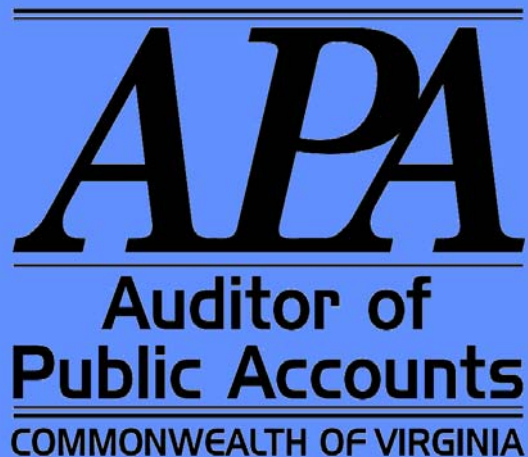


**DEPARTMENT OF MEDICAL ASSISTANCE SERVICES**

**VULNERABILITY ASSESSMENT AND  
NETWORK PENETRATION TEST**

**FEBRUARY 2007**



## **AUDIT SUMMARY**

Our vulnerability assessment and network penetration test of the Department of Medical Assistance Services (DMAS) as of January 8, 2008 found.

- Based on our assessment of the risks the systems face and the tests of the operating effectiveness of the controls developed by DMAS to alleviate those risks, overall information security controls in place at the time of the testing appear sufficient to protect critical and sensitive information from external threats; and
- Certain areas where DMAS can make improvements to information security controls that protect critical and sensitive information from internal threats

Recommendations regarding these improvements are part of a separate report that is exempted from public disclosure in accordance with Section 2.2-3705.2.3 of the Code of Virginia. This provision allows for the exemption from disclosure information that describes the design, function, operation, or access control features of any security system.



# Commonwealth of Virginia

**Walter J. Kucharski, Auditor**

**Auditor of Public Accounts  
P.O. Box 1295  
Richmond, Virginia 23218**

February 13, 2008

The Honorable Timothy M. Kaine  
Governor of Virginia  
State Capitol  
Richmond, Virginia

The Honorable Thomas K. Norment, Jr.  
Chairman, Joint Legislative Audit  
and Review Commission  
General Assembly Building  
Richmond, Virginia

The **Department of Medical Assistance Services (DMAS)** requested the Auditor of Public Accounts (Auditor) perform a vulnerability assessment and network penetration test. DMAS requested that the Auditor use its technical staff experienced in security control work and operations to perform an independent assessment of the risks the systems face (vulnerability assessment) and a test of the operating effectiveness of the controls (penetration test). We conducted the review as of January 8, 2008, and examined whether information systems management and administration had reasonably assessed risk and that the controls placed into operation were effective in mitigating the assessed risks.

DMAS requires this type of test every year to satisfy due diligence requirements for the federal Health Insurance Portability and Accountability Act (HIPAA) and internal policies. DMAS has created an information security controls environment that attempts to protect the areas where information systems management perceives risk and has tailored the controls accordingly.

The auditors used a variety of scanning software and techniques during the vulnerability and penetration test. Not only did the review investigate the state of the network and systems, it also included the content of published data. The review of the published data ensures that accidental release of information does not occur.

Outside of the scope of this engagement were "social engineering" attacks. Social engineering attacks include posing as technical support staff to elicit responses from users designed to aid in network penetration, or searching desks to reveal notes with passwords and user IDs. This type of test typically identifies significant security weaknesses. However, we did not perform this type of test work because of the effect that these tests can have on employee confidentiality, property rights, and the relationship between users and information systems staff.

This project was limited to the DMAS network. This test work did not include any information housed for DMAS at the Virginia Information Technologies Agency (VITA) or any of the information housed at First Health, DMAS' service provider for processing Medicaid claims. This engagement did not have a goal of identifying all of the potential weakness to which the systems could have been subject.

Based on our assessment of the risks the systems face and the tests of the operating effectiveness of the controls developed by DMAS to alleviate those risks, overall information security controls in place at the time of the testing appear sufficient to protect critical and sensitive information. However, we noted certain areas where DMAS can make improvements to enhance systems security. We have provided the management of DMAS the details of our recommendations in a separate report that is exempted from public disclosure in accordance with Section 2.2-3705.2.3 of the Code of Virginia. This provision allows for the exemption from disclosure of information that describes the design, function, operation, or access control features of any security system.

We discussed this report with management at an exit conference held on February 13, 2008. We have not included management's response in this report because the information included in their response is also exempted from public disclosure in accordance with Section 2.2-3705.2.3 of the Code of Virginia. However, management generally concurred with our recommendations and agreed to take appropriate corrective action.

AUDITOR OF PUBLIC ACCOUNTS

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