Office of the Auditor General

Our Vision

A relevant, valued and independent audit office serving the public interest as the House of Assembly's primary source of assurance on government performance.

Our Mission

To make a significant contribution to enhanced accountability and performance in the provincial public sector.

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1 Message from the Auditor General

I am pleased to present my November 2012 Report to the House of Assembly on work completed by my Office in the summer and fall of 2012.

As the Province's Auditor General, my goal is to work towards better government for the people of Nova Scotia. As an independent, nonpartisan officer of the House, I and my Office help to hold the government to account for its management of public funds and contribute to a well-performing public sector. I consider the needs of the House and the public, as well as the realities facing management, in providing sound, practical recommendations to improve the management of public sector programs.

My priorities are: to conduct and report audits that provide information to the House of Assembly to assist it in holding government accountable; to focus audit efforts on areas of higher risk that impact on the lives of Nova Scotians; to contribute to a better performing public service for Nova Scotia; and to encourage continual improvement to financial reporting by government, all while promoting excellence and a professional and supportive workplace at the Office of the Auditor General. This Report reflects this service approach.

This Report presents the results of audits completed in 2012 at a number of departments and agencies. Where appropriate, we make recommendations for improvements to government operations, processes and controls. Department or agency responses have been included in the appropriate chapter. We will follow up on the implementation of our recommendations in two years, with the expectation that significant progress will have been made.

2 Education: Home Schooling

The Department of Education is failing in its responsibility to protect the education rights of children enrolled in the provincial home schooling program. The program lacks the key elements necessary to be effective. The audit identified deficiencies with the program which significantly diminish the likelihood of the Department identifying children who may not be receiving a suitable education. If these children are not identified, the Department cannot take necessary steps to intervene and provide required support.

The Department has identified learning expectations and outcomes for the public school system. Public school students are periodically assessed to determine if they are achieving those outcomes. The Department does not have expected learning outcomes for home schooled children and does not require that the children be independently assessed to determine if they are making reasonable educational progress. The Department cannot provide effective oversight of home schooled children without clear direction on what the children are expected to know and be able to do, and a means to determine whether they are meeting those expectations. We recommended the Department establish clear and measurable expected learning objectives and outcomes and that periodic independent assessment of home schooled children be required.

The Department's processes for assessing the appropriateness of home study programs and children's educational progress are inadequate. We found the registration form and progress report template are not well-designed to provide guidance to parents, study programs are not assessed for adequacy, and the Department does not follow up to obtain additional information on incomplete or unclear study programs and progress reports. We recommended the Department assess study programs and children's progress against established expectations and document the results in its files.

The Department does not have an adequate system to track whether home schooled children are properly registered and progress reports are submitted. We also identified significant gaps in the Department's processes to track children transferring between home schooling and public school to ensure they are properly registered.

Recommendations

Recommendation 2.1
The Department of Education should establish clear and measurable learning objectives and outcomes for the home schooling program.

Recommendation 2.2
The Department of Education should require periodic, independent assessment of home schooled children against learning objectives and outcomes.

Recommendation 2.3
The Department of Education should revise its home schooling material to provide clear information and guidance to parents on how to outline the program plan and the type of information to provide, including examples of the child's work, in the yearly progress report.

Recommendation 2.4
The Department of Education should assess the programs proposed by parents to determine if they are designed to achieve appropriate learning objectives and outcomes for home schooled children.

Recommendation 2.5
The Department of Education should document its assessment of proposed home schooling programs in its files, through use of a checklist or other suitable form.

Recommendation 2.6
The Department of Education should obtain information on learning outcomes of home schooled children to determine if they are making reasonable educational progress.

Recommendation 2.7
The Department of Education should document in its files its assessment of the learning outcomes of home schooled children. Any action taken as a result of the assessment should also be documented.

Recommendation 2.8
The Department of Education should track home school registration using its computerized database to determine which children are not registered for the current year and whether follow up is needed.

Recommendation 2.9
The Department of Education should track receipt of progress reports using the computerized database to determine which children progress reports have not been received and whether follow up is needed.

Recommendation 2.10
The Department of Education should verify whether children no longer registered for home schooling are registered in the public school system.

Recommendation 2.11
The Department of Education should track children leaving public school for home schooling to ensure they are properly registered for home schooling.

Recommendation 2.12
The Department of Education should explore the possibility of establishing an information sharing protocol with the Department of Health and Wellness to enable tracking of all school-aged children in the province to determine whether they are registered for school.

3 Health and Wellness: Capital Health and IWK Health Centre Personal Health Information Systems

Numerous and significant weaknesses in IT controls to protect personal health information contained in computer systems at Capital Health and IWK Health Centre allow an unnecessarily high risk from internal threats. The overall level of control is inadequate and must be improved. We identified IT security vulnerabilities as well as deficiencies in the management of information technology which also need to be addressed.

Stronger controls are required to protect the privacy of personal health information. Both Capital Health and IWK need to improve controls over authorizing, granting and removing access to computer systems; applying security and other software patches; monitoring network activity; and logging system user actions. Encryption of sensitive data and controlling system changes at Capital Health also need to be addressed. These improvements are needed to guard against unauthorized access to health care systems and the potential disclosure, modification or deletion of personal health information.

Control weaknesses unnecessarily increase the risk of inappropriate access and use of Capital Health's computer systems and some of IWK's databases by employees and contract staff. While external hackers are sometimes the more widely-feared threats to computer systems, IT security industry statistics indicate insiders are the predominant threat. In addition, since the primary network used by Capital Health and IWK is also shared with other district health authorities, the risk of inappropriate access to, and abuse of, information by insiders expands beyond the two agencies we audited.

Both organizations need to improve their processes and plans for ensuring continuous operation of computer systems. We recommended better protection of the physical security of their information technology as well as improved preparations for recovering from a disaster that could put information systems, including those dealing with patient care, out of service.

Deficiencies exist in the management of information technology at both organizations. Most of IWK's published policies and procedures are not up-to-date and there is no process to keep them

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current. While Capital Health conducts some risk assessments as part of its project management process, it needs to implement a comprehensive, overall IT risk management framework to identify, assess and mitigate all significant risks.

At both Capital Health and IWK, there is no periodic assessment of overall IT controls to ensure they are appropriately designed and working effectively.

Recommendations

Recommendation 3.1
Capital Health should document its data backup and restoration procedures.

Recommendation 3.2
Capital Health should consult with all relevant departments when prioritizing systems for recovery after a disaster.

Recommendation 3.3
Capital Health should provide adequate testing and training for all significant processes described in its disaster recovery plan.

Recommendation 3.4
Capital Health should have a secondary site at which to restore its systems in the event a disaster damages its data centre.

Recommendation 3.5
The IWK Health Centre should update its disaster recovery plan.

Recommendation 3.6
The IWK Health Centre should test its disaster recovery plan and ensure IT employees have been trained on their roles and responsibilities.

Recommendation 3.7
The IWK Health Centre should have a secondary site in which to restore its systems if a disaster damages its data centre.

Recommendation 3.8
Capital Health should re-evaluate its network controls to restrict harmful traffic between systems and mitigate against identified risks.

Recommendation 3.9
The IWK Health Centre should implement network security measures to monitor and restrict malicious network traffic.

Recommendation 3.10
Capital Health should better secure its servers and databases by:
- increasing the strength of acceptable passwords;
- reviewing for the use of weak or blank passwords;
- disabling, or at least changing the default passwords, for user accounts no longer required; and
- encrypting all sensitive information that is sent between systems if there is risk that it may be viewed in transit by persons not authorized to see it.

Recommendation 3.11
IWK Health Centre should better secure its systems by adding additional controls or processes to protect databases including:
- upgrading or replacing databases that are no longer supported by vendors;
- ensuring only authorized users can copy or move databases; and
- restricting end users from directly querying backend databases.

Recommendation 3.12
IWK Health Centre should better secure its systems by increasing password and account controls which include:
- requiring users to use complex passwords;
- preventing users from reusing previous passwords; and
- locking accounts after a number of failed login attempts.

Recommendation 3.13
IWK Health Centre should better secure its systems by restricting access to shared folders to authorized individuals only and reviewing active employee accounts and their permissions on a periodic basis to determine if they are still required.

Recommendation 3.14
Capital Health should evaluate, test and install vendor-recommended security patches on a timely basis.

Recommendation 3.15
Capital Health should upgrade or replace end-of-life systems to ensure all systems are fully supported by their vendors.

Recommendation 3.16
IWK Health Centre should assess, test and install vendor-recommended security patches.

Recommendation 3.17
Capital Health should enable auditing on all patient-related applications that have the ability to do so.

Recommendation 3.18
Capital Health should set a requirement that all new patient-related applications implemented within the organization have the ability to audit user actions, including viewing, modifying and deleting of data.

Recommendation 3.19
Capital Health should, on a sample basis, periodically audit patient-related application logs to determine if users are accessing information that is not required as part of their job responsibilities.

Recommendation 3.20
IWK Health Centre should enable auditing on all systems that have the ability to do so.

Recommendation 3.21
IWK Health Centre should ensure that all new vendor-supplied applications implemented within the organization have the ability to audit users' actions, including the viewing, modifying and deleting of data.

Recommendation 3.22
IWK Health Centre should, on a sample basis, periodically audit application logs to determine if users are accessing information that is not required as part of their job responsibilities.

Recommendation 3.23
Capital Health should strengthen the security over its IT infrastructure by creating physical security policies, better controlling access to the data centre, and addressing structural issues such as mitigating water hazards and documenting equipment maintenance.

Recommendation 3.24
Capital Health should have a vulnerability assessment completed on its data centre and related infrastructure.

Recommendation 3.25
IWK Health Centre should strengthen the security over its IT infrastructure by improving controls over physical access to the data centre including:
- regular review of updated access lists for proper approvals;
- implementation of logging procedures for all guests;
- regular review of visitor logs; and,
- updating emergency procedures.

Recommendation 3.26
IWK Health Centre should have a vulnerability assessment completed on its data centre and related infrastructure.

Recommendation 3.27
Capital Health should establish a process for every system containing personal health information that ensures all requests to grant, modify, and terminate access are consistent and traceable.

Recommendation 3.28
Capital Health should use unique temporary passwords when resetting locked-out accounts or creating new accounts.

Recommendation 3.29
Capital Health should ensure that all systems access is only approved by individuals authorized to do so.

Recommendation 3.30
IWK Health Centre should ensure that access to all systems is only approved by individuals authorized to do so.

Recommendation 3.31
IWK Health Centre should enhance its processes to ensure that all users' access is removed once their employment has ended.

Recommendation 3.32
Capital Health should have a process that ensures all new systems are capable of recording when user accounts are set up.

Recommendation 3.33
Capital Health should have a process for the regular review of systems for dormant accounts. All unnecessary dormant accounts should be deactivated.

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Recommendation 3.34
IWK Health Centre should have a process for the regular review of systems for dormant accounts, and all unnecessary dormant accounts should be deactivated.

Recommendation 3.35
Capital Health should provide guidance for prioritization of IT service requests.

Recommendation 3.36
Capital Health should document incident response procedures and ensure its eHealth staff members are trained to use them.

Recommendation 3.37
Capital Health should monitor the nature of service desk calls and the resources used to resolve them to ensure the help desk is functioning effectively and efficiently and to ensure significant problems resulting in repeat incidents are being analyzed and fixed.

Recommendation 3.38
IWK Health Centre should document incident response procedures.

Recommendation 3.39
IWK Health Centre should implement a problem management process to document the identification, classification, investigation and resolution of IT problems.

Recommendation 3.40
Capital Health should record proper dates for each ticket produced by the system used to track and manage changes.

Recommendation 3.41
Capital Health should configure its help desk system so that it blocks unauthorized editing of its data.

Recommendation 3.42
Capital Health should implement a process to detect and deter employees from making unauthorized changes.

Recommendation 3.43
IWK Health Centre should document its change management process.

Recommendation 3.44
Capital Health should follow eHealth's project management processes for all significant IT projects throughout the organization.

Recommendation 3.45
IWK Health Centre should maintain a central list of ongoing projects and their status.

Recommendation 3.46
Capital Health should implement a data classification policy.

Recommendation 3.47
Capital Health should implement a process to ensure operational procedure documents contain sufficient information to guide operations staff in their responsibilities. Operational procedure documents should be kept current.

Recommendation 3.48
Capital Health should ensure all servers are being monitored for hard drive capacity.

Recommendation 3.49
Capital Health should implement processes to monitor existing human resources levels and forecast future capacity requirements for providing IT services.

Recommendation 3.50
Capital Health should require employees to periodically refresh their acknowledgement of confidentiality policies, especially when there are significant changes.

Recommendation 3.51
Capital Health should ensure the requirements of its policy exception policy are being met.

Recommendation 3.52
IWK Health Centre should develop a current, comprehensive set of policies to guide its use and control of information technology.

Recommendation 3.53
IWK Health Centre should develop a process to keep its policies up-to-date.

Recommendation 3.54
IWK Health Centre should require employees to provide documented acknowledgement of their understanding of confidentiality and IT security policies at the time of hire and periodically during their employment term.

Recommendation 3.55

Capital Health's IT control framework should include a process for monitoring and assessing IT controls.

Recommendation 3.56

IWK Health Centre's IT control framework should include a process for monitoring and assessing IT controls.

Recommendation 3.57

Capital Health should implement an IT risk assessment framework that includes determining and documenting IT risks, related mitigation strategies and the acceptability of its residual risks.

Recommendation 3.58

IWK Health Centre should include residual risks as part of the maintenance of its risk register.

4 Health and Wellness: Hospital System Capital Planning

If funding stays at recent levels and available money is allocated as it currently is, Nova Scotia's hospital system cannot be adequately maintained and will continue to deteriorate. Currently, significant deficiencies often continue due to lack of funding. Opportunities for ongoing cost savings are not given adequate consideration and the extent to which significant equipment or facilities are used is not a significant factor in funding decisions. A new approach to capital planning for the hospital system is needed which better utilizes scarce monetary resources.

Only a small portion of infrastructure and equipment requests are funded each year. The Department of Health and Wellness estimates more than $600 million will be needed in the next ten years for the most basic infrastructure needs in order to maintain the system as it now exists. While preventative maintenance can reduce repair costs in the long run, it is not always carried out. This is often due to lack of funding. Many of the funding requests each year relate to aging equipment; only a portion of these requests are funded in any given year.

Despite the challenging financial situation facing the hospital system, Health and Wellness is not fully exploring areas which could generate operational cost savings. Capital projects which would result in a net reduction in costs do not get appropriate consideration because they cannot be covered through available annual funding and district health authorities can only incur debt under the Health Authorities Act with Governor-in-Council approval. Improvements to infrastructure may also be possible through energy performance contracts with private sector companies. These contracts do not require up-front investment by the public sector entity and can lead to long-term operational cost savings by improving energy efficiency. Initially these cost savings are used to cover the contracted upgrades; once the contract has been paid, the entity realizes ongoing cost savings. We recommended the Department examine the risks and rewards of energy savings contracts.

The Department of Health and Wellness has little information regarding the extent to which significant equipment or hospital facilities are used. In times of limited funding, utilization data could assist the Department and districts in making both operating and capital planning decisions, such as where equipment and services should be located and whether to replace existing infrastructure and

equipment as it ages. We recommended the Department begin to collect utilization data and consider it in capital planning decisions.

Substantive changes are needed to the Department of Health and Wellness' capital planning processes to make better use of available funding and take advantage of opportunities for operational cost savings. Given the province's fiscal situation, the solution is not simply more funding. Implementing the recommendations in this chapter will represent a significant step towards improved capital planning for hospitals.

Recommendations

Recommendation 4.1
The Department of Health and Wellness should implement multi-year capital planning for the hospital system.

Recommendation 4.2
The Department of Health and Wellness should collect utilization data for major medical equipment and hospital infrastructure.

Recommendation 4.3
The Department of Health and Wellness should consider utilization data when making funding allocation decisions.

Recommendation 4.4
The Department of Health and Wellness should include representation from all district health authorities and the IWK Health Centre on the Infrastructure Management Repair and Renewal Committee.

Recommendation 4.5
The Department of Health and Wellness should assign sufficient staff resources to review hospital system equipment funding requests.

Recommendation 4.6
The Department of Health and Wellness should include the district health authorities and the IWK Health Centre in its criteria selection and scoring processes for equipment allocation.

Recommendation 4.7
The Department of Health and Wellness should review its use of the Pairwise scoring system and ensure that criteria are weighted in a consistent and appropriate manner.

Recommendation 4.8
The Department of Health and Wellness should revise the scoring approach for its equipment group to ensure that final scoring is consistent with funding criteria.

Recommendation 4.9
The Department of Health and Wellness should develop a process to ensure information to support equipment scores assigned during capital funding is adequately documented.

Recommendation 4.10
The Department of Health and Wellness should examine its process for requesting equipment funding submissions to ensure it considers the relative size of each district and the mix of services offered.

Recommendation 4.11
The Department of Health and Wellness should revise the approach used to score infrastructure and equipment needs to include specific consideration of future cost savings.

Recommendation 4.12
The Department of Health and Wellness should examine the risks and rewards of energy savings contracts. The results of this analysis should be used to determine whether to pursue these contracts in the province's hospital system.

Recommendation 4.13
Guysborough Antigonish Strait Health Authority and South Shore Health should prepare multi-year capital plans.

Recommendation 4.14
Capital Health and Guysborough Antigonish Strait Health Authority should develop an objective ranking system for all capital project priorities.

Recommendation 4.15
Guysborough Antigonish Strait Health Authority should prepare an objective district-wide capital project priorities list.

Recommendation 4.16
Capital Health, Guysborough Antigonish Strait Health Authority, and South Shore Health should track the current condition of significant medical equipment assets and infrastructure.

Recommendation 4.17
Capital Health, Guysborough Antigonish Strait Health Authority and South Shore Health should ensure preventative maintenance activities are completed as scheduled.

5 Trade Centre Limited

Overall, the Market Projections Report prepared by Trade Centre Limited in 2010 to support government investment in the new convention centre lacks the appropriate analysis and rigor expected for such a significant proposal. We expected a much more comprehensive analysis supporting such aggressive growth targets. Important industry realities have not been clearly addressed. We recommended that the Executive Council Office obtain an independent second opinion on the market projections for the new convention centre.

We also found financial and operational activities examined during our audit were not appropriately managed. Trade Centre Limited does not have an adequate internal control framework or sufficiently rigorous financial management practices. This contributed to a number of the control deficiencies we found. We identified control weaknesses and instances of noncompliance related to the management of entity revenues and expenses.

The documentation supporting the rationale for the allocation of costs between Trade Centre Limited and the Halifax Metro Centre is insufficient and we found errors in the allocations. Pricing guidelines have not been provided to sales staff to ensure corporate objectives are being achieved and event results are not adequately monitored.

Trade Centre Limited does not have adequate processes for the approval of travel and business expenses. The CEO's expenses were not reviewed and approved, and a number of paid claims were not supported by appropriate documentation. Trade Centre Limited's business travel and expense policy is not consistent with the government travel policy.

Trade Centre Limited does not have adequate processes to ensure the procurement of goods and services complies with applicable policies and provides value for money. We identified purchases in which Trade Centre Limited and government procurement policies were not followed. The Trade Centre Limited procurement policy has insufficient provisions for situations in which alternative procurement procedures are necessary.

We found regular financial and operational reporting to the Board is adequate.

Recommendations

Recommendation 5.1
Trade Centre Limited should implement a process to review and
approve the accuracy of information reported in the Annual Report.

Recommendation 5.2
Trade Centre Limited should conduct a comprehensive assessment of
its internal control systems including the identification and analysis
of financial and operational risks, controls necessary to mitigate
residual risks and the design of an effective monitoring process.

Recommendation 5.3
Trade Centre Limited should document the internal control
framework resulting from the assessment of its internal control
systems. The framework should be implemented and monitored for
compliance.

Recommendation 5.4
Trade Centre Limited should have an adequate analysis to support
the allocation of expenses between Trade Centre Limited and Halifax
Metro Centre, as well as internally among Trade Centre Limited
business units. This analysis should be documented.

Recommendation 5.5
Trade Centre Limited should ensure actual salary allocations agree
with the approved allocations in the budget effective April 1 each
year.

Recommendation 5.6
Trade Centre Limited should clearly document the rationale for
changes to Halifax Metro Centre salary allocations. The changes
should be approved by the Chief Financial Officer.

Recommendation 5.7
Trade Centre Limited should establish event pricing guidelines for
sales staff.

Recommendation 5.8
Trade Centre Limited should complete a profit/loss analysis for
significant events and take action as appropriate.

Recommendation 5.9
Trade Centre Limited should analyze and document the rationale for
the Ticket Atlantic base service charge.

Recommendation 5.10
Trade Centre Limited should formalize, with the Halifax Regional Municipality, the Ticket Atlantic per ticket commission to be paid to the Halifax Metro Centre.

Recommendation 5.11
Trade Centre Limited should follow its policy on advances to promoters.

Recommendation 5.12
Trade Centre Limited should allocate operating costs to tenants based on the lease terms. All new leases should define total rentable square footage.

Recommendation 5.13
Trade Centre Limited should conduct regular performance assessments on senior management and staff which include measurable performance targets and goals.

Recommendation 5.14
Trade Centre Limited should update its business travel and expense policy to be consistent with the government travel policy as required. The policy should also be updated to include appropriate documentation requirements and approvals.

Recommendation 5.15
Trade Centre Limited's updated business and travel expense policy should be approved by its Board and implemented.

Recommendation 5.16
Trade Centre Limited should comply with its business travel and expense policy and develop a process to monitor compliance.

Recommendation 5.17
Trade Centre Limited CEO travel expense claims should be reviewed and approved by the Board Chair.

Recommendation 5.18
Trade Centre Limited should update its procurement policy to include requirements for the use of alternative procurement practices.

Recommendation 5.19
Trade Centre Limited should comply with its procurement policy and develop a process to monitor compliance.

Recommendation 5.20
The Executive Council Office should obtain an independent second opinion on the 10-year market projections for the new convention centre.