

Audit Report

**Department of Health and Mental Hygiene
Vital Statistics Administration**

July 2016



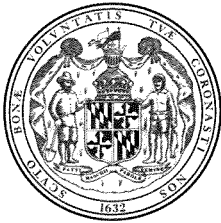
OFFICE OF LEGISLATIVE AUDITS
DEPARTMENT OF LEGISLATIVE SERVICES
MARYLAND GENERAL ASSEMBLY

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DEPARTMENT OF LEGISLATIVE SERVICES
OFFICE OF LEGISLATIVE AUDITS
MARYLAND GENERAL ASSEMBLY

Warren G. Deschenaux
Executive Director

Thomas J. Barnickel III, CPA
Legislative Auditor

July 12, 2016

Senator Guy J. Guzzone, Co-Chair, Joint Audit Committee
Delegate C. William Frick, Co-Chair, Joint Audit Committee
Members of Joint Audit Committee
Annapolis, Maryland

Ladies and Gentlemen:

We have conducted a fiscal compliance audit of the Vital Statistics Administration (VSA) of the Department of Health and Mental Hygiene (DHMH) for the period beginning February 25, 2013 and ending December 8, 2015. VSA is primarily responsible for registering all births and deaths occurring in the State; issuing certified copies of birth, death, and marriage certificates; and compiling and analyzing various vital statistics data.

Our audit disclosed that VSA had not developed comprehensive procedures for conducting its annual site visits of local health departments (LHD). The objective of the site visits is to assess whether each LHD has effective procedures and controls over the issuance of birth and death certificates, and receipt of the related fees. We also noted that VSA lacked certain critical security controls over the automated systems used to register births and deaths, and issue the related certificates.

DHMH's response to this audit, on behalf of VSA, is included as an appendix to this report. We wish to acknowledge the cooperation extended to us during the course of this audit by VSA.

Respectfully submitted,

Thomas J. Barnickel III, CPA
Legislative Auditor

Background Information

Agency Responsibilities

The Department of Health and Mental Hygiene's (DHMH) Vital Statistics Administration (VSA) is responsible for registering all births and deaths occurring in the State; issuing certified copies of birth, death, and marriage certificates; and compiling and analyzing various vital statistics data. Certified copies of these certificates are available, for a fee, at the VSA headquarters location in Baltimore. Birth certificates and certain death certificates are also available at 22 local health departments (LHDs).

According to the State's records, during fiscal year 2015, VSA's operating expenditures totaled approximately \$4.6 million. According to its records, VSA collected approximately \$10.1 million in vital record fees during fiscal year 2015 for the issuance of approximately 577,000 certified copies of certificates, of which approximately \$3.2 million was collected by LHDs.

Status of Findings From Preceding Audit Report

Our audit included a review to determine the status of the three findings contained in our preceding audit report dated May 27, 2014. We determined that VSA satisfactorily addressed these findings.

Findings and Recommendations

Vital Records

Finding 1

VSA did not have comprehensive procedures for conducting LHD site visits, which were performed to assess procedures and controls over the issuance of birth and death certificates and collection of the related fees.

Analysis

VSA did not have comprehensive written procedures for completing its annual LHD site visits. The objective of the site visits is to determine whether the 22 LHDs had adequate controls in place to ensure all birth and death certificates were properly issued and related fees were deposited. Comprehensive written procedures would promote effective and consistent monitoring of LHD activity and provide clarity by defining documentation and response requirements.

According to its records, LHDs collected approximately \$3.2 million during fiscal year 2015 for the issuance of 204,029 certified copies of birth and death certificates. The Department of Health and Mental Hygiene assigns responsibility and provides certain guidance to the LHDs for the issuance of birth and death certificates through a memorandum of understanding.

LHD site visits were performed by VSA office personnel and consisted of the completion of a standard checklist of questions. Written guidance was not provided to these personnel regarding the type of evidence to be examined when conducting the reviews and the amount of documentation needed to support the work done and conclusions reached. The checklists did not document how the information was obtained and who was interviewed, and there was no requirement for supervisory review of the work performed. Finally, the LHDs were not required to respond to the review reports regarding the intended corrective actions. Consequently, VSA management lacked assurance that the reviews were properly conducted and any corrective actions were appropriate.

We reviewed the reports issued in August 2015 for the 22 LHD site visits conducted during the months of May through August 2015. Five reports disclosed deficiencies for which corrective action was necessary. Although the reports directed the LHDs to implement the corrective actions, VSA did not require the LHDs to respond or submit a corrective action plan. Three of the LHDs, nevertheless, provided written responses indicating certain corrective action to be taken. The reports for the remaining two LHDs that did not provide a written response disclosed conditions regarding the failure to segregate duties and to secure birth certificate paper. During fiscal year 2015, these two LHDs issued 1,455 birth certificates with related collections totaling \$27,640.

Recommendation 1

We recommend that VSA prepare comprehensive written procedures for its site reviews of LHD operations relating to the issuance of birth and death certificates. At a minimum, these procedures should address the type of evidence to examine when conducting the reviews, the amount of documentation needed to support the work done and conclusions reached, the need for supervisory review and approval, and a requirement for obtaining responses and corrective action plans from the LHDs.

Information Systems Security and Control

Background

VSA operates the Electronic Vital Registration System (EVRS) and the Electronic Death Registration System (EDRS). EVRS is a system which is used for the registration of births, issuance of certified copies of birth certificates, and preparation of vital statistics data files and reports. EVRS serves all facilities and individuals providing birth data to VSA. EDRS is a system which is used for registration of deaths and issuance of certified copies of death certificates. EDRS serves all facilities and individuals providing death data to VSA. The Department of Health and Mental Hygiene - Office of the Secretary is responsible for the operation and maintenance of the network supporting EVRS and EDRS.

Finding 2

Logging and reviews of database security and audit events were not properly performed or documented, and VSA did not remove inactive domain accounts on a timely basis.

Analysis

Security and audit event monitoring over the production EVRS and EDRS databases was inadequate, and VSA did not remove inactive domain accounts on a timely basis.

- For both the EVRS and EDRS databases, although direct modifications made to critical tables were logged, these logged events were not included in reports for management review and investigation.
- We were advised that daily reviews of security event and audit event activity were performed; however, documentation did not exist to evidence these reviews.
- We identified 46 active user accounts (assigned to 45 unique individuals) that had not been used for extended periods to log into the domain. Specifically, as of our test date of January 22, 2016, inactivity periods ranged from 62 to 368 days for these 46 accounts.

Accordingly, significant database security and audit events could go undetected, thus permitting unauthorized or inappropriate activities to adversely affect the integrity of the aforementioned databases and unauthorized individuals could possibly access critical network resources.

The State of Maryland *Information Security Policy* requires that application and system auditing be enabled to the extent necessary to capture access, modification, deletion and movement of critical/confidential information by each unique user. The *Policy* also requires that procedures be developed to routinely (for example daily or weekly) review audit records for indications of unusual activities, suspicious activities or suspected violations, and report findings to appropriate officials for prompt resolution and that accounts be disabled or locked after 60 days of inactivity.

Recommendation 2

We recommend that VSA

- a. include direct changes to critical EVRS and EDRS database tables on reports of security events for management review;**
- b. document reviews and any subsequent investigations of the EVRS and EDRS database logging reports, with such documentation retained for future reference; and**
- c. disable unused domain accounts after 60 days of inactivity in accordance with the *Information Security Policy*.**

Audit Scope, Objectives, and Methodology

We have conducted a fiscal compliance audit of the Vital Statistics Administration (VSA) of the Department of Health and Mental Hygiene (DHMH) for the period beginning February 25, 2013 and ending December 8, 2015. The audit was conducted in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

As prescribed by the State Government Article, Section 2-1221 of the Annotated Code of Maryland, the objectives of this audit were to examine VSA's financial transactions, records, and internal control, and to evaluate its compliance with applicable State laws, rules, and regulations.

In planning and conducting our audit, we focused on the major financial-related areas of operations based on assessments of significance and risk. The areas addressed by the audit included cash receipts, certificate issuance, and information systems. We also determined the status of the findings contained in our preceding audit report.

Our audit did not include certain support services provided to VSA by DHMH's Office of the Secretary and related units. These support services (such as payroll, maintenance of accounting records, related fiscal functions, and certain aspects of the network information systems related to VSA's Electronic Vital Registration System (EVRS) and the Electronic Death Registration System) are included within the scope of our audit of the Office of the Secretary.

To accomplish our audit objectives, our audit procedures included inquiries of appropriate personnel, inspections of documents and records, observations of VSA's operations, and tests of transactions. Generally, transactions were selected for testing based on auditor judgment, which primarily considers risk. Unless otherwise specifically indicated, neither statistical nor non-statistical audit sampling was used to select the transactions tested. Therefore, the results of the tests cannot be used to project those results to the entire population from which the test items were selected.

We also performed various data extracts of pertinent information from VSA's EVRS for the purpose of testing user access and the issuance of certificates. We performed various tests of the relevant data and determined that the data extracted from this system were sufficiently reliable for the purposes the data were used during this audit. Finally, we performed other auditing procedures that we considered necessary to achieve our audit objectives. The reliability of data used in this report for background or informational purposes was not assessed.

VSA's management is responsible for establishing and maintaining effective internal control. Internal control is a process designed to provide reasonable assurance that objectives pertaining to the reliability of financial records, effectiveness and efficiency of operations including safeguarding of assets, and compliance with applicable laws, rules, and regulations are achieved.

Because of inherent limitations in internal control, errors or fraud may nevertheless occur and not be detected. Also, projections of any evaluation of internal control to future periods are subject to the risk that conditions may change or compliance with policies and procedures may deteriorate.

Our reports are designed to assist the Maryland General Assembly in exercising its legislative oversight function and to provide constructive recommendations for improving State operations. As a result, our reports generally do not address activities we reviewed that are functioning properly.

This report includes findings relating to conditions that we consider to be significant deficiencies in the design or operation of internal control that could

adversely affect VSA's ability to maintain reliable financial records, operate effectively and efficiently, and/or comply with applicable laws, rules, and regulations. Our report also includes a finding regarding a significant instance of noncompliance with applicable laws, rules, or regulations. Other less significant findings were communicated to VSA that did not warrant inclusion in this report.

The response from DHMH, on behalf of VSA, to our findings and recommendations is included as an appendix to this report. As prescribed in the State Government Article, Section 2-1224 of the Annotated Code of Maryland, we will advise DHMH regarding the results of our review of its response.

APPENDIX



STATE OF MARYLAND

DHMH

Maryland Department of Health and Mental Hygiene

Larry Hogan, Governor - Boyd K. Rutherford, Lt. Governor - Van T. Mitchell, Secretary

July 8, 2016

Mr. Thomas J. Barnickel III, CPA
Legislative Auditor
Office of Legislative Audits
301 West Preston Street
Baltimore, MD 21201

Dear Mr. Barnickel:

Thank you for your letter regarding the draft audit report for the Department of Health and Mental Hygiene – Vital Statistics Administration for the period beginning February 25, 2013 through December 8, 2015. Enclosed you will find the Department's response and plan of correction that addresses each audit recommendation.

I will work with the administration director and deputy secretary to promptly address the audit exceptions. In addition, the Office of the Inspector General's Division of Internal Audits will follow up on the recommendations to ensure compliance.

If you have any questions or require additional information, please do not hesitate to contact me at (410) 767-4639 or Megan Davey Limarzi, Inspector General, at (410) 767-5862.

Sincerely,



Van T. Mitchell
Secretary

cc: Howard M. Haft, M.D., Deputy Secretary, Public Health, DHMH
Jennifer Newman Barnhart, Chief of Staff, Public Health, DHMH
Isabelle Horon, Dr.P.H., Director, Vital Statistics Administration, Public Health, DHMH
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Findings and Recommendations

Vital Statistics Administration

Finding 1

VSA did not have comprehensive procedures for conducting LHD site visits, which were performed to assess procedures and controls over the issuance of birth and death certificates and collection of the related fees.

Recommendation 1

We recommend that VSA prepare comprehensive written procedures for its site reviews of LHD operations relating to the issuance of birth and death certificates. At a minimum, these procedures should address the type of evidence to examine when conducting the reviews, the amount of documentation needed to support the work done and conclusions reached, the need for supervisory review and approval, and a requirement for obtaining responses and corrective action plans from the LHDs.

Administration response:

The Administration concurs with this recommendation and will establish comprehensive written procedures detailing specifics to be examined when conducting its review of LHD operations. In addition, the Administration will document each LHD's supervisory review and signatory endorsement of suggested improvements and related conclusions. Procedures will be completed and documented within 60 days.

Finding 2

Logging and reviews of database security and audit events were not properly performed or documented, and VSA did not remove inactive domain accounts on a timely basis.

Recommendation 2

We recommend that VSA

- a. include direct changes to critical EVRS and EDRS database tables on reports of security events for management review;**
- b. document reviews and any subsequent investigations of the EVRS and EDRS database logging reports, with such documentation retained for future reference; and**
- c. disable unused domain accounts after 60 days of inactivity in accordance with the *Information Security Policy*.**

Administration response:

- a. The Administration concurs with the Auditor's recommendation and is conducting research to identify options that will not over burden our production systems.
- b. The Administration concurs with the Auditor's recommendation. VSA system administrators have put procedures in place and in use to address these issues. The reports are reviewed and a log is being kept for future reference.
- c. The Administration concurs with the Auditor's recommendation. VSA system administrators have begun to produce an Active Directory report each month and will ensure that all accounts are disabled after 60 days of inactivity.

AUDIT TEAM

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