Department of Veterans Affairs
Office of Inspector General

Healthcare Inspection

Quality of Care Issues in Cardiology
Bay Pines VA Healthcare System
Bay Pines, Florida

Report No. 06-01732-119 **April 24, 2007**

VA Office of Inspector General
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 evaluation to determine the validity of allegations made by an anonymous complainant and by VA employees. The anonymous complainant alleged that a cardiologist provided poor care for patients undergoing diagnostic and therapeutic procedures. VA employees alleged that there were multiple problems in the delivery of cardiovascular services at the Bay Pines VA Healthcare System, Bay Pines, Florida.

We examined the report of an external peer review of the care provided by the cardiologist and conducted our own detailed assessment. We also reviewed a report prepared by the Veterans Health Administration's National Program Director for Cardiology. We conducted a site visit, interviewed staff members responsible for the administration of cardiology services, and examined clinical and administrative records.

We concluded that no patients suffered major long-term adverse outcomes resulting from actions of the cardiologist named by the complainant. We concluded that the external peer review was properly conducted and that the healthcare system took appropriate corrective action as necessary.

We found that the healthcare system has had two additional authorized positions for cardiologists, which it has been unable to fill despite diligent recruiting efforts, and that this shortage has contributed to delays in the interpretation of echocardiograms. We did not substantiate that patients frequently must wait extended periods for cardiac catheterization procedures; but we did substantiate that waiting times for coronary artery bypass surgery often exceeded 3 months, especially when patients were referred within the VA healthcare system. Finally, in the course of our investigation, we found evidence suggesting minimal involvement of cardiologists in consultations conducted by nurse practitioners.

We recommended that management take appropriate steps to prevent undue delays for patients awaiting coronary bypass surgery and in the reporting of results of echocardiograms. We also recommended a review of specific expectations regarding the extent to which cardiologists are involved in the care of patients referred to Cardiology and managed primarily by nurse practitioners.

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

TO: Director, Veterans Integrated Service Network 8

SUBJECT: Healthcare Inspection – Quality of Care Issues in Cardiology, Bay Pines VA Healthcare System, Bay Pines, Florida

Purpose

The VA Office of Inspector General (OIG), Office of Healthcare Inspections conducted an evaluation to determine the validity of allegations of poor care by a cardiologist and of mismanagement of cardiovascular services at the Bay Pines VA Healthcare System (the healthcare system), Bay Pines, Florida.

Background

The healthcare system is a tertiary care hospital with more than 400 active inpatient beds, an adjacent nursing home, and domiciliary facilities.

An anonymous complainant contacted the OIG Hotline on March 3, 2006, with allegations of poor care provided by a cardiologist, whose name was provided, during the period February 6–17, 2006. The complainant stated that 2 of 20 procedures performed by the cardiologist were associated with major complications. Details about six patients, who allegedly experienced poor care and adverse outcomes, were also provided, as follows:

1. In the case of one patient who underwent a percutaneous intervention, the cardiologist failed to address a complication.

2. Following an intervention associated with a complication in a second patient, the cardiologist ignored the advice of a thoracic surgeon, who suggested that the patient be transferred to another facility for close observation.

3. For a third patient, cardiac catheterization was non-diagnostic due to poor technical quality. Although a surgeon requested another catheterization, the cardiologist refused.

4. In the case of a fourth patient, the cardiologist left a stent incompletely deployed and also left several other lesions untreated.

5. A fifth patient had complete closure of a major vessel following insertion of a stent. When he was referred for surgery, the surgeon stated that better pictures of the vessel were needed.

6. Regarding a sixth patient, who reportedly suffered a procedure-related complication, details were not provided.

In addition to these allegations regarding the care provided by one cardiologist, VA employees, who did not wish to be identified, described problems with delivery of cardiovascular services, including:

1. An inadequate number of cardiologists.

2. A backlog of cardiac catheterization procedures.

3. A backlog of echocardiograms.

4. Absence of space for the electrophysiology cardiologist to employ available equipment.

5. Electrocardiograms being interpreted "by machines" rather than by cardiologists.

6. Patients being required to wait 3–5 months to have coronary artery bypass surgery.

Scope and Methodology

We examined the report of an external peer review, which had been requested by the VA Sunshine Healthcare Network (Veterans Integrated Service Network (VISN) 8). That review addressed the specific allegations pertaining to the care of three of the six patients named by the anonymous complainant. That review also examined the care of an additional 16 patients who underwent cardiac procedures at the healthcare system during the same month as all 6 of the named patients. The allegations and issues regarding the three named patients whose care was not specifically addressed by the external peer reviewer were very similar to those which were reviewed.

We also reviewed a subsequent report prepared by the Veterans Health Administration's National Program Director for Cardiology; conducted a site visit on June 29, 2006; interviewed staff members responsible for the administration of cardiology services; and examined clinical and administrative records.

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

Inspection Results

Case Summaries

1. A patient was admitted to the healthcare system with worsening angina and had a cardiac catheterization. He had undergone coronary artery bypass graft (CABG) surgery several years earlier. Noted at the time of catheterization was "thrombus embolization to PDA [posterior descending artery] distally." A second cardiologist provided technical assistance.

   At routine primary care follow-up 6 months later, he was described as being employed and having stable angina.

2. A patient was admitted to the healthcare system because of worsening angina. He had previously undergone CABG surgery approximately 7 years earlier. Following catheterization, he was discharged and returned for intervention 10 days later. A "small perforation distal to the stent" was described at the time of the intervention, but "this was localized and the patient had no chest pain or EKG changes." An ECHO [echocardiogram] was done and there was no evidence of a complication related to the perforation. This case was evaluated by the external peer reviewer.

   At primary care follow-up 9 months later, he was described as having no angina.

3. A patient had undergone transthoracic esophagectomy and partial gastrectomy for esophageal cancer. While hospitalized during the following month, he experienced marked dyspnea[1] and had echocardiography, which indicated severe ischemia.[2] Cardiac catheterization revealed severe coronary disease not amenable to percutaneous intervention.[3]

   Approximately 1 month later, during continuing treatment in the ICU, he was found unresponsive, did not respond to resuscitative measures, and was pronounced dead.

4. A patient with no prior history of heart disease presented to the emergency room (ER) with shoulder and arm pain. He was found to have myocardial injury and underwent a catheterization. A severe single vessel obstruction was treated with stent placement.

[1] Dyspnea is difficult breathing or shortness of breath.
2 Ischemia is inadequate blood supply to a local area due to blockage of the blood vessels to that area.
3 A non-surgical procedure performed in the cardiac catheterization laboratory using special catheters to open blocked arteries that supply blood to the heart.

During a visit to the healthcare system for an unrelated injury 8 months later, he denied chest pain.

5. A patient with a history of CABG surgery more than 10 years earlier presented to the ER with chest pain, and myocardial infarction was diagnosed. At a cardiac catheterization, he was found to have "totally occluded native vessels." A "critical ostial RCA [right coronary artery] graft" was "stented with distal protection." This case was evaluated by the external peer reviewer.

   Seven months later, when he was seen as an outpatient in the Cardiology Clinic, it was noted that "His anginal symptoms have improved and this is usually relieved with 1 ntg sl [nitroglycerin under the tongue]."

6. A patient was transferred from another hospital with persistent angina. He had catheterization with angioplasty and stent placement in the left anterior descending coronary artery. This case was evaluated by the external peer reviewer.

   At primary care follow-up 8 months later, he was said to have "no chest pain currently."

Issue 1: Quality of Care Provided by a Cardiologist

We found that no patients suffered major long-term adverse outcomes resulting from actions of the cardiologist named by the complainant. The healthcare system obtained an external peer review, which we found to be properly conducted, and took appropriate corrective action as necessary.

Issue 2: Adequacy of the Number of Cardiologists on Staff

The healthcare system reported having 6.6 full-time equivalent cardiologists currently on staff, with 2 additional part-time cardiologists paid on a fee basis. We found that the healthcare system has had two additional authorized positions for cardiologists, which it has been unable to fill despite diligent recruiting efforts. We found that this shortage in Cardiology staffing has adversely affected reporting of echocardiogram results. (See Issue 5.)

Issue 3: Backlog of Cardiac Catheterization Procedures

We did not substantiate that patients frequently must wait extended periods for cardiac catheterization procedures. In the first 5 months of 2006, more than 700 cardiac catheterization laboratory procedures were performed, with an average waiting time of less than 11 days.

Issue 4: Patients Being Required To Wait 3–5 Months for Coronary Artery Bypass Surgery

We substantiated that waiting times for coronary artery bypass surgery often exceeded 3 months, especially when patients were referred within the VA healthcare system. In addition, we found insufficient processes in place to ensure that referred patients have surgery in a reasonable period of time.

Recommendation 1. The VISN Director should ensure that the Healthcare System Director takes appropriate steps to prevent undue delays for patients awaiting coronary artery bypass surgery.

Issue 5: Backlog of Echocardiograms

Although we found some delay in performing routine outpatient echocardiograms, requests for inpatients and from the Compensation & Pension Office have been handled expeditiously. However, in contrast to performing echocardiograms, we found a substantial backlog in the reporting of echocardiogram results, which was attributable to long waits for interpretation by a cardiologist. The healthcare system obtained additional services from fee-basis cardiologists, so the backlog was eliminated.

Recommendation 2. The VISN Director should ensure that the Healthcare System Director ensures that results of echocardiograms are reported without undue delay.

Issue 6: Absence of Space for the Electrophysiology Cardiologist To Employ Available Equipment

We substantiated that the electrophysiology cardiologist was temporarily unable to use available equipment due to lack of space. However, this problem has been addressed by the healthcare system; therefore, we made no recommendation.

Issue 7: Electrocardiograms Being Interpreted "by Machines" Rather Than by Cardiologists

We substantiated that electrocardiograms include a computer-generated interpretation and that cardiologists do not routinely interpret electrocardiograms requested by non-Cardiology clinicians. However, we note that, according to healthcare system policy and in general clinical practice, electrocardiograms are interpreted by physicians in many specialties[4] and that the ultimate responsibility for interpreting and responding to

[4] Alan H. Kadish, et al., "ACC/AHA Clinical Competence Statement on Electrocardiography and Ambulatory Electrocardiography: A report of the American College of Cardiology/American Heart Association/American College of Physicians-American Society of Internal Medicine Task Force on Clinical Competence;" *J Am Coll Cardiol* 104 (2001): 3169–78.

electrocardiogram results lies with the requesting provider.[5] Further, the healthcare system has established procedures to facilitate requests by providers for interpretation of electrocardiograms by a cardiologist.

Issue 8: Cardiologist Involvement in the Care of Cardiology Patients

In the course of our investigation, we found evidence suggesting minimal involvement of cardiologists in the conduct of inpatient Cardiology consultations. We reviewed Cardiology consultations conducted during November 1–15, 2006. This review revealed 10 instances in which there was no documentation of direct involvement of any cardiologist. In most of these cases, a nurse practitioner recorded that he/she had discussed the patient with a cardiologist.

Recommendation 3. The VISN Director should ensure that the Healthcare System Director reviews specific expectations regarding the extent to which cardiologists are involved in the care of patients referred to Cardiology and managed primarily by nurse practitioners.

Comments

The VISN and Healthcare System Directors concurred with the findings and recommendations and provided acceptable improvement actions. The Assistant Inspector General for Healthcare Inspections agrees with the actions taken by the VISN and the Healthcare System Directors in response to the issues raised in this report. We will follow up on planned actions until they are complete.

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

[5] Richard H. Hongo, MD, and Nora Goldshlager, MD, "Status of Computerized Electrocardiography," *Cardiol Clin*. 24 (2006): 491–504.

Appendix A

VISN Director Comments

Department of Veterans Affairs **Memorandum**

Date: January 31, 2007

From: VISN Director

Subject: **Quality of Care Issues in Cardiology, Bay Pines VA Healthcare System, Bay Pines, Florida**

To: Director, Management Review Service (10B5)

1. Thank you for the opportunity to review the Healthcare Inspection Draft Report regarding Quality of Care Issues in Cardiology, at the Bay Pines VA Healthcare System in Bay Pines, Florida.

2. I have reviewed the report and actions submitted by the Medical Center and concur with the recommendations and the actions taken.

3. If you have any questions, please contact Steven W. Young, VISN 8 Deputy Network Director at (727) 319-1125.

(original signed by:)
George H. Gray, Jr.
Network Director, VISN 8

Appendix B

Healthcare System Director Comments

Department of Veterans Affairs **Memorandum**

Date: January 29, 2007

From: Healthcare System Director, Bay Pines, FL 33744 (516/00)

Subject: **Quality of Care Issues in Cardiology, Bay Pines VA Healthcare System, Bay Pines, Florida**

To: Director, VISN 8 (10N8)

1. Response to the Office of Inspector General Healthcare Inspections Report; Comments and Implementation Plan

I. **Recommendation 1:** The VISN Director should ensure that the Healthcare System Director takes appropriate steps to prevent undue delays for patients awaiting coronary artery bypass surgery.

Concur with recommendation.

Planned Action:
The Chief, Cardiology Section, now maintains a log of all patients referred for Coronary Artery Bypass Graft (CABG) surgery, reviews it daily, and monitors it for risk stratification (emergent: now/but within 24 hours; urgent: within 24–48 hours; elective: within 30 days). Attempts are made to transfer veterans to the James A. Haley Veterans' Hospital, Tampa, FL, within the prescribed parameters; however, if there are no beds available, veterans are sent into the community for care under the Fee Basis Program. During 1st Quarter, FY07, 19 veterans were sent for care at non-VA facilities, and 22 veterans were sent for care at the James A. Haley Veterans' Hospital. As of December 31, 2006, 16 elective patients were waiting for CABG. Six elective patients were waiting more than 30 days; however, their delays were related to work-up or treatment of intervening illnesses, such as cancer, or non-compliance by the veteran.

II. **Recommendation 2:** The VISN Director should ensure that the Healthcare System Director ensures that results of echocardiograms are reported without undue delay.

Concur with recommendation.

Planned Action:
The Chief, Medicine Service, continuously monitors the status of unread echocardiograms to identify backlogs and delays. The daily review is conducted by Chief, Cardiology Section, and/or Administrative Officer, Medicine Service, who report this information bi-weekly to the Chief, Medicine Service. A level has been set to trigger the use of additional staff to include Fee Basis and locum tenen providers.

The Cardiology Section is approved for eight full-time and one part-time cardiology physician positions and six Advanced Registered Nurse Practitioner (A.R.N.P) positions. Currently there are two vacancies for cardiologists and one for an A.R.N.P. One cardiologist is scheduled to start full-time employment in February 2007. Diligent recruiting efforts continue for the open positions.

III. **Recommendation 3:** The VISN Director should ensure that the Healthcare System Director reviews specific expectations regarding the extent to which cardiologists are involved in the care of patients referred to Cardiology and managed primarily by Nurse Practitioners.

Concur with recommendation.

Planned Action:
Chief, Medicine Service, has more clearly defined the Scope of Practice of Cardiology Advanced Registered Nurse Practitioners (A.R.N.P) regarding Cardiology physician involvement in patient encounters. The Cardiologist must see the patient and document the patient encounter for all patients in the Coronary Care Unit (CCU) daily and all patients having ST-elevation Myocardial Infarction (STEMI). In these settings, any patient encounter by an A.R.N.P. must be followed up with direct Cardiologist involvement and documentation in the medical records noting as such. The Cardiology A.R.N.P.s can conduct routine Cardiology consults on the Telemetry Ward and routine consults/visits in Cardiology Clinic after patient care has been established with a Generalist, i.e.,

Hospitalist or Primary Care Provider. In these settings, the A.R.N.P. should send all initial consult notes to the Cardiologist for review and co-signature. Also, the A.R.N.P. is to discuss with the Cardiologist if there is non-routine problem and document as such. The change to the Scope of Practice was reviewed and approved at the Professional Standards Board/Medical Staff Executive Board January 17, 2007. The process had been initiated to incorporate the changes into the five individual Cardiology A.R.N.Ps Scope of Practice and Prescriptive Authority.

WALLACE M. HOPKINS, FACHE

Appendix C

OIG Contact and Staff Acknowledgments

OIG Contact	Jerome Herbers, MD Office of Healthcare Inspections (202) 565-8121
	Carol Torczon, MSN, NP Christa Sisterhen, Associate Director, Atlanta Office of Healthcare Inspections

Appendix D

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