Department of Veterans Affairs
Office of Inspector General

Office of Healthcare Inspections

Report No. 13-04592-179

Healthcare Inspection

Alleged Preventive Maintenance Inspection Deficiencies Northern Arizona VA Health Care System Prescott, Arizona

June 9, 2014

Washington, DC 20420

To Report Suspected Wrongdoing in VA Programs and Operations:
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Executive Summary

The VA Office of Inspector General Office of Healthcare Inspections conducted an inspection to assess the merit of allegations concerning medical equipment with expired preventive maintenance inspections (PMIs). The confidential complainant alleged that equipment with expired PMIs posed an immediate hazard to the safety of patients at the Northern Arizona VA Health Care System (system), Prescott, AZ. It was further alleged that:

- All respiratory therapy (RT) equipment had expired PMIs, with some exceeding expiration dates by several years, and that several pieces of equipment had inspection stickers indicating "routine inspection not applicable."
- It was the expectation that RT equipment remain in use even with expired PMIs.
- Other departments had medical equipment with expired PMIs.
- The Biomedical Engineering (BME) Department is "short staffed."

We did not substantiate the allegation that medical equipment with expired PMIs posed an immediate hazard to the safety of patients. We found no evidence of medical equipment failures or malfunctions that contributed to the death, serious injury, or serious illness of any individual.

We did not substantiate the allegation that all of the RT equipment had expired PMIs, with some exceeding expiration dates by several years, and that several pieces of equipment had inspection stickers indicating "routine inspection not applicable." We found no RT equipment with expired PMIs or with inspection stickers indicating "routine inspection not applicable."

We did not substantiate the allegation that the expectation was for RT equipment to remain in use with expired PMIs.

We substantiated the allegation that other departments had medical equipment with expired PMIs. We found medical equipment with expired or missing safety inspection labels and missing equipment entry numbers.

We substantiated the allegation that the BME Department is "short staffed." We found that the system was allocated four full-time equivalent BME technician positions but did not fill the vacancies of two technicians who terminated their employment.

We recommended that the System Director initiate actions to address medical equipment with expired PMIs and assess staffing in the BME Department and take appropriate actions to meet the workload requirements.

Comments

The Veterans Integrated Service Network and Facility Directors concurred with our recommendations and provided an acceptable action plan. (See Appendixes A and B, pages 6–9 for the Directors' comments.) We will follow up on the planned actions until they are completed.

JOHN D. DAIGH, JR., M.D.
Assistant Inspector General for
Healthcare Inspections

Purpose

The VA Office of Inspector General (OIG) Office of Healthcare Inspections conducted an inspection to assess the merit of allegations concerning medical equipment with expired preventive maintenance inspections (PMIs)[1] at the Northern Arizona VA Health Care System (system), Prescott, AZ.

Background

The system is part of Veterans Integrated Service Network (VISN) 18 and includes the main medical facility, the Bob Stump VA Medical Center in Prescott; five community based outpatient clinics in Anthem, Kingman, Lake Havasu City, Flagstaff, and Cottonwood; and a TeleHealth Clinic in Holbrook, AZ. The Bob Stump VA Medical Center provides a continuum of primary and secondary level medical, rehabilitative, and long-term care to veterans residing in northern Arizona.

In September 2013, a confidential complainant contacted the OIG Hotline Division alleging that medical equipment at the system with expired PMIs posed an immediate hazard to the safety of patients. It was further alleged that:

- All respiratory therapy (RT) equipment had expired PMIs, with some exceeding expiration dates by several years, and that several pieces of equipment had inspections stickers indicating "routine inspection not applicable."
- It was the expectation for RT equipment to remain in use even with expired PMIs.
- Other departments had medical equipment with expired PMIs.
- The Biomedical Engineering (BME) Department is "short staffed."

Scope and Methodology

During an onsite visit October 28–29, 2013, we interviewed system managers, clinicians, and other employees directly involved with receiving, testing, calibrating, maintaining, and operating medical equipment. Several attempts to contact the complainant by telephone and email were unsuccessful.

We reviewed Veterans Health Administration (VHA), The Joint Commission (TJC), and system policies and procedures related to medical equipment. Additionally, we reviewed root cause analyses, patient events and incident reports, peer reviews,

[1] A preventive maintenance inspection of biomedical equipment is a systematic inspection, detection, and correction of possible failures either before they occur or before they develop into major defects.

Automated Engineering Management System and Medical Equipment Reporting System[2] reports, and Patient Safety and Environment of Care Committee meeting minutes. We inspected medical equipment in two acute care units (3B and 4B); two community living centers; the emergency, respiratory therapy, and radiology departments; and the ophthalmology, optometry, cardiology, and pulmonary outpatient clinics.

We conducted the inspection in accordance with *Quality Standards for Inspection and Evaluation* published by the Council of the Inspectors General on Integrity and Efficiency.

[2] Automated Engineering Management System and Medical Equipment Reporting System is a hospital computer program equipment inventory and maintenance program. All medical equipment is required to be assigned an equipment entry number and be entered into the system upon acquisition.

Inspection Results

Issue 1: Patient Safety

We did not substantiate the allegation that medical equipment with expired PMIs posed an immediate hazard to the safety of patients.

We reviewed root cause analyses, patient events and incident reports, peer reviews, and the Patient Safety and Environment of Care Committee Meeting minutes. We found no evidence of medical equipment failures or malfunctions that contributed to the death, serious injury, or serious illness of any individual.

Issue 2: Medical Equipment

RT Equipment with Expired PMIs. We did not substantiate the allegation that all RT equipment had expired PMIs with some exceeding expiration dates by several years, and that several pieces of equipment had inspection stickers indicating "routine inspection not applicable." We inspected 25 pieces of equipment in the RT Department and found no equipment with expired PMIs or with inspection stickers indicating "routine inspection not applicable."

Expectation to Use RT Equipment with Expired PMIs. We did not substantiate the allegation that it was the expectation for RT equipment to remain in use with expired PMIs. We found no RT equipment with expired PMIs.

Equipment with Expired PMIs in Other Departments. We substantiated the allegation that other departments in the system had medical equipment with expired PMIs. We inspected 50 pieces of non-life support[3] medical equipment in 7 patient care areas. We found 27 (54 percent) pieces of medical equipment with expired safety inspection labels ranging from 2 months to 2 years past due. Additionally, we found 17 (34 percent) pieces of medical equipment with either missing safety inspection labels or missing equipment entry numbers.[4]

We found that the system conducted a Joint Commission Mock Survey August 20–22, 2013. The survey identified equipment items in the dental clinic, stress echocardiography lab, Psychosocial Rehabilitation and Recovery Center, and Home Based Primary Care Clinic that had expired safety inspections. Two automated external defibrillator units were also found to have safety inspections that expired in 2012. During the August 2013 environment of care rounds, expired safety inspections were found on all eye testing equipment in the ophthalmology and optometry clinic. None of

[3] Non-life support refers to medical equipment that is not needed to sustain life. Examples of life-support medical equipment include defibrillators, pacemakers, ventilators, anesthesia machines, intra-aortic balloon pumps, and heart-lung machines.

[4] Equipment entry numbers are assigned to medical equipment acquired by VA facilities. The numbers are then entered into the Automated Engineering Management System and Medical Equipment Reporting System to track equipment inventory, and initial, corrective and preventive maintenance inspections, hazard alerts, and recalls.

the items identified in the August 2013 environment of care rounds were inspected at the time of our onsite visit.

VHA and TJC require facilities to establish a Medical Equipment Management Program and develop a plan to inspect, test, and develop maintenance strategies to ensure the safe operation of equipment used to monitor, diagnose, assess, and treat patients.[5,6] The Medical Equipment Management Plan determines the PMI schedule for electrical safety and functionality inspections based on the evaluation of risk according to manufacturer's recommendations, The Center for Engineering, Occupational Safety and Health Environment of Care Guidebook (CEOSH),[7] and the National Fire Protection Association.[8] Additionally, system policy[9] requires safety inspection labels to be applied to equipment indicating that the devices have passed inspection and when they are due for re-inspection.

Issue 3: BME Department Staffing

We substantiated the allegation that the BME Department is short staffed. We found that the system was allocated four full-time equivalent BME technician positions but did not fill two of the vacancies after the incumbents of those positions terminated their employment, one on January 14, 2012, and the other on June 29, 2013. The two remaining technicians were required to complete the BME workload previously handled by four technicians. We found that from April 1, 2013, through October 24, 2013, 46 percent of the medical equipment work orders and 68 percent of the equipment requiring PMIs were not completed.

Conclusions

We did not substantiate the allegation that medical equipment at the system with expired PMIs posed an immediate hazard to the safety of patients. We found no evidence of medical equipment failures or malfunctions that contributed to the death, serious injury, or serious illness of any individual.

We did not substantiate the allegation that all RT equipment had expired PMIs and that several pieces of equipment had inspection stickers indicating "routine inspection not applicable." We found no RT equipment with expired PMIs or with inspection stickers indicating "routine inspection not applicable."

We did not substantiate the allegation that it was the expectation for RT equipment to remain in use with expired PMIs.

[5] VHA CEOSH, Medical Equipment Management Guidebook, October 2011.
[6] TJC.EC.02.04.01, and TJC.EC.02.04.03
[7] VHA CEOSH Environment of Care Guidebook, July 2013. TJC requires documentation of a complete equipment history. This includes incoming inspection, corrective and preventive maintenance (PM), hazard alerts, recalls, etc.
[8] National Fire Protection Association Standard 99.
[9] NAVAHCS Electrical Safety Policy, December 2008.

We substantiated the allegation that other departments at the system had medical equipment with expired PMIs. We found medical equipment with expired or missing safety inspection labels and missing equipment entry numbers.

We substantiated that the BME Department at the system is "short staffed." We found that the system was allocated four full-time equivalent BME technician positions but only two of those positions were filled.

Recommendations

1. We recommended that the System Director initiate actions to address medical equipment with expired preventive maintenance inspections, that processes be strengthened to identify and track deficiencies to closure, and that compliance is monitored.

2. We recommended that the System Director assess staffing in the Biomedical Engineering Department and take appropriate actions to meet the workload requirements.

Appendix A

VISN Director Comments

Department of Veterans Affairs

Memorandum

Date: May 12, 2014

From: Director, VA Southwest Health Care Network (10N18)

Subject: Healthcare Inspection—Alleged Preventive Maintenance Inspection Deficiencies, Northern Arizona VA Health Care System, Prescott, Arizona

To: Director, San Diego Office of Healthcare Inspections (54SD)

Director, Management Review Service (VHA 10AR MRS OIG Hotline)

1. I concur with the attached facility response to this draft report from the OIG following their visit from October 28-29, 2013, to substantiate allegations.

2. If you have additional questions or concerns, please contact Robert Baum, VISN 18 Executive Officer to the Network Director, at (480) 397-2777.

Susan P. Bowers
Network Director

Appendix B

System Director Comments

Department of Veterans Affairs

Memorandum

Date: May 8, 2014

From: Director, Northern Arizona VA Health Care System (649/00)

Subject: Healthcare Inspection—Alleged Preventive Maintenance Inspection Deficiencies, Northern Arizona VA Health Care System, Prescott, Arizona

To: Director, VA Southwest Health Care System (10N18)

1. I concur with the findings and recommendations in the draft report from the OIG following their visit from October 28-29, 2013, to substantiate allegations.

2. Corrective action plans have been established, with some being already implemented, and target completion dates have been set for the remaining items as detailed in the attached report.

For

Donna K. Jacobs, FACHE
Medical Center Director
Northern Arizona VA Health Care System

Comments to OIG's Report

The following Director's comments are submitted in response to the recommendations in the OIG report:

OIG Recommendations

Recommendation 1. We recommended that the System Director initiate actions to address medical equipment items with expired preventive maintenance inspections, that processes be strengthened to identify and track deficiencies to closure, and that compliance is monitored.

Concur

Target date for completion: July 30, 2014

Facility response: NAVAHCS has initiated the following actions to strengthen our process in addressing medical equipment items with expired preventive maintenance inspections and identifying and tracking deficiencies to closure.

1. The VISN 18 Safety Performance Dashboard and OSHA inspection reports will be completed monthly. Data included in this report that is specific to this recommendation is entitled "Performance Monitor - Medical Equipment Preventative Maintenance (PM) Completion Rate and SPD Communication". These reports will be completed by Chief of Engineering and submitted monthly to the NAVAHCS Environment of Care Committee (EOCC) and to the VISN 18 Network Safety Manager. NAVAHCS will monitor PM completion rate until a benchmark of 90% or greater is maintained for 3 consecutive months. Once this benchmark is achieved, these reports will continue to be reported to the EOCC on a quarterly basis to assure continued sustainability.

Recommendation 2. We recommended that the System Director assess staffing in the Biomedical Engineering Department and take appropriate actions to meet the workload requirements.

Concur

Target date for completion: June 16, 2014

Facility response: Staffing needs in the Biomedical Engineering Department have been assessed and the following actions have been taken to meet the workload requirements:

1. A Medical Equipment Repairer 4805 was hired with start date on February 24, 2014. A Biomedical Engineer GS-0858 has been selected with a pending start date.

2. In April 2014, all infusion pumps were inspected and certified by an outside contractor.

3. A BM technician from the Albuquerque VAMC was assigned to NAVAHCS for 3 days to assist with PM work orders.

Appendix C

OIG Contact and Staff Acknowledgments

Contact	For more information about this report, please contact the OIG at (202) 461-4720.
Contributors	Sandra Khan, RN, BSN, Team Leader Charles Cook, MHA Deborah Howard, RN, MSN Glen Pickens, RN, MHSM George Wesley, MD Derrick Hudson, Program Support Assistant

Appendix D

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