Department of Veterans Affairs
Office of Inspector General

Healthcare Inspection

Review of a Patient with Pulmonary Embolism
Oklahoma City VA Medical Center
Oklahoma City, Oklahoma

Report No. 11-02385-300 **September 30, 2011**

VA Office of Inspector General
Washington, DC 20420

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Executive Summary

The VA Office of Inspector General Office of Healthcare Inspections conducted a review to determine the validity of allegations of misdiagnosis by providers at the Oklahoma City VA Medical Center (facility) in Oklahoma City, OK. The complainant alleged that:

- A patient was given a diagnosis of communicable pneumonia and then placed in a room with four other patients in the facility's emergency room.
- The patient was incorrectly given a diagnosis of lung cancer.
- When the patient left the facility and went to a community hospital, the patient was found to have acute pulmonary embolism.

We did not substantiate that the patient was placed in a room with four other patients. The facility's emergency room cannot accommodate more than two patients in a room, but the patient may have been evaluated in areas where other patients were nearby and management of patients with pneumonia does not require isolation.

We did not substantiate that the patient was given a diagnosis of lung cancer. The providers we interviewed denied giving the patient a diagnosis of lung cancer. However, providers did document that malignancy was a diagnostic consideration, and that possibility may have been mentioned to the patient.

We found that providers did not adequately pursue a possible diagnosis of pulmonary embolism at initial presentation or upon admission to the facility. This patient had previously been treated for pulmonary embolism and recurrence might have been prevented.

We recommended that the Facility Director obtain a peer review assessment of the care provided to this patient during both presentations to the emergency room and subsequent admission.

The Veterans Integrated Service Network and Facility Directors concurred with our findings. We will follow up until the planned actions are completed.

DEPARTMENT OF VETERANS AFFAIRS
Office of Inspector General
Washington, DC 20420

TO: Director, South Central VA Health Care Network (10N16)

SUBJECT: Healthcare Inspection – Review of a Patient with Pulmonary Embolism, Oklahoma City VA Medical Center, Oklahoma City, Oklahoma

Purpose

The VA Office of Inspector General (OIG) Office of Healthcare Inspections reviewed allegations of misdiagnosis by providers at the Oklahoma City VA Medical Center, (facility) in Oklahoma City, OK. The purpose of the inspection was to determine if the allegations had merit.

Background

The facility is a 159-bed tertiary care facility that provides comprehensive healthcare through inpatient and outpatient services in medicine, surgery, mental health, and rehabilitation medicine. The facility is part of Veterans Integrated Service Network 16.

In April 2011 a complainant contacted OIG's Hotline Division regarding patient care concerns and alleged misdiagnosis at the facility. The complainant alleged that:

- A patient was given a diagnosis of communicable pneumonia and then placed in a room with four other patients in the facility's Emergency Room (ER).
- On the second day of hospitalization, the patient was incorrectly given a diagnosis of lung cancer.
- When the patient left the facility and presented to a community hospital, the patient was found to have acute pulmonary embolism (PE).[1]

Scope and Methodology

We conducted telephone interviews with the patient and providers involved in the care of this patient during the review period. We reviewed the physical layout of the facility's

[1] PE occurs when one or more arteries in the lungs become blocked, usually by blood clots that travel to the lungs from the legs.

ER. We reviewed the patient's facility medical record, medical records from the community hospital admission, relevant facility policies, and relevant Veterans Health Administration directives.

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.

Case Summary

The patient was a man in his fifties with a history of impaired memory, depression, diabetes, high blood pressure, heart attacks, heart surgeries, degenerative joint disease, obstructive lung disease,[2] and a stable lung nodule.[3] Additionally, in 2006, deep vein thrombosis (DVT)[4] and PE were diagnosed, and he was treated with warfarin[5] until January 2010.

In August 2010, the patient presented to the facility ER complaining of chest pain for 2 days. He was diagnosed with pneumonia and discharged home on oral antibiotics. Discharge instructions included encouragement to quit smoking, instructions to contact his primary care provider in 4 days if not feeling better, and to return to the ER if his chest pain became worse or other symptoms occurred.

Five days later, the patient reported feeling worse and was evaluated in the facility's Urgent Care Clinic and transported to the ER. He was admitted to the facility with a diagnosis of right upper lobe pneumonia for treatment to include intravenous antibiotics. The patient's inpatient provider documented lung sounds common to pneumonia and noted the patient's complaint of a productive cough that caused chest wall tenderness.

Because of concerns regarding possible malignancy or atypical infection, the provider ordered a computed tomography scan (CT) without contrast,[6] noting that the patient's creatinine[7] level was elevated. The provider documented that a repeat CT with contrast would be ordered when the patient's creatinine level improved.

The CT report documented areas in the lungs "concerning for pneumonia" and that the patient's longstanding lung nodule remained unchanged from prior imaging. The

[2] Obstructive lung disease refers to a group of conditions that cause difficulty breathing.
[3] A stable benign lung nodule is a small mass of tissue on the lung that has remained stable in size for more than 2 years and is not considered cancerous.
[4] A blood clot in the leg is generally called a deep vein thrombosis.
[5] Warfarin is a medication that is used to treat or prevent clots in the veins, arteries, lungs, or heart.
[6] A CT uses x-rays to produce detailed pictures inside of the body. Contrast, or dye, may be injected or swallowed by the patient to enhance the x-ray picture.
[7] A creatinine test shows how well the kidneys function. High levels suggest that the kidneys might have trouble clearing x-ray contrast from the body.

patient's creatinine level was noted as improving and vital signs were documented as stable.

The provider documented breathing improvement despite a persistent cough and chest tenderness. Nurse's notes documented no complaints of pain by the patient. During the evening of day three, a nurse documented the patient was agitated and refused medications, threatening to leave the facility. On day four, the patient refused any further treatment and left the hospital against medical advice.

Three days later, the patient was admitted to a community hospital. The discharge summary from that hospitalization states "CT scan of the chest with infusion revealed moderate-sized pulmonary emboli identified within the branches to each lobe," and lower extremity ultrasonography revealed DVT.

Issue 1: Initial ER Care, Including Diagnosis and Room Placement

We did not substantiate that the patient was held in an area with four other patients.

The patient described being held in an ER storage or overflow area with four other patients. However, we found that the ER area consists of 12 exam rooms arranged in a semi-circle around the nurse's station. There is no overflow or additional space where ER patients are placed. The space in the exam rooms is limited and cannot accommodate more than one or two patients.

Facility policy requires spatial separation of patients with respiratory infections of greater than 3 feet in common waiting areas. Patients with pneumonia are not usually isolated.

Issue 2: Diagnosis of Lung Cancer

We did not substantiate that the patient was given a diagnosis of lung cancer.

The patient stated that a provider discussed a diagnosis of lung cancer. However, none of the providers we interviewed recalled such a discussion and there is no documentation in the record to support that a discussion of a lung cancer diagnosis by any provider occurred. Providers did document that malignancy was a diagnostic consideration, and that possibility may have been mentioned to the patient.

Issue 3: Diagnosis of Pulmonary Embolism

We found that providers did not adequately pursue the diagnosis of PE. This patient has a past history of PE. Recurrent PE might have been prevented if providers had appropriately pursued the diagnosis at initial presentation or upon hospital admission. The patient was admitted to a community hospital 3 days after leaving the facility and found to have both PE and DVT.

While hospitalized at the facility, the patient was treated for community-acquired pneumonia, and pneumatic compression hose and low-dose anticoagulation were ordered. However, providers' progress notes indicate no recognition that the patient's prior history of DVT and PE conferred a risk of recurrence or that PE might be responsible for the patient's symptoms. The patient had received outpatient anticoagulation during the previous year. Further, the patient's most prominent presenting symptom of chest pain was out of proportion to his other symptoms and chest x-ray findings attributed to pneumonia.

A chest CT scan was obtained on the second hospital day to evaluate the possibility of malignancy. However, intravenous contrast was not used because of the patient's renal insufficiency. This diagnostic study was therefore inadequate to assess the possibility of PE, and in any case that possibility was not mentioned.

Given the patient's past history of PE and new symptoms including chest pain, providers should have pursued the possibility of acute PE on either occasion when he presented to the ER or when he was admitted to the facility. Various management strategies could have been considered for this patient, including lower extremity ultrasonography[8] and immediate therapeutic anticoagulation with delay of contrast CT until after administration of intravenous fluids.

Conclusions

We did not substantiate that the patient was placed in a room with four other patients. The facility's ER cannot accommodate more than two patients in a room, but the patient may have been evaluated in areas where other patients were nearby. Management of patients with pneumonia does not require isolation.

We did not substantiate that the patient was given a diagnosis of lung cancer. The patient stated that a provider discussed a diagnosis of lung cancer; however, none of the providers we interviewed recalled such a discussion. Providers did document that malignancy was a diagnostic consideration, and that possibility may have been mentioned to the patient.

We could not substantiate that providers failed to make the diagnosis of PE because it is impossible to know with certainty whether or not the patient had a PE when he was treated at the facility. Nevertheless, we did find that providers did not adequately pursue the diagnosis at initial presentation or upon admission to the facility. This patient had previously been treated for PE and recurrence might have been prevented.

[8] Lower extremity ultrasonography is a non- invasive procedure that uses high- frequency sound waves to check for blood clots in leg veins.

Recommendation

Recommendation. We recommended that the Facility Director obtain a peer review assessment of the care provided to this patient during both presentations to the ER and during his subsequent admission.

Comments

The Veterans Integrated Service Network and Facility Directors concurred with our findings (See Appendixes A and B, pages 6-8, for the full text of their comments). We will follow up until the planned actions are completed.

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

Appendix A

Veterans Integrated Service Network Director Comments

Department of Veterans Affairs **Memorandum**

Date: September 1, 2011

From: Director, South Central VA Health Care Network (10N16)

Subject: **Healthcare Inspection – Review of a Patient with Pulmonary Embolism, Oklahoma City VA Medical Center, Oklahoma City, Oklahoma**

To: Director, Dallas Office of Healthcare Inspections (54DA)

Thru: Director, Veterans Healthcare Administration Management Review Service (10A4A4)

I have reviewed the results of the Healthcare Inspection of the Oklahoma City VA Medical Center and concur with the findings.

Thank you for this comprehensive review.

(*original signed by*:)
George H. Gray, Jr.
Director, South Central VA Health Care Network (10N16)

Appendix B

Facility Director Comments

Department of Veterans Affairs **Memorandum**

Date: August 29, 2011

From: Director, Oklahoma City VA Medical Center (635/00)

Subject: **Healthcare Inspection – Review of a Patient with Pulmonary Embolism, Oklahoma City VA Medical Center, Oklahoma City, Oklahoma**

To: South Central VA Health Care Network (10N16)

I concur with the findings of Healthcare Inspection review team.

We appreciate the opportunity to work with the Office of Inspector General as we continuously strive to improve the quality of healthcare for America's Veterans.

David Wood

David P. Wood, MHA, FACHE
Director, Oklahoma City VA Medical Center (635/00)

Director's Comments to Office of Inspector General's Report

The following Director's comments are submitted in response to the recommendations in the Office of Inspector General's report:

OIG Recommendation

Recommendation: We recommended that the Medical Center Director obtain a peer review assessment of the care provided to this patient during both presentations to the ER and subsequent admission.

Concur **Target Completion Date:** September 10, 2011

Facility's Response:

Peer reviews were requested in accordance with VHA Directive 2010-025 to review the care provided to this patient in the ER and the inpatient admission.

Status: Pending

Appendix C

OIG Contact and Staff Acknowledgments

OIG Contact	For more information about this report, please contact the Office of Inspector General at (202) 461-4720.
Acknowledgments	Cathleen King, MHA, CRRN, Project Leader Maureen Washburn, ND, RN Jerome Herbers, MD, Medical Consultant Misti Kincaid, BS, Program Support Assistant

Appendix D

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