



STATE OF MISSISSIPPI
OFFICE OF THE STATE AUDITOR
STACEY E. PICKERING
STATE AUDITOR

March 12, 2009

Information Systems Management Report

F. E. Thompson, Jr., M.D., M.P.H., State Health Officer
Mississippi State Department of Health
P. O. Box 1700
Jackson, Mississippi 39212-1700

Dear Dr. Thompson:

The Office of the State Auditor has completed its limited assessment of the Information Systems (IS) general controls and selected application controls of the Mississippi State Department of Health as of January 29, 2009. This assessment was performed in conjunction with the federal audit of the State of Mississippi. The Office of the State Auditor's staff members participating in this IS review engagement included: Toby Frazier, CISA, Mike Ferguson, CISA, LaDonna Johnson, and Jason Johnston.

The fieldwork for these assessment procedures was begun on January 12, 2009. These procedures cannot and do not provide absolute assurance that all state legal requirements have been met. In accordance with Section 7-7-211, Miss. Code Ann. (1972), the Office of the State Auditor, when deemed necessary, may conduct additional procedures for this or other fiscal years to ensure compliance with legal requirements.

In planning and performing our limited assessment of the IS general controls, we considered the Mississippi State Department of Health's internal control over electronic data processing in order to determine our assessment procedures but not for the purpose of expressing an opinion on the effectiveness of the internal control over electronic data processing. These procedures were performed primarily through observations and discussions with Mississippi State Department of Health's Office of Health Informatics personnel and limited testing of information from the Time Study application system.

A control deficiency exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent or detect misstatements on a timely basis. A significant deficiency is a control deficiency, or combination of control deficiencies, that adversely affects the entity's ability to initiate, authorize, record, process, or report financial data reliably in accordance with generally accepted accounting principles such that there is more than a remote likelihood that a misstatement of the entity's financial statements that is more than inconsequential will not be prevented or detected by the entity's internal control. We consider the deficiencies noted in Finding Numbers One (1), and Two (2) to be significant deficiencies in internal control.

A material weakness is a significant deficiency, or combination of significant deficiencies, that results in more than a remote likelihood that a material misstatement of the financial statements will not be prevented or detected by the entity's internal control.

Our consideration of the internal control over electronic data processing was for the limited purpose described in the third paragraph and would not necessarily identify all deficiencies in internal control over electronic data processing that might be significant deficiencies and accordingly would not necessarily disclose all significant deficiencies that are also considered to be material weaknesses. We did not identify any deficiency in the internal control over electronic data processing and its operation that we consider to be a material weakness as defined above.

We also noted certain deficiencies involving internal control over electronic data processing that require the attention of management. These matters are noted under the heading CONTROL DEFICIENCIES. As part of obtaining reasonable assurance about whether selected IS general controls of the Mississippi State Department of Health were functioning as designed, we performed assessments of compliance with certain regulations and industry best practices. However, providing an opinion on compliance with those regulations and practices was not an objective of our assessment and, accordingly, we do not express such an opinion.

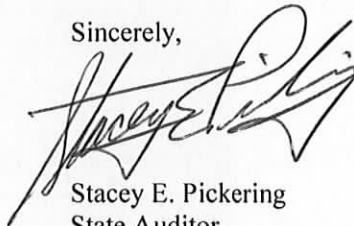
Please review the recommendations included in this report and submit a plan to implement them by March 20, 2009. The enclosed findings contain more information about our recommendations.

During future engagements, we may review the findings in this management report to ensure procedures have been initiated to address these findings.

This report is intended solely for the information and use of management and Members of the Legislature and federal awarding agencies and is not intended to be and should not be used by anyone other than these specified parties. However this report is a matter of public record and its distribution is not limited.

I appreciate the cooperation and courtesy extended by the officials and employees of the Mississippi State Department of Health throughout this assessment. If you have any questions or need more information, please contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Stacey E. Pickering". The signature is stylized and cursive, written over the printed name and title.

Stacey E. Pickering
State Auditor

Enclosures

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I. ABBREVIATIONS USED IN THIS REPORT

DOH	Name of a domain server at MDH
ePHI	Electronic Health Information
IS	Information Systems
HIPAA	Health Insurance Portability and Accountability Act
IS	Information Systems
IT	Information Technology
ITS	Mississippi Department of Information Technology Services
MWITS	Mississippi WIC Inventory Tracking System
MDH	Mississippi State Department of Health
OSA	Office of the State Auditor
USDA	United States Department of Agriculture
WIC	Special Supplemental Nutrition Program for Women, Infants and Children

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II. REVIEW OBJECTIVES AND APPROACH

Our review's overall objective was to perform an assessment of the general data processing controls established by management of the Mississippi State Department of Health (MDH) to support the integrity and security of the financial information processed by the computer systems of the MDH at its main office in Jackson, Mississippi. To accomplish these objectives, the Information Systems Audit Section staff of the Office of the State Auditor (OSA):

- Met with MDH management and the OSA financial auditors to gain an understanding of the critical MDH processes and controls;
- Interviewed selected MDH technology and accounting personnel;
- Reviewed available documentation of procedures, standards and other evidential matter;
- Performed audit tests to verify the existence and effectiveness of the processes and controls in place to meet the objectives delineated above; and
- Identified any vulnerabilities associated with any weaknesses, if noted, in the control environment.

Our approach was not designed to specifically detect illegalities, fraudulent acts, errors or other irregularities.

III. STANDARD OF BEST PRACTICES

In this report we will refer to best practices standards that should be achieved by all Information Technology (IT) departments, specifically we mention and endorse the methodology of CobiT 4.0 of the IT Governance Institute (www.itgi.org) as the industry standard we have selected for the evaluation of the IT control environment. Other similar methodology is the Information Technology Infrastructure Library (ITIL) which is a framework of best practice approaches intended to facilitate the delivery of high quality IT services. ITIL outlines an extensive set of management procedures that are intended to support businesses in achieving both quality and value for money in IT operations. These procedures are supplier independent and have been developed to provide guidance across the breadth of IT infrastructure, development, and operations

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IV. FINDINGS AND RECOMMENDATIONS

A. SIGNIFICANT DEFICIENCIES IN INTERNAL CONTROL

1. MDH Should Improve the MWITS Application System Reliability
Special Supplemental Nutrition Program for Women, Infants and Children

Finding:

During the State Fiscal Year 2008 scope of our review, the Mississippi WIC Inventory Tracking System (MWITS) at the Mississippi State Department of Health (MDH) did not provide reliable services due to significant intermittent failures in data replication from December 2007 to September 2008; therefore, central MDH MWITS reports could not be reliably utilized.

Recently, improvements made by MDH Informatics in both procedures and infrastructure appear to have improved the MWITS replication reliability issue. Also, as a compensating factor, the MDH Accounting Department has developed manual methods and spreadsheets which we believe somewhat compensates for the lack of system integrity, but is highly inefficient.

We also noted some unexplained random errors occur in WIC warehouse data processing which adds to the confusion created by this application system. This and other issues continue to surface, which are often irresolvable with the current software package because the application is in object code only form and therefore, is not reasonably changeable by the MDH Informatics Department staff.

Management has indicated that MDH is in the process of attempting to acquire a replacement system.

Recommendation:

We recommend that MDH continue with implementation of a replacement or improvement of the MWITS application. Otherwise, MDH continues with the possible risks of system failure and loss of control of information, improper disclosure of information, and risks of HIPAA and or US Department of Agriculture regulation non-compliance.

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2. Time Study Data Control Processes Should Be Improved

Finding:

In February 2009, we conducted test work of June 2008 data related to the Time Study process, which was stated as complete. During our February 2009 test work, OSA auditors discovered that the data input into the Time Study process was incomplete. Specifically, the “time spent on encounters data” which is used in building relative value tables for the next budget period had not been fully input. MDH at the time of our fieldwork was unaware of this exception, or had not acted timely to resolve this exception.

Failure to maintain control over data could cause the Time Study process to yield invalid information to support the next fiscal year budget process. Lack of a systematic data input and error repair process could lead to poor quality results as any corrections to errors located would have to be made months later when information is difficult to obtain.

Standards for data control are outlined in COBIT DS11.1, which states, “Establish arrangements that source documents expected from the business are received, and all data received from the business are processed.”

Recommendation:

We recommend that MDH Informatics develop more detailed process standards for Time Study which include data control procedures that require a documented process for logging the status of each step of Time Study from the beginning data to the completion of the cycle.

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B. CONTROL DEFICIENCIES

3. MDH Should Provide for Regular HIPAA Related Network Security Reviews
Recurring Finding

Finding:

HIPAA compliance requires that internal system and network security audits be performed on a scheduled basis. The last contracted review was performed in 2005. MDH did have a network review performed in the fall of 2006 which was funded by a federal grant from the U. S. Department of Homeland Security. Additionally beginning in 2007 a network services company was contracted with to perform remediation work on findings from the previous network review.

However, at the time of our review no further network review services were identified as scheduled or contracted. HIPAA requirements for ePHI security suggest that security reviews be performed on a regular basis.

Recommendation:

In order to maintain compliance with ePHI requirements of HIPAA we recommend that network security reviews be conducted on a regularly defined basis.

4. MDH Should Ensure That WIC Locations Are Backing Up Files Offsite
Recurring Finding

Finding:

This finding is recurring from our previous review. In that review, OSA IS Audit made on-site visits to two WIC warehouses. In both locations, the MWITS server files were daily backed-up to tape, however the back-up tapes were not being removed to offsite storage. Inquiries this year did not provide any evidence that the field locations were removing their files to offsite locations, but rather indicated that many may still not be backing up their files offsite.

The guideline from CobiT DS4.10 Offsite Backup Storage states: "Store all critical backup media offsite."

Recommendation:

We recommend that MDH communicate the requirement for each WIC warehouse to rotate their back-up tapes to offsite storage. The MDH Office of Health Informatics should ensure that each location has sufficient tapes to manage an offsite back-up tape rotation process.

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5. MDH Should Purge Terminated Employees from the DOH Active Directory
Recurring Finding

Finding:

Although MDH was disabling the user accounts of terminated employees in the DOH server Active Directory, and marking them "pending deletion", it appears that the "pending deletion" accounts were not being removed on a timely basis. We also noted a small number of user accounts that had not been moved to "pending deletion" including the prior State Health Officer. Additionally, it appears that the systems and application areas responsible for systems security, including MWITS for WIC, are not receiving employee termination reports on a consistent basis.

Compliance with HIPAA standards for information security requires that terminated employees' User ID's are fully removed from any systems.

Recommendation:

We recommend that a time limit be established for full removal of terminated employees from all systems.

End of Report