Scathing report details botched e-health plans

Poor planning, a budget that is soaring out of control and delivery that is five years behind schedule plague electronic records program

BY VAUGHN PALMER
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The B.C. Liberal drive for electronic records-keeping in the health care system is behind schedule, over budget, poorly planned and still a long way from realizing any benefits to patients, according to auditor general John Doyle.

Doyle released a report Wednesday that chronicled a list of failings so comprehensive as to raise doubts about whether the Electronic Health Records project could be said to be "managed" in any proper sense whatsoever.

By way of accountability, the almost 60-page report contained a passing mention of one likely blame line for the Liberals: "Turnover in senior management" at the health services ministry and "a sudden change in the assistant deputy minister."

Both references to the ouster, in mid-2007, of the senior official in charge of e-health, over a series of allegations that are still being examined by a special prosecutor.

But it would be a mistake to attribute the EHR failings to a single official, however highly placed.

More than two years after the supposed housecleaning in the health ministry, there remain considerable problems with the Liberal plan to establish a single, province-wide system to allow authorized health care providers to access a patient's complete medical records wherever the individual seeks medical attention.

"There is still a long way to go before British Columbians fully realize the benefits of having an electronic health record," Doyle cautioned in his report.

The auditor-general agreed the project has potential benefits for patients and medical professionals alike. But given the inherent complexities, his report conveys a sense of astonishment at the inadequacies of the planning process and absence of follow-through.

For instance: "We expected the ministry to develop and follow a good tactical plan from the start; one that laid out how it intended to achieve the strategic goals of an integrated, compatible provincial electronic health records system."

But no: "The ministry initiated the EHR in 2005 without having a comprehensive tactical plan for completing this complex and high-risk endeavour."

Expectation: "Good management practice would have been to establish how the initiative would be evaluated early in the planning stage and to collect baseline information to measure future results against."

Wrong again: "During our audit" -- meaning up to the end of November of last year -- "the ministry had just started planning how to evaluate the impact and outcomes."

Nor was there any comprehensive attempt to prevent duplication. In one incredible but true passage, Doyle discloses that "each health authority"-- all six of them, presumably -- "and the ministry has developed or purchased its own viewer."

The viewer being "the part of the electronic record that connects to and displays the health information on a health professional's computer." Apparently, the province ended up paying for seven of them, with all that entails for compatibility between doctors, patients and regions.

The Liberals' original notion was that EHR would be up and running by the end of 2008. The current target for completion is three years hence, a full five years behind schedule.

They forecast it could be done for $150 million, all but $30 million of which was supposed to come from the federal government.

The capital cost has since grown 50 per cent to a projected $222 million, with the provincial share growing almost fourfold to $110 million. Ottawa is, theoretically, on the hook for the remainder, contingent on the meeting of certain time lines.

Operating costs are pegged at a further $27 million a year and rising. The health authorities have yet to weigh in with any estimate for their capital and operating costs.

Plus, as Doyle discloses, the health ministry has just begun work to determine "the percentage of work completed relative to the percentage of the total budget used." Meaning the supposed budget of $222 million to complete the project is a guess, and perhaps a poorly informed one at that.

The findings would be even more damning, had he not cut the Liberals some slack. He gave the government a preview last June, but held off reporting publicly until this month, thus allowing the ministry another half year or so to address the shortcomings in the planning process.

But having provided additional leeway, he closes with a dozen or so questions about implementation, costs and outputs that suggest his concerns are far from settled.

The report marks the second time in a week that the auditor general has been highly critical of electronic record keeping in the health care sector.

Last Wednesday, he blasted the Vancouver Coastal Health Authority for inadequate security on the electronic records it maintains on some 600,000 patients receiving residential care and other services.

The problems were so extensive Doyle held off releasing that report for six months, until the authority could address more than 100 recommendations for improving security and protecting patient privacy.

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Planning came late to the initiative for electronic health records

The Liberals fumbled the e-health file so badly that regional systems being developed aren't compatible across the province

BY VAUGHN PALMER
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One doesn't need to read too far into the latest report from auditor-general John Doyle to discover why electronic health records should be a good thing for patients and medical professionals alike.

"Why should a lack of comprehensive EHR be a concern for British Columbians?" asks Doyle, in the opening pages of his damning investigation of the provincial government's way-behind-schedule, grossly over-budget and ineptly planned records-keeping initiative.

He then proceeds to answer his own question, using a series of fictional scenarios to illustrate the potential benefits of a thorough system of electronic record-keeping in the health care sector.

Fictional scenario one: "Eric is a senior citizen who has lived in six different parts of B.C. in the last 10 years. He has had X-rays and blood tests and received various prescriptions in several different towns."

Then one day, while our senior is on vacation in the Okanagan, he experiences shortness of breath and is taken to a walk-in medical clinic in Kelowna.

"Currently, Eric's health records exist all over the province, on paper and film. This makes the job of the treating physician in Kelowna especially challenging because she will have difficulty accessing all the details about Eric's medical history quickly and efficiently."

One can readily expand on Doyle's scenario by adding a few more telling details.

What medication has Eric been taking? Has he experienced shortness of breath before, when and to what extent? He might be able to answer himself, were he not stressed and increasingly muddled. His doctor would know, but she's on vacation and her practice is being handled by a stand-in who has never treated Eric.

Point made. Electronic health records could be a positive boon. But that only underscores the significance of Doyle's report, summarized by his discouraging observation that "there is still a long way to go before British Columbians will enjoy the benefits of an EHR system."

The system, which was supposed to be fully operational two years ago, won't be up and running for three years at the earliest. "Once built," adds Doyle, "it will still need to be fully integrated across the health sector and regularly used by health professionals in treating their patients."

Nor can one have much confidence that the Liberals will be able to stick to their current, much-revised schedule, given their ineptitude to date.

For instance, take the matter of the government's relations with the medical professionals who will be generating the electronic records and accessing them on a daily, hourly and perhaps minute-by-minute basis.

"Achieving the expected value from the EHR initiative requires engaging doctors, nurses, pharmacists and other health professionals from the start, to ensure the tools are developed to meet their requirements," the auditor-general observed. "The professionals must see the benefits of the system for their clinical work before they will adopt it."

You'd think so. But that wasn't how the Liberals saw things. Their half-baked plan completely lacked "a communications strategy that identified who the key stakeholders were, what information they needed and how the ministry would provide that information."

Health professionals were largely excluded from any comprehensive role in crafting a system to meet their needs until quite recently.

No wonder that when the auditor-general's staff examined levels of participation by medical professionals, they found that only one in five -- about 2,000 out of 10,000 physicians -- had enrolled to begin implementing electronic record-keeping.

Or consider the Liberals' incredible negligence in failing to coordinate with the six provincial health authorities. "The regional electronic health record systems being developed in the health authorities are not compatible with each other and are thus not accessible across the province," says Doyle.

But then, as the auditor-general concluded after examining the Liberal plan, there really was no plan in the sense one would reasonably expect from a government preparing to spend tens of millions of dollars of public money.

"The health services ministry initiated the EHR without having a well-formulated strategic plan, process or structures in place," says the auditor-general, in his most damning finding off all.

Such a plan is now in place. It was established at the end of last year, after a preliminary report from Doyle chronicled the grave failings in the Liberals' e-health initiative.

"A significant achievement," says Doyle, who nevertheless put the government on notice that his office expects progress updates every six months, including: "results against planned measures of time, cost, quality and outcomes, as well as explanations of those results."

The watchdog will be watching and so should the public and the Opposition.

Four years into the program for electronic health records, $150 million already spent, and the B.C. Liberals (under prodding from the auditor-general) have finally got around to producing a credible strategic plan.

Monumentally embarrassing for a party that claims to know how to run the proverbial peanut stand.

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E-health security so lax report was withheld

Publication of auditor-general's findings delayed half a year while Vancouver Coastal tried to plug holes in medical records database

BY VAUGHN PALMER
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When Auditor-General John Doyle and his staff investigated the security of electronic record-keeping at the Vancouver Coastal Health Authority, they found trouble everywhere they looked.

"In every key area we examined, we found serious weaknesses," wrote Doyle. "Security controls throughout the network and over the database were so inadequate that there was a high risk of external and internal attackers being able to access or extract information without the authority even being aware of it."

This for a database containing the sensitive medical records of some 620,000 people receiving residential and home care, mental health, addiction and other services, in 75 community locations across Vancouver and Richmond.

The system is known as PARIS, a cutesy-pie acronym derived from Primary Access Regional Information System. But nothing about it suggested any point of comparison with the fabled city of light.

Some sample findings from Doyle's 30-page report, one of two issued recently on the government's mismanaged electronic health initiatives.

"No intrusion prevention and detection systems exist to prevent or detect certain types of [online] attacks. Open network connections in common business areas. Dial-in remote access servers that bypass security. Open accounts existing, allowing health care data to be copied even outside the Vancouver Coastal Health Care authority at any time."

More than 4,000 users were found to have access to the records in the database, many of them at a far higher level than necessary.

"Almost all users have some access to confidential information about all clients in the database. Many clients' full health information is accessible to a large number of users. Team memberships are not up to date, meaning that many unauthorized users could have access to client records that they should not have."

Plus some of this access was forever.

"Former client records and irrelevant records for current clients are still accessible to system users. Hundreds of former users, both employees and contractors, still have access to resources through active accounts, network accounts, and virtual private network accounts."

Together, these security lapses meant the confidential information stored on the system was wide open to "inappropriate disclosure for either personal or financial gain of insiders or external intruders."

Moreover the medical records of all those patients and clients were vulnerable to tampering for pure mischief or more sinister motivations.

"Incorrect data may have been entered, data may have been corrupted, or unauthorized viewing of data may have occurred."

But it was impossible to say with any certainty whether any of those things have happened, because as Doyle went on to note, there was no tamper-proof system for auditing usage or monitoring access.

"Pertinent information is not collected, so it is not possible to determine whether unauthorized access to systems has ever occurred."

So great were the weaknesses and so far-reaching the potential for abuse that Doyle took the extraordinary step of withholding findings from the public, as explained in a covering letter to his report.

"Due to the seriousness of the deficiencies, I delayed the publication of this audit report to allow sufficient time for the authority to address the security vulnerabilities we identified, thereby ensuring that this report would not further expose the system to potential compromise."

Instead of going public when the report was completed last summer, he went straight to the health authority with a barrage of recommendations to plug the many chinks in the security perimeter.

Seven for improving security policies. Twenty-seven on system security. Another 27 ways to protect the database and operating system. Two dozen on restricting access. Thirty on account management. An even dozen dealing with monitoring. Some 127 recommendations in all.

Vancouver Coastal responded by implementing most of the recommendations. The rest are sufficiently in the works that Doyle finally felt comfortable about releasing his report Feb. 10, six months after it was first completed.

In a covering letter of its own, the authority thanked the auditor-general for his consideration. But CEO David Ostrow also felt compelled to come to the defence of the much-maligned record-keeping system.

"PARIS has served our community, patients and clients well without any demonstrated risk to safety," he insisted. "It has strict security protocols that not only protect confidentiality, but comply with established practices and expectations.

"A recent external security assessment confirmed that Vancouver Coastal's electronic security perimeter was among the top 25 per cent of companies in Canada -- even higher when compared to other health care organizations."

A security perimeter, lest we forget, with so many well-documented holes that the auditor-general was afraid to identify them publicly until the most critical ones had been plugged.

If that puts Vancouver Coastal near the top among the country's keepers of electronic health records, one shudders to think about the state of security among those further back in the pack.

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