Department of Veterans Affairs
Office of Inspector General

Resident Supervision in the Operating Room, Birmingham VA Medical Center, Birmingham, Alabama

Report No. 05-02925-100 **March 7, 2006**

VA Office of Inspector General
Washington, DC 20420

To Report Suspected Wrongdoing in VA Programs and Operations
Call the OIG Hotline – (800) 488-8244

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

TO: Director, Veteran Integrated Service Network (10N07)

SUBJECT: Resident Supervision in the Operating Room, Birmingham VA Medical Center, Birmingham, Alabama

1. Purpose

The Department of Veterans Affairs, Office of Inspector General (OIG), Office of Healthcare Inspections (OHI), inspected the Birmingham VA Medical Center (BVMAC) in response to allegations by an anonymous complainant regarding two instances in which vascular and orthopedic surgical residents were not properly supervised in the operating room. The purpose of the inspection was to determine the validity of the allegations and to evaluate patient safety, physician time and attendance, and clinical education issues related to those allegations.

2. Background

BVAMC is a 313-bed facility that provides acute tertiary medical and surgical care to veterans of Alabama and surrounding states. BVAMC is affiliated with eight universities, including the University of Alabama at Birmingham (UAB). BVAMC has contracts with various UAB physicians for certain clinical and surgical services, including vascular surgery and orthopedic surgery.

During our Combined Assessment Program (CAP) review of BVAMC in September 2005, a complainant alleged that UAB contract surgeons were not present in the BVAMC operating room (OR) to supervise surgical residents during two recent surgeries. Specifically, the complainant alleged that:

- In August 2005, an unsupervised vascular surgery resident initiated a thrombectomy of a patient's leg, which subsequently required amputation.

- In September 2005, a hip fracture operation was delayed after administration of anesthesia because the responsible orthopedic surgeon was performing surgery at UAB.

3. Scope and Methodology

We conducted a site visit at BVMAC in November 2005. We interviewed clinical staff, administrators, managers, and other employees knowledgeable about the allegations. We reviewed OR schedules and quality management records pertaining to resident supervision in the OR. We reviewed patients' medical records, administrative records, and pertinent facility and medical center policies, procedures, and standards. We interviewed the supervising surgeons, surgical residents, anesthesiologists, and OR nurses involved in the two cases included in the complainant's allegations. We also interviewed the Chief of Staff, the Associate Chiefs of Staff, the Director of Education, and the Chief of Surgery. We reviewed medical records, OR reports, and time and attendance records relevant to the two cases included in the allegations. We also reviewed OR reports for other vascular and orthopedic surgeries to determine if the lack of resident supervision was a persistent problem in those services.

The inspection was conducted in accordance with the *Quality Standards for Inspections* published by the President's Council on Integrity and Efficiency.

4. Inspection Results

We substantiated the complainant's allegations that the assigned surgeons were not present to properly supervise residents during part of the two surgeries cited by the complainant. We did not substantiate allegations that the lack of resident supervision jeopardized patient safety in these two cases. Although we found some minor discrepancies in time and attendance records of the two surgeons, we did not find substantial violations of time and attendance requirements that would require reimbursement to VA.

CASE REVIEWS

Case Review 1: Vascular Surgery

An 87-year-old male with a history of a femoral peroneal bypass[1] in the right leg and a previous above-the-knee amputation of the left leg presented to the BVAMC vascular surgery clinic on August 1, 2005, with right lower extremity pain. Vascular Surgery initially believed the patient's pain resulted from venous insufficiency and edema as the patient had dopplerable dorsalis pedis and posterior tibial pulses.[2] During his evaluation, lab tests revealed significant anemia (hemoglobin of 6.7 and hematocrit of 20.2).[3] Vascular Surgery referred the patient to the General Medicine Service for admission.

[1] In this procedure, a blocked blood vessel is bypassed by grafting an open vessel around the blockage.
[2] These are pulses that can be felt with the hand or heard using a handheld Doppler ultrasound. The presence of these pulses generally means there is some arterial blood flow to the leg.
[3] Normal Hemoglobin 14-18 g/dl; normal Hematocrit 40-54g/dl.

Further lab tests demonstrated a supratherapeutic International Normalized Ratio (INR) of 5.19.[4] On August 3, 2005, a duplex arterial ultrasound found decreased blood flood velocities in the right lower extremity graft.[5] On August 4, 2005, an arteriogram suggested a possible clot.[6] Vascular surgery subsequently scheduled the patient for a thrombectomy[7] on August 5, 2005. Lab tests on the evening of August 4, 2005, confirmed a persistently elevated INR and anemia.

The patient went to the operating room holding area at 7:30 a.m. on August 5, 2005, for a scheduled start time of 9:00 a.m. The patient required additional units of plasma and blood preoperatively to improve his coagulopathy and anemia. The decision was made to proceed with epidural analgesia rather than general anesthetic. The operative note shows that correction of the patient's anemia and coagulopathy in conjunction with the choice of anesthetic resulted in a delay of the surgery.

The attending surgeon scheduled to supervise this operation was notified at UAB by phone of the delay. The surgical resident initiated the procedure at 10 a.m. without the supervising surgeon present. Upon incision and inspection, the resident discovered that the patient's graft was likely infected and that his leg needed to be amputated below the knee. BVAMC Surgical Service clinicians and staff then attempted to contact the assigned supervising surgeon again. UAB records showed that the assigned attending surgeon was at that time performing an operation on a patient at UAB. Unable to contact the assigned attending surgeon after several attempts, BVAMC Surgical Service staff contacted another attending surgeon, who then came to the BVAMC OR to supervise the remainder of the procedure. No further anesthetic was required, and the operation proceeded without complication. The originally assigned attending surgeon arrived in the operating room after the amputation near the end of the procedure. The operation was completed without further complication, and no postoperative complications occurred.

Case Review 2: Orthopedics

A 74-year-old man with a history of hypertension, coronary artery disease (CAD), and chronic renal failure fell on September 6, 2005, at the Tuskegee VA Medical Center (TVAMC). On September 7, TVAMC transferred the patient to BVAMC's emergency room with left hip pain. An x-ray revealed an interochanteric[8] fracture involving the left

[4] INR (International Normalized Ratio) is a measure of how difficult it is for the patient's blood to clot. Typically, patients with peripheral vascular disease are at high risk for clots and are placed on medications to increase their INR. The higher the INR, the less likely it is that the patient's blood will clot, but the more likely it is that bleeding will occur. An appropriate INR for this patient would have been 2.0 to 3.0.

[5] Decreased velocities refers to a decrease in the velocity of blood flowing across the graft which can suggest some blockage.

[6] An arteriogram involves inserting a small tube into an artery and injecting a dye material to actually map the vessels and test for patency of the vessels.

[7] A thrombectomy is a surgery to remove a blood clot.

[8] Interochanteric is a hip fracture 3-4 inches from the hip joint. American Academy of Orthopedic Surgeries; http://orthoinfo.aaos.org/fact/thr_report.cfm?Thread_ID=229&topcategory=Hip

femur with no dislocation. Internal Medicine admitted the patient. After confirming the diagnosis, Orthopedic Surgery scheduled an open reduction and internal fixation of his hip for September 9. Because the assigned UAB orthopedic surgeon was out of town, another orthopedic surgeon at UAB with privileges at BVAMC agreed to perform the hip surgery. On the day of the surgery, September 9, the covering surgeon arrived at the medical center as scheduled at 7 a.m., but the procedure was delayed. The surgeon then left BVAMC and returned to UAB to perform scheduled surgeries on other patients. The anesthesiologist administered spinal anesthesiology to the patient, and BVAMC OR staff attempted to contact the covering surgeon. BVAMC records show that the operation started at 9:35 a.m.; UAB records show that the supervising surgeon was at that time performing an operation on a patient at UAB. Unable to contact the covering surgeon, the BVAMC Chief of Anesthesiology, Administrative Officer for Surgical Service, and Associate Chief of Staff for Acute and Specialty Care then attempted to locate another supervising orthopedic surgeon. Unable to contact another supervising orthopedic surgeon, the Associate Chief of Staff for Acute and Specialty Care decided to cancel the operation. However, immediately prior to implementing that decision, the covering surgeon returned and the operation proceeded. Clinical staff we interviewed stated that there was a half-hour to one-hour delay after anesthesia was administered before the attending surgeon arrived in the BVAMC operating room. The patient experienced no intraoperative or postoperative complications and was discharged to a community nursing facility for rehabilitation.

Issue 1: Resident Supervision

We substantiated the complainant's allegations that BVAMC clinicians did not comply with VHA requirements for resident supervision in the two cases alleged by the complainant. In both the vascular surgery case and the orthopedics case, we found that the responsible supervising surgeon was not present in the operative suite during all of the operation as required by VA policies.

VHA Handbook 1400.1[9] requires that supervising surgeons be physically present in the operating room or the immediate operating suite for all surgical procedures except in cases of emergency or routine "non-OR procedures." During the year prior to our inspection, BVAMC undertook efforts to educate its physicians, including UAB physicians working at BVAMC, about VA requirements for resident supervision and documentation. The BVAMC Director of Education distributed VHA policies and educational materials, including a pocket card about supervision and documentation requirements, to all BVAMC physicians as well as UAB physicians with privileges at BVAMC. The Chief of Staff held several training sessions for residents and attending physicians, including UAB physicians, about their responsibilities regarding resident supervision. During a Partnership Council Meeting held May 3, 2005, the BVAMC Residency Program Director reinforced to the affiliates, including UAB, that BVAMC

[9] VHA Directive 1400.1 Resident Supervision

patients must be cared for by clinicians who are qualified to deliver that care and that the care must be documented appropriately and accurately in the patient's record.

Despite these efforts, the surgeon involved in the vascular case we reviewed told us he was not familiar with VHA Handbook 1400.1 or its requirements. The Chief of Anesthesiology and the OR Nurse Manager said that the UAB surgeons have stated to them that it was sufficient for them to be in the "vicinity" of the operating room during some surgeries; however, the area included within the meaning of "vicinity" was not well-defined and surgeons often returned to their BVAMC offices or returned to UAB. We recommended that BVAMC reinforce the requirements of VHA Handbook 1400.1 through additional training and that the physicians certify that they understand VA resident supervision requirements. In particular, BVAMC should clarify to the surgeons when they must be in the operating room or immediate operating suite during surgical procedures.

We found that there were several extenuating circumstances in the two cases we reviewed. In the vascular surgery case, the supervising surgeon was only notified the night before that he would be the supervising surgeon. In the orthopedic case, the supervising surgeon was a "without compensation" (WOC) physician covering for another UAB surgeon. In both cases, there were significant delays at BVAMC due to patient complications that resulted in surgery start times that conflicted with surgeries already scheduled at UAB. These extenuating circumstances did not, however, nullify or modify VA resident supervision requirements. Rather, they served to illustrate the need to strengthen coordination between BVAMC and UAB so that such events do not reoccur, even if there are complicating factors. We recommended that BVAMC review its processes for scheduling and coordinating BVAMC and UAB surgeries to ensure that supervising surgeons are present at the time that BVAMC surgeries start.

Issue 2: Patient Safety

We did not substantiate that patient safety was jeopardized in the two cases we reviewed. However, we found that potential patient safety issues could have arisen in both cases and are inherent in all cases of inadequate resident supervision. The administration and duration of anesthesia in patients with medical problems such as renal failure, hypertension, CAD, and respiratory problems increases the probability of complications during surgical procedures. Both patients in the cases we reviewed had one or more of these medical conditions, which increased their risk of adverse outcomes related to extended anesthesia during surgery or a delay in surgery. In the vascular surgery case we reviewed, the surgical resident and the anesthesiologist told us that the delay could have required a conversion from spinal anesthesia to general anesthesia because spinal anesthesia is administered in an injection and can only be given once. The conversion to general anesthesia would have increased the patient's risk of complications and adverse outcomes. In the vascular surgery case, it should be noted that the spinal anesthesia did

not metabolize quickly because of the patient's age (87); thus the patient was able to have an amputation without converting to general anesthesia.

Issue 3: Physician Time and Attendance

We reviewed time and attendance records at BVAMC and UAB of the two assigned attending surgeons for the surgeries contained in the allegations in order to determine if significant discrepancies occurred in the two cases we reviewed. Although we found some minor discrepancies in time and attendance records of the two surgeons, we did not find substantial violations of time and attendance rules that would require reimbursement to VA.

5. Conclusion

We found that BVAMC did not comply with VHA resident supervision requirements in the two cases alleged by the complainant. We concluded that, although there were extenuating factors, BVAMC needed to reinforce education of physicians regarding resident supervision requirements and improve coordination of surgery schedules.

We did not substantiate that patient safety or time and attendance issues resulted from these cases.

6. Recommendations

We recommend that the VISN Director ensure that the Medical Center Director:

(a) Enforce VHA resident supervision requirements.

(b) Provide additional training to physicians and residents on resident supervision requirements.

(c) Conduct a management review of BVAMC OR procedures for scheduling surgeries and coordinating surgery times with UAB surgeons to ensure that supervising surgeons are available and present at the start of surgeries.

7. VISN and VAMC Director Comments

The Acting VA Southeast Network Director and the Facility Director agree with the recommendations in this report and have taken actions to correct identified deficiencies. The full text of this response is in Appendix A.

8. Assistant Inspector General for Healthcare Inspections Comments

We agree with the improvement plans and actions taken by the VISN and Medical Center Director to address the issues raised in this report. We will follow up until all actions are completed.

(original signed by:)
JOHN D. DAIGH, JR., M.D.
Assistant Inspector General for
Healthcare Inspections

Appendix A

Director Comments

Department of Veterans Affairs **Memorandum**

Date: January 12, 2006

From: Director, Veteran Integrated Service Network (10N07)

Subject: **Lack of Resident Supervision in the Operating Room, Birmingham VA Medical Center, Birmingham, Alabama**

To: Assistant Inspector General for Healthcare Inspections

Thru: Director, Management Review Service (105B)

The following comments are submitted in response to Draft Report 2005-02925-HI-0009.

(original signed by:)
Tom Capello

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

The following Director's comments are submitted in response to the recommendation(s) in the Office of Inspector General's Report:

OIG Recommendation(s)

Recommended Improvement Action(s) a. The VISN 7 Director needs to ensure that the BVAMC Director takes action to enforce VHA resident supervision requirements.

Concur **Target Completion Date:** see below

Recommended Action(s) 1. Birmingham VA Medical Center has developed a new note template for use in the surgical clinics to more effectively document resident supervision. This note template will require the resident physicians to document attending supervision prior to completion of the note. This note template is in the process of being reviewed and tested prior to implementation.

Target Completion Date: February 1, 2006

Recommended Action(s) 2. A documentation review of resident supervision in the Operating Room has been implemented to assist with continued education and to ensure compliance with resident supervision guidelines.

Target: Completion Date: Complete

Recommended Action(s) 3. Birmingham has begun recruitment for an Registered Nurse that will be located in the Operating Room. This employee will have responsibility for ensuring that surgical attending documentation is completed and that attending surgeons are present prior to commencing with surgical procedures.

Target Completion Date: March 1, 2006

Recommended Improvement Action(s)b. The VISN 7 Director needs to ensure that the BVAMC Director takes action to provide additional training to physicians and residents on resident supervision requirements.

Concur **Target Completion Date:** see below

Recommended Action(s) 4. A new training module has been added to the Physician New Employee Orientation covering isses related to Part-time physician time and attendance, resident supervision, and compliance.

Target Completion Date: Complete

Recommended Action(s) 5. The nationally developed VA pocket card outlining resident supervision documentation requirements has been disseminated to all attending and resident physician staff.

Target Completion Date: Complete

Recommended Action(s) 6. All physicians with responsibility for resident supervision will be provided with a copy of VHA Handbook 1400.1 related to the requirements of resident supervision, as well as VHA Policy 2005-054 Revised Billing Guidance for Services provided by Supervising Practitioners and Residents and will certify that they have read and will abide with the regulations contained therein.

Target Completion Date: March 1, 2006

Recommended Improvement Action(s) c. The VISN 7 Director needs to ensure that the BVAMC Director takes action to conduct a management review of BVAMC OR procedures for scheduling surgeries and coordinating surgery times with UAB surgeons to ensure that supervising surgeons are available and present at the start of surgeries.

Concur **Target Completion Date:** see below

Recommended Action(s) 7. An external review of the Birmingham VA Medical Center Surgical Program will be conducted by a team from the Boston VA Healthcare System. This review will be headed by the Boston VA Chief, Surgical Service. This review will focus on all aspects of the overall management of the facility surgical program to include the procedures for scheduling surgeries and the coordination of surgeon time between the VA and the University to insure that surgeons are available and present at the start of surgical procedures. This review will be conducted in close coordination with facility and University leadership.

Target Completion Date: January 24, 2006

Appendix C

OIG Contact and Staff Acknowledgments

OIG Contact	Marisa Casado, Director, Bay Pines Regional Office of Healthcare Inspections, (727) 395-2416
Acknowledgments	Raymond M. Tuenge, Associate Regional Director, Bay Pines Regional Office of Healthcare Inspections Annette Robinson, Team Leader Dennis Capps Dr. Andrea Buck Dr. George Wesley Triscia Weakley

Appendix D

Report Distribution

VA Distribution

Office of the Secretary
Veterans Health Administration
Assistant Secretaries
General Counsel
Director, Veterans Integrated Service Network (10N07)

Non-VA Distribution

House Committee on Veterans' Affairs
House Appropriations Subcommittee on Military Quality of Life and Veterans Affairs
House Committee on Government Reform
Senate Committee on Veterans' Affairs
Senate Appropriations Subcommittee on Military Construction and Veterans Affairs
Senate Committee on Governmental Affairs
National Veterans Service Organizations
General Accountability Office
Office of Management and Budget
Senator Jeff Sessions
Senator Richard C. Shelby
Representative Artur Davis

This report will be available in the near future on the OIG's Web site at http://www.va.gov/oig/52/reports/mainlist.htm. This report will remain on the OIG Web site for at least 2 fiscal years after it is issued.

To Report Suspected Wrongdoing in VA Programs and Operations

Call the OIG Hotline – (800) 488-8244