Chapter 28
eHealth Saskatchewan—Securing Patient Data in the Saskatchewan Laboratory Results Repository

1.0 MAIN POINTS

By July 2020, eHealth Saskatchewan fully addressed the remaining three recommendations made in our 2015 audit related to securing confidential patient information in the Saskatchewan Lab Results Repository (SLRR).[1]

eHealth is updating its SLRR system for critical vulnerabilities, resetting passwords annually, and periodically confirming user access remains appropriate. This reduces the risk of unauthorized access to eHealth's systems and data.

2.0 INTRODUCTION

eHealth provides authorized health care providers the ability to access patient information electronically and is responsible for protecting patient information in SLRR. SLRR is one of several key data repositories that form part of Saskatchewan's electronic health records. It contains confidential patient data.

Our *2015 Report – Volume 1*, Chapter 10 concluded, for the 12-month period ended March 31, 2015, eHealth had effective processes to secure patient information in SLRR other than in the areas reflected in five recommendations. Our *2017 Report – Volume 2,* Chapter 30 reported eHealth had implemented two of the five recommendations to secure patient information in SLRR. This chapter describes our follow-up audit of management's actions on the three outstanding recommendations.

To conduct this audit engagement, we followed the standards for assurance engagements published in the *CPA Canada Handbook—Assurance* (CSAE 3001). To evaluate eHealth's progress toward meeting our recommendations, we used the relevant criteria from the original audit. eHealth agreed with the criteria in the original audit.

We reviewed and assessed related reports, plans, policies and IT system settings with management from eHealth.

3.0 STATUS OF RECOMMENDATIONS

This section sets out each recommendation including the date on which the Standing Committee on Public Accounts agreed to the recommendation, the status of the recommendation at July 31, 2020, and eHealth's actions up to that date.

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[1] SLRR is an IT system, including patient lab information that is a key portion of Saskatchewan's electronic health records.

3.1 Periodically Confirming Appropriate User Access

We recommended eHealth Saskatchewan implement a policy to confirm periodically with healthcare organizations that existing users have appropriate access to the Saskatchewan Lab Results Repository through the eHR Viewer. (*2015 Report – Volume 1*, p. 99, Recommendation 4, Public Accounts Committee agreement January 13, 2016)

Status—Implemented

eHealth established a policy in July 2020 to confirm monthly with key healthcare organizations (e.g., the Saskatchewan Health Authority) whether access to the eHR Viewer for certain users remains appropriate.[2]

eHealth sent the first report to key healthcare organizations outlining users from their organization who have not accessed the eHR Viewer in 11 months or greater in July 2020. eHealth expects the organizations to confirm, within one month, whether the access of users listed continues to be appropriate. We found eHealth removes access of users who no longer needed it.

Having a systematic process to remove inappropriate user access reduces the risk of someone gaining access to confidential patient information.

3.2 Passwords Reset Intermittently

We recommended eHealth Saskatchewan follow its password expiry policy for privileged user accounts that access the Saskatchewan Lab Results Repository. (*2015 Report – Volume 1*, p. 99, Recommendation 5, Public Accounts Committee agreement January 13, 2016)

Status—Implemented

In June 2020, eHealth created and implemented a password reset work standard for its key applications such as SLRR. The work standard requires passwords in each key application, set to never expire, to be changed at a prescribed interval.

We found, as of July 2020, eHealth last reset passwords for SLRR in March 2020 consistent with its work standard (finalized in June 2020).

Changing passwords periodically reduces the risk a password may be compromised and/or a system breached.

3.3 SLRR System Kept Up-to-date

We recommended eHealth Saskatchewan properly configure and update, on a timely basis, its Saskatchewan Lab Results Repository systems for critical vulnerabilities. (*2015 Report – Volume 1*, p. 98, Recommendation 2, Public Accounts Committee agreement January 13, 2016)

Status—Implemented

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[2] eHealth makes lab results in SLRR electronically available through the eHR Viewer.

eHealth updates the SLRR system within a reasonable timeframe.

We found, other than one component of the SLRR system, eHealth kept the system up-to-date (i.e., appropriately configured) and supported. It applied security patches to servers supporting SLRR within a reasonable period.[3] At July 2020, eHealth had a plan to update the one component by December 2020.[4]

Always keeping the SLRR system up-to-date reduces the risk of unauthorized access to eHealth's systems and data.

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[3] Security patches address known vulnerabilities and remain available when systems are up-to-date (i.e., supported). Patches should be applied based on the risk and at minimum annually.
[4] Components of the SLRR system include the database, application, middleware, and operating system.