



**Department of Veterans Affairs
Office of Inspector General**

Office of Healthcare Inspections

Report No. 15-02842-450

Healthcare Inspection

Alleged Mold and Environment of Care Concerns in the Spinal Cord Injury and Disorders Units Hunter Holmes McGuire VA Medical Center Richmond, Virginia

July 30, 2015

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 in response to complaints about the environment of care and the possible presence of mold in the Spinal Cord Injury and Disorders (SCI/D) units at the Hunter Holmes McGuire VA Medical Center (facility), Richmond, VA.

The complainant alleged that chronic cleanliness issues were associated with patient reports of chronic respiratory problems and lost time from work for SCI/D staff; facility managers did not act to rule out the presence of black mold; and, indoor air potentially contained high levels of mold in the SCI/D units, and senior leadership concealed this information.

We did not substantiate the allegations. We found that the facility monitored cleanliness and cleaning processes and did not identify chronic cleanliness issues in the SCI/D units. We did not confirm effects on respiratory conditions of SCI/D patients or lost time for staff related to cleanliness issues in the environment of care. The facility sampled indoor air quality in March 2014 and acted on the mold level from one sample although no limits or standards for mold levels were established. The facility communicated air sampling results and actions taken to Veterans Integrated Service Network leaders and external partners.

We made no recommendations.

Comments

The Veterans Integrated Service Network and Facility Directors concurred with the report. (See Appendixes A and B, pages 7–8 for the Directors' comments.) No further action is required.



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

Purpose

The VA Office of Inspector General (OIG) Office of Healthcare Inspections reviewed allegations regarding the environment of care and the possible presence of mold in the Spinal Cord Injury and Disorders (SCI/D) units at the Hunter Holmes McGuire VA Medical Center (facility), Richmond, VA. The purpose of the review was to determine whether the allegations had merit.

Background

The facility provides a broad range of inpatient and outpatient medical, surgical, mental health, and long-term care services. It is a 399-bed facility offering primary, secondary, and tertiary health care services including medicine, surgery, neurology, rehabilitation medicine, intermediate care, and acute and sustaining spinal cord injury care.

The SCI/D system of care is organized into “Hubs and Spokes.” A “Hub” is an SCI/D Center where most veterans with SCI/D are seen for an annual evaluation and receive primary and specialty care if they live nearby. Each Hub coordinates care with a number of “Spokes,” where SCI/D Patient Aligned Care Teams of doctors, nurses, and social workers who are trained in spinal cord injuries and disorders provide specialty care. Veterans who do not live near a Hub receive routine health care at one of the Spokes.

The facility’s SCI/D service is a Hub for 13 Spokes among 4 Veterans Integrated Service Network (VISNs). It includes 68 operating inpatient beds, operates an outpatient clinic, and provides telehealth and home-health services.

Allegations. In March 2015, OIG received allegations regarding the environment of care (EOC) and facility actions in the SCI/D units. Specifically, the allegations were:

- Staff and patients expressed concern about chronic cleanliness issues that were associated with patient reports of chronic respiratory problems and lost time from work for SCI/D staff.
- Facility managers did not take action to rule out the presence of black mold in the SCI/D units.
- Indoor air potentially contained high levels of mold in patient and staff common areas of the SCI/D units, and senior leadership concealed this information.

Mold. Indoor exposure to mold is concerning because exposure to mold can cause a variety of adverse health effects and symptoms, ranging from allergic reactions (cough, stuffiness, runny nose) to invasive infections with the potential to spread to other parts

of the body.¹ Mold, a type of fungus, is ubiquitous in the environment and can be found almost anywhere moisture and oxygen are present. Molds reproduce by making spores that can be continually suspended in indoor and outdoor air. Moisture promotes mold growth, and in the presence of excessive moisture, mold can accumulate in buildings or on building materials; construction activity may introduce mold spores into the air if affected materials are displaced.

Environmental Protection Agency (EPA) recommendations regarding mold remediation state, “It is impossible to eliminate all mold and mold spores in the indoor environment. However, mold growth can be controlled indoors by controlling moisture indoors,” and “Standards or Threshold Limit Values (TLVs) for airborne concentrations of mold, or mold spores, have not been set.”²

Sampling methodologies exist for sampling indoor air quality (IAQ) for the presence of mold; however, EPA recommendations and Centers for Disease Control and Prevention (CDC) guidelines note that results of sampling may have limited use or application. CDC guidance states, “Microbiologic sampling of air in health-care facilities remains controversial because of currently unresolved technical limitations and the need for substantial laboratory support.”³

Unresolved issues associated with microbiologic air sampling include:⁴

- Lack of standards linking fungal spore levels with infection rates (no safe level of exposure)
- Lack of standard protocols for testing (for example, sampling intervals, number of samples, sampling locations)
- Confounding variables with high-risk patients (for example, exposure to visitors and time spent in multiple areas without respiratory protection)

IAQ sampling may be useful in locating the source of mold contamination, identifying some mold species present in the environment, or differentiating mold from soot or dirt. Pre- and post-mold remediation sampling may also be useful in determining whether remediation efforts were effective. The types and concentrations of mold in indoor air samples should be similar to what is found in the local outdoor air; however, IAQ sampling provides information only for that moment in time in which the sampling occurred, much like a snapshot.⁵

¹ CDC website, “Symptoms of Aspergillosis”, <http://www.cdc.gov/fungal/diseases/aspergillosis/symptoms.html>, accessed April 1, 2015.

² EPA document, *Mold Remediation in Schools and Commercial Buildings*, September 2008, <http://www.epa.gov/mold/pdfs/moldremediation.pdf>. Accessed April 20, 2015.

³ Centers for Disease Control and Prevention, *Guidelines for Environmental Infection Control in Health-Care Facilities*, June 6, 2003. http://www.cdc.gov/hicpac/pdf/guidelines/eic_in_HCF_03.pdf/ Accessed April 20, 2015.

⁴ *Ibid.*

⁵ EPA document, *Mold Remediation in Schools and Commercial Buildings*, September 2008, <http://www.epa.gov/mold/pdfs/moldremediation.pdf>. Accessed April 20, 2015.

The Veterans Health Administration (VHA) developed a moisture and mold management program that required laboratories that conduct testing of IAQ samples to be accredited by the American Industrial Hygiene Association (AIHA).⁶ VHA also issued an information letter addressing mold and moisture control that required facility policies to include protocols for responding to moisture incursion or recognition of mold growth.⁷

Scope and Methodology

We conducted an unannounced site visit March 17–18, 2015. We interviewed facility leadership and managers. We reviewed relevant VHA and other governmental policies and facility policies and procedures, committee meeting minutes, Engineering Service work orders, reports of time lost from work, and other relevant records. We reviewed electronic health records (EHRs) of 52 patients with lengths of stay of at least 3 days in the SCI/D inpatient units.⁸ We conducted an unannounced inspection of the SCI/D inpatient units and the SCI/D outpatient clinic in the morning on March 17, 2015.

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.

⁶ VHA *Moisture and Mold Management Program*, December 21, 2004.

⁷ Under Secretary For Health's Information Letter, *Control of Moisture and Mold in Veterans Health Administration (VHA) Facilities*, IL 10-2005-007, May 4, 2005

⁸ An infection can be considered healthcare-associated if the date of signs or symptoms occurs on or after the 3rd calendar day of admission to an inpatient location.

Inspection Results

Issue 1: Chronic cleanliness issues were associated with patient reports of chronic respiratory problems and lost time from work for SCI/D staff.

We did not substantiate chronic cleanliness issues in the SCI/D units. The facility monitored cleanliness through routine EOC rounds, Environmental Management Services (EMS) cleaning checklists, SCI/D inpatient satisfaction surveys, and evaluations of daily and terminal cleaning of patient care equipment. None of the monitoring records we reviewed identified a chronic lack of cleanliness. Reports from two external reviews did not cite cleanliness as an issue needing improvement. During our unannounced inspection of the SCI/D units, we observed repairs in progress that were included in ongoing facility construction projects or were small-scale repairs conducted by an SCI/D-based Engineering Service maintenance worker. Some rooms we inspected contained full trash cans; however, EMS staff had not serviced those rooms yet that morning.

We did not substantiate that chronic respiratory problems or time lost from work were associated with EOC conditions in the SCI/D units. Of the 52 inpatients with lengths of stay greater than 3 days in the SCI/D units, 11 patients' EHRs documented chronic respiratory problems; however, the illnesses were diagnosed 2–15 years prior to our inspection, and we found no documentation in the EHRs that the underlying chronic respiratory illnesses worsened during stays in the facility SCI/D units.

Twelve of the 52 patients intermittently reported “cold” (upper respiratory illness) or allergy symptoms to their providers; however, we found no EHR documentation that any patient or health care provider suggested that the symptoms were related to the facility environment. SCI/D patients were not confined to the SCI/D units and were able to move through other indoor and outdoor areas of the facility according to their abilities with the use of wheelchairs, scooters, or litters. With the potential for contact with other people and locations at the facility, and in the absence of EHR documentation of EOC-related complaints, it was not possible to confirm an association between patients' symptoms and cleanliness in the SCI/D units.

Reports of time lost from work did not show trends in claims related to EOC conditions during the period from January 2013 through December 2014.

Issue 2: Facility managers did not act to rule out the presence of black mold.

We did not substantiate a lack of action by the facility to rule out the presence of black mold.⁹ The facility hired a contractor to perform IAQ sampling in the SCI/D inpatient units in March 2014. Air samples were obtained at multiple patient rooms and compared with a sample of outside air obtained at the same time. The contractor's

⁹ *Aspergillus niger* is commonly referred to as “black mold” because of its physical appearance and is reported in air quality sample reports as *Aspergillus*.

report noted, “Thorough site observations and laboratory results indicated there were no current conditions in the building that may have a negative effect on the indoor air quality.” Mold spore counts in one indoor sample varied from the outdoor air and facility managers inspected the area and took action to modify the outdoor environment near the sampled area.

Following the IAQ sampling, the facility implemented a “facelift” plan to update patient rooms while a long-term strategic plan for renovation was under development. When patient rooms remained unoccupied for several days, the facility disinfected, repaired, and restored patient bathroom floors and repainted room walls, and facility managers monitored work progress. The facility updated rooms as they became available; availability changed over time, as the patient census fluctuated and some rooms had yet to be updated at the time of our inspection. Prior to and during construction activities, the facility monitored risks for potential construction-related infections.

In March 2015, prior to our inspection, the facility repeated IAQ sampling of SCI/D inpatient units in order to determine the effectiveness of the changes made during the previous year. In order to validate the results from IAQ sampling, the facility hired two contractors to collect air samples simultaneously from each area, and each contractor sent the samples for analysis to different reference laboratories. In both rounds of IAQ sampling, the reference laboratories were AIHA-accredited. Each contractor reported similar results. Mold spore counts in several samples were reported as “none detected.”

In addition to IAQ sampling activities, the facility had a policy in place that included procedures for responding to moisture incursion and remediation in the event of recognized mold growth. Facility infection surveillance activities included monitoring laboratory reports for pathogens associated with the hospital environment, including *Aspergillus*. No clinical specimens contained *Aspergillus* and no patients received a diagnosis of *Aspergillus* infection.

Issue 3: Indoor air potentially contained high levels of mold in patient and staff common areas of the SCI/D units and senior leadership concealed this information.

We did not substantiate that facility leadership concealed high or other levels of mold spores identified in IAQ sampling. We found evidence of communication regarding IAQ sampling results among facility leaders, VISN leaders, and external partners. No standards or limits on mold levels in indoor air are established; in the absence of established limits, it was not possible to substantiate that mold spores existed at high levels in the SCI/D units. None of the three reports from the AIHA-accredited testing laboratories identified conditions indicating negative effects on IAQ.

Conclusions

We did not substantiate that chronic cleanliness issues existed nor that poor cleaning practices were associated with reports of acute or chronic respiratory problems for

patients or lost time from work for SCI/D staff, that facility managers did not act to rule out the presence of black mold, or that high levels of mold existed in the SCI/D units and senior leadership concealed the information.

We found that the facility monitored cleanliness and cleaning processes and did not identify chronic cleanliness issues in the SCI/D units. We did not confirm effects on respiratory conditions of SCI/D patients or lost time for staff related to cleanliness issues in the environment of care. The facility sampled indoor air quality in March 2014 and acted on the mold level from one sample, although no limits or standards for mold levels were established. The facility communicated air sampling results and actions taken to VISN leaders and external partners.

We made no recommendations.

VISN Director Comments

**Department of
Veterans Affairs**

Memorandum

Date: June 23, 2015

From: Director, VA Mid-Atlantic Health Care Network (10N6)

Subj: Healthcare Inspection—Alleged Mold and Environment of Care Issues in the Spinal Cord Injury and Disorders Units, Hunter Holmes McGuire VA Medical Center, Richmond, Virginia

To: Director, Washington DC Office of Healthcare Inspections (54DC)
Director, Management Review Service (VHA 10AR MRS OIG Hotline)

1. I concur with the report.
2. If you have any questions please contact Lisa Shear, VISN 6 QMO, at (919) 956-5541.

//original signed by//
DANIEL F. HOFFMANN, FACHE

Facility Director Comments

**Department of
Veterans Affairs**

Memorandum

Date: June 23, 2015

From: Director, Hunter Holmes McGuire VA Medical Center (652/00)

Subj: Healthcare Inspection—Alleged Mold and Environment of Care Issues in the Spinal Cord Injury and Disorders Units, Hunter Holmes McGuire VA Medical Center, Richmond, Virginia

To: Director, VA Mid-Atlantic Health Care Network (10N6)

1. Concur with Report.
2. If you need additional information please contact me at 804-675-5500.

//original signed by//
John A. Brandecker
Director

OIG Contact and Staff Acknowledgements

Contact	For more information about this report, please contact the OIG at (202) 461-4720.
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