eHealth Ontario

Ontario Lab Data and Your EMR

Welcome to the
Ontario Laboratories Information System

The Ontario laboratories information system, or OLIS, is a health information system that facilitates the secure, electronic exchange of laboratory test orders and results.

OLIS is a province-wide repository of lab information that can be shared between hospitals, community laboratories, public health laboratories, and health care providers.

OLIS accepts data feeds from labs in the province such as public health Ontario laboratories, community and hospital laboratories and to date has data representing over 90 per cent of community lab volume, and almost 60 per cent of the total provincial volume.

The goal is to have 100 per cent of all lab tests performed in Ontario in OLIS. For the most up-to-date list and the latest about OLIS, visit: **www.ehealthontario.on.ca/en/initiatives/view/olis**.

OLIS and Your Electronic Medical Record (EMR) System

In partnership with eHealth Ontario, OntarioMD – a subsidiary of the Ontario Medical Association – maintains a provincial specification for electronic medical record (EMR) systems. EMR products certified against the 4.0 or higher specification are able to connect automatically with OLIS to receive lab results.

Feedback from the Field

"It's reassuring for me as a type 1 diabetic that anywhere in the province I go, my health care team has access to my records with the click of a mouse. No more extra testing, no more frustrating, confusing processes that have to take place. Now there's a central hub of a computer system that can be plugged into by the entire health care team."

Steve Stresman
Patient

"Patients are going to notice that they are not having duplicate tests or being asked the same questions over and over again, and that their care providers are more confident about the care they are delivering because they have better information and are more comfortable with the decisions they are making."

Dr. Glen Geiger
Chief medical information officer
The Ottawa Hospital

"The Ontario laboratories information system and eHealth Ontario have revolutionized my practice over the last year. And, in fact, I'm constantly learning new ways to use this system to my patients' advantage."

Dr. Greg Rose
Infectious disease consultant
The Ottawa Hospital

"I think everyone wants to see movement forward in reducing inefficiencies in clinic. Everyone wants to use their time wisely, both patients and providers."

Dr. Erin Keely
Chief, endocrinology & metabolism
The Ottawa Hospital

Benefits to You

- Ensures timely access to information for decision making at point-of-care

- Facilitates more comprehensive and complete lab test information as produced by laboratories outside of their organizations

- Provides better coordination of care between multiple practitioners and within health care teams

- Improves workflow and reduces the dependency on paper-based systems

Benefits to Your Patients

- Ensures fewer gaps in patient information as patients move between hospital, practitioner's office (e.g. family physicians, specialists), home care and long-term settings

- Provides an effective tool to integrate and track patient laboratory history over time, monitor progress of treatments and support chronic disease management

- Reduces the number of unnecessary lab tests due to greater availability and sharing of information

- Enables timelier and broader access to lab test results by practitioners

The Newest Addition to Your EMR

If you are already receiving electronic lab results directly from labs and scanning them into your EMR, OLIS provides an even broader view of your patients' lab result history.

The patient query enables you to search lab test histories for particular patients – regardless of who ordered the test. For example, you might want to:

- Pre-load a new patient's chart with historical laboratory results ordered by another health care provider
- Check previous versions of a test to see what the trend is
- Check to see if a particular type of test has already been done (e.g., to avoid redundant testing)

A Patient Query Search
Step-by-Step

1. Select a patient (e.g. by viewing that patient's chart).
2. Filter results by specifying information. For instance, you can select specific types of tests, or those tests from a specific ordering/attending/admitting health care provider, or that were processed by a specific specimen collection centre or lab. At a minimum, you must specify the date range for the search.
3. OLIS will search for all lab results that meet the stated criteria.
4. Preview the results and decide which, if any, to permanently import into your EMR system.
5. You may also sort the list of returned results (e.g., by lab, test type, or date).

Contact your EMR vendor for training on how to use OLIS within your specific EMR.

Important Notices about Privacy and Security

Your Privacy and Security Obligations

As custodians of patient personal health information (PHI), health care providers have obligations under the *Personal Health Information Protection Act*, 2004 *(PHIPA)* and *Ontario Regulation 329/04 (the "Regulation")*.

In accordance with PHIPA, health care providers only collect lab data from OLIS for the purpose of providing health care, or assisting in the provision of health care, to the provider's patients.

OLIS will not restrict access to lab data for the provider that originally ordered the test, or if the provider has been copied on the lab order by another provider. If a provider is aware that a patient has placed a restriction on his or her lab data in OLIS (i.e. withdrawn consent), the provider must not access this information without obtaining the express consent of the patient (or the patient's substitute decision-maker).

Each health care provider is responsible for ensuring that he or she complies with the following obligations when collecting, using, retaining and disclosing OLIS data:

a. All agreements entered into between eHealth Ontario and the health care provider or the organization for which the health care provider works (whether as employee, partner, agent, or under contract)

b. All agreements entered into between the EMR vendor and the health care provider or the organization for which the health care provider works

c. PHIPA and Ontario Regulation 329/04 (the regulation)

d. Any other applicable legislation or regulation, and

e. Any applicable judicial or administrative tribunal judgments, orders, rulings, or decisions

Each health care provider should ensure that his or her employees, agents and service providers handling PHI on behalf of the provider are in compliance with the provider's obligations, listed above, and are aware of, and comply with, any specific obligations under PHIPA or the regulation applicable to the provider's employees, agents or service providers.

A more complete description of provider security and privacy responsibilities can be found in PHIPA and the regulation.

A useful overview of security can be found in the eHealth Ontario publication entitled *Guide to Information Security for the Health Care Sector – Small Medical Offices,* which is also available on eHealth Ontario's web site at: **www.ehealthontario.on.ca/en/security/guides**.

If you become aware of a suspected or confirmed privacy or security breach of OLIS data by you or any of your employees, agents, or service providers, follow the procedure outlined in Appendix B.

Appendix C outlines the process for making the following types of access requests:

- A provider wishing to access the OLIS access audit log

- A patient wishing either to access the OLIS access audit log or to find out what information is contained about him/her in OLIS

Patient Consent

Your patients may be concerned with the privacy and security of their personal health information (PHI), now that their laboratory test results may be more easily shared with other health care providers.

OLIS has a consent directive capability, which gives patients the option to opt out of OLIS.

A patient may restrict access to either:

- All of his/her laboratory test results in OLIS or

- A particular test (to be specified at the time the test is conducted)

Restricting a test result means only the following are allowed to see it:

- The health care providers who were named on the lab requisition (e.g., the ordering or copied provider)

- The reporting lab, the lab that performed the test and the organization that placed the test request

In other words, if a patient restricts access to his/her results in OLIS, other health care providers involved in the patient's care will not be able to access any patient information that has been, or will be, submitted into OLIS. When a restricted provider queries lab results for this patient, the EMR will notify him/her of this when returning the results of a patient query.

If a patient wishes to place a restriction on access to his/her information in OLIS, or wishes to reinstate access (remove the restriction), he/she can call Service Ontario at 1-800-291-1405 (TTY 1-800-387-5559).

Overriding a Consent Directive

In special cases (with consent from the patient or the patient's substitute decision-maker) the patient directive restricting access to the test can be overridden by a provider, from within the EMR.

Such an override is logged in the EMR system, along with the identity of the overriding health care provider, and an assertion as to what kind of consent was obtained. In addition, OLIS logs all accesses to its data, and an audit of this information can be requested by the patient.

In cases where a health care provider obtains the express consent of the patient to override a directive restricting access, it is recommended that the provider clarify for the patient that although the consent override is temporary in respect of OLIS, the information that the patient has allowed the provider to view will be saved in the EMR system, flagged as sensitive information, and may be available to other providers involved in the patient's care.

Your Questions Answered

What's different between lab results from OLIS and the results I get now?

- OLIS will not yet replace your existing sources of lab results; rather it will augment them with additional information that you may not have access to today.

- OLIS provides data from more sources; eventually all labs in Ontario.

- Generally faster access to results.

- Access to historical, as well as current, results.

- Results are received electronically, directly into your EMR system.

- OLIS uses international standard names for test results; these may be different from what you have been seeing up until now. If you wish to change your EMR to use other more familiar names, your EMR vendor can show you how to do so.

How will using OLIS affect the way I work?

OLIS is an additional tool for your use – specifically for getting a more comprehensive lab test history for a specific patient. It augments what you already do; there is no change to your existing workflow. You can choose how to integrate the OLIS patient query into your day-to-day work.

Reports retrieved electronically from OLIS can go straight into your EMR and can also be printed on paper if needed.

OLIS uses a standardized set of test names. Therefore, depending on what test names you are using, there may be some naming differences. Your EMR vendor can show you how to tell the EMR system to translate the OLIS names into the ones that you use.

Future plans for OLIS include the continued introduction of both new features and additional sources of lab data.

How secure is OLIS?

OLIS uses sophisticated security features to keep patient information secure. OLIS runs in a state-of-the-art data centre to manage personal health information. A summary of administrative, technical, and physical safeguards is provided in Appendix D.

How complete and accurate is the OLIS data?

Accuracy: OLIS data is provided to you exactly as sent by the labs.
Completeness: Currently, there are a number of hospitals as well as public health and community labs feeding data into OLIS. Together, these organizations represent over 60 per cent of the total test volume for the province – and more than 90 per cent of the community lab volume.

Some of their results may not be available in OLIS, for reasons such as:

- Tests were referred to sites not yet connected to OLIS.

- Results that were initially rejected due to formatting or information errors may not have been resubmitted by the labs.

Beyond the organizations currently feeding data into OLIS, work is underway to continually add new data sources.

For the most up-to-date list, visit:
www.ehealthontario.on.ca/en/initiatives/view/olis.

What are the future plans for OLIS?
The goal is to capture 100 per cent of all laboratory test data for Ontario.

What if OLIS goes down?
- Your EMR will continue to receive lab data from your regular sources, and all other functionality should not be impacted.
- In the event of an OLIS outage (either planned or unplanned), eHealth Ontario will email notifications to all lead practitioner and technical contacts.

What if something isn't working?
- Contact your EMR vendor anytime you need help or support with OLIS. If necessary, your EMR vendor will contact eHealth Ontario for additional assistance.

How do I get started?
Your EMR vendor, in partnership with eHealth Ontario, will set you up. For example, your vendor will:

- Register your EMR system with eHealth Ontario so you are authorized to access OLIS data.
- Work with eHealth Ontario to assist you in completing and submitting

an eHealth Ontario OLIS-EMR practice group profile form, including designation of a lead physician and an information technology (IT) lead.
- Work with eHealth Ontario to assist you in signing an eHealth Ontario data access agreement outlining your responsibilities under PHIPA.
- Install the new version of the EMR system.
- Train you.

Please note: key staff/employee changes must be communicated to eHealth Ontario.

- If your lead physician changes – update your OLIS-EMR practice group profile form and email **servicedesk@eHealthOntario.on.ca**.
- If your IT lead changes – fill out a new OLIS-EMR practice group profile form and email **servicedesk@eHealthOntario.on.ca**.
- OLIS-EMR practice group profile forms can be downloaded at: **www.ehealthontario.ca/portal/ server.pt/community/olis-emr_information/2505**.

Which labs are currently sending results to OLIS?
For the most up-to-date list visit:
www.ehealthontario.on.ca/en/initiatives/view/olis.

Appendix A – Common Types of Personal Information and Personal Health Information

Personal information (PI) means information about an identifiable individual, and includes:

- Information relating to the race, national or ethnic origin, colour, religion, age, sex, sexual orientation or marital or family status of the individual;
- Date of birth;
- Address, telephone number;
- Photograph;
- Any identifying number, symbol or other particular information assigned to an individual;
- Employment history;
- Criminal history;
- Financial transactions;
- Personal cell numbers, or
- IP address.

The above list is not exhaustive. See subsection 2(1) of the *Freedom of Information and Protection of Privacy Act (Ontario)* for a complete definition of personal information.

Personal health information (PHI) includes any information in oral or recorded form about an identifiable individual, if the information:

- Relates to the physical or mental health of the individual;
- Relates to the family medical history of the individual;
- Identifies the individual's health card number;
- Can identify an individual and link him/her to health care;
- Can identify an individual and link him/her to a health information custodian;
- Identifies an individual's substitute decision-maker;
- Relates to the donation of any body part or bodily substance of the individual or the testing or examination of any body part or bodily substance; or
- Includes patient health records.

The above list is not exhaustive. See section 4 of the *Personal Health Information Protection Act, 2004 (Ontario)* for a complete definition of personal health information.

Appendix B – Reporting a Privacy or Security Breach

If you become aware of a confirmed or suspected privacy or security breach of OLIS data by you or any of your employees, agents, or service providers, you must report the confirmed or suspected breach to eHealth Ontario's service desk, by phone, at 1-866-250-1554.

This includes reporting any suspected or confirmed unauthorized collections, uses, accesses or disclosures of OLIS data, by you or your agents, employees or service providers, and reporting any issues with the OLIS system which have caused or may lead to a privacy or security breach by your practice or eHealth Ontario.

When reporting a confirmed or suspected privacy or security breach to eHealth Ontario, please have the following information ready:

1. If possible, a description of the situation and condition that led to the incident.
2. Who was involved (name and role).
3. Where the incident happened.
4. When and at what time was the incident noticed.

5. If possible, describe how the incident was detected.

6. If possible, provide information on the most likely cause - for example:

• Human error;

• Negligence;

• Technical failure, caused by failure of an application or system to maintain privacy;

• Process failure, caused by not following a process;

• Wilful wrongdoing;

• Act of nature.

7. Describe the type of PI/PHI involved in the incident.

Note: It is extremely important that you do not disclose any patient personal health information and/or personal information to the eHealth Ontario service desk agent when reporting a suspected or confirmed privacy breach.

8. If possible, list measures taken to contain the breach or any risks that could eventually result in a breach.

9. If possible, list any corrective measures taken or additional controls applied.

10. What services, if any, are impacted?

11. Are eHealth Ontario's services impacted or involved?

It is expected that you will cooperate with any investigations conducted by eHealth Ontario in respect of any suspected or confirmed privacy or security breaches in relation to OLIS data. In the event of an incident investigation, eHealth Ontario may contact the physician lead or the practice office IT lead, as designated in the OLIS-EMR practice group profile form submitted to eHealth Ontario.

Appendix C – Access Requests

There are two kinds of access requests with respect to OLIS:

1. An access request made by a provider or patient for OLIS access audit logs from the provider's facility.

2. An access request made by a patient for:
   a. OLIS access audit logs, or
   b. Information on what patient data is contained in OLIS.

Access request made by a provider or patient for OLIS access audit logs from the provider's facility

As a provider, you may require a record of who from your organization accessed OLIS data through your EMR. Your lead physician may request an audit log from eHealth Ontario which will provide you with a record of the following:

• By facility request – eHealth Ontario will provide you with a log of all users in your organization who have accessed OLIS data in the timeframe set out in the request.

• By user request – eHealth Ontario will provide you with a log of all accesses to OLIS data by a particular user from your organization, within the timeframe set out in the request.

In order to request an OLIS audit log from eHealth Ontario, please contact the eHealth Ontario service desk at 1-866-250-1554, and have the following information ready:

• Facility requests – Provide the service desk agent with the name of your facility and the timeframe for the report (start date, end date).

• User requests – Provide the service desk agent with the name of your facility, the name of the user and the timeframe for the report (start date, end date).

Access request made by a patient

If a patient wishes to make a request to find out what data about him or herself is contained in OLIS, or who has accessed their information in OLIS in a given timeframe, the patient must contact the Ministry of Health and Long-Term Care (MOHLTC) directly at the following address:

Attention: Freedom of Information and Privacy Coordinator
Access and Privacy Office
Ministry of Health and Long-Term Care
5700 Yonge Street, 6th Floor
Toronto ON, M2M 4K5

If you have any questions regarding access requests, audit logs or incident / breach management processes, contact the eHealth Ontario privacy operations department, at **privacyoperations@ ehealthontario.on.ca**. Please ensure that you do not include any personal information or personal health information in any emails to eHealth Ontario.

Privacy-related enquiries and complaints from patients

Upon receipt by a provider of a privacy-related enquiry or complaint from a patient relating to OLIS, or his/her data in OLIS, the provider should promptly advise the patient to notify the MOHLTC's access and privacy office of the complaint or enquiry, in writing, at:

Attention: Manager, Access and Privacy Office
Ministry of Health and Long-Term Care
5700 Yonge Street, 5th Floor
Toronto, ON M2M 4K5

Appendix D – Summary of Security Safeguards in Place at eHealth Ontario

Administrative safeguards

- eHealth Ontario has a director of privacy and director of security services; these individuals are accountable for health information privacy and security.

- All providers who use OLIS must sign a data access agreement with eHealth Ontario, which, among other things, spells out their responsibilities regarding security and privacy.

- eHealth Ontario requires its representatives to implement privacy and security safeguards, as appropriate, to the service being provided.

- eHealth Ontario regularly reviews and enhances its privacy and security policies. Staff and contractors are required to read the relevant policies and acknowledge in writing that they have read and understood them.

- All staff and contractors must sign confidentiality agreements and undergo criminal background checks prior to joining or providing services to eHealth Ontario.

- eHealth Ontario has a security screening policy that requires staff to have an appropriate level of clearance for the sensitivity of the information they may access.

- eHealth Ontario staff and contractors generally have no ability or permission to access personal health information. If access to personal health information is required in the course of providing eHealth Ontario services, individuals are required to follow the access request process and are prohibited from using or disclosing such information for other purposes.

- eHealth Ontario ensures, through contracts, that any third party it retains to assist in providing services to health information custodians will comply with the restrictions and conditions necessary for eHealth Ontario to fulfill its legal responsibilities.

- eHealth Ontario has developed a full security and privacy incident management system.

- eHealth Ontario has mandatory privacy and security awareness and training programs for all staff and contractors.

- eHealth Ontario staff, contractors, suppliers and clients must promptly report any security breaches to eHealth Ontario for investigation.

- eHealth Ontario conducts privacy and security risk assessments for both product/ service development and client deployments. Mitigation activities are well established and tracked as part of each assessment.

- eHealth Ontario provides a summary of the results of privacy and security risk assessments to the affected health information custodians.
- eHealth Ontario ensures all operational and systems changes follow the agency's change management procedures.

Patients have a right to request and see information about all access to their information. To do so, the patient must contact the Ministry of Health and Long-Term Care directly at the following address:

Attention: Freedom of Information and Privacy Coordinator
Access and Privacy Office
Ministry of Health and Long-Term Care
5700 Yonge Street, 6th Floor
Toronto, ON M2M 4K5

Technical safeguards

- Authorization and authentication (i.e., confirming who each user is, and what he/she is permitted to do) controls limit access to OLIS to only those individuals who require it to perform their job function.
- OLIS users are authenticated each time they access the system.
- Authorized systems/users must be able to supply a patient's health card number, date of birth, and gender in order to be able to access the patient's lab records.

- Information about each data request is recorded in an audit trail maintained by OLIS, in compliance with PHIPA.
- Patients can expressly withhold or withdraw their consent to use or disclose information related to their lab tests.
- Consent directives can subsequently be revoked by a patient who contacts Service Ontario. Reinstatement can only be done at the patient level and not at the test request level.
- When a laboratory order is received by OLIS, the patient and all health care providers named on the order are validated against appropriate data stores. The laboratory license is also validated for each laboratory.
- OLIS verifies all inbound messages to ensure that they are well formed.
- Personal health information is transmitted to and from OLIS securely using a mutually authenticated encryption tunnel.
- Networks are protected by devices (firewalls and routers) which limit access to and from systems.
- The systems are kept up-to-date by installing software updates on a regular basis.
- Security agents are installed on each system to protect OLIS from malware and detect intrusions.

- eHealth Ontario's hosting environment provides continuous secure data backup and immediate failover capabilities for all system components.

Physical safeguards

- OLIS resides in a specially-built facility that is physically secured against unauthorized access.
- Biometrics, secure cabinets and access cards control physical access to facilities and equipment.
- OLIS equipment is located in isolation from other health information systems.
- The facilities are staffed and monitored continuously by security staff/employees.
- The facility is protected against environmental issues such as power outages and extreme weather conditions.

eHealth Ontario
It's working for you.

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