A national electronic health record for primary care

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The Canada Health Act states that health care should be portable — but health records are not. Despite billion-dollar efforts to promote information transfers between jurisdictions,[1] sharing health information today often requires feeding it through a fax machine or sealing it in an envelope for mailing. Care is frequently based on incomplete information: patients try to remember which vaccines they have received, radiography is repeated because the results are not available, and family doctors attempt to piece together what happened during hospital admissions and emergency department visits.

The good news is that most primary care providers now use an electronic health record. The bad news is there was no coordination in selecting them. Some clinicians have even created their own electronic health record. As a result, doctors now log into a myriad of separate systems for primary care and hospital records, laboratory and imaging results, and prescription documentation — systems that usually cannot connect with one another.

The past decade has seen many reports written about "interoperability," setting standards so data can be shared between systems, but repeating the buzzword did not bring us actual interoperability. The large number of attempted solutions has become an additional problem. So much for a single health record for each patient.

Rather than adding another layer to an overly complicated system, we should rebuild it from the ground up, starting with primary care records. We should select a single system and make it the national primary care electronic health record. If all primary care providers used it, the billions already spent on electronic health records themselves — or trying to get the different ones to talk to each other — could be spent on improving the one everyone used.

Although switching will be painful, one primary care electronic health record will make apparently insolvable problems solvable. Sharing records among primary care sites would become easier and the creation of similar data sets for research purposes would be an added benefit. Since access to primary care records will enhance care in specialist clinics and hospitals, there will be an impetus for these centres to connect with the new health record and populate it with pertinent data — which in turn will improve care in the primary care setting.

We can learn from large health care systems that have already moved toward a single electronic health record. The US Department of Veterans Affairs implemented a national electronic health record in 1999, and the availability of needed records during clinical encounters was reported in one observational study to increase by 40%.[2] Plans were announced last year to drop this tailor-made system and switch to the proprietary system used by the US Department of Defence, as the several hundred million dollars poured into improving interoperability between the 2 systems had failed.[3] SingHealth, 1 of 2 health clusters in Singapore, uses a single electronic health record for nearly 4 million annual patient encounters in both hospitals and outpatient clinics.

Whereas some clinicians will be relieved to have an electronic health record chosen for them, others may bristle at a decision affecting daily practice being made by people who are unaware of local nuances. But allowing choice of electronic health record and publicly funding many options has led to a jumble.

Selecting an electronic health record will involve deciding between many proprietary programs and a smaller number of open-source records. The input of clinicians and patients will be critical to this decision — and agreement on a single health record does not preclude customization to meet local needs.

Selecting open-source software may avoid dependence on the owners of a proprietary product, because the source code will remain freely available and any vendor can provide support and customization services to users. Examples of open-source electronic health record software in use currently include OSCAR, developed at McMaster University and widely used in Canada, and OpenEMR, developed through a collaboration in the United States.

Canada Health Infoway, the pan-Canadian institution reporting to provincial and territorial governments that is charged with promoting digital health solutions, should be given the specific mandate to select and improve one electronic health record — with the input of patients and clinicians — that will be used across primary care sites in Canada. Provinces and territories should fund only this electronic health record for primary care. If we are truly committed to improving the health of Canadians, a bold move such as this is needed.

References

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