RECOMMENDATIONS

The recommendations listed below are a result of our audit effort and subject to the limitation of our scope of work. We believe that these recommendations provide reasonable approaches to help resolve the issues identified. We also believe that operational management is in a unique position to best understand their operations and may be able to identify more efficient and effective approaches and we encourage them to do so when providing their response to our recommendations. As such, we strongly recommend the following:

In order to ensure that ATCEMS accurately accounts for and properly manages its disposable medical supplies, ATCEMS should:

- **create a team (including the Financial Services Department and ATCEMS) to evaluate the shortcomings of the current process and to design and implement an effective, efficient, and economical process to manage its disposable medical supplies;**
- **identify and implement an inventory tracking system that is integrated with the City's financial system and the department's ePCR billing system, providing for a single point of entry and effective tracking and monitoring.**

MANAGEMENT RESPONSE: **Concur.** Refer to Appendix A for management response and action plan.

MANAGEMENT RESPONSE



MEMORANDUM

TO: Ken Mory, City Auditor

FROM: Ernesto Rodriguez, Chief
Austin-Travis County Emergency Medical Services

DATE: February 3, 2014

SUBJECT: ATCEMS Inventory Management Audit

A handwritten signature in blue ink, appearing to read "Ernesto Rodriguez".

Findings: ATCEMS does not have adequate controls to ensure it accurately accounts for and properly manages its inventory of disposable medical supplies.

Management concurs. The EMS Department began the stages of reorganizing and retooling the warehouse operations in FY 2013. The department completed a best practice visit to MedStar EMS in Fort Worth, Texas in July 2013 to gather information on their centralized warehouse and distribution functions. In addition to the site visit, EMS has conducted surveys with high performing EMS services to compare warehouse operations. In reviewing the practices of San Antonio, Wake County and Mecklenburg County, the department has identified potential solutions to the identified control and deployment inadequacies. It is important to note that of the three agencies surveyed, one used a central deployment model which operates with 16 personnel on a 24 hour 7 days a week operating schedule to cover 512 square miles. The other entities distribute supplies from their 19 and 33 stations respectively. The EMS Department manages 37 stations over a 1,100 square mile radius and distributes supplies through area hospitals and satellite locations. In addition to the best practice visits and surveys, EMS is building from the lessons learned in our successful management of narcotics and will push those lessons into general warehouse management.

To date, EMS has begun developing an inventory management policy and procedure to adequately account for each phase of inventory management. The department will collaborate with Financial Services to ensure that all existing City policies and procedures are fully implemented as well.

The department's inventory management and warehouse functions are currently being operated with a manager and four employees through a manual process. These staffing levels do not allow for two employees to receive or deliver inventory. The department has included requests for additional resources over the past several years through the budget process to better manage the workload in the warehouse and supply unit.

The department is currently reviewing asset management and inventory solutions that will allow for better management of inventory from receipt through distribution and final use and disposal. Current practice allows for inventory management through distribution to the satellite locations. Through the ePCR system, EMS can also determine usage on patients; however, there is an identified gap in visibility from the satellite site to final use and disposal. An inventory management system will allow for more effective tracking of all disposable supplies.

Management agrees that increased supporting documentation is needed when completing counts and inventory balances. The inventory adjustments made in FY 2012 were a result of the year-end physical count where the Controller's Office made an adjustment of \$312K. The process that was being used to record inventory purchases into the financial system was not complete, therefore did not generate all of the system entries necessary to correctly account for the inventory balance. Therefore, additional adjustments were required, and part of the reason the FY 2012 year-end adjustment to the physical count was so large. ATCEMS changed its process in FY 2013 to correct the system entry problem which resulted in a significantly smaller year-end adjustment. It should be noted that these adjustments are not the result of lost inventory and the establishment and implementation of the proper procedures will mitigate future occurrences.

ACTION PLAN

Austin-Travis County Emergency Medical Services (ATCEMS) Inventory Management Audit

Recommendation	Concurrence and Proposed Strategies for Implementation	Status of Strategies	Proposed Implementation Date
<p>In order to ensure that ATCEMS accurately accounts for and properly manages its disposable medical supplies, ATCEMS should:</p> <ul style="list-style-type: none"> ▪ create a team (including the Financial Services Department and ATCEMS) to evaluate the shortcomings of the current process and to design and implement an effective, efficient, and economical process to manage its disposable medical supplies; ▪ identify and implement an inventory tracking system that is integrated with the City’s financial system and the department’s ePCR system, providing for a single point of entry and effective tracking and monitoring. 	<p>Concur:</p> <ol style="list-style-type: none"> 1. A team will be created in conjunction with Financial Services to evaluate the current process 2. Department policies and procedures will be established and implemented 3. Identify and implement inventory tracking system solutions 	<ol style="list-style-type: none"> 1. Planned 2. Planned 3. Underway – request for funding has been made through IT Business Plan process 	<ol style="list-style-type: none"> 1. 2/28/14 2. 5/31/14 3. Contingent on available funding