

Ontario Health Teams: Digital Health Playbook

Released August 2019



Introduction: How to use the Playbook



This Playbook is intended to help Ontario Health Teams*(OHTs) build their digital health plan and capacity. The book is organized into chapters called *Plays*. We recommend that users:



1. Read the Playbook all the way through first; and



2. Take an iterative approach to implementing the “Plays”.

This Playbook is a living document, intended to evolve over time as Ontario Health Teams grow and develop and as new solutions are introduced to Ontario’s digital health landscape. To do this, we need your feedback!

Please send any comments or suggestions for future revisions to OHTdigital@ontario.ca.

*When used in this playbook, the term “Ontario Health Teams” or “OHT” means teams of providers that have placed themselves on the OHT readiness path in Ontario, including those teams that are “In Discovery”, “In Development”, “OHT Candidate”, “Designated OHT”. While this playbook is intended for those teams invited to complete a Full Application, any team of providers, regardless of readiness, may find the information in this playbook helpful.

Introduction



Ontario Health Teams (OHTs) are part of the government's plan to build a modern, sustainable and integrated health care system that connects health care providers and services focused on the patient. In order to realize this vision, Ontario Health Teams will require modern technologies, tools and information that support patient-centred care.

Digital health is at the core of a more connected and integrated health care system. Thus, Ontario Health Teams will become key to fostering local innovation and provincial digital health advancements.

This Playbook details how the adoption and use of digital health solutions can help OHTs meet their clinical and performance objectives. The document provides a general overview of the types of tools, requirements and policy directions that will guide the creation of digitally-enabled Ontario Health Teams. The Playbook also provides information on the supports offered by specific digital health delivery organizations, namely, Cancer Care Ontario, eHealth Ontario, Health Shared Services Ontario, OntarioMD, and the Ontario Telemedicine Network.

The digital health services and supports being provided to OHTs represent the contributions of multiple delivery organizations, including those who will soon become a part of Ontario Health (i.e. eHealth Ontario, Health Shared Services Ontario and Cancer Care Ontario).

The Playbook is intended to support OHTs in the development of their digital health plans during the full application stage. However, it can be useful to OHTs at any stage of development.

Introduction: How to use the Playbook



For users who have already read the Playbook in full, and are looking to refresh their knowledge, or for those reading the Playbook with a specific focus in mind, we have also created “Focused Views” highlighting key sections of interest for the groups below.

For Executives



For OHT executives looking to know how digital health will enable integrated health care, and find summaries of the resources in the Playbook.

For Providers



For health care providers in an OHT looking for information on the benefits of digital health and the tools available to providers in an OHT environment.

For Digital Health Specialists



For digital health specialists looking to create and implement a digital plan in the OHT environment.

EXECUTIVE SUMMARY

Play 1: What Can Digital Health Do for You?



In this Play, Ontario Health Teams can:

- Learn about digital health and the digital health landscape in Ontario.
- Understand the capabilities and benefits of digital health for providers and patients.
- Learn how the Playbook can support your digital health plan

Click the title bar on any page to return to the Table of Contents page.

Pages that are part of a specific “Focused View” will have their **respective symbol shown at the bottom of the page.**

Click on any of the symbols to go to the Focused Views: Table of Contents page (see next page).

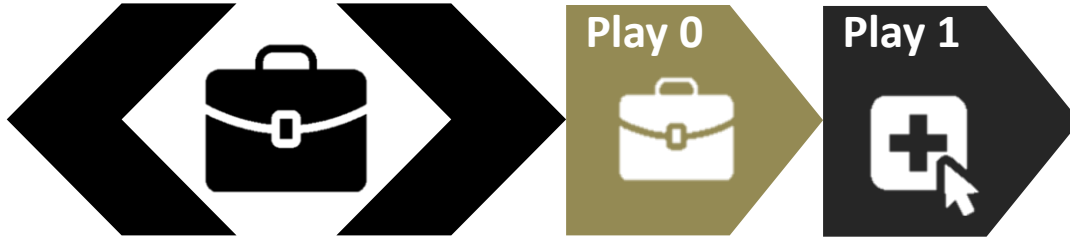


Focused Views: Table of Contents



Click on the symbol for each Play for a quick link to each section.

For Executives



For Providers



For Digital Health Specialists



A Note for Digital Health Vendors



For Digital Health Vendors

Ontario's digital health ecosystem includes a wealth of innovative digital health vendors, from emerging start-ups to large-scale multinational firms.

Vendors are critical in enabling Ontario Health Teams, providing technologies and expertise that power clinical systems, integration solutions, patient access channels, analytics capabilities and more. At the same time, it is crucial that any technologies or services that are deployed in OHTs have the ability to work with the larger digital health ecosystem in Ontario so that OHTs do not run the risk of becoming “digital silos” where systems can't talk to those of other OHTs and patient information becomes trapped.

We encourage vendors and OHTs to work together in a way that respects the existing, taxpayer-funded provincial services available in the [Digital Health Service Catalogue](#) and the standards established in the [Digital Health Policy Guidance Document](#) to ensure the interoperability and comparability of technologies across the province.

The ministry is also available to answer questions, concerns, or ideas from the vendor community. Please contact OHTdigital@ontario.ca with any inquiries.



List of Plays



0



Executive Summaries

Executive summaries for each play in the Playbook.

1



What Can Digital Health Do for You?

An introduction to digital health, including the landscape of tools and assets available in Ontario.

2



Select Your Suite of Services

A [Digital Health Service Catalogue](#) that outlines the assets, services and infrastructure services that are provincially available for use by OHTs to satisfy digital health needs and requirements.

3



Supporting an Integrated System

A summary of a set of policy directions, including the [Digital Health Policy Guidance](#) document, on the implementation and use of digital health tools and assets.

4



Innovate and Try New Things

Considerations for digital health innovation adoption and upcoming potential proof-of-concept projects.

5



Assistance for OHTs

Contact information for any inquiries or assistance.

0



Executive Summaries

EXECUTIVE SUMMARY

Play 1: What Can Digital Health Do for You?



In this Play, Ontario Health Teams can:

- Learn about digital health and the digital health landscape in Ontario.
- Understand the capabilities and benefits of digital health for providers and patients.
- Learn how the Playbook can support your digital health planning.

Ontario Health Teams will provide a new way of organizing and delivering services in local communities to enable integrated health care. The right combination of digital health services and tools will be key to supporting seamless and efficient delivery of care.

- **For providers**, digitally-enabled OHTs offer clinicians and health service providers access to the information they need, when they need it, and more efficient channels for delivering services.
- **For patients and caregivers**, this means having access to patient health information and the choice to engage with providers in person or via digital tools, such as video visits and secure messaging. Through digitally-enabled OHTs, when a patient goes from one care setting to another, their information will follow them.
- **For organizations**, this means equipping teams with workflow tools and business information systems that allow them to focus their efforts on providing care directly to patients while minimizing time lost to inefficient and redundant reporting activities. The creation of OHTs presents a unique opportunity to consider how digital technologies can support patient journeys and efficient clinical processes.



EXECUTIVE SUMMARY

Play 2: Select Your Suite of Services



In this Play, Ontario Health Teams can:

- Understand what digital assets, tools, programs and services are available to OHTs through the Digital Health Service Catalogue.

Ontario's digital health delivery organizations provide tools and services that improve outcomes for patients and providers. From virtual care to health data collection and sharing, these solutions and assets lead to increased clinical value and better health care system integration.

In addition, OHTs can always choose to utilize digital health workflow tools to leverage and maximize the value of existing assets, strengthen reporting and analytics, and meet privacy and security requirements to protect patient health information.

In collaboration with provincial digital health delivery organizations, the Ministry of Health has developed Ontario's [Digital Health Service Catalogue](#). The Catalogue ensures OHTs are able to leverage and adopt existing technologies that support their digital health objectives.



EXECUTIVE SUMMARY

Play 3: Supporting an Integrated System



In this Play, Ontario Health Teams can:

- Understand the provincial digital tools and maturity targets for all OHTs.
- Find summaries of solution-specific as well as general policy directions that guide the procurement, implementation and evaluation of digital health solutions.

To ensure that the basic tools and functionalities are in place to support integrated care delivery, the ministry has compiled a set of minimum requirements for prospective OHTs and a list of policy directions that guide them when selecting, procuring, implementing and evaluating digital health tools. Detailed information on the draft policy directions can be found in the [Digital Health Policy Guidance](#)* document. Summaries of all the policies can be found in this Play.

These policy directions are designed to ensure that OHTs will be able to leverage and support provincial digital assets and data for coordinated, comprehensive, and seamless care. They also provide guidance to ensure that OHTs have flexibility in selecting local solutions, while maintaining interoperability and comparability of technologies across the system.

*In development and for discussion



EXECUTIVE SUMMARY

Play 4: Innovate and Try New Things



In this Play, Ontario Health Teams can:

- Learn about key considerations for adopting innovative digital health technology.
- Consider proof-of-concepts the ministry is interested in helping to advance.

Technology is ubiquitous and constantly improving to better serve consumers and their needs. Moving beyond what is contained in the [Digital Health Service Catalogue](#), Ontario Health Teams have the flexibility and opportunity to leverage innovative digital health technologies to provide better and more efficient care, enable better health care outcomes and address the local needs of their patients and providers.

Ontario has a rich ecosystem of digital health innovators, creating products that improve the delivery of health care and the patient experience based on cutting edge technologies. The Ministry of Health is interested in exploring various innovative ideas, and could support OHTs looking to work with the ministry on a limited selection of proof-of-concept projects.



EXECUTIVE SUMMARY

Play 5: Assistance for OHTs



In this Play, Ontario Health Teams can:

- Learn what guidance and support is available.
- Understand how they can contact the Ministry of Health for further information.

The Ministry of Health will support OHTs through a centrally coordinated program of supports. This model will include resources and supports in key areas aligned with the OHT model, such as: digital health, provincial data, analytics, information management and privacy, governance and leadership, patient partnership and community engagement, evidence translation, and primary care engagement.

Given the foundational role that digital health will play in transforming health care delivery in Ontario, the Ministry of Health, along with its specified digital health delivery organizations, intend to further support OHTs through a shared services and support model. This support includes:

- Assisting OHTs with crafting a digital plan to support integrated care;
- Priority access to the contents of the [Digital Health Service Catalogue](#);
- An integrated service desk function and the provision of technical support; and
- Coordinated delivery of change management services.



1



What Can Digital Health Do for You?

EXECUTIVE SUMMARY

Play 1: What Can Digital Health Do for You?



In this Play, Ontario Health Teams can:

- Learn about digital health and the digital health landscape in Ontario.
- Understand the capabilities and benefits of digital health for providers and patients.
- Learn how the Playbook can support your digital health planning.

Ontario Health Teams will provide a new way of organizing and delivering services in local communities to enable integrated health care. The right combination of digital health services and tools will be key to supporting seamless and efficient delivery of care.

- **For providers**, digitally-enabled OHTs offer clinicians and health service providers access to the information they need, when they need it, and more efficient channels for delivering services.
- **For patients**, this means having access to their own health information and the choice to engage with providers in person or via digital tools, such as video visits and secure messaging. Through digitally-enabled OHTs, when a patient goes from one care setting to another, their information will follow them.
- **For organizations**, this means equipping teams with workflow tools and business information systems that allow them to focus their efforts on providing care directly to patients while minimizing time lost to inefficient and redundant reporting activities. The creation of OHTs presents a unique opportunity to consider how digital technologies can support patient journeys and efficient clinical processes.





What does the Ontario Digital Health Landscape look like?



Ontario's digital health infrastructure consists of solutions and assets that lead to increased clinical value and better health care system integration. The landscape of options ranges from provincially available data and credentialing tools to locally customized suites of virtual care and access solutions. The following describes the types of digital solutions that OHTs will be able to leverage:

①

Foundational provincial digital systems

All OHTs will be connected to the foundational provincial digital systems. Through the use of ONE ID, authorized service providers can contribute to and access patient data stored in provincial health data repositories and directories.

②

Digital enhancements for provider workflow and records management

OHTs are encouraged to take advantage of a number of solutions deployed across Ontario that support better communication and transitions in care, leaner workflow and greater clinical standardization. Although all OHTs will leverage the solutions listed under this category, how they are deployed will depend on the configuration of the OHT.

③

Provider and patient tools for digital access to care

The third category of digital solutions includes provider and patient-facing tools that offer options in how care can be accessed. This includes patient portals, secure messaging, virtual provider visits and virtual consultations. OHTs can adopt and deploy a suite of these services customized to their local needs and environment.





Digital Health Plan

Developing a Digital Health Plan

The Ministry of Health's overarching goals are to provide better patient and caregiver experience, better patient and population health outcomes, better value and efficiency, and better provider experience. The successful implementation of the OHT model will require groups to develop and implement effective digital health plans.

As part of this process, OHTs are going to need to undertake the following:

- 1) Understand and articulate the current state of clinical workflows and processes for those organizations that will be part of the OHT, and their use of supporting digital health technology.
- 2) If necessary, redesign clinical workflows and undertake process redesign activities to support integrated care delivery.
- 3) Describe the end state of digital health for the OHT.
- 4) Outline the key activities to be undertaken over the next 12 months to begin to move from the current state to the end state.

This Playbook provides guidance for all of the above. The ministry aims to enable OHTs to be innovative and flexible while also ensuring that a minimum set of data can flow provincially, and the Playbook outlines the different mechanisms that OHTs should use to achieve these goals. In some circumstances, this will entail the adoption of common core solutions, while in other cases OHTs will have local flexibility within an interoperable, standards-based framework.

As part of the OHT support model, the ministry and delivery organizations will be available to assist OHTs in developing their up-front digital health plan to guide this work moving forward.



CELESTE'S EXPERIENCE – OHT Future State

Celeste's Experience

Digital Health Supports



After experiencing shortness of breath, chest pain, and irregular heartbeat, Celeste goes to her local hospital, where she is closely monitored. Digital health services allow her to experience a seamless health care journey from one point of care to the next.



At the ER,

the doctor reviews the results and discharges Celeste, but recommends a follow-up with her family physician.



At discharge,

a Care Navigator helps Celeste create a care plan to maintain her health and well-being.



At her follow-up,

Celeste's family physician recommends that she see a cardiologist.



At the cardiologist's,

Celeste receives helpful advice to manage her condition.

Hospital Admission

- The ER doctor is able to **access provincial data** to check her medication records for drug interactions. Having her records in the **Hospital Information System** means Celeste doesn't need to tell her story multiple times.
- **eNotification** alerts Celeste's family physician that she has been admitted to the hospital.

Hospital Discharge

- The Care Navigator uses **CHRIS** to assess Celeste's current situation and creates a personalized home care plan.
- **eNotification** lets the family physician know that she has been discharged, and the doctor's office follows up to schedule an appointment.
- Celeste is able to book an appointment with her family physician from her **patient portal**.

Follow-up

- **HRM** provides the family physician with Celeste's hospital discharge report.
- As Celeste exhibits hypertension, the family physician is able to use OMD's **EMR Quality Dashboard** to ensure her blood pressure will be monitored and tracked in accordance with best-practice guidelines.
- **eReferral** helps the family physician quickly find a cardiologist close to Celeste's home, for additional follow up.

Referral

- Using a **provincial viewer**, the cardiologist is able to see Celeste's **recent test results and drug information**, and so is able to avoid issuing duplicative tests.
- The cardiologist offers the option to participate in a **digital self-management and remote monitoring program**, which will give Celeste greater control over her condition and help to keep her out of hospital.



LIAM'S EXPERIENCE – OHT Future State



After an impressive basketball season, Liam feels sharp pain in his left shoulder and an orthopaedic surgeon determines that surgery is the best treatment option. Using various digital health services, Liam is able to navigate a personalized and effective health care system.

Liam's Experience



At the clinic,

Liam's family physician believes he may be a candidate for shoulder surgery.



At the Hospital,

the surgeon can easily **access the necessary information** to ensure a safe procedure.



At home,

Liam can focus on his rehabilitation through a **virtual care program**.



At his follow-up,

Liam has a **virtual video visit** with the surgeon to ensure a healthy recovery.

Initial triage & assessment

Surgery

Hospital Discharge

Post-Operative Follow-up

Digital Health Supports

- Instead of waiting months for a preliminary consultation with an orthopaedic surgeon, the family physician uses **eConsult** to contact a specialist who confirms, within two days, that Liam needs surgery.
- **eReferral** then allows the family physician to quickly find an orthopaedic surgeon close to Liam's home, thereby significantly reducing his wait time for surgery.

- Prior to surgery, the specialist accesses a **provincial viewer** to review Liam's medical history.
- **eNotification** lets Liam's family physician know when the procedure is over and when Liam has been discharged from the hospital.

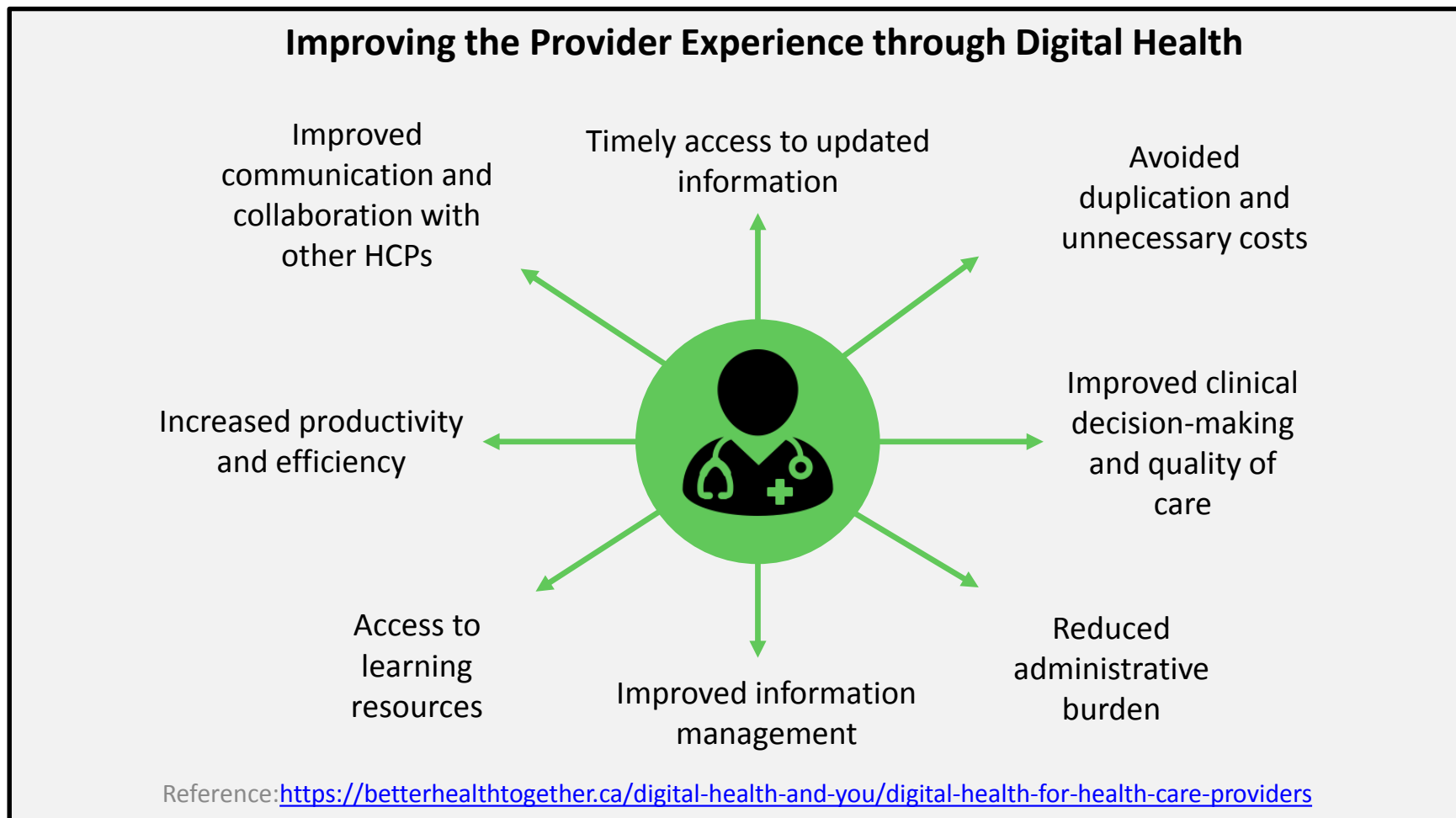
- Liam uses his **patient portal** to contact the surgeon and ask about his upcoming therapy session.
- Using **ONE ID**, Liam's surgeon responds quickly to his questions through **secure online messaging**.

- During the **virtual video visit**, the surgeon confirms the wounds are healing well and that there is no need for an in-person follow-up.
- The surgeon updates Liam's **integrated health record** in near real-time, meaning both the family physician and Liam can access the updated information electronically.



THE PROVIDER EXPERIENCE – OHT Future State

Though adjusting clinical practices can be overwhelming at times, digital health will enable OHTs to catalyze the skills, knowledge and experience of hard-working professionals across the health care system. The ministry is dedicated to ensuring health care providers across Ontario experience the multiple benefits of fully integrated care.





Facilitating Integrated Care

Alignment with Relevant Provincial Digital Health Directions

The success of OHTs will be driven, in part, by establishing an organized approach to the spread and scale of digital health. The contents of the Playbook outline how digital health can help Ontario Health Teams meet their clinical and financial objectives.

- For a full list of the services and programs that have been built or procured for use by the Ontario health system, please refer to the [Digital Health Service Catalogue](#), found in Play 2.
- For information on relevant provincial digital health policy directions please see the [Digital Health Policy Guidance](#) document, found in Play 3.
- For more information on the considerations for digital health innovation adoption or how OHTs can participate in potential [proof-of-concept projects](#) to improve patient and provider experience, please refer to Play 4.

Play 2



Play 3



Play 4



2



Select Your Suite of Services

Key Take-Aways

Play 2: Select Your Suite of Services



In this Play, Ontario Health Teams can:

- Understand what digital assets, tools, programs and services are available to OHTs through the Digital Health Service Catalogue.

Ontario's digital health delivery organizations provide tools and services that improve outcomes for patients and providers. From virtual care to health data collection and sharing, these solutions and assets lead to increased clinical value and better health care system integration.

In addition, OHTs can always choose to utilize digital health workflow tools to leverage and maximize the value of existing assets, strengthen reporting and analytics, and meet privacy and security requirements to protect patient health information.

In collaboration with provincial digital health delivery organizations, the Ministry of Health has developed Ontario's [Digital Health Service Catalogue](#). The Catalogue ensures OHTs are able to leverage and adopt existing technologies that support their digital health objectives.





Digital Health Service Catalogue

Introducing the Digital Health Service Catalogue

Effective and integrated digital health delivery requires collaboration across the health care system. Ontario's digital health delivery organizations provide tools and services that improve outcomes for patients and providers. From virtual care to health data collection and sharing, Ontario's digital health infrastructure consists of solutions and assets that lead to increased clinical value and better health care system integration.

A number of provincially-available digital health tools and services are available in the [Digital Health Service Catalogue](#) to help OHTs to meet their digital health objectives. The Catalogue includes both provincial items that are required for use and solutions that are available to OHTs should they choose to adopt them. When considering any digital solution, OHTs are asked to refer to relevant provincial policy directions to ensure that they meet provincial standards prior to procurement.





Digital Health Service Catalogue



How to use the Digital Health Service Catalogue

The [Digital Health Service Catalogue](#) is designed to assist OHTs with understanding the digital landscape in the province. It lays out the digital health assets, services and infrastructure services that are provincially available for use by all OHTs.

The Catalogue will help OHTs:

- 1) Understand what is available;
- 2) How they could benefit from using a particular asset or service; and
- 3) Who to contact to learn more about a particular asset or service.

Whether selecting digital health services from the Digital Health Service Catalogue or procuring services not contained in the Catalogue, OHTs must ensure their implementation and deployment efforts comply with the relevant digital health policy directions. The Digital Health Service Catalogue is complimentary to the [Digital Health Policy Guidance](#) and the two documents should be read in tandem.

The Ministry of Health will assist OHTs in liaising with applicable digital health delivery organizations for items listed in the Digital Health Service Catalogue.





Digital Health Service Catalogue

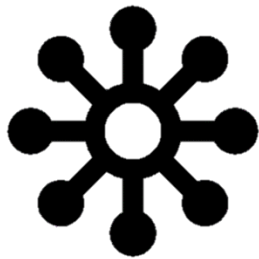
The Digital Health Service Catalogue

Please read the Service Catalogue thoroughly to ensure that your OHT leverages provincial offerings. Each item included in the Service Catalogue will provide the following:

	➤ A description of the tool, service or asset
	➤ Intended end users of the item
	➤ The sector(s) served
	➤ Whether the item is required for OHT use and rationale
	➤ Which of the Digital Health Policies are applicable
	➤ Relevant contacts for additional information or support



3



Supporting an Integrated System

Key Take-Aways

Play 3: Supporting an Integrated System



In this Play, Ontario Health Teams can:

- Understand the provincial digital tools and maturity targets for all OHTs.
- Find summaries of solution-specific as well as general policy directions that guide the procurement, implementation and evaluation of digital health solutions.

To ensure that the basic tools and functionalities are in place to support integrated care delivery, the ministry has compiled a set of minimum requirements for prospective OHTs and a list of policy directions that guide them when selecting, procuring, implementing and evaluating digital health tools. Detailed information on the draft policy directions can be found in the [Digital Health Policy Guidance](#)* document. Summaries of all the policies can be found in this Play.

These policy directions are designed to ensure that OHTs will be able to leverage and support provincial digital assets and data for coordinated, comprehensive, and seamless care. They also provide guidance to ensure that OHTs have flexibility in selecting local solutions, while maintaining interoperability and comparability of technologies across the system.

*In development and for discussion





Supporting an Integrated System

OHT Readiness Criteria	Year 1 Expectations
<ul style="list-style-type: none">Confirmed commitment to offer one or more virtual care services to patientsA plan has been proposed to provide patients with some digital access to their health informationConfirm plan to share information across OHT partners for the purposes of integrated care delivery, planning, and quality improvementIdentify existing digital health gaps and confirm commitment to develop a plan (with provincial support, if desired) to address them as a priorityDemonstrate that at least some partners have the ability to adopt and provide some digital options for decision support (e.g., computerized physician order entry), operational insights, population health management, and track and report on key indicatorsIdentify a single point of contact for digital health activities moving forward	<ul style="list-style-type: none">Expanded virtual care offerings from baseline, and 2-5% of Year 1 patients who received care from the Ontario Health Team had a virtual encounter in Year 110-15% of Year 1 patients who received care from the Ontario Health Team digitally accessed their health informationHarmonized Information Management (IM) plan in placeIncreased adoption of relevant digital health tools amongst the Ontario Health Team partners (e.g. ONE-ID, provincial clinical viewers, eConsult)Plan is in place to streamline and integrate point-of-service systems consistent with provincial frameworks and to use data to support enhanced patient care and population health managementComplete and accurate reporting in place on required indicators

During Year 1, OHTs will work closely with the ministry to assess digital health and IM gaps. OHTs will be required to develop appropriate digital health and implementation plans, which includes participation in a digitally-focused evaluation with an IM component.





Digital Health Policies

How will OHTs deliver integrated digital health care?

In order to ensure a consistent and coordinated approach to deploying digital supports across the province, the ministry has established a set of draft policy directions that will guide implementation efforts and the use of digital health tools and assets. OHTs will be asked to comply with the following:

- **4 General digital health policy directions** to support the implementation and/or ongoing use of all digital health systems:
 - Digital Health Information Exchange Policy
 - Digital Health Investment and Value-for-Money Policy
 - Digital Health Privacy and Security Policy
 - Digital Health Reporting and Performance Policy
- **3 System-specific policy directions** to guide implementation activities for those OHTs that are undertaking new procurements or significant upgrades of any of the following:
 - Point of service systems (e.g. electronic medical record (EMR) systems and Hospital Information systems (HISs))
 - Patient digital access to care, such as:
 - Virtual visits
 - Online appointment booking
 - Patient self-management tools
 - eServices





Digital Health Policies

General Digital Health Policy Directions

General Digital Health Policy Directions (Draft)	Summary
Digital Health Information Exchange Policy	Requirements for the use of modern technical approaches (e.g. FHIR-based APIs and web services) by solutions used within an OHT in order to promote efficiency and seamless access to patient records.
Digital Health Investment and Value-for-Money Policy	Guidance to ensure that health service providers achieve value for money from their procurement activities and that vendors are reimbursed for the outcomes that their products and services deliver. This policy also leverages local, regional and/or provincial purchasing power to create value in the healthcare system, promote successful innovations to spread and to move away from localized purchases that are based on cost and technical factors alone.
Digital Health Access, Privacy and Security Policy	Guidance for OHTs in developing and operationalizing information practices relating to the collection, use and disclosure of personal health information (PHI) in compliance with the Personal Health Information Protection Act (PHIPA).
Digital Health Reporting and Performance Policy	Requirements for OHTs to report against a limited number of indicators, to ensure investments in Ontario's health care system are transparent and accountable





Digital Health Information Exchange Policy

Background

The province's digital health infrastructure is being improved by adopting modern technical standards and investing in projects that increase the interoperability, technical capacity, and value of existing digital health assets.

Policy Direction

This **"Digital Health Information Exchange Policy"** guides all of the province's digital health delivery organizations who have control or custodianship of digital health assets that either hold or enable access to Ontarians' personal health information (PHI) to:

1. Make connections to their digital health assets available via APIs based on the HL7 FHIR standard, where appropriate, so that these assets may exchange recognized and meaningful data.
2. Make available those APIs through modern web services that enable connections to their respective digital health assets.
3. Make available development testing environments and relevant and appropriate technical support documentation for the APIs in publicly available formats (e.g. posted on their website).
4. Modernize relevant digital health assets under their control or custodianship according to prescribed technical standards. This modernization includes adopting modern standards for data exchange, data content and health terminology standards (i.e. HL7 FHIR, SNOMED CT), and web applications (i.e. SMART on FHIR).
5. Make available a minimum data set through standardized APIs to ensure continuity of care across various care and practice settings, and to allow for more HSP and patient choices in accessing and exchanging health information.

Rationale for this Policy Direction

Ontario's aspirations for an integrated health system face a number of practical barriers for which policy direction on standards is required, including lack of interoperability across provincial data assets and clinical systems, and fragmentation that limits consistent and reliable integration of health information.

The anticipated impact of this policy is more flexibility in ways people and HSPs access patient health information, improved information sharing between HSPs, and greater value for money and increased utility of government investments.

For further details, please refer to the [Digital Health Policy Guidance](#) document.





Digital Health Policies

Digital Health Investment and Value-for-Money Policy

Background

Procurement is a complex and resource intensive task with documents and processes that are lengthy, prescriptive and overly burdensome for both purchasers and vendors. There is an opportunity to develop a policy that aligns supply chain management with the delivery of stronger patient-centred services and integrated care across the system enabled by digital technologies.

Policy Direction

This **“Digital Health Investment and Value-for-Money Policy”** (the policy) guides the province’s health service providers to:

1. Understand clinical workflows and map opportunities where digital solutions can add value, improve effectiveness or realize efficiencies. Such activities should be included within the planning process prior to undertaking the procurement of new digital health tools.
2. Abide by the principles of the Broader Public Sector Procurement Directive (e.g. accountability, transparency, value for money, quality service delivery and process standardization) and any future direction from the Ministry of Government and Consumer Services regarding Broader Public Sector procurement, where appropriate;
3. Comply with the Interim Measures (effective March 18, 2019) of the Ontario Public Service Procurement Directive, where appropriate and as updated from time to time;
4. Engage in value based procurement, which considers stating the problem that needs to be solved rather than including technical language for solutions in procurement documents;
5. Leverage regional and provincial services (e.g. shared services organizations, vendor of record agreements, framework agreements, etc.) to ensure procurement expertise, best practices in sourcing and value for money;
6. Include provisions within competitive procurement documents and agreements that request a benefits evaluation to be completed by the ministry through the Centre for Digital Health Evaluation (or equivalent) and then assessed by the ministry Investment Management Framework;
7. Consider incentive-based reimbursement models (e.g. models that pay for outcomes and share risk) for non-commodity digital health innovations; and
8. Develop extensible agreements that state how future purchasers may participate in the procurement, which includes parameters around terms, pricing and at what point the term becomes “stale”.

Rationale for this Policy Direction

This policy is intended to ensure that health service providers achieve value for money from their procurement activities, and that vendors are reimbursed for the outcomes that their products and services deliver. This policy also leverages local, regional and/or provincial purchasing power to create value in the healthcare system, promote successful innovations to spread and to move away from individual purchases that are based on cost and technical factors alone.

For further details, please refer to the [Digital Health Policy Guidance](#) document.





Digital Health Access, Privacy and Security Policy

Background

Ensuring the privacy and security of personal health information (PHI) is an obligation for health information custodians and service providers under the Personal Health Information Protection Act, 2004 (PHIPA), and is key to maintaining Ontarians' confidence in digital health and a connected health system. While progress has been made, there is still significant friction as a result of health care providers' uncertainty in interpreting PHIPA to manage the risk of sharing information, and the resulting inconsistencies in health information management practices across the system.

Policy Direction

This **"Digital Health Privacy and Security Policy"** is intended to guide OHTs in developing and operationalizing information practices relating to the collection, use and disclosure of PHI in compliance with PHIPA.

1. HICs and their agents participating within an OHT must harmonize their privacy and security policies, procedures and practices amongst themselves with respect to operations conducted within the governing framework of the OHT.
2. HICs and their agents participating within an OHT must take reasonable steps to ensure that patients understand any information practices that relate to the operation of the OHT, and how these may differ from the practices of the HIC when it is operating independently.
3. Initially, OHTs and OHT participants must comply with any and all privacy and security policies associated with digital health assets that are utilized by the OHT and/or participants.
4. OHTs may wish to leverage OntarioMD Privacy and Security Training and resources to support their understanding and compliance with privacy and security requirements.
5. OHT participants must have in place and maintain policies, procedures, practices, and agreements that are necessary to enable them to comply individually and collectively with their legal and regulatory obligations (including those under PHIPA) and with other relevant policies such that an individual served by an OHT: may make a request for access, correction or a consent directive just once to any OHT participant, and receive a response that addresses any affected PHI, regardless of which participants are custodians of that PHI. Further, such an individual in respect to his or her PHI, may pose a question, make a complaint or report a suspected breach of privacy or security to any OHT participant, and he or she will receive one response, regardless of how many participants may need to contribute to that response.
6. OHT participants must collectively identify and mitigate privacy and security risks and areas of non-compliance in respect of OHT participants' connectivity with provincial digital health assets. OHTs may want to consider establishing a joint function for this purpose.

Rationale for this Policy Direction

This policy is critical to creating consistent OHT practices for managing the collection, use and disclosure of PHI so that more HCPs and patients can have seamless access to patient health information in a way that protects individual privacy.

For further details, please refer to the [Digital Health Policy Guidance](#) document.





Digital Health Reporting and Performance Policy

Background

The Ministry of Health (MOH) is committed to ensuring investments in Ontario's health care system are transparent and accountable. Ontario Health Teams (OHT) are a key player in advancing the digital maturity of Ontario's health care system, and as such are required to help track progress.

Policy Direction

This **"Digital Health Reporting and Performance Policy"** (the policy) guides all digital health delivery organizations to:

1. Report annually on the sets of digital health solutions being developed, procured and/or otherwise deployed within the OHT to improve Ontario's digital health maturity and interoperability (e.g. OHTs should report on digital health assets in which they are investing to ensure the province has a centralized understanding of Ontario's digital health landscape); and
2. Report on a limited set of performance and accountability measures on a quarterly basis to facilitate provincial tracking of digital health maturity.

Please note that specific indicators are under development.

All reporting will be done in alignment with an OHT performance measurement framework and broader ministry reporting.

Rationale for this Policy Direction

The province relies on local delivery organizations to improve Ontario's digital health by adopting and using digital health solutions. While data about some digital health solutions is available from provincial delivery organizations (e.g., Ontario Health), for solutions implemented based on local choice, local data is necessary to maintain a fulsome understanding of digital health maturity. By aligning digital health performance measurement and reporting across the province, the province can assure accountability and ensure to make the strategic adjustments necessary to continue to enable and support the use of digital health assets to improve healthcare in Ontario.

For further details, please refer to the [Digital Health Policy Guidance](#) document.





Digital Health Policies

System-Specific Policy Directions

System-Specific Policy Directions (Draft)	Summary
Clinical Systems Policy	This policy defines requirements that OHTs should meet in order to ensure their point-of-service clinical system allows providers to access relevant health information, enables patients to access their own personal health information, and facilitates data extraction for system-level performance measurement
Patient-Facing Digital Health Policy	This policy directs all OHTs to offer a minimum set of functionalities for their patients to enhance how and when they receive care and access their personal health information.
eServices Solutions Policy	This policy directs all Ontario Health Teams to offer eServices (i.e. eConsult and eReferral) and also provides implementation guidance to enhance how providers communicate to support transitions in care. Guidance is also provided to technology service providers in order to comply with provincial requirements.





Clinical Systems Policy

Background

A clinical system is an information system that allows providers to access patient data for the purposes of providing care. Clinical systems also provide embedded clinical best practices and standards. In order to ensure patients receive integrated, coordinated care, there is a need to develop principles that OHTs should apply when considering their clinical system strategy and future implementations.

Policy Direction

The clinical systems policy outlines the requirements that Ontario Health Teams will need to meet when planning, procuring, upgrading or implementing a clinical information system:

1. **Standardization:** Each OHT should develop a clinical standards framework and must create a process for incorporating the latest evidence into frontline systems. OHTs should align their clinical systems to existing provincial standards and should contribute to provincial governance processes to develop clinical, technical and business standards that can be embedded in clinical systems.
2. **Data:** Any governance structure that an OHT has in place must have an active data oversight function that ensures appropriate availability, use and quality of the data within their systems, should include an audit function if appropriate, and should be aligned to any applicable provincial data governance body.
3. **Technology:** Clinical systems should leverage a mature and reliable hosting model (e.g. cloud-based, Application Service Provider (ASP) model) and any new systems that are to be locally hosted should be accompanied by a business case supporting the approach. The OHT should develop a plan to move towards a smaller number of instances in each sector within the OHT and submit it to the ministry.
4. **Implementation:** In the near-term, instances of new systems should be shared between organizations and OHTs should consume and contribute to any existing or new provincial systems.
5. **Procurement:** Procured systems will be required to incorporate the most current version of provincial standards (e.g. OntarioMD Certification). All HIS procurements and significant upgrades must be for a Provincial Reference Model (PRM) where one exists; if one does not exist, the OHT should work with the ministry to build a new PRM for the vendor's solution.

As OHTs are planning for and implementing these systems, they should work with the ministry to assess the most applicable and relevant supports available in order to ensure they are able to meet the requirements defined in this policy.

Rationale for this Policy Direction

This policy defines requirements that OHTs must meet in order to ensure their clinical systems allow providers and organizations to access relevant health information; enable patients to access their own personal health information; facilitate data extraction for OHT and system-level performance measurement; and reduce costs by leveraging shared systems and standards.

For further details, please refer to the [Digital Health Policy Guidance](#) document.





Patient-Facing Digital Health Policy

Background

Patient-facing digital health refers to the use of digital tools that make it easier and more convenient for patients and their caregivers to interact with Ontario's health care system, anytime and anywhere they need it. Through a patient-facing digital health policy, a wide range of health care services will be made available through digital platforms that are more convenient for patients, just as consumers have come to expect in other industries such as banking and travel.

Policy Direction

This policy for patient-facing digital health solution adoption directs all Ontario Health Teams and/or other provider groups to offer a minimum set of functionalities for their patients, and also provides implementation guidance. The minimum functionality requirements are:

- 1) **Virtual Visits:** Traditional clinical care interactions and follow-ups between patients and providers conducted through digital channels. Modalities include video visits, audio call and electronic messaging.
- 2) **Patient empowerment and self-management:** Patients are able to access their own PHI and use digital self-care tools and programs to support self-management and remote monitoring of their condition. Modalities include patient access channels, mobile apps, remote monitoring platforms, web portals.
- 3) **Online appointment booking:** Similar to the consumer experience Ontarians have come to expect, patients are able to manage administrative activities digitally at the practice-level for all providers and sectors and book appointments online.

The ministry has developed implementation guidelines to ensure that, among other factors, the patient experience is considered (e.g., minimizing the number of portals/solutions for the required functionalities), OHTs leverage expertise and best practice, and other provincial standards and requirements are met.

Rationale for this Policy Direction

A policy for enhancing patient-facing digital health will ensure that all Ontarians have equitable access to choose digital health options for receiving care. This policy will help patients, and their families and caregivers, access and control how and when they receive care and access their own personal health information, enabling them to become better partners in managing their own health.

For further details, please refer to the [Digital Health Policy Guidance](#) document.





eServices Solutions Policy

Background

At the end of a clinical interaction, clinicians undertake many transactional processes to obtain services for patient care, such as referring patients to other providers, prescribing drugs, ordering lab tests or imaging, and applying for supports such as assistive device coverage. Conventional processes for these activities are largely fax-and-paper-based, resulting in significant administrative burden and provider burnout and patients falling through the cracks and/or facing long wait times due to untraceable processes.

The ministry is currently working to develop an eServices program that would treat these clinically related activities as part of a holistic provider workflow and build a technical architecture that facilitates interoperability between different solutions. The ministry has already invested in eConsult and eReferral, which would be the first initiatives in scope of this program due to their track record of success in improving health system integration and smoother handoffs between care settings. eConsult enables primary care providers (e.g. family physicians and NPs) to engage in a secure electronic dialogue with specialists (community-based or hospital-based) around patient care. eReferral digitizes the traditionally paper-based fax referral process, which results in shorter wait times, fewer inappropriate referrals, and higher quality referrals.

Policy Direction

Under development

Implementation expectations for the near term are that OHTs should follow current provincial programs and direction:

- **eConsult:** Participation in the Provincial eConsult Program, led by the eConsult Centre of Excellence, hosted on the OTNhub.
- **eReferral:** As the first approach, OHTs should validate if active procurements currently available (e.g., the SCA program, Novari) meet their needs. Where OHTs choose to deviate from existing procurements, ministry consultation and approval is required.

This would help minimize the proliferation of other technology solutions, which would exacerbate the existing fragmentation in the technology landscape.

The ministry's emerging provincial eServices program would provide additional guidance for further expansion of eConsult and eReferral, as well as additional initiatives for implementation

For further details, please refer to the [Digital Health Policy Guidance](#) document.



4



Innovate and Try New Things

Key Take-Aways

Play 4: Innovate and Try New Things



In this Play, Ontario Health Teams can:

- Learn about key considerations for adopting innovative digital health technology.
- Consider proof-of-concepts the ministry is interested in helping to advance

Technology is ubiquitous and constantly improving to better serve consumers and their needs. Moving beyond what is contained in the [Digital Health Service Catalogue](#), Ontario Health Teams have the flexibility and opportunity to leverage innovative digital health technologies to provide better and more efficient care, enable better health care outcomes and address the local needs of their patients and providers.

Ontario has a rich ecosystem of digital health innovators, creating products that improve the delivery of health care and the patient experience based on cutting edge technologies. The Ministry of Health is interested in exploring various innovative ideas, and could support OHTs looking to work with the ministry on a limited selection of proof-of-concept projects.





Innovative Objectives

OHTs are encouraged to take a holistic approach to implementing innovative digital health technology projects. OHTs should consider innovative digital tools that achieve the goals of the quadruple aim:

- 1) Improved health outcomes
- 2) Improved patient experience
- 3) Reduced costs
- 4) Increased provider satisfaction

When assessing new digital health solutions, OHTs should also work collaboratively with the targeted clinical users and patients to ensure the proposed technologies meet their needs. Other factors, such as easy integration into existing care pathways, and the level of specialized support for deployment and adoption should also be considered.





Key Supports for Innovation

The Ministry of Health recognizes the importance of innovation in the health care sector. Consequently, the ministry and the specified digital health delivery organizations will provide the necessary guidance and support for OHTs looking to innovate. Resources and supports available to OHTs include:



The [Digital Health Policy Guidance](#) document, which offers a range of key considerations to be considered in the selection and adoption of any off-market digital tools, including the ministry's Digital Health Investment and Value-for-Money Policy (see Play 3 for further information).



The Ministry of Health and its partners will support OHTs through a centrally coordinated program of supports. This model will include resources and supports in key areas aligned with the OHT model, such as: digital health, provincial data, analytics, information management and privacy, governance and leadership, patient partnership and community engagement, evidence translation, and primary care engagement





Innovate

Proof-of-Concepts

OHTs will have priority access to participate in potential proof-of-concepts (POCs), which may include other supports. Interested OHTs are encouraged to reach out to the ministry (contact information provided in play 5) to discuss opportunities.

Priority Areas for Proof-of-Concepts Include:

- **Patient Digital Identity**

- The ministry has identified digital identity, access and authorization (IAA) as a critical enabler to support the success of the Ontario Health Team model. A modern patient experience in the context of OHTs requires the establishment of a digital IAA mechanism so that patients may access personal health information (PHI) held by OHTs and care services through the use of digital tools.

- **Population Health**

- Access to, and analysis of, local population health data can help Ontario Health Teams to streamline and prioritize their services for the greatest impact. The ministry is proposing to assist Designated OHTs or OHT Candidates through a number of potential proof-of-concepts that would seek to improve their ability to capture and utilize data on population health through the use of innovative digital tools or techniques within an OHT.

[Continued on next page.]





Proof-of-Concepts (continued)

- **Clinical System Consolidation**

- Consolidation of clinical systems can help to support the goal of seamless information sharing across an OHT. The ministry is proposing to assist early adopter OHTs through a number of potential proof-of-concepts that would seek to improve clinical system capabilities (including through the use of innovative tools or techniques) within an OHT.

- **Clinical and Data Standardization**

- Clinical and data standards are a key enabler of integrated care. This PoC would focus on such activities as the development, implementation and adoption of a set of clinical standards using digital solutions or tools. Implementation would be across all OHT partners and should contain the ability to input and collect discrete and standard data, embedding of clinical standards in clinical systems and the ability to evaluate data to assess impact on patient care.



5



Assistance for OHTs

Key Take-Aways

Play 5: Assistance for OHTs



In this Play, Ontario Health Teams can:

- Learn what guidance and support is available.
- Understand how they can contact the Ministry of Health for further information.

The Ministry of Health will support OHTs through a centrally coordinated program of supports. This model will include resources and supports in key areas aligned with the OHT model, such as: digital health, provincial data, analytics, information management and privacy, governance and leadership, patient partnership and community engagement, evidence translation, and primary care engagement.

Given the foundational role that digital health will play in transforming health care delivery in Ontario, the Ministry of Health, along with its specified digital health delivery organizations, intend to further support OHTs through a shared services and support model. This support includes:

- Assisting OHTs with crafting a digital plan to support integrated care;
- Priority access to the contents of the [Digital Health Service Catalogue](#);
- An integrated service desk function and the provision of technical support; and
- Coordinated delivery of change management services.





Ministry of Health Supports

The Ministry of Health intends to support the development of OHTs. Some key examples include:

- Assistance in the crafting of OHT policy and digital plans to support integrated care;
- Assisting OHTs with barrier resolution;
- Supporting privacy and security requirements for OHTs;
- Developing standards and guidance for OHTs that support information management best practices in data quality, storage, transmission and disclosure;

OHTs can also benefit from a number of additional resources from digital health delivery organizations and experts in the health care sector. These resources are outlined in the following page.





Additional Supports for OHTs

Identified digital health delivery organizations will be responsible for supporting OHTs through the following means:

- Maintaining provincial digital catalogue services for priority roll out to the OHTs; and
- Service level accountabilities, including:
 - Client education and onboarding;
 - The provision of service;
 - Co-design activities with OHTs where invited; and
 - Any technical support.





Need assistance?



The ministry is dedicated to the successful transformation of health care through the creation of Ontario Health Teams.

For inquiries and assistance related to digital supports, please contact the Digital Health Secretariat at OHTdigital@ontario.ca.



Health care providers can also leverage the resources available from their professional associations to support with the OHT transition process. Please contact your association for more information.

END OF DOCUMENT



The Digital Health Policy Guidance Document

DRAFT IN DEVELOPMENT AND FOR DISCUSSION

The Ministry of Health (MOH)
August 2019

Contents

Introduction	2
Digital Health Information Exchange Policy.....	3
Digital Health Investment and Value for Money Policy	7
Digital Health Access, Privacy and Security Policy	9
Digital Health Reporting and Performance Policy	13
Clinical Systems Policy	14
Patient-Facing Digital Health Policy	17
eServices Policy	22

Introduction

In order to ensure a consistent and coordinated deployment of digital supports for Ontario Health Teams (OHTs) and across the province, the Ministry of Health (“the ministry”) has established a set of draft guidance documents on the implementation and use of digital health tools and assets.

OHTs will be asked to follow these draft policy directions.

- **Four general digital health policy directions** to support the implementation and/or use of all digital health systems:
 - Digital Health Information Exchange Policy
 - Digital Health Investment and Value for Money Policy
 - Digital Health Access, Privacy and Security Policy
 - Digital Health Reporting and Performance Policy
- **Three system-specific policy directions** to guide implementation activities for those OHTs that are undertaking new procurements or significant upgrades of any of the following:
 - Point of service systems (e.g. electronic medical record (EMR) systems and Hospital Information systems (HISs))
 - Patient-facing digital tools such as:
 - Virtual visits
 - Online appointment booking
 - Patient empowerment and self-management (including access to personal health information)
 - eServices (e.g., eReferral, eConsult)

How to use the Digital Health Policy Guidance Document

The Digital Health Policy Guidance Document guides how solutions are acquired, implemented or used.

The **four general digital health policy directions** apply to all digital health assets, services or tools used in Ontario, including items from the Digital Health Service Catalogue, and any solutions procured outside of the Catalogue.

The **three system-specific policy directions** apply to particular types of solutions, as outlined in the policies intended to ensure that all solutions procured within these categories meet minimum provincial requirements and service levels, while supporting integrated care across the province.

The success of OHTs will be driven, in part, by establishing an organized approach to the spread and scale of digital health. The Digital Health Policy Guidance Document represents an important milestone in establishing a strong foundation for interoperability and collaboration in Ontario.

Digital Health Information Exchange Policy

Background

While modest progress has been made in enabling information sharing across Ontario's health system, there is still significant unmet demand for seamless access to integrated patient records in order to improve patient care, streamline provider workflows and enable value-added uses of data such as population health.

To respond to this demand, the province's digital health infrastructure is being improved by adopting modern technical standards, and investing in projects that increase the interoperability, technical capacity, and value of existing digital health assets.

Making technical systems interoperable through modern technical standards is needed to let health service providers (HSPs), innovators, and ultimately, people access trusted patient health information in a frictionless, reliable, and consistent manner. By doing so, the anticipated impact of the policy is a wider selection of digital health tools for people and HSPs to access patient personal health information (PHI), improved information sharing, coordination and communication amongst HSPs, and greater value for money and increased utility of government investments.

Policy Direction

Since the full range of Ontario's digital health assets also include ones that are operated by the ministry or its agencies, this "Digital Health Information Exchange Policy" (the policy) guides all of the province's digital health delivery partners – including the ministry and its agencies, Ontario Health Teams, other funded organizations (e.g. OntarioMD, OTN) and those who deliver point of care systems for use by broader public sector partners (e.g. HIS and EMR vendors, service providers) – who have control or custodianship of digital health assets that either hold or enable access to Ontarians' PHI and care services to:

- Make connections to their digital health assets available via Application Programming Interfaces (APIs) based on the HL7 FHIR standard, where appropriate, so that these assets may exchange recognized and meaningful data.
- Make available those APIs through modern web services that enable connections to their respective digital health assets.
- Make available development testing environments and relevant and appropriate technical support documentation for the APIs in publicly available formats (e.g. posted on their website).
- Modernize relevant digital health assets under their control or custodianship according to prescribed technical standards. This modernization includes adopting modern standards for data exchange, data content and health terminology standards (i.e. HL7 FHIR, SNOMED CT), and web applications (i.e. SMART on FHIR).
- Make available a minimum data set through standardized APIs to ensure continuity of care across various care and practice settings, and to allow for more HSP and patient choices in accessing and exchanging health information.

Rationale for this Policy Direction

The government's Ontario Health Team model of integrated delivery of health care in the province is supported in large part by the Digital First for Health Strategy. As the provincial interoperability framework, this policy is an underlying success factor for the Digital First for Health strategy, as it seeks to address a number of practical barriers that hinder frictionless access to information by patients and providers alike:

1. **Lack of interoperability across provincial digital health assets** – The province's digital health assets reside across multiple delivery partners and have all been built to various technical standards. Accordingly, there is no established leadership or coordination between delivery partners to connect these assets to one another and for third-party applications to connect to these digital health assets.
2. **Lack of interoperability across local clinical systems** – The local clinical systems used in hospitals (HIS), primary care practices (EMRs), and community care organizations are highly fragmented, with many different vendors and products. While there are some common requirements within sectors, and a recent trend towards consolidation in the HIS space, consistent standards are lacking across sectors – making it extremely difficult to integrate patient records or to integrate local systems with provincial ones.
3. **Fragmentation limiting consistent and reliable integration of health information** – Information can't follow patients because digital health delivery partners lack clear guidance on why, when and how provincial and HSP-level digital health assets should be made available for consumer access and use.

Stakeholders, including patient groups, delivery partners and vendors, have clearly said they need and want policies and guidance on establishing standards that would serve to address the information needs of HSPs and Ontarians alike. Specifically:

- **For patients** – This policy means better care and more choice in how they can access their health information and health care services. When more delivery partners integrate their digital health assets with one another, and when more innovators are able to connect their products and services to provincial sources of patient health data, patients and the HSPs who serve them are able to access relevant health information in more convenient ways.
- **For OHTs and HSPs** – The improved integration of digital health systems would facilitate information sharing amongst themselves and their patients. This allows for efficiencies in lessening the burden of administrative work, better and safer communication with other HSPs via digital health tools, and improved coordination of health care services.
- **For the ministry** – This policy allows the ministry to get more use out of its digital health investments – getting greater value for money, and better meeting the information needs of HSPs and patients through increased interoperability of the province's digital health assets. It also enables the ministry to support innovation and the economy by establishing the technical

standards innovators must implement to connect their digital health products and services to provincial health data.

- **For digital health delivery partners** – This policy means eliminating information silos through the integration of systems so that data may flow between delivery partners with greater ease. It also means that delivery partners can get more out of investments made in their digital health assets.
- **For EMR and HIS vendors** – This policy is a step towards bridging the information gap between primary care and the hospital. By establishing the technical standards by which both EMR systems used in primary care and hospital information systems may connect to the province's digital health assets, it also establishes the standard by which EMR systems and hospital information systems may connect to one another and opens the possibility of sharing data between primary care clinics and hospitals.

Implementation

To modernize health care in Ontario and deliver it more efficiently, the connectedness of the province's digital health assets must increase. The development, release and ongoing support of APIs that enable authoritative connections to digital health assets is intended to become embedded within the scope of each digital health delivery partners' normal business operations and accountabilities.

To align with the policy objectives, digital health delivery organizations should prioritize API development for digital health assets that either hold or enable access to Ontarians' PHI and care services. Understanding that guidance is required around which data classes their corresponding elements and which terminology standards are recognized in Ontario, this policy acknowledges commonly accepted data classes and elements provided by Health Level Seven International¹, and terminology standards found in the National Immunization Data Dictionary², the Canadian Vaccine Catalogue³, the SNOMED CT® Canadian Edition⁴, and the pan-Canadian LOINC Observation Code Database (pCLOCD)⁵.

To start, the ministry would recommend a minimum data set⁶ containing data classes and their corresponding elements for information exchange within and between OHTs. This minimum data set would include clinical notes, laboratory information, medications, paediatric vital signs, patient demographics, (non-paediatric) patient vital signs, provenance and others.

¹ <https://www.hl7.org/fhir/resourcelist.html>

² <https://infocentral.infoway-inforoute.ca/en/resources/docs/pubhealth/national-immunization-data-dictionary/2692-nidd-version-3>

³ <https://cvc.canimmunize.ca/en/home>

⁴ <https://infocentral.infoway-inforoute.ca/en/standards/canadian/snomed-ct>

⁵ <https://infocentral.infoway-inforoute.ca/en/standards/canadian/pclcd-loinc>

⁶ The classes and elements of the minimum data set will be validated as OHTs are formed and may be revised periodically for relevance.

The ministry will not provide or facilitate unrestricted access to Ontarians' PHI. Care must be taken to responsibly enable and control access to provincial digital health assets, especially those holding PHI – the responsibilities and obligations for all health information custodians (HIC) under the Ontario Personal Health Information Privacy Act (PHIPA) must be upheld. Furthermore, this policy underscores the need for all parties that access PHI held in provincial digital health assets to have appropriate data-sharing and legal agreements in place between digital health delivery partners, relevant HICs, patients, and any other party involved in the access and disclosure of PHI.

The ministry recognizes the immense value that private sector innovators bring to the health care system and is committed to supporting digital health innovation. We understand that providing more opportunity for non-health information custodians to connect their digital health products and services to provincial digital health assets may increase the risk of exposing personal health information to unauthorized audiences. This is why a phased implementation is recommended to make sure that the right amount of planning is done with all digital health delivery partners so that challenges are anticipated, and issues are addressed immediately.

Digital Health Investment and Value for Money Policy

Background

Ontario is modernizing its health care system to be more integrated, innovative and patient-centred. This modernization will be supported by digital technologies that allow patients to connect virtually with their care providers and will put the right health information into the hands of patients, caregivers and health care providers at the right time. To accomplish this, it will require health service providers to re-think how their digital services and related infrastructure are organized. This may include the purchase of new and/or updated health information systems, applications and communication technologies.

It is important to ensure that the acquisition of digital health tools does not place an undue burden on Ontario Health Teams and health service providers and leverages economies of scale when appropriate to improve value for money. These tools should support provincial strategic objectives and improve the experience of patients and providers. This policy will support the evaluation of promising innovations, enable the spread and scale of proven and successful digital health tools and reduce the fragmentation caused by local decisions and one-off purchases that has led to inequality and variation in health outcomes.

Policy Direction

This “Digital Health Investment and Value for Money Policy” (the policy) guides the province’s health service providers to:

- Abide by the principles of the Broader Public Sector Procurement Directive (e.g. accountability, transparency, value for money, quality service delivery and process standardization) and any future direction from the Ministry of Government and Consumer Services regarding Broader Public Sector procurement, where appropriate;
- Comply with the Interim Measures (effective March 18, 2019) of the Ontario Public Service Procurement Directive, where appropriate and as updated from time to time;
- Engage in value-based procurement, which considers stating the problem that needs to be solved rather than including technical language for solutions in procurement documents;
- Leverage regional and provincial services (e.g. shared services organizations, framework agreements, etc.) to ensure procurement expertise, best practices in sourcing and value for money;
- Include provisions within competitive procurement documents and agreements that request a benefits evaluation to be completed by the ministry through the Centre for Digital Health Evaluation (or equivalent), and then assessed by the ministry Investment Management Framework;
- Consider incentive-based reimbursement models (e.g. models that pay for outcomes and share risk) for non-commodity digital health innovations; and

- Develop extensible agreements that state how future purchasers, including all Ontario Health Teams, can participate in the procurement, which includes parameters around terms, pricing and at what point the term becomes “stale”.

Rationale for this Policy Direction

This policy is intended to ensure that Ontario Health Teams and health service providers achieve value for money from their procurement activities, and that vendors are reimbursed for the outcomes that their products and services deliver. This policy also leverages local, regional, and/or provincial purchasing power to create value in the health care system, promote successful innovations to spread and to move away from individual purchases that are based on cost and technical factors alone.

Implementation Expectations

This policy applies to all Ontario Health Teams and health service providers that procure digital health. This policy will ensure that procurements of new and/or updated digital health assets, services and programs comply with collateral policy directions (e.g. the Digital Health Information Exchange Policy) and support the province’s Digital First for Health strategic objectives.

Digital Health Access, Privacy and Security Policy

Background

Ensuring the privacy and security of personal health information is an obligation for health information custodians and service providers under the Personal Health Information Protection Act, 2004 (PHIPA), and is key to maintaining Ontarians' confidence in digital health and a connected health system. While progress has been made, there is still significant friction as a result of health care providers' uncertainty in interpreting PHIPA to manage the risk of sharing information, and the resulting inconsistencies in health information management practices across the system.

Establishing clear and consistent accountabilities, expectations and requirements for the privacy and security practices of Ontario Health Teams is needed to allow authorized individuals to securely, seamlessly and easily access PHI from across the health system in a manner that respects and protects individual privacy and access rights.

The anticipated impacts of the policy are to reduce administrative barriers to access for digital health information; to improve coordination and communication amongst HSPs by facilitating the sharing of personal health information; to standardize privacy and security practices within OHTs; to help improve the patient experience by ensuring seamless access to PHI, while reinforcing privacy and security protections through clear and consistent policies and controls; and to reduce legal costs for HSPs by providing clear guidance in support of PHIPA compliance.

Note on scope: at such time as Part V.1 of PHIPA may be proclaimed into force, a Prescribed Organization will have accountabilities with respect to the management of PHI that is received from HICs for the purpose of creating and maintaining electronic health records. However, HICs will retain accountabilities for PHI that is managed outside of the Prescribed Organization's control.

Policy Direction

These proposals for "Privacy and Security Policy" content are intended to guide Ontario Health Teams in developing and operationalizing information practices relating to the collection, use, and disclosure of personal health information to deliver effective, patient-centred care across a continuum of health services in compliance with PHIPA.

- Health Information Custodians (HICs) and their agents participating within an OHT must harmonize their privacy and security policies, procedures and practices with other OHT participants with respect to operations conducted within the governing framework of the OHT.
- Health Information Custodians (HICs) and their agents participating within an OHT must take reasonable steps to ensure that patients understand any information practices that relate to the operation of the OHT, and how these may differ from the practices of the HIC when it is operating independently.
- Initially, OHTs and OHT participants must comply with any and all privacy and security policies associated with digital health assets that are utilized by the OHT and/or participants, which may include:

- eHealth Ontario's Electronic Health Record Privacy Policies and EHR All-in-One Security Policy with respect to access to provincial digital health assets maintained by eHealth Ontario; and
 - Other policies with respect to digital health assets maintained by other digital health delivery partners.
- OHTs may wish to leverage OntarioMD Privacy and Security Training and resources to support their understanding and compliance with privacy and security requirements.
- A provincial cyber security framework for health care organizations is currently under consideration and may lead to additional requirements for OHTs.
- OHT participants must have in place and maintain policies, procedures, practices, and agreements that are necessary to enable them to comply individually and collectively with their legal and regulatory obligations (including those under PHIPA) and with other relevant policies such that an individual served by an OHT: may make a request for access, correction or a consent directive just once to any OHT participant, and receive a response that addresses any affected PHI, regardless of which participants are custodians of that PHI. Further, such an individual in respect to his or her PHI, may pose a question, make a complaint or report a suspected breach of privacy or security to any OHT participant, and he or she will receive one response, regardless of how many participants may need to contribute to that response.
- OHT participants must collectively identify and mitigate privacy and security risks and areas of non-compliance in respect of OHT participants' connectivity with provincial digital health assets, through means such as:
 - A standardized program of education and awareness for all affected staff and agents;
 - Completion of privacy and security readiness self-assessments (as applicable);
 - Completion of privacy and security operational self-attestations;
 - Developing a unified cybersecurity blueprint and roadmap identifying the needed cybersecurity controls and services that need to be put in place amongst all participants;
 - Mitigating the gaps by OHT participants based on the target state cybersecurity blueprint;
 - Auditing and monitoring activities;
 - Enforcement of privacy and security policies and procedures; and
 - Assurance of agents and Electronic Service Providers.

OHTs may want to consider establishing a joint function for this purpose.

Rationale for this Policy Direction

This policy is critical to creating consistent OHT practices for managing the collection, use and disclosure of PHI so that more HCPs and patients can have seamless access to patient health information in a way that protects individual privacy.

- PHIPA establishes that individual HICs are each responsible for establishing their own information practices. HICs have significant variance in their capacity to assess and manage privacy and security risks.
- A patient-centred approach requires that patients should not be required to contact each HIC participating in an OHT individually to ensure that their requests are honoured by all of their care providers.

Implementation Considerations

Factors that must be considered for implementation, including expectations of delivery partners, will include the following:

- Alignment and harmonization of privacy and security policies, procedures and practices across HICs of varying capacity is likely to be challenging.
 - It is likely that participants will naturally develop some degree of alignment/harmonization as a consequence of establishing the initial governance model(s) for OHTs.
 - Full/complete alignment should not be a precondition for OHTs, but early adopters should plan to establish a harmonized privacy and security model within 6-12 months of launch.
- PHIPA allows two or more HICs to apply to the minister for an order permitting all or some of the applicants to act as a single health information custodian. Designating a group of OHT participants as a single HIC with respect to OHT operations would provide a convenient way for HICs to respond collectively to access requests, etc. but would likely still require agreements between among those HICs-participants to clarify operational roles and responsibilities.
 - Responding to privacy requests/inquiries in an integrated fashion is important for the patient experience but does not need to be a requirement on the first day. Early adopters should plan to establish integrated processes for managing such inquiries within 12 months of launch.
 - Integration with respect to individual access requests may be a dependency for efficiently implementing digital patient access channels.
- Complying with eHealth Ontario's privacy and security requirements for access to provincial digital health assets is known to be challenging, particularly for smaller organizations. HSPs may lack the expertise to understand and implement privacy requirements. Privacy assessments are often complex, lengthy and time consuming to complete.
 - eHealth Ontario and other digital health partners will offer greater than normal assistance to early adopters in order to streamline OHT compliance with privacy and security onboarding requirements.
 - Early adopter OHTs that include any participating organizations not currently approved for access to provincial digital health assets should plan to complete assessments and begin mitigating deficiencies as soon as possible after launch (within 3 months).

- eHealth Ontario's EHR policies apply only to those assets that are maintained by eHealth Ontario as part of the electronic health record under their prescribed role under s6.2 of O. Reg 329/04.
 - In time, we would expect development of harmonized policies for a larger set of digital health services when delivery partners are consolidated within Ontario Health.
- Subject matter expertise in privacy and security, capacity, and resourcing for some of the OHT participants might be an issue at the beginning of transition and in their future operations, and this needs to be studied and considered to inform practices for harmonizing privacy and security models.
 - Based on the cybersecurity controls and services identified during cybersecurity blueprint development activity for OHTs, some services might need to be outsourced to vendor of records such as Security Operation Center (SOC), privacy auditing tools, or external peer-review activities for compliance purposes. Such activities and their procurement considerations need to be planned in advance in order to have them in place on a timely manner avoiding possible breaches.

Digital Health Reporting and Performance Policy

Background

The Ministry of Health is committed to ensuring investments in Ontario's health care system are transparent and accountable. Ontario Health Teams are a key player in advancing the digital maturity of Ontario's health care system, and as such are required to help track progress.

Policy Direction

This "Digital Health Reporting and Performance Policy" (the policy) guides all digital health delivery organizations to:

1. Report annually on the sets of digital health solutions being developed, procured and/or otherwise deployed within the OHT to improve Ontario's digital health maturity and interoperability (e.g. OHTs should report on digital health assets in which they are investing to ensure the province has a centralized understanding of Ontario's digital health landscape); and
2. Report on a limited set of performance and accountability measures on a quarterly basis to facilitate provincial tracking of digital health maturity.

Please note that specific indicators are under development.

All reporting will be done in alignment with an OHT performance measurement framework and broader ministry reporting.

Rationale for this Policy Direction

The province relies on local delivery partners to improve Ontario's digital health by adopting and using digital health solutions. While data about some digital health solutions is available from provincial delivery partners (e.g., Ontario Health), for solutions implemented based on local choice, local data is necessary to maintain a fulsome understanding of digital health maturity. By aligning digital health performance measurement and reporting across the province, the province can assure accountability and have the information necessary to make strategic adjustments to continue to enable and support the use of digital health assets to improve health care in Ontario.

Implementation Expectations

All OHTs will be asked to provide quarterly reporting on 8-10 indicators in alignment with Digital First for Health. Ontario Health Teams will be provided with clear definitions for the indicators and expectations for how to provide the reporting to ensure comparability and aggregability across Ontario Health Teams to provide a clear understanding of digital health maturity at a provincial level. Additionally, annual reports will provide an opportunity for OHTs to articulate the progress made during the current year and identify their intended goals for the coming fiscal year.

Indicators for reporting are in development.

Clinical Systems Policy

Background

Across the province, efforts have been underway to both consolidate and update clinical systems in order to ensure providers are able to deliver optimal care to their patients. Although progress has been made, implementations are typically carried out at the provider or organization level within each sector. In order to ensure patients receive integrated, coordinated care, there is a need to develop principles that future Ontario Health Teams should apply when considering their clinical system strategy and future implementations.

A clinical system is an information system that allows providers to access patient data (personal health information) for the purposes of providing care. Clinical systems also provide embedded clinical best practices and standards based on leading evidence. These systems are typically different for each sector (e.g. hospital information systems (HISs) in acute care settings, electronic medical records in primary care and community-based specialist practices, etc.); very few systems are implemented between sectors.

Ontario Health Teams will collaborate with the ministry on plan for achieving better connected care for patients through improving the clinical information systems they use to support the provision of high-quality patient care and robust information management practices.

Policy Direction

The POS policy outlines the requirements that Ontario Health Teams **should** meet when planning, procuring, upgrading or implementing a clinical information system.

- **Procurement** – Clinical systems must be procured in accordance with BPS procurement directives, as appropriate, and aligned with the Digital Health Procurement and Value-for-Money Policy and the Digital Health Privacy and Security Policy. Procured systems will be required to incorporate the most current version of provincial standards and will commit to upgrade to new versions as they are released. All HIS procurements and significant upgrades must be for a Provincial Reference Model (PRM) where one exists; if one does not exist, the OHT should work with the ministry to build a new PRM for the vendor's solution. All EMR procurements should be for OntarioMD-certified products. Clinical systems should include requirements to score vendors based on their ability to meet the requirements of the Digital Health Information Exchange Policy. All new procurements must be for shared instances with the objective of moving towards a smaller number of instances in each sector within the OHT.
- **Technology** – Clinical systems should leverage a mature and reliable hosting model (e.g. movement to cloud-based, application service provider model) and any new systems that are to be locally hosted should be accompanied by a business case submitted to the Ministry supporting the approach. The OHT should develop a plan to move towards a smaller number of instances in each sector within the OHT and submit it to the Ministry.

- The OHT clinical systems should be implemented and operated to meet the most recent provincial technical standards where available, including but not limited to the following areas:
 - Cybersecurity;
 - Identity and Access Management;
 - Digital Health Privacy and Security Policy
 - System performance and availability; and
 - Backup, recovery and data management.
- In developing an OHT-specific digital health plan, consideration should be given to how OHTs will connect clinical information systems to digital health assets in adherence to the Digital Health Information Exchange Policy.
- **Standardization** – OHTs should align their clinical information systems to existing provincial standards (messaging and content) and must contribute to provincial governance processes to develop clinical, technical and business standards that can be embedded in clinical systems (e.g. future Ontario clinical standards governance body). OHTs must ensure an efficient and effective process is in place to support the implementation of new clinical standards or changes to existing standards across all care sectors, in order to ensure the latest medical knowledge is available at the point of care.
- **Data** – Any governance structure that an OHT has in place must have a data oversight function that ensures appropriate availability, use and quality of data, including an audit function as appropriate, and should be aligned to any applicable provincial data governance body. This oversight function must ensure that consistent, standardized, structured data and terminology (for both clinical and non-clinical data, e.g. standard patient and provider identifiers) is used in clinical systems across the OHT, and that the OHT data standards are aligned with any applicable provincial standards.
- **Implementation** – In the near-term, instances of new systems should be shared, and implementations should align to the plan submitted to the Ministry on how the OHT will move towards at most one instance in each sector within the OHT. All providers in an OHT must utilize and contribute to any existing or new provincial systems wherever possible and applicable.

Rationale for this Policy Direction

This policy defines requirements that OHTs should meet in order to ensure their clinical systems allow the following:

- Providers and organizations to access relevant health information as appropriate for providing care and improving quality of services for OHT patients.
- Patients are able to access their own personal health information in order to become more empowered to participate in their care, as well as to enable virtual care encounters with their providers.
- Data to be extracted for the purposes of evaluating the performance of OHTs, as well as to generate insights for care planning and population health.

Implementation Expectations

As OHTs are planning and implementing these policies, there should be consideration given to assessing the maturity of their clinical information systems across a number of dimensions. After identifying maturity in each of these areas, OHTs can work with the ministry to assess the most applicable and relevant supports available in order to ensure they are able to meet the requirements defined in this policy.

There is a need to consult with key sector stakeholders, including hospitals, primary care providers, long-term care homes, home and community care agencies/service providers, etc. to better understand the current state, how these proposed requirements can be implemented, and confirm these requirements will achieve the desired end state. OHTs may also be requested to participate in evaluations of the use of technologies and standards and make recommendations on the applicability of province-wide adoption.

In the future, the Ministry may perform compliance audits to ensure consistent use of the technologies and standards described in this policy.

Patient-Facing Digital Health Policy

Background

Historically, patients have had limited options for accessing care through digital tools, which has impeded their ability to access care how and where they want it. It has also been difficult for patients to get access to their health records, which is typically paper-based and often bears a cost. This lack of digital access to care has been a significant pain point for many patients – whether it is avoiding travel and time off work by videoconferencing with providers for straightforward appointments, or patients with complex conditions who want to be more informed and proactive participants in their health care.

Patient-facing digital health refers to the use of digital tools that make it easier and more convenient for patients and their caregivers to interact with Ontario’s health care system, anytime and anywhere they need it. Through a patient-facing digital health policy, a wide range of health care services will be made available through digital platforms that are more convenient for patients, just as consumers have come to expect in other industries such as banking and travel.

The objectives of patient-facing digital health are to:

- Enhance patient choice to access care how and where they want it (e.g., virtual visits enabled by video, audio call, electronic messaging).
- Empower patients with access to their own health information (e.g., information from point-of-care systems, PHI in provincial repositories), and innovative self-management tools (e.g., digital self-care, remote monitoring).
- Simplify the administrative and navigation aspects of getting care through online appointment booking.

The ministry is committed to making digital health options available to patients so that Ontarians can make choices about how and where to engage with the health system and be active participants in their care.

Policy Direction

This policy for patient-facing digital health solution adoption encourages all Ontario Health Teams (OHTs) to offer a minimum set of functionalities to their patients and also provides implementation guidance.

Minimum Functionality Requirements: Patients and caregivers will have access to a comprehensive suite of digital health options, namely:

1. **Virtual Visits:** Traditional clinical care interactions and follow-ups between patients and providers conducted through digital channels. Modalities include:
 - a) Video visits
 - Includes both direct home video visits, and video visits where the patient is in a health care or community support agency setting (i.e., telemedicine patient host site), and may be supported (e.g., by a nurse) to connect via video to a clinician.
 - b) Audio call

- c) Electronic messaging for bi-directional communication between patients and providers (e.g., through email, portal, or text message)
2. **Patient empowerment and self-management:** Patients should be able to access their own PHI and use digital self-care tools and programs to support self-management and remote monitoring of their condition(s). Modalities include patient access channels, mobile apps, remote monitoring platforms, and web portals.
 - a) Access to PHI should include at least three sectors and could include:
 - Unlocking PHI stored in tethered, clinical information systems (e.g., EMR and HIS systems, lab test providers) and in provincial data repositories (e.g., OLIS, DHDR) by following standards for interoperability and using patient-friendly terminology.
 - Supporting the connection of various innovative patient-facing modalities to PHI with the appropriate safeguards for privacy and security.
 - b) Digital self-care tools and programs could include, but *are not limited to*:
 - Chronic disease or mental health digital self-care programs linked to clinical support to enable patient self-management (e.g., OTN Telehomecare, Community Paramedics Remote Patient Monitoring (RPM), Medly, Ottawa Heart Institute's RPM, Big White Wall).
 - Light touch models to reinforce health messages and monitor for deterioration in health (e.g., Ottawa Heart Institute's Interactive Voice Response program).
 - Digital self-care tools that could support and enhance health care delivery (e.g., surgical transitions, home peritoneal dialysis).
 3. **Online appointment booking:** Patients should be able to manage administrative activities digitally for all providers and sectors through online appointment booking. The priority is to enable practice-level appointment booking, while considering appointment booking at the OHT-level as an area for future exploration.

To meet OHT year 1 expectations, at minimum, OHTs must offer the following functionalities:

Year 1 Expectation	Met through the corresponding functionality requirement
Expanded virtual care offerings from baseline, and 2-5% of Year 1 patients who received care from the Ontario Health Team had a virtual encounter in Year 1	1. a-c) Virtual visits through video, audio call, and electronic messaging
10-15% of Year 1 patients who received care from the Ontario Health Team digitally accessed their health information	2. a) Patient empowerment and self-management through access to PHI in at least three sectors.

Since OHTs will be expected to offer the full spectrum of functionalities at maturity, further progress made in meeting the remaining functionality requirements (e.g., practice-level online appointment booking, digital self-care, inclusion of additional sectors or provider groups) is encouraged.

Rationale for this Policy Direction

A policy for enhancing patient-facing digital health will ensure that all Ontarians have equitable access to choose digital health options for receiving care. This policy will help patients, their families, and caregivers to access and control how and when they receive care and access their own personal health information, enabling them to become better partners in managing their own health. Patient-facing digital health tools can also support clinical decision-making and facilitate treatment, with the potential to reduce or offset the need for emergency visits or use of walk-in clinics.

Implementation Expectations

The ministry and delivery partners (e.g., OTN, OntarioMD, eHealth Ontario) will provide support and advice to early adopters. In general, OHTs are expected to proceed with implementation according to the following guidelines.

Implementation Guidelines	
Patient experience	OHTs should minimize the number of portals for their patient population rather than proliferating several portals for sector or pathway specific needs. For example, many of the existing patient access channels that enable patients to access their own PHI also have additional functionalities for virtual visits (e.g., video, electronic messaging) and online appointment booking. Implementing solutions that have multiple functionalities would help create a streamlined and integrated experience for your patients and be a cost-effective approach. As a result, OHTs should prioritize solutions that offer multiple functionalities over implementation of individual solutions for each functionality requirement option or modality.
Integrated access across multiple sectors	OHTs should prioritize investments in solutions that: <ul style="list-style-type: none"> • Enable virtual care across the OHT in a minimum of three sectors; • Enable access to PHI across the OHT in a minimum of three sectors; • and/or • Could enable virtual care across various programs and/or patient populations (e.g. for digital self-care).
Identity, access, and authorization	The ministry is developing an approach for provincial patient identity, access, and authorization (IAA) so that patients have a secure and trusted way to prove who they are online in order to get appropriate access to services offered by different service providers. When released, OHTs will be expected to align with technical and operational requirements.
Leverage existing expertise and best practice	Throughout the province there are many examples of impactful uses of virtual care which improve the health outcomes for patients and/or experience for patients and provider. OHTs should leverage the existing expertise and best practices to minimize duplicative development and support quality expansion of virtual care.
Operational Impact	Options for patient-facing digital health should complement clinical workflows and be a benefit to the administration of clinical practice by creating operational efficiencies that remove bottlenecks in manual processes.

Access to Provincial Assets	<p>HSPs should make PHI available for patient access by default or upon request, unless there are limitations from doing so as outlined in PHIPA.</p> <p>In terms of a minimum dataset to be made available to patients, short term priorities include laboratory and drug information, with an emphasis on information held in provincial data assets (i.e., OLIS, DHDR, respectively).</p> <ul style="list-style-type: none"> • Subsequent priority areas include the clinical data repository (CDR). • Efforts to enable access to provincial data assets should follow SPARK guidelines (e.g., meet ministry requirements for security and IAA management), including using the legal agreement structure the ministry has developed for access to provincial data assets.
Data Management	HSPs should minimize filtering and time lags for data release.
College guidelines	Clinicians and health service providers are expected to follow all college guidelines with respect to the delivery of virtual care (e.g., from the College of Physicians and Surgeons of Ontario).
OHTs should follow additional digital health policies, including:	
Digital Health Investment and Value-for-Money Policy	Any procurements of patient-facing digital health solutions should comply with the Digital Health Investment and Value-for-Money Policy.
Digital Health Information Exchange Policy (DHIEX)	<p>As the gateway that patients will use to digitally access care and their own PHI may change over time (e.g. website, app), tools that offer patient-facing digital health should or be able to employ application program interfaces (APIs) that follow technical standards that have been widely adopted by to ensure interoperability:</p> <ul style="list-style-type: none"> • Messaging: HL7 FHIR • Web applications: Open, RESTful (SMART on FHIR)
Digital Health Reporting and Performance Policy	OHTs should comply with reporting requirements and should demonstrate consideration of the patient experience (e.g., by considering investments in solutions that offer bundles of functionality) and leveraging of existing expertise and best practice.
Digital Health Privacy and Security Policy	HSPs are health information custodians (HIC) as defined in the Personal Health Information Protection Act (PHIPA) and are accountable for the PHI disclosed via PACs. In the case that multiple HSPs have formed an OHT, the OHT entity may be the HIC for all members and therefore hold the above accountabilities under PHIPA.

There is a need to consult with key sector stakeholders, including providers, caregivers and especially patients to better understand the current state, how these proposed requirements can be implemented effectively, and to confirm these requirements will achieve the desired end state for patients.

Functionality specific guidance:

Video visits

- Provincial requirements for the ministry’s telemedicine program continue to apply for remuneration for video visits via the OHIP claims system (e.g., patient and provider at an OTN site in Ontario).
- Various pilots will enable greater flexibility, including:
 - For use of non-OTN technology, OHT early adopters can apply to join the OTN Partnered Videoconferencing Proof of Concept project.
 - OHTs would trial and support refinement of a draft framework for use of non-OTN technology in Ontario.
 - Providers would be able to be remunerated for care delivered over non-OTN video visit technology that meet minimum standards and guidelines.
 - For ‘home’ video visits remuneration the options are:
 - OTN’s Home Video Visit pilot to deliver ‘home’ video visits via OTNinvite.
 - OTN Partnered Videoconferencing Proof of Concept project (as above).

Electronic messaging and audio call

- Remuneration for these types of virtual visits is only available through the Enhanced Access to Primary Care Pilot as part of the Ministry’s telemedicine program.
- Further requirements may be provided as the remuneration framework is developed.

eServices Policy

Background

At the end of a clinical interaction, clinicians undertake many transactional processes to obtain services for patient care, such as referring patients to other providers, prescribing drugs, ordering lab tests or imaging, and applying for supports such as assistive device coverage. Conventional processes for these activities are largely fax-and-paper-based, resulting in significant administrative burden and provider burnout and patients falling through the cracks and/or facing long wait times due to untraceable processes. Some digital tools have emerged to address these problems, but programs for each individual transaction have been developed in siloes, and there is significant fragmentation and many solutions that are not interoperable. EMR integration is also not consistently available for all eService solutions, or all EMR users.

The ministry is currently working to develop an eServices program that would treat these clinically related activities as part of a holistic provider workflow and build a technical architecture that facilitates interoperability between different solutions. **eConsult** and **eReferral** would be the first initiatives in scope of this program due to their track record of success in improving health system integration and smoother handoffs between care settings:

- Electronic consultations (eConsult) enables primary care providers (i.e., family physicians and nurse practitioners) to engage in a secure electronic dialogue with specialists (community-based or hospital-based) around patient care.
- Electronic patient referral systems (eReferral) digitizes the traditionally paper-based fax referral process, which results in shorter wait times, fewer inappropriate referrals, and higher quality referrals.

The eServices policy guides OHTs to consider eConsult and eReferral implementation together to support providers in delivering effective, holistic, collaborative, and cost-effective care. eConsults can avoid unnecessary referrals and eReferral systems can enhance the completeness of patient information to make specialist visits more effective – ultimately resulting in modernized and integrated patient care across the entire continuum. Progress made by OHTs in implementing eConsult and eReferral would be leveraged for further implementation of the eventual provincial eServices program.

Policy Direction

Under development

Implementation Expectations

Early implementation: In the near term, eServices adoption should follow current provincial programs and direction.

- eConsult: Participation in the Provincial eConsult Program, led by the eConsult Centre of Excellence, hosted on the OTNhub.
- eReferral: As the first approach, OHTs should validate if active procurements currently available (e.g., the SCA program, Novari) meet their needs. Where OHTs choose to deviate from existing procurements, ministry consultation and approval is required.

The ministry's emerging provincial eServices program would provide additional guidance for further expansion of eConsult and eReferral, as well as additional initiatives for implementation.



The Digital Health Service Catalogue

The Ministry of Health (MOH)
August 2019

Contents

Introduction	3
How to Use the Digital Health Service Catalogue	3
Provincial Clinical Data Assets	4
Acute Care Clinical Information.....	5
Diagnostic Imaging and Radiology Reports	6
Drug Information	8
Immunization records	9
Laboratory orders and results	9
Public-Facing Services and Programs	10
Digital Self-Care.....	10
Immunization Connect Ontario (ICON)	13
InScreen	14
Interactive Symptom Assessment and Collection (ISAAC) Application.....	15
MyCancer IQ	17
Patient Access Channels.....	17
Retinal Screening Program.....	18
Virtual Visits	20
Provider-Facing Tools, Services and Programs	28
Client Health and Related Information System (CHRIS) Suite of Applications.....	28
Data Submission Portal	32
eClaims.....	34
Electronic Child Health Network (eCHN)	35
Electronic Canadian Triage and Acuity Scale (eCTAS).....	35
Electronic Patient Referral (eReferral)	37
Health Report Manager (HRM) and eNotification Service.....	39
Integrated Assessment Record (IAR).....	40
KidneyWise	41

Ontario Renal Reporting System (ORRS)	42
OntarioMD Insights4Care (EMR Quality Dashboard).....	43
ONE Mail	44
Oncology Patient Information System (OPIS)	45
Positron Emission Tomography (PET) eTool	46
Provincial Clinical Viewers.....	47
Screening Activity Report (SAR)	48
Special Authorization Digital Information Exchange (SADIE).....	49
Ontario eConsult Program (eConsult)	49
Administrative and Technical Tools, Services and Programs.....	51
Integrated Client Management System (ICMS)	51
iPort and iPort Access	52
ONE ID Credentialing Service	53
Wait Time Information System (WTIS)	54
Provincial Registries/Directories	56
OTN Health Service Directory (HSD).....	56
Provincial Client Registry (PCR)	58
Provincial Provider Registry (PPR)	59
IT and Network Infrastructure Services.....	60
Consumer Gateway and/or Provider Gateway.....	60
Innovation Lab	61
SPARK	61
Digital Learning Resources and Reference Tools.....	62
Clinical Practice Guidelines, Standards and other Resources.....	62
Drug Formulary Resources.....	63
E-Learning	64

Introduction

Effective and integrated digital health delivery requires collaboration across the health care system. Ontario's digital health delivery organizations provide world-class tools and services that improve outcomes for patients and providers. From virtual care to health data collection and sharing, Ontario's digital health infrastructure provides solutions and assets that lead to increased clinical value and better health care system integration.

The Ministry of Health has developed Ontario's Digital Health Service Catalogue in collaboration with provincial digital health delivery organizations. It is designed to assist Ontario Health Teams (OHTs) with understanding the digital health landscape in the province. It lays out the digital health assets, services and infrastructure services that are provincially available for use by all OHTs.

The digital health services and supports being provided to OHTs represent the contributions of multiple delivery organizations, including those who will soon become a part of Ontario Health (i.e. eHealth Ontario, Health Shared Services Ontario and Cancer Care Ontario).

How to Use the Digital Health Service Catalogue

This catalogue provides a list of provincial digital health assets, services and infrastructure services available for use by OHTs to satisfy digital health needs and requirements.

This document covers a wide range of service and programs that have been built or procured for use by Ontario health system participants and should be used as a first resource for OHTs looking for digital solutions. If an OHT is looking for a resource that is not included in the provincial catalogue, then OHTs may procure a market-available solution.

Whether selecting digital health services from the Digital Health Service Catalogue or procuring off-catalogue solutions, OHTs are expected to ensure their implementation and deployment efforts align with the relevant digital health policy directions. The Digital Health Policy Guidance Document is complementary to the Digital Health Service Catalogue and should be read in tandem with that document.

Ontario's digital health assets and tools are categorized as follows:

1. Provincial Clinical Data Assets
2. Patient-Facing Services and Programs
3. Provider-Facing Tools, Services and Programs
4. Administrative and Technical Tools, Services and Programs
5. Provincial Registries/Directories

6. IT and Network Infrastructure Services
7. Digital Learning Resources and Reference Tools

Provincial Clinical Data Assets

Ontario maintains a series of provincial data repositories containing important patient records and digital health information. These repositories include historic as well as current data gathered from care and diagnostic settings across the province.

These records help to support Ontario's transformation toward integrated care delivery and health sector efficiency, with:

- Timely access to patient health information for decision making at point-of-care;
- Smoother patient transitions between health care providers and geographies;
- Better coordination of care between multiple practitioners, and within health care teams;
- More efficient workflow and reduced dependency on paper-based systems;
- Lower cost, better-quality patient experience through reduced unnecessary or duplicate tests;
- Improved monitoring over time to support chronic disease management;
- Fewer gaps in patient information as patients move between hospital, practitioner's office, home care and long-term settings; and
- Continuous improvement in how we deliver care with data to support a population health approach and research activities.

OHTs are asked to ensure that their providers have access to the relevant information available in these repositories either through use of the provincial clinical viewers (in most cases) or through direct integration with their point of service solutions (i.e. Electronic Medical Record (EMR) Systems or Hospital Information Systems (HIS)).

OHTs are also expected to work with the province and agencies to ensure that all member organizations contribute relevant patient information to the provincial data repositories.

The data repositories currently in use provincially include the following patient information:

- [Acute care clinical information](#)
- [Diagnostic imaging and radiology reports](#)
- [Drug information](#)
- [Immunization records](#)
- [Laboratory orders and results](#)

The following requirements have been designed to ensure that OHTs have access to all appropriate patient health data that is currently available.

Requirements and Rationale

To support integrated care delivery, OHTs are required to ensure that all relevant staff have access to one of the two provincial viewers, ClinicalConnect or ConnectingOntario and, to support improved workflow, should also ensure that they have access to the Health Reports Manager for notifications (see [Health Report Manager \(HRM\) and eNotification Service](#)).

To ensure that these records are available, all OHTs must stipulate that their providers contribute to this data set by building/maintaining connections through the provincial Health Information Access Layers or the Consumer and Provider API Gateway, as directed by the provincial Digital Health Exchange policy. In addition, all OHT member organizations that produce relevant diagnostic imaging studies should contribute images to their regional diagnostic imaging repository (see [Diagnostic Imaging and Radiology Reports](#)).

To ensure that information can be contributed and accessed appropriately, organizations are required to adhere to the following technical standards:

- OHT records must include a unique patient identifier, so that it can be referenced through the Provincial Client Registry (formerly known as Enterprise Master Patient Index);
- All relevant OHT staff should be credentialed using ONE ID or use a federated identity POS applications, should employ contextual sharing as a way of streamlining the user experience and enabling the seamless delivery of healthcare services.

Applicable OHT Policies

The following policies apply to use of this data:

- Digital Health Access, Privacy and Security Policy
- Digital Health Information Exchange Policy
- Digital Health Reporting and Performance Policy

Below is a detailed description of the different types of data available and their use.

Acute Care Clinical Information

Description

Authorized health care providers can access key acute care and community clinical information through the Acute and Community Clinical Data Repository (acCCR). This data includes hospital and community care organization discharge summaries, emergency reports, referral details,

care plans, consultations, clinical notes and assessments. The acCDR currently contains 72% of the clinical data from acute, Local Health Integration Network (LHIN) home and community care, and primary care.

The data is available to view via ClinicalConnect and ConnectingOntario. Direct integration is not currently available.

Service Owner

- eHealth Ontario

End User(s)

- Service Providers

Sector(s) Served

- Acute Care
- Complex Continuing Care (chronic care)
- Paramedic and EMS
- Home Care
- Community Care
- Mental Health/Addictions
- Primary Care
- Palliative Care
- Long-Term Care
- Specialists

Diagnostic Imaging and Radiology Reports

Description

This set of services gives Ontario health care providers access to a patient's diagnostic imaging studies and radiologist reports, irrespective of where the exams were taken. Access to this data provides valuable and timely information that helps to inform the kind of treatment a patient requires and minimizes the need to conduct duplicative tests, delay care, and have patients carry around CDs with their images between providers.

Patients' diagnostic imaging and radiology reports are collected by both Independent Health Facilities and Hospital Picture Archiving and Communication System (PACS) systems and stored in three regional diagnostic imaging repositories.

For primary care physicians using an EMR, once a final report is received, the receiving regional repository sends the report through Health Reports Manager (HRM) to the ordering clinician and notifies them that the image is available for access.

In addition, direct access to the data contained in the regional repositories can be made available through integrations with hospital PACs/RIS systems. PACS-quality images and reports from all three regional repositories are available through the two provincial viewers, ClinicalConnect, and ConnectingOntario. Specific use cases for these services are available as part of the onboarding and change management process for OHTs.

Currently the data set held by the diagnostic imaging repositories (DI-r) contains the following modalities:

- Computed Tomography Imaging (CT),
- Positron Emission Tomography (PET),
- Digital Radiology (X-rays),
- Ultrasound (Vascular, OB/GYN),
- Mammography,
- Fluoroscopy (Radio, In Vivo),
- Echocardiography,
- Nuclear Medicine and
- Bone Mineral Densities.

Additional Requirement(s)

For hospital-based clinician (radiologist) access, OHTs should ensure that they have a DI-r based Foreign Exam Management (FEM) between OHT partners with their own RIS/PACS solutions.

Service Owner(s)

eHealth Ontario

End User(s)

- Service Providers

Sector(s) Served

- Acute Care
- Radiology (Hospital and Independent Health Facility-Based)
- Complex Continuing Care (Chronic Care)
- Emergency Care
- Primary Care
- Specialty Care (i.e. Cardiology, Oncology)

Drug Information

Description

Ontario's provincial health data assets include a large and growing proportion of the province's community pharmacy-dispensed prescription drugs and monitored drugs (i.e. narcotics) through the Digital Health Drug Repository (DHDR). This currently provides access to approximately 70% of the records of all of Ontario's dispensed medications, including publicly-funded dispensed medications, pharmacy services, and all monitored drugs.

Access to this information supports health care providers to avoid fatal drug interactions and/or overprescribing, to develop patient drug strategies, and to monitor drug usage.

Access to provincial drug information is available through the regional viewers, ClinicalConnect and ConnectingOntario.

A listing of a patient's prescribed and dispensed drugs obtained during a hospital stay is included as part of the discharge summary information available within ClinicalConnect and ConnectingOntario. Primary Care EMR direct access for Discharge Summaries (HRM) is available.

Service Owner

eHealth Ontario

End User(s)

- Service Providers

Sector(s) Served

- Primary Care
- Speciality Care
- Acute Care
- Community Care
- Long-Term Care
- Home Care
- Paramedic and Emergency Management Services
- Pharmacy

Applicable OHT Policies

- Digital Health Information Exchange Policy
- Digital Health Access, Privacy and Security Policy
- Digital Health Reporting and Performance Policy

Immunization records

Description

Ontario maintains provincially available information on immunizations, vaccine catalogue, and cases of outbreaks of infectious disease held within the Digital Health Immunization Repository (DHIR). The DHIR is a comprehensive, integrated public health information system that helps point of service providers and public health professionals in Ontario, provincially and locally, to efficiently access and manage immunization, vaccine catalogue, and cases of outbreaks of infectious disease.

Service Owner

Ministry of Health

End User(s)

- Service Providers (as of 2020)
- Patients

Sector(s) Served

- Primary Care
- Public Health
- Home Care
- Acute Care
- Education

Additional Requirement(s)

Access to these immunization records is not required for OHTs at this time.

Laboratory orders and results

Description

Ontario maintains provincial records for approximately 94% of Ontario's insured laboratory test results and orders from hospitals, community and public health labs through the Ontario Laboratories Information System (OLIS). This resource provides a way for hospitals, community, and public health labs to facilitate the secure electronic exchange of laboratory test orders and results with practitioners, which reduces the need for duplicative tests and improves patient care.

Provincial records of lab results can be accessed through any of the provincial clinical viewers (ClinicalConnect and ConnectingOntario), or through direct integration to a point of service solutions (EMR or HIS).

The Ontario Laboratory Information Systems currently captures the following data types:

1. Biochemistry
2. Haematology
3. Pathology
4. Blood Bank
5. Microbiology

Service Owner

eHealth Ontario

End User(s)

- Service Providers
- Patients

Sector(s) Served

- Acute Care
- Long-Term Care
- Mental Health/Addictions
- Palliative Care
- Primary Care
- Specialty Care
- Public Health

Public-Facing Services and Programs

Digital Self-Care

Digital Self-Care is a term being used in Ontario to encompass digitally enabled patient self-management support and symptom/vital sign monitoring.

Two provincial digital self-care programs are profiled in this catalogue. However, they do not represent the entirety of digital self-care supports that are available to OHTs.

For more detailed information and advice on digital self-care tools and services in Ontario, OHTs can access the Ontario Telemedicine Network's (OTN's) Virtual Care Advisory Service, which supports the use of evidence-informed and best practice virtual care processes, including the integration of virtual visits and digital self-care tools into new models of care. The resources and expertise available through this service will not be limited to OTN technology offerings or programs but will also include advice on other models and technologies that may be of interest to Ontario health care providers.

1. Provincial Telehomecare Program

Description

The Telehomecare Program, designed by a Clinical Advisory Group in Ontario, is an intensive six-month coaching and monitoring program which supports patients with chronic obstructive pulmonary disease (COPD) or congestive heart failure (CHF) through education, health coaching, and remote monitoring – complementing the care provided by the patient’s primary care provider. While the Telehomecare program relies on the use of supplied monitoring equipment in a patient’s home, including a blood pressure unit, weight scale, and an oximeter to measure oxygen saturation, evidence shows that remote patient monitoring alone is not effective; therefore, motivational interviewing and coaching skills are a key component in this program. Telehomecare Registered Clinicians or Registered Respiratory Therapists remotely monitor each patient’s health status, work with the patient to set personalised healthy living goals, and coach them on a weekly basis as well as through just-in-time opportunities through monitoring alerts. This combined approach helps the patients learn self-management skills for their chronic disease, allowing them to stay healthier at home.

Telehomecare has served almost 20,000 patients to date and is currently live in 9 regions (Toronto Central, Central West, North East, Central, North Simcoe Muskoka, South West, Central East), with an annual enrollment of over 3,500 patients per year.

Telehomecare has been shown to significantly decrease health system utilization, including emergency department visits, hospital admissions and physician visits, and to improve patients’ clinical outcomes and self-management. Telehomecare reviews and evaluations have shown that these interventions lead to marked improvement in patients’ quality of life and were highly acceptable to patients. Also observed were improvements in the prescribing of medications, patient knowledge and self-care and functional class. The ministry has engaged Toronto Health Evaluation and Technology Assessment (THETA) from the University of Toronto in the evaluation of the program.

The program currently operates with:

- OTN providing project management oversight, centralized technology, business/clinical process leadership, quality improvement, and change management and adoption support.
- The local/regional planning organization (e.g. LHIN, OHT) supporting local business model development, establishing patient /provider referral processes, establishing enrolment targets, providing local leadership (i.e. leading project/clinical steering committee), and conducting communications/awareness activities.

- The host organization(s) (most often a hospital or home and community care) selected (e.g. by LHIN, OHT) to be responsible for the actual delivery of the Telehomecare service, including employing the nurses and executing of all operational aspects.

There are various other digital self-care models for COPD and CHF in the province. More can be learned about the other models through Virtual Care Advisory Service.

Service Owner

Ontario Telemedicine Network

End User(s)

- Patients
- Service Providers

Sector(s) Served

- Acute Care
- Home and Community Care
- Primary Care
- Public Health

Requirements and Rationale

The Provincial Telehomecare Program is an evidence-informed program with demonstrated benefit that, where regionally available, OHT physicians could refer their patients to or that OHTs could consider implementing for their catchment.

Applicable OHT Policies

- Patient-Facing Digital Health Policy
- Digital Health Access, Privacy and Security Policy
- Digital Health Reporting and Performance Policy

2. Digital Mental Health – Online Peer Support Tool

Description

Big White Wall provides a round-the-clock online peer support community where members can share experiences and express themselves in words and images, helping participants feel less socially isolated. There is also a library of articles, tips and support courses including cognitive behaviour therapy accessible online. Members can access the safe community anonymously via computer, tablet or smartphone. Trained counsellors are available 24/7 to offer support and keep the community safe (Peak hours of activity are between 1am and 3am).

The online peer support tool is made available to all Ontarians coping with mood disorders via OTN through the Provincial Structured Psychotherapy Program. The Provincial Psychotherapy

Program is funded by the ministry and aims to assess the effectiveness of various structured psychotherapy modalities. Since October 2018, over 16,000 patients across Ontario have enrolled in the program.

Patients can self-enroll anonymously, and the program can be promoted in coordination with local mental health and addictions strategies and/or service delivery.

Service Owner

Ontario Telemedicine Network

End User(s)

- Patients

Sector(s) Served

- Mental Health/Addictions

Requirements and Rationale

Big White Wall is available provincially for OHT providers to raise awareness with their patients, who can self-enroll.

Applicable OHT Policies

- Patient-Facing Digital Health Policy
- Digital Health Access, Privacy and Security Policy
- Digital Health Reporting and Performance Policy

Immunization Connect Ontario (ICON)

Description

The Immunization Connect Ontario (ICON) is a web-based tool for the public to securely look up their immunization records and report immunizations to and from the Digital Health Immunization Repository (also known as the 'Digital Yellow Card').

Service Owner

eHealth Ontario

End User(s)

- Public

Sector(s) Served

- Primary Care
- Public Health
- Education

Requirements and Rationale

OHTs may choose to recommend ICON to caregivers or patients as a means of tracking a dependant's or their own immunization status.

Applicable OHT Policies

- OPIS

InScreen

Description

InScreen combines existing Breast, Cervical, and Colorectal cancer screening data into a single integrated digital platform that supports patients, providers, and health system planners in improving the quality and uptake of screening. InScreen includes digital screening records for all insured residents of Ontario 18-75 years of age. It also enables Cancer Screening Correspondence, a key component of an organized screening program, which is used to increase client participation in screening. Last year, InScreen generated 6 to 7 million pieces of correspondence sent to screening-eligible Ontarians.

InScreen's citizen/patient record is updated daily and the physician information is updated weekly. InScreen contains information on all health insured citizens of Ontario 18-75, and information on all physicians and through the physician/patient rostering process, also includes the patient's primary care physician and the primary care physician's patient list. The information collected by InScreen also informs the Screening Activity Report also identified in the digital catalogue.

Service Owner

Cancer Care Ontario

End User(s)

- Service Providers
- Ontario Citizens

Sector(s) Served

- Public Health

Requirements and Rationale

InScreen is informed by laboratory information, ministry information, hospital information, and the cancer registry to segment and target screen-eligible Ontarians for correspondence. OHTs will not be required to provide information as it is collected through existing screening data.

Screening letters are sent to people to invite them to get screened, tell them about their test results, let them know if they need to get more tests done and remind them when it is time to

be screened again. There is an opportunity for InScreen to support screening services for other chronic diseases.

Applicable OHT Policies

The following policies apply to use of this data:

- Digital Health Information Exchange policy
- Digital Health Investment and Value-for-Money Policy
- Digital Health Access, Privacy and Security Policy
- Digital Health Reporting and Performance policy

Interactive Symptom Assessment and Collection (ISAAC) Application

Description

The Interactive Symptom Assessment and Collection (ISAAC) tool allows patients and their care team to assess and monitor symptoms through a web-based platform. It is an accessible, touch-screen platform that currently supports symptom management for oncology as well as functional assessment for orthopedic patients. ISAAC enables the collection of patient-reported outcomes (PROs) from patients and facilitates the identification of concerning symptoms or issues. There is evidence that the use of PROs on platforms such as ISAAC improves patient-clinician communication, detects unrecognized problems and improves the patient experience.

ISAAC has the capability to notify the caregiver team via email when symptom scores exceed defined thresholds, ensuring the appropriate symptom management can be performed more effectively and efficiently. ISAAC also has the functionality to intelligently trigger PROs based on patient responses. If a patient indicates feelings of depression, ISAAC will offer additional questions to characterize the patient's depressive symptoms.

Ontario's cancer symptom screening program is the only population-based cancer symptom screening program in North America. Most patients are screening for symptoms using a PRO called the 'Edmonton Symptom Assessment Survey' (ESAS). ISAAC is implemented at 14 regional cancer centres and over 50 hospitals. More than 45,000 patients complete symptom screening using ISAAC every month. Other Oncology PROs available via ISAAC include Patient Reported Functional Status (PRFS), Expanded Prostate Cancer Index Composite (EPIC), Personal Health Questionnaire (PHQ-9) for depression and the MD Anderson Symptom Inventory – Head and Neck Cancer module (MDASI-H&N).

In 2018, ISAAC was expanded to support the collection of PROs in orthopedics, in particular for patients who are undergoing hip or knee replacement surgery. These patients complete either the Oxford Hip Scale or Oxford Knee Scale and the EQ-5D (a quality of life PRO used worldwide). The hip and/or knee PROs assess the functional status, pain and quality of life for these patients. These PROs will be quality indicators for the hip/knee surgery Quality Based

Procedure (QBP) funding model. Currently, ISAAC is live in 20 orthopedic clinics and the intention is to implement ISAAC at all 57 orthopedic clinics in Ontario.

To enable interoperability, ISAAC has three integration services available to sites: Hospital Information System (HIS) to ISAAC, ISAAC to the HIS, and integration with the hospital patient portal. ISAAC is supported on major mobile platforms and integration with hospitals systems allows patient and disease data to inform ISAAC, ultimately providing the patients with a better patient experience.

Service Owner

Cancer Care Ontario

End User(s)

- Service Providers
- Patients

Sector(s) Served

- Specialist Care (Oncology, Orthopedics)

Requirements and Rationale

Cancer patients are offered the opportunity to report their symptoms so that their care team can monitor their symptoms and provide support as required.

Patients undergoing hip and/or knee replacement surgery are offered the opportunity to report their functional status, pain and quality of life, the care team monitors these reports and tailors the rehabilitation plan accordingly. Furthermore, orthopedic PROs will be used a quality indicator for this type of surgery, comparative data will be reported by the Canadian Institutes for Health Information (CIHI) provincially and nationally.

ISAAC improves patient assessment, facilitates improved patient-clinician communication and ultimately improves the patient experience.

Applicable OHT Policies

The following policies apply to use of this application:

- Digital Health Information Exchange Policy
- Digital Health Investment and Value-for-Money Policy
- Digital Health Access, Privacy and Security Policy
- Digital Health Reporting and Performance Policy
- Patient-Facing Digital Health Policy

MyCancer IQ

Description

MyCancer IQ is an award-winning website that helps people understand their risk for cancer and what they can do to lower that risk. It ultimately aims to reduce the risk of developing cancer by providing evidence-based information and resources to support Ontarians in managing their health, as well as opportunities to discuss the outcome of the assessment with their primary care physician.

My CancerIQ provides cancer risk assessments and resources, including a personalized action plan to Ontarians, for six cancers: lung, breast, colorectal, cervical, kidney and melanoma. To date, nearly 500,000 cancer risk assessments have been completed.

Service Owner

Cancer Care Ontario (CCO)

End User(s)

- Public

Sector(s) Served

- Public Health
- Primary Care

Requirements and Rationale

MyCancerIQ is a public facing website that supports all major mobile platforms. After completing a series of questions, the tool provides a personalized cancer risk assessment that can be shared between a patient and their primary care physician.

Applicable OHT Policies

The following policies apply to use of this data

- Digital Health Investment and Value-for-Money Policy
- Digital Health Access, Privacy and Security Policy

Patient Access Channels

Description

Patient Access Channels (PACs) are patient-facing digital products or services that collect and/or disclose personal health information (PHI) to patients and may also connect patients directly to their providers. Currently, there are at least 50 distinct PACs in Ontario used by more than 2 million Ontarians to access parts of their health records that reside with their health services providers (HSPs).

PACs can be standalone services or offered as part of a point-of-care solution (i.e. an EMR or HIS). An example of a standalone product which is available in Ontario is MyChart™.

MyChart™

MyChart™ is a patient portal developed by Sunnybrook Health Sciences Centre that streamlines the way health record information is accessed and shared. Patients are key stakeholders in the delivery of care and MyChart™ empowers them to manage their health through access and contribution to their personal health information and the ability to securely communicate with other users (e.g. family, friends, health care providers). Electronic access to PHI can be granted by patients to family caregivers, hospital clinicians, primary care physicians, home and community care staff, pharmacists, and others.

Service Owner

Sunnybrook Hospital

End User(s)

- Patients

Sector(s) Served

- Acute Care
- Home and Community Care (coming soon)

Requirements and Rationale

Ontario Health Teams must provide patients with digital choices to interact with their care team and this includes digital access to patient health records. MyChart™ is one example of a patient access channel that Ontario Health Teams can deploy to improve digital access to patient health records. The unique needs of the patient population served by the Ontario Health Team should inform the choice and implementation of a digital tool.

Applicable OHT Policies

- Digital Health Information Exchange Policy
- Digital Health Investment and Value-for-Money Policy
- Digital Health Access, Privacy and Security Policy
- Patient-Facing Digital Health Policy

Retinal Screening Program

Description

This program provides retinal screening sites for diabetes patients that leverage the eConsult program for access to ophthalmology consults. The core focus of this program is reaching those patients with diabetes who have not had an eye exam within the past year and do not have an eye care provider. The program strives to provide timely access to care if diabetic retinopathy is detected from the screening exam and arrange ongoing care (e.g., ophthalmology, optometry). Through LHIN or other funding, a trained technician takes images of referred

patients with a specialized camera. Once the images have been captured, they are uploaded into a web-based software for an ophthalmologist to review and grade accordingly (see eConsult section). Treatment and follow-up recommendations are sent to the host site to share with the patient and their primary care provider. This innovative care model will continue to serve people with diabetes to improve access to screening, support early identification of retinopathy and treatment and improve the efficiency of specialists in a cost-effective manner.

Retinal screening programs are currently available in 7 LHINs with 11 screening organizations: Central West, Central, Toronto Central, Hamilton Niagara Haldimand Brant, South East, North East and North West. Many of the retinal screening programs have partnered with health care organizations and providers in their community to offer on-site outreach screening clinics as a strategy to increase access to care locally for hard to reach patients who are unscreened for retinopathy.

Each retinal screening program has access to monthly quality dashboards to view performance and outcome metrics per host site as well as provincially. For FY 18/19, 2,155 patients were screened by the 11 host sites. Retinopathy was detected in 13% of these screens. Provincially, the average time from photo upload to interpretation and from interpretation to report completion by ophthalmologist was 3.90 and 3.45 days respectively. Additional diagnoses are also captured in a patient's report to ensure that patients are connected to the care required if other eye pathologies are detected in the screening exam.

Service Owner

Ontario Telemedicine Network

End User(s)

- Service Providers

Sector(s) Served

- Specialist Care
- Primary Care
- Public Health

Requirements and Rationale

Available model for consideration by OHTs who have an unreached population of patients with diabetes in need of retinal screening.

Applicable OHT Policies

- Patient-Facing Digital Health Policy
- Digital Health Access, Privacy and Security Policy
- eServices Solutions Policy

- Digital Health Reporting and Performance Policy

Virtual Visits

Virtual visits are clinical visits conducted by video, electronic message, and/or audio call.

In Ontario, the provincial program for virtual visits is the ministry's Telemedicine Program, which allows providers to have video visits with patients at a patient host site through OTN's provincial network and bill their services through the OHIP claims process.

In addition to this provincial offering, the ministry, with OTN's support, is working on expanding access to virtual visits and modernizing the ministry's Telemedicine Program. Thus, in addition to this core program there are various pilot projects that are available to OHTs, which can allow wider billable uses of virtual visits. These pilots enable delivery of:

- Video visits to the Home (i.e. eVisits to the Home Pilot; Partner Video Proof-of-Concept Project);
- Primary care virtual visits by video, electronic messaging and/or audio call (i.e. eVisit: Timely Access to Primary Care Pilot); and/or
- Video visits via non-OTN technology (i.e. Partner Video Proof-of-Concept Project).

The provincial virtual visit program and pilot initiatives are described below in more detail.

Please also note that, for more detailed information and advice on virtual care tools in Ontario, OHTs can access OTN's **Virtual Care Advisory Service**, which supports the use of evidence-informed and best practice virtual care processes, including the integration of virtual visits and digital self-care tools into new models of care. The resources and expertise available through this service will not be limited to OTN technology offerings or programs but also include advice on other models and technologies that may be of interest to Ontario health care providers.

1. Provincial Virtual Visit Program

Description

Ontario has one of the largest telemedicine (i.e. video visit) networks in the world, allowing patients and providers across Ontario to participate in secure clinical video visits at a telemedicine studio or directly through computer, video and smartphone. This program enables:

- Patient care closer to or even at home;
- Timely care with reduced travel and wait times;
- Continuity of care for patients; and
- Private and secure video patient-provider connections.

Through the Provincial Virtual Visit Program:

- Providers will have secure real-time video visits through OTN with patients or peers and choose the method that is best for them (e.g. via room-based, PC, Mac or mobile solutions);
- Patient host sites are enabled to allow patients local access to secure and supported sites within their communities to receive video visits from their provider(s);
- Physician will be remunerated for the virtual care provided by the ministry's Telemedicine Program via the OHIP claims process; and
- Video visit support services enable providers to find patient host sites and other providers delivering video visits, schedule video visits and access educational learning resources.

In order to access this program, providers need an OTN membership. Membership is free to health care providers who receive 50% or more of their funding from the ministry or OHIP.

Provider Video Visit (eVisit)

Providers have access to secure real-time video visits with patients or peers through the method that is best for them (e.g. via room-based, PC, Mac or mobile solutions):

- OTNhub: Through the OTNhub website providers can access OTN's eVisit solution online from their desktop devices.
- OTNconnect: OTNconnect is OTN's mobile app, which is available to health care providers in Ontario who have signed up for OTNhub.ca and is available on both iOS and Android.
- Room-based video conferencing: OTN provides a Vendor of Record (VOR) of qualified room-based video conferencing equipment available in easy-to-deploy configurations for procurement by health service provider sites. The VOR includes telemedicine systems and accessories used in physical video-conferencing suites that are able to connect with other OTN video access points (OTNhub, OTNconnect, Room-based system) including video equipment, carts, medical peripherals, etc.

Providers can also send an OTNinvite (i.e. e-mail invitation) through the OTNhub or OTNconnect to a non-OTN member to participate in a secure video event from their own device. See 'Physician Remuneration' section below for billing restrictions within the Provincial Virtual Visit Program when using OTNinvite.

OTN also offers an urgent/emergent telemedicine application (TraumaTenant) which enable video conferencing for specialized emergency care and timely treatment for patients in need. This application is used by many provincial and regional models such as the Ontario Telestroke Program, which provides emergency physicians with 24/7 access to neurologists with expertise

in stroke care who can support both the assessment and treatment of patients experiencing acute stroke.

Patient Host Sites

Ontario has a provincial network of over 1,500 patient host sites that offer convenient facilities local to patients that enable equitable access to video visits and provide a supported environment that can often enable a more complex assessment (e.g. one that requires nursing support and/or medical peripherals at the patient site).

The technology used at patient host sites to enable video visits through OTN include:

- Room-based videoconferencing systems, sometimes with medical peripherals (e.g. telesteth, ENT scope, high grade exam camera), which transmit images and/or sound to the consulting physician. These are available through OTN's vendor of record;
- Computer/tablet with camera and microphone using an OTNhub/OTNconnect license; and
- Computer/tablet with camera and microphone that can receive an OTNinvite.

In addition, to providing space and technology to host a patient, patient host sites can either schedule or receive scheduled patient-to-specialist appointments through OTN's scheduling service. Patient host sites act as patient-facing endpoints for any member specialist or clinical professional delivering care in the province. They are responsible for meeting the consultant's clinical requirements, including any pre or post patient assessments and in-appointment procedures.

Physician Remuneration

Ontario physicians can register to provide and submit claims for video visits. In order to simplify the billing and payment process, the ministry's Telemedicine Program leverages the existing Ontario Health Insurance Plan (OHIP) billing system for claims submission. However, the claims are not processed as OHIP claims and should not be confused with insured services. To be eligible to submit claims, physicians must submit a physician registration form and register with the ministry for billing privileges.

Both the physician and the patient must be in attendance at an OTN-certified site in Ontario during the health care encounter in order for the service to be eligible for remuneration. That means that:

- Providers are using:
 - A room-based videoconferencing system in Ontario that is part of OTN; or
 - An OTNhub/OTNconnect license and they are physically located in Ontario.
- Patients are at a patient host site in a health care or community support setting in Ontario that is using:

- A room-based videoconferencing system that is part of OTN;
- An OTNhub/OTNconnect license; or
- A system that receives an OTNinvite (e.g. GuestLink site) ¹.

Even though telemedicine-enabled patient health care services are not insured services, the telemedicine program's physician service rates are set at the same rate payable for insured services (i.e., the rate in the OHIP Schedule of Benefits). The telemedicine program utilizes the OHIP Schedule of Benefits fee codes plus a program code.

Video Visit Supports

Video visit support services enable providers to find patient host sites and other providers delivering video visits, schedule video visits, and access educational learning resources.

- **Finding patient host sites and other providers through OTN's Health Services**

Directory:

- Identify specialists and clinical programs that accept referrals for video visits. To facilitate the referral process, the Directory lists key information, such as programs, sub-specialties, clinical interests, and specific clinical protocols such as referral information.
- Identify patient host site near their patients' location of residence and determine those that provide nursing support, use of peripheral technology, etc. if that is required for the video visit. This information is used to support the video visit scheduling process.
- **Schedule video visits through OTN's scheduling system**, which allows for province-wide scheduling of patient host sites and equips providers with the tools they need to schedule patient appointments, while safeguarding patient privacy. OTN has implemented specific guidelines for direct online scheduling and coordination between health care providers and patient host sites across Ontario to promote flexibility and control over providers' scheduling activity and improve the patient experience.
- **Access education learning resources** through the OTNhub, which provides access to thousands of educational learning resources in one place. These services can be used to help providers prepare for various types of video-based patient encounters, including technology support and clinical best practices.

¹ Patient visits via OTNinvite to non-professional setting (e.g. home, business, etc.) are not eligible. See pilots for access to wider billable uses of virtual visits.

Service Owner

Ontario Telemedicine Network

End User(s)

- Service Providers and their Administrative Staff
- Care Coordinators
- Patients

Sector(s) Served

- Acute Care
- Specialist Care
- Primary Care
- Mental Health/Addictions
- Home and Community Care
- Long-Term Care
- Public Health
- Community Support Services
- Corrections

Requirements and Rationale

The Provincial Virtual Visit Program is recommended for use by OHTs interested in enabling patients with digital access to care through video visits. It is required for physician video visit remuneration by the ministry's Telemedicine Program via the OHIP claims system, and for video visits that require use of patient host sites.

Applicable OHT Policies

- Patient-Facing Digital Health Policy
- Digital Health Access, Privacy and Security Policy
- Digital Health Reporting and Performance Policy

2. eVisits to the Home Pilot

Description

OTN's eVisits to the Home Pilot providers can leverage OTNinvite to provide 'home' video visits that are launched through a secure e-mail link and be remunerated for the virtual care delivered. This is a pilot allowance for 'home' video visit remuneration from the ministry's Telemedicine Program.

OTNinvite functionality is available to all OTNhub users but to bill for the 'home' video visits delivered, the providers must be enrolled in this pilot.

This pilot has limited enrollment and is available predominantly to:

- Specialists; and
- Primary care providers associated with an OHT, who are delivering care to their own patients (i.e. within an existing physician-patient relationship).

Early insights on the benefits of this initiative show significant time and travel savings for patients and high patient and provider satisfaction, with most patients feeling the quality of care was the same or somewhat better than an in-person appointment.

Service Owner

Ontario Telemedicine Network

End User(s)

- Service Providers
- Patients

Sector(s) Served

- Acute Care
- Specialist Care
- Primary Care
- Home and Community Care
- Long-Term Care

Requirements and Rationale

The eVisits to the Home Pilot is available for enrollment by OHT associated physicians interested in enabling patients with digital access to care through ‘home’ video visits.

Applicable OHT Policies

- Patient-Facing Digital Health Policy
- Digital Health Access, Privacy and Security Policy
- Digital Health Reporting and Performance Policy

3. eVisits: Timely Access to Primary Care Pilot

Description

The eVisits: Timely access to primary care pilot enables patients to have virtual visits with their primary care practitioner from their computer or smartphone via electronic messaging, audio call or video visit using an online platform (i.e. Novari Health, Think Research).

This pilot (September 2017 – March 2019) was conducted in 5 regions (Novari: Central West, Central East, Mississauga Halton, Toronto Central; Think Research: Waterloo Wellington) with 280 physicians and over 32,000 patients invited who completed over 17,000 virtual visits during the pilot. Physicians are remunerated for virtual visits according to a pilot billing framework.

The formal evaluation of this pilot is being conducted by the Women's College Hospital Institute for Health System Solutions and Virtual Care (WIHV). Preliminary findings demonstrated that patients highly value virtual visits, *but do not overuse them*, with most visits being conducted over electronic messaging. The final evaluation will be available in Q1 2019/20.

The online platforms (i.e. Novari Health, Think Research) are available for purchase through a vendor of record (VOR) arrangement from OTN.

Pending review of final evaluation results, enrollment in this model will be considered for primary care providers who: are part of an OHT early adopters; have procured technology off the OTN VOR; and are providing care to their own patients (i.e. within an existing physician-patient relationship). This would allow primary care physicians in OHTs to deliver and receive remuneration for virtual visits according to a pilot billing framework.

Service Owner

Ontario Telemedicine Network

End User(s)

- Service Providers
- Patients

Sector(s) Served

- Primary Care

Requirements and Rationale

Pending evaluation results, the eVisits: Timely Access to Primary Care may be available for enrollment by primary care physicians who are part of an OHT and are interested in enabling patients with digital access to care through 'home' virtual visits.

Applicable OHT Policies

- Patient-Facing Digital Health Policy
- Digital Health Access, Privacy and Security Policy
- Digital Health Reporting and Performance Policy

4. Partner Video Proof-of-Concept Project

Description

This is a limited enrollment proof-of-concept (PoC) project through which health care organizations and providers can trial and help inform the recommended provincial approach that could enable broader use of non-OTN technology in Ontario, while not inadvertently fragmenting or decreasing access to virtual care. This includes elements such as, requirements

for technology, interoperability, accountability agreements, data/reporting, etc. and enabling supports needed (e.g. procurement, privacy and security).

Through this PoC:

- Providers can be remunerated for care delivered via non-OTN video visit technology that meet minimum standards and guidelines;
- Participants will participate in focused demonstration projects to support development of various elements (e.g. requirements for patient host site connections); and
- Participants will provide feedback and support refinement of the recommendations for a provincial approach that could support modernization of the ministry's Telemedicine Program.

Service Owner

Ontario Telemedicine Network

End User(s)

- Service Providers
- Patients

Sector(s) Served

- Acute Care
- Specialist Care
- Primary Care
- Mental Health/Addictions Care
- Home and Community Care
- Long-Term Care

Requirements and Rationale

OHTs and associated clinicians interested in enabling patients with digital access to care through 'home' video visits through non-OTN technologies will be given priority in joining the OTN Partner Video Proof-of-Concept Project.

Applicable OHT Policies

- Patient Digital Access to Care Standard
- Digital Health Access, Privacy and Security Policy
- Digital Health Reporting and Performance Policy

Provider-Facing Tools, Services and Programs

Client Health and Related Information System (CHRIS) Suite of Applications

Description

The Client Health and Related Information System (CHRIS) is the provincial digital health asset that supports the delivery of home and community care services. CHRIS is a web-based platform that acts as the home and community care core patient management system, delivering a common set of functions related to care coordination, care planning and administration of home and community care. CHRIS supports the provincial client record for clients receiving home and community care services, as well as key functions including client assessments and referrals, billing and reconciliation and required reporting on service delivery.

CHRIS supports communications and placement with other parts of the health system including Long-Term Care placement, eNotification with hospitals and eReferral to community support service providers. Authorized external health system organizations are able to access client information stored in CHRIS through Health Partner Gateway (HPG) – the CHRIS partner portal.

OHTs are required to leverage key functions of CHRIS to support the delivery of home and community care services, as well as coordinate other health services including long-term care placements and referral to community support services. Some functions may only be required during the transition of home and community care to OHTs. OHTs may choose to adopt different technologies and processes to support these functions at maturity.

The Client Health and Related Information System includes (1) home and community care management, (2) placement management, and the (3) Coordinated Care Plan (CCP).

1. CHRIS/HPG – Home and Community Care Management

The CHRIS solution suite for Home and Community Care Management supports organizations in the care of patients, handling of referrals, and delivery of services in home and community settings. It includes:

- **Health Partner Gateway (HPG)** – Provides access to patient information available in CHRIS and collaboration workflows. This solution supports ONE ID federated login. This functionality is strongly recommended for use by OHTs.
- **Inbound eReferral** – Supports the receipt of standardized referrals from hospitals and emergency medical services (EMS), streamlining intake and status update processes. Please note, work to enable eReferrals from Primary Care and Regional Referral Hubs is in progress. OHTs should use this functionality.
- **Assessments Tools** - Enables standardized assessments for patients being referred for and receiving home and community care services. The information captured from the assessments help identify issues, risks and changes in health conditions and assists in

the development of specific care planning. The assessment platform is integrated with CHRIS and assessment information is shared with relevant users via HPG and provincial repositories. The following standard interRAI assessment tools are currently available:

- interRAI Contact Assessment (interRAI-CA)
- interRAI Home Care (interRAI-HC Community & interRAI-HC Hospital includes hospital version)
- interRAI Palliative Care (interRAI-PC)
- interRAI Community Health Assessment, including four supporting supplements:
 - Functional Supplement (interRAI CHA-FS)
 - Assisted Living Supplement (interRAI CHA-AL)
 - Mental Health Supplement (interRAI CHA-MH)
 - Deafblind Supplement (interRAI CHA-Db)
 - Child and Youth Mental Health and Adolescent Supplement (interRAI ChYMH) (available in 2020)
 - interRAI Preliminary Screener

OHTs should use this functionality.

- **Home Care Service Planning, Referrals, Contract Management, and Billing** – Supports the planning and delivery of home care services by Home Care Agencies. Supports reporting of service utilization for home and community care to the ministry. Service availability and waitlists are managed based on geography and market share. Supports service pathways for common treatment care plans (e.g., bundled care hip & knee). Bi-directional information sharing with Home Care Agencies is automated through the HPG solution and is available through PXML web services interfaces. During transition, OHTs should use this functionality.
- **Ontario Drug Benefit (ODB) Authorization** – Enables ministry and pharmacy notification of ODB authorizations, extensions and terminations. OHTs should use this functionality.
- **Equipment and Supplies (E&S) Ordering** – Supports the purchase of supplies & rental of equipment required in the delivery of home care services. Web service APIs support Home Care Agencies submitting requisition requests and E&S Vendors for purchase orders and billing data exchange. During transition, OHTs should use this functionality.
- **Community Care Referral Management** – Supports the creation and management of Community Care referrals and waitlists. Community Care Agencies access and respond to referrals, manage waitlists, and exchange documents and assessments through HPG. This functionality is strongly recommended for use by OHTs.
- **eNotification to Home Care and Community Care** – Provides near real-time notification when patients present to an emergency department, are admitted or discharged from an acute care facility, or are seen by EMS. OHTs should use this functionality.

- **Integration with Provincial Data Repositories** – CHRIS provides a near real-time summary of a patient's home and community care record to the Clinical Data Repository (CDR). CHRIS supports the ClinicalConnect solution through real-time access to information through a web services interface. OHTs should use this functionality.
- **Health Card Validation** – CHRIS is integrated with the ministry Health Card Validation System to electronically validate Ontario Health Card Numbers and versions. OHTs should use this functionality.
- **Provincial Client Registry (PCR) Integration** – PCR integration enables CHRIS demographic data to be linked with or accessed by, other health information systems. A bi-directional system-to-system integration between CHRIS and PCR enables users to auto-populate information from PCR into the CHRIS client record. OHTs should contribute home and community care information to the PCR and have the option to consume information in the PCR.
- **Centralized Information Management & Decision Support Reporting** – A provincial data warehouse that supports provincial reporting (e.g. MIS) and the development of provincial tools, dashboards and algorithms to support performance measurement and monitoring as well as quality improvement initiatives. OHTs should use this functionality.

2. CHRIS/HPG – Placement Management

The CHRIS solution suite supports placement management including the management of long-term care home waitlists, transitioning patients into long-term care settings, and bookings for short stay beds. Applications to long-term care facilities are exchanged through the HPG solution. Long-term care home staff are enabled to manage referrals, view waitlists, and access shared documents, assessments, and other patient information. Placement management includes use of:

- **Bed Board Management (BBM)** – BBM records vacant LTCH and hospital beds, their locations and characteristics. Allows linking to CHRIS waitlists to match resources to appropriate patients. Supports Long-Term Care beds and short stay bed bookings. During transition, OHTs should use this functionality.

3. CHRIS/HPG – Coordinated Care Plan (CCP)

A web-based solution that provides an implementation of the Health Quality Ontario Health Links Coordinated Care Plan (CCP). To support all Health Link participants, this solution supports collaborative multi-authoring capabilities for creating, viewing, and being notified of changes to coordinated care plans. This solution supports ONE ID federated login. This functionality is strongly recommended for use by OHTs.

Asset Owner

Health Shared Services Ontario

End User(s)

- Service Providers
- Delivery Organizations
- Care Coordinators
- Provincial Reporting and Analytics

Sector(s) Served

- Home and Community Care
- Long-Term Care
- Laboratory Orders and Results

Requirements and Rationale

At full maturity, OHTs will have clear workflows and capacity to support the management of home and community care services that may be supported by a combination of technologies including CHRIS. In the interim to full maturity, CHRIS will be used by OHTs to support the transition and delivery of home and community care services.

Key functions of CHRIS are required for use by OHTs managing home and community care services, client placement to long-term care homes and collaborative care planning using the Coordinated Care Plan (CCP). The status of each function as mandatory, strongly recommended or optional is noted in the description of each function noted above.

The use of CHRIS by OHTs provides a shared provincial home and community patient record available across OHTs and supports information sharing, placement management and patient movement. Benefits of CHRIS include:

- Supports a single provincial client record and repository for home and community care that can be leveraged by all appropriate health system organizations.
- Existing information exchange processes and system integrations are currently in place with every provincial home care provider and many health system organizations including hospitals, long-term care homes and community support service agencies. Continuity of solution use removes the need to reinvest in new integrations and associated change management.
- Provides consistent, integrated, centralized ministry reporting capabilities for home and community care.
- Inbound eReferral capabilities from hospitals and EMS that reduce manual data entry and enable automated status updates to referral source.

- eNotification services that provide real-time alerts to health teams on patient status and location, preventing missed home care visits.
- Provides consistency across OHTs for placement referrals and bed booking for long-term care homes. It provides provincial long-term care waitlists, in compliance with current legislation for long-term care.

Patient information is consistently shared with provincial repositories and regional viewers.

- Bi-directional integration between CHRIS and the Client Registry (PCR) supports access to home and community care client information in provincial repositories, which can be viewed through the Provincial Clinical Viewers (e.g. ConnectingOntario). CHRIS is also integrated with Clinical Connect, Sunnybrook MyChart, SHIP and the REACH portal. These integrations reduce the volume of data entry and data transfers between systems thereby reducing the risk of privacy incidents and improving the patient experience.

Applicable OHT Policies

- Digital Health Information Exchange Policy
- Digital Health Investment and Value-for-Money Policy
- Digital Health Access, Privacy and Security Policy
- Digital Health Reporting and Performance Policy
- Clinical Systems Policy
- Patient-Facing Digital Health Policy
- eServices Solutions Policy

Data Submission Portal

Description

The Data Submission Portal (DSP) is a web-based .NET application used for the submission and validation of data for a number of cancer and screening programs, including:

- Activity Level Reporting (ALR) used to support funding, quality and capacity management for cancer services provided by an OHT;
- Specialized Services Oversight (SSO) used to support funding, quality and capacity management for highly specialized procedures provided by an OHT;
- Gastrointestinal Endoscopy (GI Endo) used to support provincial colorectal screening, funding, quality and capacity management for gastrointestinal endoscopy procedures provided by an OHT;
- Fecal Immunochemical Test (FIT) used to support provincial colorectal screening, funding, quality and capacity management of colorectal screening tests provided by the

labs supporting delivery of screening to OHT patients;

- Positron Emission Tomography (PET) used to support the collection of PET insured data for funding, quality and capacity management of PET procedures provided by an OHT;
- Registered Nurse Flexible Sigmoidoscopy (RNFS) used to support the collection of RNFS data for funding, quality and capacity management of RNFS procedures provided by an OHT; and
- eClaims data used to support patient enrollment and the adjudication of cancer drugs used for treatment provided by an OHT.

Data is used to support both operational and analytic needs across the cancer continuum. The DSP is designed to be scalable and can easily support the addition of new tenant programs, including those beyond the cancer and screening programs if required.

Service Owner

Cancer Care Ontario

End User(s)

- Hospital Administrators, Management
- Clinics, Labs, Administrators, Management providing OHT services

Sector(s) Served

- Specialist Care

Requirements and Rationale

The DSP is required for OHT use as it is the conduit for digital health delivery organizations, hospitals, and other health care providers to submit the data noted above. The DSP collects standardized structured data from sites via CSV extracts from local systems. Sites submitting data using DSP are provided real-time feedback on data quality with an opportunity to correct data for resubmission.

All organizations using the DSP are required to sign the following agreements: acceptance of end user Licence Agreement, identification of Local Registration Agent (LRA), DSA for specific tenants.

Applicable OHT Policies

The following policies apply to use of this data:

- Digital Health Information Exchange Policy
- Digital Health Investment and Value-for-Money Policy
- Digital Health Access, Privacy and Security Policy
- Digital Health Reporting and Performance Policy

eClaims

Description

eClaims is a web-based application deployed in over 90 hospitals across the province and allows for adjudication and reimbursement of approximately \$400 million of cancer drugs annually.

eClaims is used primarily by Pharmacists, Pharmacy Technicians, Physicians (e.g., Oncologists, Hematologists), hospital finance staff and other hospital administrators as well as CCO program and finance staff.

eClaims is a real-time system that facilitates the adjudication of patient enrolments and treatment claims for injectable cancer drug treatments funded through CCO's New Drug Funding Program and Evidence Building Program to ensure use is in alignment with eligibility criteria.

eClaims provides a central location for all relevant information on a patient (e.g., enrolments, treatments, supporting clinical documentation and patient specific communication). It also enables providers within the circle of care across sites to view enrolment details and treatment history (e.g., including uploaded supporting documentation) on their patients.

Contact

Cancer Care Ontario

End user(s)

- Providers (Hospital Oncology Pharmacist, Pharmacists, Pharmacy Technicians, Oncologists, Hematologists)
- Administration (Finance Staff)

Sector(s) Served

- Specialist Care

Requirements and Rationale

eClaims improves and expedites management of adjudication and reimbursement activities related to the appropriate use of injectable cancer drugs. eClaims applies a digital rules-based solution to automatically adjudicate reimbursement claims for cancer drugs against clinically validated standards for treating cancer patients. eClaims also ensures that all drugs covered under the New Drug Funding Program and Evidence-Based Program are efficiently adjudicated for hospital sites administering patient treatment.

HL7 APIs for local integration of Computerized Prescriber Order Entry (CPOE) systems or data submission using the Data Submission Portal (DSP) are available.

All organizations supporting eClaims are required to sign the following agreements: Software License and Services Agreement (eClaims Data Submission Portal), eClaims License and Participation Agreement, Local Registration Agent (LRA) Agreement.

Applicable Policies

The following policies apply to use of this data:

- Digital Health Information Exchange Policy
- Digital Health Investment and Value for Money policy
- Digital Health Privacy and Security Policy
- Digital Health Reporting and Performance Policy

Electronic Child Health Network (eCHN)

Description

eCHN is the paediatric digital health record of Ontario. It is a secure portal for clinicians to access paediatric medical information for patients under their care. Patient data is collected from over 70 hospital sites across Ontario and is reflected in a consolidated digital record.

Thousands of clinicians rely on eCHN for the timely coordination of pediatric patient care and for pediatric referrals, regardless of location.

Note: Some information contained within eCHN is also available through the provincial viewer services ConnectingOntario and ClinicalConnect.

Service Owner

The Hospital for Sick Children (SickKids)

End User(s)

- Service Providers

Sector(s) Served

- Acute Pediatric Care

Requirements and Rationale

Connection to eCHN is required for OHTs providing acute pediatric care.

Applicable OHT Policies

- Digital Health Access, Privacy and Security Policy
- Digital Health Reporting and Performance Policy

Electronic Canadian Triage and Acuity Scale (eCTAS)

Description

eCTAS improves patient safety by ensuring consistent application of triage guidelines in Ontario emergency departments (EDs).

The Canadian Triage and Acuity Scale (CTAS) are guidelines used by ED nurses to triage patients according to the urgency of their needs. The triage process assesses how urgently a patient needs to be seen by a physician and helps define the order in which patients should be seen when multiple patients are waiting.

Through the years, significant variations were identified in how clinicians interpret and apply the CTAS guidelines. The 2010 Ontario Auditor General's report identified a lack of consistency in assigning CTAS levels and a lack of clear accountability in ensuring standardization of CTAS guideline application. Award-winning eCTAS improves both clinical decision-making and data accuracy for one in six patients.

eCTAS is also a key enabler towards an evolution to live ED reporting. The cloud-based provincial system receives patient volumes, presenting complaints, triage scores, vitals and clinical documentation immediately after the triage event.

By standardizing the application of the CTAS guidelines across the province, the eCTAS program provides:

- Improved patient safety and quality of care
- Enhanced accountability through more timely collection, analysis and reporting of clinical triage data
- Support for more informed policy and funding decision-making

Asset Owner

Cancer Care Ontario

End user(s)

- Service Providers (e.g. Emergency Department Nurses)
- Emergency Department Registration Clerks
- Hospital Management and Administration

Sector(s) Served

- Emergency Care

Requirements and Rationale

To be eligible for in the ministry's Pay-for-Results program, an emergency department must implement the eCTAS system.

Participation in the eCTAS program includes the integration of clinical decision support into a facility's clinical and technical workflows. Access to Care assists hospitals in selecting their optimal technical integration option and helps provide change management services for effective integration (e.g., project management, implementation, integration and education support). Hospitals are responsible for local information system development and implementation resource costs.

An OHT with emergency care services (e.g., urgent care centre, emergency department, etc.) interested in eCTAS implementation should contact CCO's Access to Care team to inquire about eligibility, availability and requirements for implementation. These requirements and level of change management effort can vary significantly based on the hospital's selected clinical and technical integration.

Standard requirements for all integration options include:

- Identification of clinical, technical and product leads to support implementation and ongoing operations of the eCTAS system
- Agreements (data sharing agreement, acceptance of end user license agreement)
- Reliable internet access
- Support from local clinical and technical resources for:
 - Initial and ongoing release testing and validation
 - Assistance in local and provincial incident investigation

Applicable OHT Policies

The following policies apply to use of this application:

- Digital Health Information Exchange Policy
- Digital Health Investment and Value-for-Money Policy
- Digital Health Access, Privacy and Security Policy
- Digital Health Reporting and Performance Policy
- Clinical Systems Policy

Electronic Patient Referral (eReferral)

Description

An eReferral is an electronic communication that enables the referral process through the transfer of information among providers to support the patient across the continuum of care. eReferral helps to address the challenge of fragmentation across a high number of disconnected systems that make it difficult to share patient information. Traditional referrals are also often lost, incomplete, and provide little to no transparency for the referrer or patient.

There are currently multiple eReferral solutions in the province, such as:

- **Ocean eReferral** – Primarily used for primary care to specialists eReferrals; technology solution for the System Coordinated Access (SCA) Program led by the eHealth Centre of Excellence in Waterloo Wellington.
- **Novari eRequest** – Mainly used for surgical booking and central intake in the acute sector.

- **Strata Pathways/Resource Matching and Referral** – Primarily used for eReferrals from the acute sector to home and community care.

CHRIS is also widely used to send referrals to the home and community care sector.

Service Owner

Technology	Existing Procurements
Ocean	<ul style="list-style-type: none"> • System Coordinated Access – Stream 1 • System Coordinated Access – Stream 2
Novari	<ul style="list-style-type: none"> • Common Electronic Regional Referral and Intake (CERRI) • Halton Healthcare and Novari Partnership – Central Intake • PROMIS – Surgical Booking, Wait Times Reporting, and eReferral • SUBMIT – Surgical Booking and Wait Times reporting • Novari Wait Times
Strata	<ul style="list-style-type: none"> • Resource Matching & Referral – NW and TC LHINs

End User(s)

- Service Providers

Sector(s) Served

- Primary Care
- Specialty Care
- Home and Community Care

Requirements and Rationale

Where OHTs choose to implement an eReferral solution, OHTs should first leverage one of the existing procurements (listed above), or CHRIS within the home and community sector. Where OHTs would like to deviate from existing procurements or CHRIS, ministry approval is required.

Applicable OHT Policies

- Digital Health Access, Privacy and Security Policy
- Digital Health Reporting and Performance Policy
- Clinical Systems Policy
- eServices Solutions Policy

Health Report Manager (HRM) and eNotification Service

Description

Health Report Manager (HRM) is digital health solution that enables primary care clinicians using an OntarioMD-certified EMR to securely receive important patient reports electronically from other participating health care settings (primarily hospitals, HSSO and Independent Health Facilities).

HRM electronically delivers Medical Record reports, (e.g. Discharge Summary), and transcribed Diagnostic Imaging reports from sending facilities directly into patients' charts, within the clinician's EMR.

Currently, over 211 hospital sites and more than 100 independent health facilities /speciality clinics send reports via HRM, and 10,000 clinicians are receiving reports from across the province.

Reports sent through HRM also include eNotifications, which are real-time electronic notifications of an event (e.g.: Admit, Discharge or Transfer) or message sent through Health Report Manager (HRM) to the EMR of the patient's family physician to inform him/her that his/her patient has been discharged from the hospital's Emergency Department or admitted to or discharged from an in-patient unit. They are seamlessly integrated into the EMR and the physician's workflow.

eNotifications are augmented with community information provided through Health Shared Services Ontario's CHRIS as well as Health Links information (where available) prior to being sent to EMRs. This integration of community information with patient information in EMRs is improving the coordination, efficiency and effectiveness of care to patients with complex needs.

By transmitting hospital reports directly to physicians' EMRs, helping to break down silos and smooth transitions across the care continuum. Further, HRM functionality and adoption have become a centrally-available, cost-effective mechanism for the secure transmission of data.

eNotifications contribute to faster follow-up care after a patient has been hospitalized. After receiving an eNotification, physicians know they will subsequently receive a discharge summary and/or other reports from the hospital after the hospital has prepared the report(s) for electronic transmission.

Service Owner

OntarioMD

End User(s)

- Service Providers
- Care Coordinators

Sector(s) Served

- Primary Care
- Home and Community Care

Requirements and Rationale

To support improved workflow, hospitals within an OHT should be live as sending facilities for HRM and eNotification, and primary care providers in an OHT should be able to receive medical reports and eNotifications through HRM.

Applicable OHT Policies

- Clinical Systems Policy
- Digital Health Access, Privacy and Security Policy

Integrated Assessment Record (IAR)

Description

The Integrated Assessment Record (IAR) provides a centralized integrated repository for clinical assessment data collected from multiple community care sectors, including home and community care, Community Mental Health (CMH), Community Addictions (CA), Long-Term Care Homes (LTCH) and Inpatient Mental Health (MH). It allows authorized Health Service Providers (HSPs) within the circle of care to upload and view a client's assessment information in a secure and timely manner.

At this time the IAR is a stand-alone service, however work is underway to make it available through the provincial clinical viewers (ClinicalConnect and Connecting Ontario)

Service Owner

Ministry of Health

End User(s)

- Service Providers

Sector(s) Served

- Community Care
- Mental Health/Addictions
- Home Care
- Long-Term Care
- Inpatient Mental Health

Requirements and Rationale

The IAR data is available to OHTs.

Applicable OHT Policies

- Digital Health Access, Privacy and Security Policy
- Digital Health Reporting and Performance Policy

KidneyWise

Description

KidneyWise is an online clinical toolkit that provides guidance to primary care providers on which patients are at higher risk of developing chronic kidney disease. It also provides recommendations on how to properly diagnose and best manage a patient to reduce the risk for further disease progression.

The KidneyWise toolkit has three main components, including:

- A clinical algorithm that can be used at the point-of-care;
- An evidence summary for primary care providers requesting more information; and
- An Outpatient Nephrology Referral Form, outlining appropriate clinical tests results that should be included in the referral.

The KidneyWise toolkit was recently updated in 2018 based on new evidence from clinical practice guidelines and feedback from clinical providers.

Service Owner

Cancer Care Ontario

End User(s)

- Service Providers

Sector(s) Served

- Primary Care
- Specialist Care (Nephrology)

Requirements and Rationale

KidneyWise is made available as a responsive website, viewable on various device dimensions and orientations. With KidneyWise, primary care providers have immediate access to standardized approach for identification, detection and management of Chronic Kidney Disease (CKD), as well as a structured referral form. These are available provincially for OHT providers who are involved in care of patients who are at higher risk of chronic kidney disease.

In order to use this web-based toolkit, OHTs will require a modern browser (desktop or other

mobile device) and will need to provide a name and email address per user for access (to support user communications according to medical device legislation).

Applicable OHT Policies

The following policies apply to use of this data:

- Digital Health Access, Privacy and Security Policy
- Digital Health Reporting and Performance Policy
- Patient-Facing Digital Health Policy

Ontario Renal Reporting System (ORRS)

Description

Ontario Renal Reporting System (ORRS) is a provincial renal data and operational information system for health care providers allowing for:

- Patient-based funding;
- Performance reporting;
- Quality management; and
- Capacity planning.

ORRS includes a robust provincial clinical dataset of chronic dialysis, advanced chronic kidney disease and acute dialysis patients. This data determines significant funding of renal services and is used by regional renal programs for patient management, funding forecasts and data quality real-time reporting.

Service Owner

Cancer Care Ontario

End User(s)

- Service Provider (Renal Care)
- Hospital Administration

Sector(s) Served

- Specialist Care (Nephrology)
- Home and Community Care

Requirements and Rationale

ORRS is the primary funding data source of renal services for renal care providers. It also allows for the monitoring, measurement and reporting of Chronic Kidney Disease (CKD) and Quality Based Procedures (QBPs) for the purpose of improving outcomes for renal patients. For OHTs involved in providing renal services, use of ORRS will be required.

OHTs interested in using ORRS will need to identify data leads to implement train-the-trainer models for ongoing data reporting, data quality and data compliance operations. Clinical and

back-office systems and resources will also be required for the reporting and extraction of required data, and for the implementation of quality improvement plans associated to performance measures.

All organizations using ORRS are required to sign the following agreements: ONE ID agreements, including RA, LRA and ORRS LRA designation for user registration and service enrollment, Data Sharing Agreement and Acceptance of end user License Agreement.

Applicable OHT Policies

The following policies apply to use of this data:

- Digital Health Information Exchange policy
- Digital Health Investment and Value-for-Money Policy
- Digital Health Access, Privacy and Security Policy
- Digital Health Reporting and Performance policy

OntarioMD Insights4Care (EMR Quality Dashboard)

Description

The EMR Quality Dashboard is an in-EMR clinical tool that supports clinicians in taking a population health approach to care, with an actionable, real-time clinical dashboard view of their patients with respect to proactive, preventative care, and ongoing management of various chronic diseases as well as opioid use. It provides clinicians the ability to drill down to patient level data and take immediate action. As an inherent outcome, it enables clinicians to improve the consistency of data captured and trend their progress over time in the management of their roster.

Service Owner

OntarioMD

End User(s)

- Service Providers

Sector(s) Served

- Primary Care

Requirements and Rationale

At this time, the OMD Dashboard is not required for OHTs. The Dashboard is currently only available through two EMR vendors (TELUS Health and OSCAR EMR). OntarioMD is in discussions with the ministry around an approach to support provincial rollout of the EMR Quality Dashboard tool.

Applicable OHT Policies

- Digital Health Access, Privacy and Security Policy
- Clinical Systems Policy

ONE Mail

Description

ONE Mail allows users to securely and confidentially exchange patient health information with other registered health care providers. using ONE Mail. ONE Mail has two offerings:

- ONE Mail Partnered is a secure, encrypted email service for large organizations. This service uses an organization's existing email structure and routes their email through our infrastructure to allow users to securely and confidentially exchange patient health information (PHI) or personal information (PI) with other ONE Mail users.
- ONE Mail Direct is a secure email service designed specifically for small organizations and for individual regulated health care professionals in Ontario. This encrypted service, hosted in our highly-secure infrastructure, allows users to securely and confidentially exchange patient health information (PHI) or personal information (PI) with other ONE Mail users.

Service Owner

eHealth Ontario

End User(s)

- Service Providers
- Care Coordinators

Sector(s) Served

- Primary Care
- Public Health
- Acute Care
- Home and Community Care
- Long-Term Care
- Pharmacy

Requirements and Rationale

All OHTs must have the ability to securely share structured or unstructured information between providers. ONE Mail can be used to satisfy the secure messaging requirement for exchanging ad-hoc patient information and dialogue between OHT providers registered with a ONE Mail account. Any organization wishing to choose ONE Mail will require all providers to have ONE ID credentials.

Applicable OHT Policies

- Digital Health Access, Privacy and Security Policy

Oncology Patient Information System (OPIS)

Description

Systemic therapy drug ordering is one of the most complex processes in patient care. The Oncology Patient Information System (OPIS) is a CPOE that is used in 15 hospitals and 19 satellite facilities across Ontario for ordering and administering systemic treatments. Formerly a paper-based process for systemic therapy drug ordering, OPIS automates this process and improves patient safety by:

- Allowing immediate electronic communication among cancer care providers to ensure reliable, safe and efficient care;
- Replacing handwritten prescriptions to reduce prescription errors and adverse drug events; and
- Flagging drug allergies to prevent adverse drug events.

OPIS is integrated with Cancer Care Ontario's automated drug adjudication system (eClaims) for patient enrollment and treatment data as well as CCO's Drug Formulary, which provides view-only information on regimen and drug monographs. It is aligned with CCO's Activity Level Reporting (ALR) data requirements.

OPIS is directly involved with patient care and is integrated with the patient registration system at each hospital. Approximately 20,000 treatments are entered in OPIS per month across the province.

Key features of OPIS include: regimen build, ordering module (for both hospital-administered and take-home cancer drugs), pharmacy verification, medication administration, clinical alerts and physician billing. Custom chemo order reports and drug labels have been developed to meet the needs of each site.

Service Owner

Cancer Care Ontario

End User(s)

- Service Providers (Hospital Oncology Pharmacists)

Sector(s) Served

- Specialist Care (Medical and Radiation Oncology)
- Clinical Trials Resources at Hospitals
- Hospital Medical Records Resources

Requirements and Rationale

OHTs are required to ensure that hospital sites are using OPIS as their CPOE maintain patient safety standards and clinical best practices. As hospital sites transition to new CPOEs over the next five years, OHTs will ensure that patient treatment and safety standards are maintained.

OPIS is installed and managed by local technical staff supported by CCO. Hospitals are required to stay within two releases of the most current version of OPIS available.

Applicable OHT Policies

The following policies apply to use of this data:

- Digital Health Information Exchange policy
- Digital Health Investment and Value-for-Money Policy
- Digital Health Access, Privacy and Security Policy
- Digital Health Reporting and Performance Policy
- Clinical Systems Policy

Positron Emission Tomography (PET) eTool

Description

The PET eTool provides support for referring physicians (typically specialists) ordering PET scans. It contains information regarding clinical eligibility and facilitates access to – and sharing of – PET scan referral and activity data between physicians, PET centres and CCO. PET imaging can be used to evaluate normal and abnormal biological function of cells and organs with primary use in oncology as well as some cardiovascular and neurology indications.

PET data is used to determine eligibility for funding (PET scans are reimbursed when they meet evidence-based clinical recommendations of appropriate use). The information also supports:

- Patient-based funding;
- Performance reporting;
- Quality management including service impact evaluation; and
- Capacity planning.

Service Owner

Cancer Care Ontario

End User(s)

- Service Providers

Sector(s) Served

- Specialist Care

Requirements and Rationale

OHTs may require access to the PET eTool as part of patient referrals for PET scans and/or the administration of PET programs. The PET data for Ontarians obtained through the PET eTool

will provide support to access PET scanning and facilitate information exchange between OHTs and other providers (e.g., PET centres).

Applicable OHT Policies

The following policies apply to use of this data:

- Digital Health Information Exchange Policy
- Digital Health Investment and Value-for-Money Policy
- Digital Health Access, Privacy and Security Policy
- Digital Health Reporting and Performance Policy

Provincial Clinical Viewers

Description

The provincial clinical viewers give users real-time access to digital health records contained in Ontario's provincial data repositories, including clinical documentations, assessments, discharge summaries, consultations reports, dispensed medications, laboratory results, hospital visits, home & community care services, mental health care information and diagnostic imaging reports and images. There are two main viewers:

- **ConnectingOntario ClinicalViewer** – Provides regional access to a wide range of patient information for authorized providers in the GTA and Northern and Eastern Ontario (NER). ConnectingOntario includes access to the following provincial repositories:
 - Acute and Community Clinical Data Repository (acCCR)
 - Diagnostic Imaging Common Service (DI-CS) and Diagnostic Imaging Repositories
 - Digital Health Drug Repository (DHDR)
 - Ontario Labs Information System (OLIS)
- **Clinical Connect** – Provides regional access to a wide range of patient information for authorized providers in South West Ontario. ClinicalConnect includes access to the following provincial repositories:
 - Acute and Community Clinical Data Repository (acCCR)
 - Diagnostic Imaging Common Service (DI-CS) and Diagnostic Imaging Repositories
 - Digital Health Drug Repository (DHDR)
 - Ontario Labs Information System (OLIS)

Service Owner

eHealth Ontario

End User(s)

- Service Providers
- Care Coordinators

Sector(s) Served

- Primary Care
- Public Health
- Acute Care
- Home and Community Care
- Long-Term Care
- Pharmacy

Requirements and Rationale

Access to one of the two viewers is required for OHTs, unless they have access to the following provincial assets by other means.

Applicable OHT Policies

- Digital Health Information Exchange Policy
- Digital Health Investment and Value-for-Money Policy
- Digital Health Access, Privacy and Security Policy

Screening Activity Report (SAR)

Description

The Screening Activity Report (SAR) provides Patient Enrolment Model (PEM) Primary Care Physicians (including their delegates and Health care Providers servicing First Nations, Inuit, Metis and urban Indigenous), with a supplementary tool for improving their cancer screening rates and appropriate follow-up for breast, cervical and colorectal cancer screening.

The report presents physician performance and patient level screening activity for colorectal, breast and cervical cancer screening. It allows physicians to compare their screening performance against other physicians within their OHT, as well as across the province. It is integrated with eHealth's ONE ID for identity and access management.

Service Owner

Cancer Care Ontario

End User(s)

- Service Providers

Sector(s) Served

- Primary Care

Requirements and Rationale

The SAR information can be obtained through an online portal that provides patient enrollment model (PEM) physicians with a practice level patient and performance report for cervical,

breast and colorectal cancer screening. Physicians must register for ONE ID to access the SAR service.

Applicable OHT Policies

The following policies apply to use of this data:

- Digital Health Information Exchange Policy
- Digital Health Investment and Value-for-Money Policy
- Digital Health Access, Privacy and Security Policy
- Digital Health Reporting and Performance Policy

Special Authorization Digital Information Exchange (SADIE)

Description

SADIE is a secure web application to guide clinicians through the Exceptional Access Program Application (EAP) request preparation process, ensuring all required information is accurately submitted.

Service Owner

Ministry of Health

End User(s)

- Service Providers

Sector(s) Served

- Primary and Specialist Care

Requirements and Rationale

SADIE is available for use by OHTs.

Applicable OHT Policies

- N/A

Ontario eConsult Program (eConsult)

Description

eConsult is a secure web-based tool that allows physicians or nurse practitioners timely access to specialist advice for all patients, often eliminating the need for an in-person specialist visit.

The program includes 4 services: Champlain BASE™ regional service (available to providers in the Champlain and Mississauga Halton region), the Ontario eConsult service accessed through the secure OTNhub (available to all Ontario nurse practitioners and physicians)

Teledermatology and Teleophthamology. The program is led by the Ontario eConsult Centre of Excellence (eConsult COE), housed at The Ottawa Hospital in partnership with the Bruyère

Research Institute. In addition to the provincial partners described above, a number of regional partner sites coordinate and administer the program for their local populations. Existing partner sites include Champlain BASE™ in partnership with Winchester District Memorial Hospital, the South East Academic Medical Organization for SE LHIN, Mississauga Halton LHIN team, Hamilton Health Sciences (HITS team) for HHNB LHIN, Woman's College Hospital for TC LHIN and eHealth Centre of Excellence for WWLHIN regions. Delivery partners are the Ontario Telemedicine Network (OTN), OntarioMD, and eHealth Ontario, with the support of the Ministry of Health.

Most regions have established local lead organizations to facilitate the development of regional communities of practice whereby primary care providers can access the specialists they are most familiar with while also having access to the provincial groups to ensure equitable access.

The four eConsult services available through the Ontario eConsult program are described below in more detail.

Ontario eConsult Service

Provides provincial and regional multi-specialty eConsult services province-wide on the OTNhub platform. Uses the BASE™ managed specialty model and OTN direct to specialist model. To enable a more streamlined workflow for physicians, EMR integration has been piloted with two vendors. An eConsult API specification was published (Draft for Use March 2019) to enable all EMR vendors, with OntarioMD certified offerings, to integrate their EMR to the eConsult technology.

Champlain BASE™ regional service

Provides regional eConsult services to the Champlain and Mississauga Halton Local Health Integration Networks (LHINs) on a local SharePoint platform. Uses the BASE™ managed specialty model.

Teledermatology

Teledermatology allows doctors to securely send photographs of a patient's skin condition and other relevant health information to an Ontario-based dermatologist. The dermatologist reviews the file and provides a diagnosis and treatment plan to the referrer.

Teleophthalmology

Teleophthalmology is a program that enables people with diabetes to have a retinal eye screen done in community rather than having to travel to see an ophthalmologist in person.

Teleophthalmology is overseen by OTN, and delivered in partnership with hospitals, family health teams, regional health authorities, and community health centres.

Service Owner

Program Contact: eConsult Centre of Excellence

Technology contact: Ontario Telemedicine Network

End User(s)

- Service Providers

Sector(s) Served

- Primary Care
- Specialty Care

Requirements and Rationale

Where OHTs choose to implement an eConsult solution, OHTs must leverage the existing eConsult program. Only eConsults sent through the provincial program are eligible for the programmatic time-based funding. Where OHTs would like to deviate from the existing program, ministry approval is required.

Applicable OHT Policies

- Digital Health Access, Privacy and Security Policy
- Digital Health Reporting and Performance Policy
- Patient-Facing Digital Health Policy
- eServices Solutions Policy

Administrative and Technical Tools, Services and Programs

Integrated Client Management System (ICMS)

Description

The Integrated Client Management System (ICMS) was developed to support the management of breast screening at Ontario Breast Screening Program (OBSP) sites and to collect the data required to run a provincial screening program.

ICMS has been used by the OBSP to track breast cancer screening activity at affiliated screening centres for over 20 years. Information in ICMS is used by the sites, regions and the provincial office to facilitate patient care, support the Quality Assurance program and Ontario Breast Screening Program evaluation.

The ICMS currently supports the management and reporting for the Ontario Breast Screening Program for approximately 230 sites across the province.

Service Owner

Cancer Care Ontario

End User(s)

- Providers (Hospital/Clinic)
- Administration (OBSP Management/Administrators)

Sector(s) Served

- Specialist Care (Ontario Breast Screening Centers and Sites)
- Primary Care

Requirements and Rationale

ICMS is a centrally managed digital solution provided via Citrix. It provides breast screening sites with the capability to manage the patient's navigation through the screening process and facilitates better awareness and follow-up care for patients undergoing breast screening.

All organizations using ICMS are required to sign the following agreements: acceptance of end user Licence Agreement, identification of Local Registration Agent (LRA), OBSP Participation Agreement.

Applicable OHT Policies

The following policies apply to use of this data:

- Digital Health Information Exchange Policy
- Digital Health Investment and Value-for-Money Policy
- Digital Health Access, Privacy and Security Policy
- Digital Health Reporting and Performance Policy

iPort and iPort Access

Description

Microstrategy is a secure enterprise Business Intelligence (BI) platform that provides self-serve analytics and automation of analytics reports and decision support models. iPort and iPort Access are domain-specific products that leverage Microstrategy to provide site, facility and regional reporting on health care system performance and other key performance indicators.

Reporting is currently available for the following areas:

- iPort – Cancer reporting for: Provincial Drug Reimbursement Program, Systemic Treatment-QBP (formerly STFM), Regional Cancer Programs, Cancer Surveillance, Pathology, Radiation, Systemic, Specialized Services Oversight, Symptom Management, Psychosocial Oncology and Palliative Care
- iPort Access – Reporting for: Access to Care priority areas including emergency,

surgery, diagnostic imaging, alternate level of care

Service Owner

Cancer Care Ontario

End User(s)

- Service Providers
- Hospital and Health Care Administrators

Sector(s) Served

- Specialist Care
- Acute Care
- Emergency Care
- Palliative Care

Requirements and Rationale

These tools and reports are used daily for Ontario health care system performance measurement, management and reporting. These tools could be used by OHTs to measure the effectiveness and performance of providers and services in their regions.

Applicable OHT Policies

The following policies apply to use of this platform

- Digital Health Information Exchange Policy
- Digital Health Investment and Value-for-Money Policy
- Digital Health Access, Privacy and Security Policy
- Digital Health Reporting and Performance Policy

ONE ID Credentialing Service

Description

ONE ID is the Provincial Identity and Access Management solution which performs identity validation of health care professionals and their staff through established registration and enrolment processes and standards. This includes managing access permissions to digital services such as clinical viewers, OTN Hub and ONE Mail.

There are three primary models in use by ONE ID:

- In-Person (Registration Agent) – Registrants visit ONE ID approved registration agent to obtain their ONE ID account.
- College Based – Users request ONE ID account through their respective college (i.e CPSO). Federation (Point-of-Care Application)– Leverage a trusted account issued by a trusted organization (i.e. use Hospital's credentials).

A ONE ID credential offers the following features:

- (1) A trusted identity solution
- (2) Multifactor authentication
- (3) Online profile management

Service Owner

eHealth Ontario

End User(s)

- Service Providers
- IT/Systems Administrators

Sector(s) Served

- Primary Care
- Public Health
- Acute Care
- Home Care
- Community Care
- Long-Term Care
- Pharmacy

Requirements and Rationale

ONE ID credentials are recognized as a secure identity solution for accessing patient health information by the ministry and numerous health care organizations in Ontario. ONE ID credentials are required for all relevant (regulated professionals) OHT staff.

Partners can leverage single sign on between their point-of-care application and employ contextual sharing as a way of streamlining the user experience and enabling the seamless delivery of healthcare services.

Applicable OHT Policies

- Digital Health Access, Privacy and Security Policy

Wait Time Information System (WTIS)

Description

The Wait Times Information System (WTIS) application is a provincial information system dedicated to collect near real time Ontario wait times data from hospitals, independent health facilities and surgeon's offices. The WTIS is a web-based application that supports manual data entry by facilities, in addition to enabling automated data capture from other information systems.

The WTIS captures wait times information from acute care facilities/sites in the following clinical service areas:

- Surgery (cancer and non-cancer surgery)
- Diagnostic imaging (MRI and CT)
- Patients in hospital designated alternate level of care (ALC)

Ontario wait times data is also captured from Canadian Institute for Health Information's National Ambulatory Care Reporting System (NACRS) information system and used to monitor and report in near real time on emergency room performance.

The wait times data is used to measure, monitor and report on health system performance to improve access, efficiency and quality of services for Ontarians. The data is published monthly in a variety of performance reports available to health care stakeholders (e.g., ministry, hospitals, surgeon offices). The wait times data for surgery, diagnostic imaging and emergency room is reported publicly on the HQO website.

Ontario wait times data supports clinicians in:

- Prioritizing access to services using a standardized approach
- Planning a clinical course of care
- Managing wait lists effectively

It is also used to develop evidence-based recommendations necessary to inform decision making by health system planners.

WTIS can be accessed through this URL:

Service Owner

Cancer Care Ontario

End User(s)

- Health Care Providers
- Hospital Administrators

Sector(s) Served

- Acute Care
- Emergency Care

Requirements and Rationale

Organizations within OHTs likely already contribute data to WTIS in some fashion as it is the primary data collection for wait times performance measurement and management.

Organizations would benefit from increasing their integration level to WTIS as it can decrease their data collection burden and allow them access their performance data faster.

All organizations collecting information on WTIS are required to sign the following agreements: WTIS Agreement, Data Sharing Agreement and Acceptance of end user License Agreement.

Coordinators should also be identified to implement train-the-trainer models for ongoing data reporting, data quality, user registration and data compliance operations. Organizations will also require clinical and back-office systems and resources for reporting of required data and implementation of expansions to WTIS data collection.

Applicable OHT Policies

The following policies apply to use of this data:

- Digital Health Information Exchange Policy
- Digital Health Investment and Value-for-Money Policy
- Digital Health Access, Privacy and Security Policy
- Digital Health Reporting and Performance Policy

Provincial Registries/Directories

OTN Health Service Directory (HSD)

Description

The OTN Health Service Directory (HSD) enables providers to find:

- Patient host sites;
- Specialists who offers their services either: in office (Toronto Central pilot); through video visit; or through eConsult; and
- Non-telemedicine community services (Toronto Central pilot).

The HSD is integrated with data from the Provincial Provider Registry and augmented with additional information by the virtual care providers and patient host sites. All updates made to the Provincial Provider Registry are automatically fed into the HSD so there is no duplication of effort or information.

Through a Toronto Central pilot, in partnership with the University Health Network, an enhanced version of the HSD was developed for primary care physicians, presenting them with a single point by which to access comprehensive and up-to-date information to support their patient referrals; whether virtual or in person. Through this pilot OTN's directory is being enhanced with office practice information, sub-speciality service, clinical areas of interest, wait times, etc. In addition, HealthLine data was added to the HSD to include listings of programs offered by Community Support and Community Mental Health providers. Specialist from Toronto hospitals may provide information updates directly to the HSD through their annual credentialing processes managed in the CMaRS solution. The HSD is now available outside of

the OTNhub, allowing users to conduct searches that display non-confidential telemedicine and office referral information without the need to login.

The enhanced version of the HSD could be expanded with similar datasets through a partnership between OTN and hospitals or OHTs.

Service Owner

Ontario Telemedicine Network

End User(s)

- Service Providers

Sector(s) Served

- Acute Care
- Home and Community Care
- Mental Health/Addictions
- Community Support Services
- Long-Term Care
- Primary Care
- Public Health
- Pharmacy
- Laboratory

Requirements and Rationale

Use of the OTN Health Service Directory's provincial virtual care components is recommended for use by OHTs in enabling patients with digital access to care through video visits and/or supporting transitions in care through eConsult. Use of this directory is necessary to find virtual care providers and patient host sites across the province.

OHTs can also partner with OTN to incorporate details about their provider practices and community program offerings to expand the Health Service Directory within their catchment area.

Applicable OHT Policies

- Digital Health Information Exchange Policy
- Digital Health Procurement and Value for Money Policy
- Privacy and Security Policy

Provincial Client Registry (PCR)

Description

The Provincial Client Registry (PCR) is the definitive provincial source for a health care client's (patient) identity, facilitating the unique, accurate and reliable identification of individual clients and others who receive care in Ontario, across the disciplines in the health care sector. It also serves as a unique identifier (e.g. health care number) for the linking of health information across all EHR enabled clinical information repositories.

The PCR is fed by multiple data sources, including the ministry of Health Registered Persons Database, hospital sites tracking admissions, discharges, and transfers, and from local systems participating in health care delivery. Currently, 98% of Ontarians are represented in the PCR.

Use of the PCR and proper issuance/collection of a unique identifier will ensure that a patient's records and information are able to move with them regardless of where they are and where they receive treatment in the province.

Some POS systems are using the PCR as a means of prefilling fields in their POS during the admission – discharge process, shortening the amount of time it takes to get checked in before treatment.

Service Owner

eHealth Ontario

End User(s)

- Service Providers as part of a POS application

Sector(s) Served

- Acute Care
- Primary Care
- Specialty Care
- Home and Community Care

Requirements and Rationale

All OHTs are required to contribute patient identification information to the PCR for the purpose of updating patient identity and increase the probability of linking with clinical data.

Organizations will be required to follow eHealth Ontario's *Provincial Client Registry Standard Release 2* to ensure that information can be contributed and accessed appropriately.

Applicable OHT Policies

- Digital Health Information Exchange Policy
- Digital Health Access, Privacy and Security Policy

- Digital Health Reporting and Performance Policy

Provincial Provider Registry (PPR)

Description

The Provincial Provider Registry (PPR) is the authoritative source of information for health profession data for use by digital health solutions. It contains records for ~92% of health regulated providers from more than 20,000 provider organizations. It facilitates the unique and accurate identification of regulated providers and organizations that deliver health services in Ontario, or who participate in the collection, use, or disclosure of personal health information across the continuum of care.

Typical use would include support for professional credentialing and assisting with authenticating data access. Although PPR does not currently contain related services information that would include location, services available, wait time or booking status, work is underway as to how that can be either referenced or include with the PPR.

Service Owner

eHealth Ontario

End User(s)

- Service Providers as part of a POS application

Sector(s) Served

- Pharmacy
- Public Health
- Long-Term Care
- Home and Community Care
- Primary Care
- Labs & Diagnostics
- Acute Care
- Specialist Care

Requirements and Rationale

All OHTs are required to use the PPR as a means of maintaining their own provider service information, which may include validating their staff as regulated professionals where appropriate.

Once the service directory strategy is finalized, OHTs may be asked to supplement service information on providers practicing within their team.

Applicable OHT Policies

- Digital Health Information Exchange Policy
- Digital Health Access, Privacy and Security Policy
- Digital Health Reporting and Performance Policy

IT and Network Infrastructure Services

Consumer Gateway and/or Provider Gateway

Description

Consumer Gateway and/or Provider Gateways enables direct access to provincial data assets, registry and data assets. The gateway works at the messaging layer between systems (i.e. POS) and facilitates digital requests for patient information through industry standard API's.

It manages the flow of data being contributed into the integrated health record, as well as the flow of data requested to view by users, and logs access and applies security policies.

Service Owner

eHealth Ontario

End User(s)

- IT Systems Administrators – Information Exchange Tool

Sector(s) Served

- All

Requirements and Rationale

Alignment with the Consumer Gateway and/or Provider Gateway is required for OHTs or developers seeking to connect to provincial assets. Users will also be required to comply with eHealth Ontario standards.

Applicable OHT Policies

- Digital Health Information Exchange Policy
- Digital Health Investment and Value-for-Money Policy
- Digital Health Access, Privacy and Security Policy
- Digital Health Reporting and Performance Policy
- Clinical Systems Policy
- Patient-Facing Digital Health Policy
- eServices Solutions Policy

Innovation Lab

Description

The Innovation Lab allows vendors and innovators an environment to experiment interoperability of their assets with provincial systems.

Service Owner

- eHealth Ontario
- Mohawk College

End User(s)

- Developers
- IT Administrators

Sector(s) Served

- All

Requirements and Rationale

The innovation lab is required for use by applications looking to connect to provincial data sets identified in this document.

Applicable OHT Policies

- N/A

SPARK

Description

SPARK provides streamlined pathways to support the connection of consumer digital health applications to provincial health data assets. It ensures that the appropriate safeguards are in place to protect Personal Health Information through privacy and security risk assessments, an agreements framework and conformance to eHealth Ontario's technical specifications.

Service Owner

- University Health Network

End User(s)

- Developers of patient portals and consumer digital health applications

Sector(s) Served

- All

Requirements and Rationale

Consumer digital health applications must use the SPARK pathway to connect to provincial health data assets. This service is currently being piloted for the connection of the myUHN patient portal to OLIS through the Consumer Gateway.

Applicable OHT Policies

- N/A

Digital Learning Resources and Reference Tools

Clinical Practice Guidelines, Standards and other Resources

Description

There are several online, evidence-based clinical practice guidelines, standards and additional resources available to both health care providers and patients, including:

- Clinical Practice Guidelines and Standards – Cancer Care Ontario guidelines are available online and cover the entire cancer continuum (prevention, screening, diagnostic assessment, treatment, palliative care, end-of-life care and survivorship). This guidance contains recommendations for practice and policy that reflects the most current and best available evidence from health care research and expert opinion.
- Disease Pathway Maps – Pathway maps are evidence-based flowcharts that show a high-level overview of the care an Ontario cancer patient should receive. Pathway maps are organized by cancer type (e.g., lung cancer) and phase along the cancer continuum (e.g., screening, diagnosis, treatment). They are designed for use by health care providers and administrators.
- Ontario Cancer Profiles – Ontario Cancer Profiles is a self-serve, interactive mapping tool. It gives you the ability to create custom graphs, maps and tables that show recent provincial and regional statistics on select cancer burden, risk factor and screening indicators. This tool allows for the creation of profiles that support targeted cancer control and prevention efforts.
- TobaccoWise – TobaccoWise is website that provides resources on quitting smoking for First Nations, Inuit, Métis and urban Indigenous communities.

Service Owner

Cancer Care Ontario

End User(s)

- Care Providers
- Patients

Sector(s) Served

- Specialist Care

Requirements and Rationale

These resources are available provincially for OHT providers and patients.

Applicable OHT Policies

The following policies apply to use of this data:

- Digital Health Access, Privacy and Security Policy
- Digital Health Reporting and Performance Policy
- Patient-Facing Digital Health Policy

Drug Formulary Resources

Description

The Drug Formulary is a publicly available repository of evidence-informed resources that serve as a reference for clinicians, administrators, patients and caregivers. It contains information on approximately 900 evidence-informed treatment regimens that are approved for use in Ontario. It reflects best practices, standardized language and provides information about safe use of drugs in the Ontario cancer system. The Drug Formulary is currently accessed over 47,000 times each month.

Health care providers can access drug and regimen monographs, funding information as well as safety and advice information related to cancer drugs. Patients and their families can learn about cancer drugs and regimens from patient-friendly information sheets.

Service Owner

Cancer Care Ontario

End User(s)

- Patients
- Service Providers (Physicians/Clinicians)
- Administrators

Sector(s) Served

- Specialist Care

Requirements and Rationale

OHTs should leverage the Drug Formulary as a vital reference tool in support of best practices and drug safety within the province.

Applicable OHT Policies

The following policies apply to use of this data:

- Digital Health Information Exchange Policy

- Digital Health Access, Privacy and Security Policy
- Digital Health Reporting and Performance Policy

E-Learning

Description

The Cancer Care Ontario E-Learning site offers primary care providers and other health care professionals including medical student a variety of online resources for continuing professional development with a focus on the Aboriginal Relationship and Cultural Competency Courses. All E-Learning resources are free of charge and accessible anytime, from anywhere.

E-Learning resources include various accredited, self-directed, online courses that will provide learners with continuing professional development credits and a Certificate of Completion. The E-Learning courses are accredited by the College of Family Physicians of Canada for Mainpro+ credits. The number of credits allotted varies by course.

Service Owner

Cancer Care Ontario

End User(s)

- Care Providers

Sector(s) Served

- Primary Care

Requirements and Rationale

These resources are available provincially for OHT providers.

Applicable OHT Policies

- N/A