

Evaluating First Contact Care and Health811 in Ontario- Final Report

Centre for Digital Health Evaluation,
Women's College Hospital Institute for
Health Systems Solution and Virtual Care

PRESENTED TO:
Ontario Ministry of Health

DATED:
March 31st, 2026

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Acknowledgements

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Acronyms

AI	Artificial Intelligence
CDHE	Centre for Digital Health Evaluation
DFD	Digital Front Door
EAVC	Episodic Access to Virtual Care
ED	Emergency department
HIMMS	Digital Health Indicator framework by the Healthcare Information and Management Systems Society
LHS	Learning Health Systems
NP	Nurse Practitioner
PAN	Patient Advisors Network
PCP	Primary care provider
PPE	Patient Partner Evaluator
RN	Registered Nurse
THO	Telehealth Ontario
VTAC	Virtual Triage and Assessment Centre
WCH	Women's College Hospital
WIHV	Women's College Hospital Institute for Health System Solutions and Virtual Care

Operational Definitions

Attachment: A process by which patients are formally linked or registered with a primary care provider, such as a family doctor or a family health team, to access primary health care services. This relationship ensures the patient can access the same provider and maintain a relationship on a continuous basis.

Comprehensive Care: Ongoing care provided over time to a patient, informed by their medical history, and delivered by a responsible provider or care team.

Digital Front Door: A single, seamless, patient-facing entry point that integrates digital tools and services to help people easily access, navigate, and engage with healthcare from anywhere.

Episodic Care: Care provided for a single visit or short-term issue, focusing on a specific concern. It does not require an ongoing care relationship between the patient and the provider.

First Contact Care: The initial point of contact for individuals seeking care for a health concern.

Health811: A free, secure, and confidential 24/7 digital health service that allows Ontarians to call or chat online with a registered nurse and access the health information and services needed through a website and/or phone line.

Market Share: The proportion of total volume visits in Ontario provided by a particular service or care model, relative to other first-contact care options.

On-ramps: The point or process through which a patient enters a service, program or a model of care.

Off-ramps: The point or process through which a patient is redirected, transitioned, or discharged from a service, program or a model of care to another place of care for support.

Platform: A centralized digital service that serves as a primary source for clinical and health service questions, and provides a central infrastructure for connecting, directing or matching users to appropriate healthcare services.

Unattached patient: A patient who is not registered with a family doctor or a nurse practitioner as their primary care provider

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Executive Summary

Background

Health811 Ontario is a 24/7 service that Ontarians can call or visit on the web to chat with a nurse, use a symptom-checker, and find health services and information. Launched in April 2022 to replace Telehealth Ontario, Health811 has the potential to reposition itself as the digital front door (DFD) for virtual healthcare access and to evolve into a comprehensive digital platform that shapes demand for health services.

Objective

The purpose of this evaluation was to 1) assess the current state of first contact care in Ontario and the relative market share of different services including Health811; 2) identify potential components of a DFD within Health811 programs in consultation with 811 leads from across Canada, as well as barriers and facilitators to DFD implementation; and 3) develop metrics to assess Health811's performance as a platform.

Methods

The Centre for Digital Health Evaluation conducted a mixed-methods evaluation that included a scan of first contact care services in Ontario with visit volumes estimated from publicly available data, an evidence synthesis to identify DFD components and performance metrics, three surveys administered to the Pan-Canadian Health811 Knowledge Exchange Working Group, and key informant interviews (n= 8) to determine barriers and facilitators of DFD implementation.

Key Takeaways

FIRST CONTACT CARE SERVICES IN ONTARIO

- Health811 averages 59,047 monthly visits. This places it below the pharmacy led minor ailments program (61,311 visits per month) and far below walk-in clinics (787,530 visits per month), emergency departments (551,369 visits per month), and primary care clinics (~ 5.3 million visits per month).
- Among virtual services, internet-based health information seeking accounts for approximately 506,973 monthly visits and artificial intelligence (AI) chatbots approximately 69,893 monthly visits. Both figures are likely underestimates. Health811 plays a marginal role in Ontario's first-contact care landscape

DFD COMPONENTS AND PERFORMANCE METRICS

- Implementation of DFD components varies across Health811 programs in Canada. Ontario has stronger implementation of components related to equity and access, and operational structure, with opportunities to strengthen interoperability and evaluation.
- Performance metrics collected by Health811 programs varies across jurisdictions. Ontario collects more metrics related to platform gravity (e.g., service utilization, access and reach), with opportunities to strengthen measurements related to platform flow and connection (e.g., care outcomes, system integration).

BARRIERS AND FACILITATORS OF DFD IMPLEMENTATION

- Barriers to DFD implementation include factors such as competing stakeholder priorities, lack of public awareness, time and regulatory constraints, and lack of data and evaluation.
- Facilitators to DFD implementation include factors such as public and key interest holder engagement, and shared learning among Health811 programs.

Recommendations

1. Enhance Health811's reach and brand recognition as an entry point for health services that goes beyond the previous nurse telehealth service.
2. Consider opportunities to integrate AI within Health811 services (e.g., chatbot with an Ontario knowledge base) and workflow to enhance functionality and patient experience.
3. Continue to strengthen the use of performance data to iteratively enhance the reach and impact of Health811 and support its establishment as a Learning Health System.
4. Ensure shared understanding among stakeholders regarding service scope, priorities, performance metrics, and future directions.
5. Broaden stakeholder engagement to include front-line providers, and patient and community partners in decision-making processes during all phases of the program (e.g., planning/design, implementation, refinement).

1. Introduction

1.1. Context

Navigating Ontario's healthcare system is complex and often challenged by the absence of a clear entry point, limited awareness of available services, systemic fragmentation, and inadequate support for patients to make informed healthcare decisions (1, 2) These challenges contribute to unnecessary or avoidable emergency department (ED) visits, delayed access to primary care, duplication of services, and increased strain on Ontario's health system.

To address some of these challenges and reduce unnecessary visits to emergency departments and access delays, Ontario launched Health811 in April 2022 (3). Replacing Telehealth Ontario (THO), Health811 is a 24/7 digital health service that allows Ontarians to call or chat online with a registered nurse (RN) and access the health information and services needed through a website and/or phone line (4). Health811 is for non-urgent health information, advice, and referrals, and may help Ontarians avoid unnecessary visits to EDs and delays in accessing some types of care. Health811 programs have also been implemented in 10 other provinces and territories across Canada, sharing a similar purpose and scope.

Health811 is used by Ontarians with approximately 77,500 monthly telephone, online chats, and video visits, in addition to approximately 140,000 monthly website visits in 2023 (5). Despite this uptake, its integration with the broader health system has been limited as it operates largely as a standalone access point rather than a coordinated entry pathway linked to other parts of the system through referral pathways and digital infrastructure (e.g., patient records, referral systems). To better understand how Health811 can be integrated into the system, there is a need to first map the current landscape of first contact care in Ontario, including the range of services available, and their relative use and contribution to overall access (market share).

Moreover, Health811 has significant potential to serve as the *digital front door* (DFD) for virtual healthcare access in Ontario, and across Canada, by providing a single access point that streamlines patient interactions with the healthcare system. Health811 could evolve into a more comprehensive digital *platform* that functions as a primary source for clinical and health service information, while offering a centralized infrastructure to connect, direct, or match users to appropriate healthcare services and identify service demand to inform the creation and integration of new services.

1.2. Purpose and Objectives

The Centre for Digital Health Evaluation (CDHE) at Women's College Hospital Institute for Health System Solutions and Virtual Care (WIHV) conducted a mixed-methods evaluation to assess the current state of first contact care in Ontario and evaluate the extent to which Health811 could function as a comprehensive DFD and platform.

The purpose of this evaluation was to identify the key components of a DFD, determine which of these components are in place or planned for Health811, and develop a measurement framework to evaluate Health811 as a platform. This evaluation highlighted the necessary structures and assessed the performance of Health811 as a platform that connects patients and providers and manages supply and demand of services equitably in the context of resource constraints.

Project objectives are as follows:

- 1) Describe the current state of first contact care in Ontario, including the range of services, connections between them, and relative market share.
- 2) Assess potential components of a comprehensive DFD present in Health811 programs in Ontario and 10 other regions in Canada and explore barriers and facilitators to implementation.
- 3) Develop a measurement framework for Health811 as a platform, identifying key areas and performance criteria.

Two patient partner evaluators (PPEs) from the Patient Advisors Network (PAN) were involved throughout the evaluation to ensure that the patient perspective and experience are integrated into every stage of the project. The PPEs were consulted to provide valuable insights and feedback. Their involvement spanned from study design to data interpretation, ensuring that the evaluation reflects the priorities and concerns of patients.

2. Methodology

2.1. Environmental Scan of First Contact Care Services in Ontario

An environmental scan was conducted to identify and describe the range of first contact care services in Ontario. For this evaluation, first contact care was defined as the initial point of contact for individuals seeking care for a health concern. Services were identified iteratively through publicly available sources, including federal and provincial government websites, non-profit health organizations (e.g., Canada Health Infoway, Canadian Institute for Health Information, etc.) and peer-reviewed literature.

For each service type identified, descriptive information was extracted to characterize key features of first-contact care. These included eligibility criteria, staffing composition, delivery modality (virtual, in-person, or hybrid), hours of operation, geographic availability, and referral pathways (*on ramps* into services, and *off-ramps* to other parts of the system). Where available, additional data were collected on appointment scheduling (i.e., first come, first served or scheduled visits) populations served, range of services provided and costs to users (if any).

Estimates of service utilization, expressed as monthly visits, were drawn from publicly available administrative data, reports or organizational data sources. When exact counts of monthly visits were not available or reported, utilization was estimated using available proxy measures. Available data for each service reflected either (1) utilization rates (e.g., visits per person per year) or (2) survey-based measures of each (e.g., percentage of Ontarians reporting use of the service at least once in the last 12 months). For services with *utilization rate* data, annual visit volumes were estimated using the Ontario population aged 16 years or older (2021 census: 11,812,955) and converting this to an average monthly volume by dividing by 12. For services with *survey-based reach* data from Canada Health Infoway's 2024 iteration of the Canadian Digital Health Survey, we estimated utilization by multiplying the percentage of Ontario respondents who reported using each service by the Ontario population aged 16 years or older (based on 2021 Census data) (6), consistent with the survey's age eligibility criteria. This was converted to an average monthly estimate by dividing by 12, assuming service use was distributed evenly across the year. When relevant information was unavailable or outdated, requests for data were made to the organization that was anticipated to have that information (i.e., Ontario Ministry of Health and Ontario Health).

2.2. Evidence Synthesis of Digital Front Door Framework and Performance Measurement Framework

To define and refine the concepts of *DFD* and *platform* in the context of first contact care and Health811, a targeted review of relevant theories, models, peer-reviewed, and grey literature was conducted. Additional consultations were conducted to gather input from members of the evaluation team and the pan-Canadian Health811 Knowledge Exchange group. This evidence was used to identify potential DFD components and metrics to evaluate Health811's performance as a platform.

2.3. Surveys and Key Informant Interviews

SURVEYS

Three surveys were administered through Microsoft Forms to the Health811 Knowledge Exchange Working Group (**Table 1**), consisting of Health811 program or vendor leads across Canada's provinces and territories. *Survey #1* asked participants to define a DFD, rate 54 potential DFD components on a Likert scale according to their implementation status and identify any additional components not previously captured. *Survey #2* was unique for each Health811 program and included any components that were identified as uncertain by the program leads in Survey #1. It also included five new components suggested in survey #1, and participants were asked to rate their implementation status. *Survey #3* asked participants to identify performance metrics currently captured by Health811 programs for relevant DFD components. Survey data were summarized descriptively (e.g., frequencies, proportions), while open-ended responses were reviewed thematically to identify common areas of agreement, uncertainty and suggested improvements.

Table 1. Description and timeline of survey distribution

Survey No.	Purpose	Survey Open Date	Survey Close Date
1 (Appendix 1)	Gather information about the implementation status and validate identified DFD components.	November 1, 2025	November 28, 2025
2 (Appendix 2)	Provide additional validation for new or uncertain DFD components from Survey 1.	February 1, 2026	February 28, 2026
3 (Appendix 3)	Gather information on the current capacity of Health811 in supporting performance metrics.	March 2, 2026	March 23, 2026

KEY INFORMANT INTERVIEWS

Key informant interviews were conducted with Health811 Knowledge Exchange Working Group members from Ontario and two other regions, between February 9, 2026 to March 16, 2026. Interviews focused on barriers and facilitators of implementing DFD. The interview guide was informed by three implementation science frameworks, including the Consolidated Framework for Implementation Research (7), RE-AIM (Reach, Effectiveness, Adoption, Implementation, and Maintenance) (8), and the Proctor Implementation Outcomes Framework (9) ([Appendix 4](#)). Interviews were 45 to 60 minutes in duration, audio-recorded, transcribed, and analyzed thematically using the Proctor Implementation Outcomes Framework (9).

3. Results

3.1. First Contact Care Services in Ontario

Across Ontario, multiple types of services provide first contact access to primary care. These services span a continuum, from episodic services to comprehensive primary care. We identified these services to support two main functions: (1) system navigation and health advice and (2) clinical service delivery ([Appendix 5](#)).

SYSTEM NAVIGATION AND HEALTH ADVICE

These virtual, episodic services include internet-based health information seeking, artificial intelligence (AI) chatbots, and Health811. They primarily support individuals in consulting about health conditions, interpreting symptoms, and identifying places to seek care, rather than directly delivering clinical treatment.

CLINICAL SERVICES

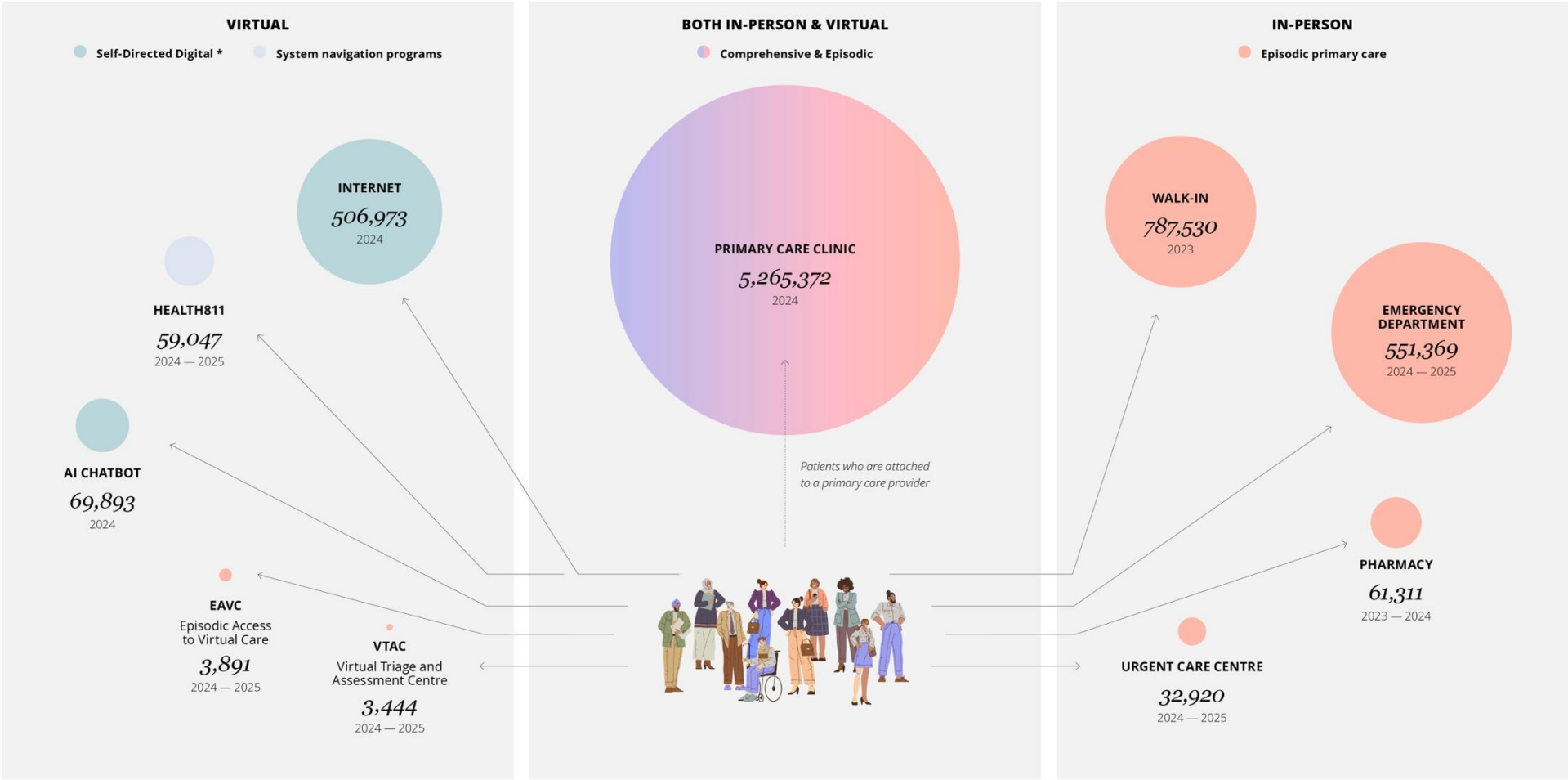
Episodic clinical services include walk-in clinics, urgent care centres, and episodic virtual care programs that offer both virtual and in-person care. These include the nurse practitioner-led Episodic Access to Virtual Care (EAVC) program and the Virtual Triage and Assessment Centre (VTAC) in Renfrew County. Comprehensive care services include primary care clinics such as family health teams, family health organizations, community health centres and others.

SERVICE UTILIZATION AND MARKET SHARE

Service utilization varies considerably across first contact services ([Appendix 6](#)). Primary care clinics account for the largest average monthly visit volume at 5,265,372 visits per month (2024). Walk-in clinics (787,530 visits per month in 2023) and EDs (551,369 visits per month in 2024/2025) also account for high volumes. Pharmacies under the minor ailments program account for 61,311 visits per month (2023/2024) and urgent care centres 32,920 visits per month (2024/2025). Among virtual services, internet-based health information shows substantial use at 506,973 monthly visits (2024). AI chatbots account for approximately 69,893 visits per month and Health811 accounts for 59,047 visits per month. VTAC and EAVC accounted for much lower visit volumes relative to the other services, 3,444 visits per month (2024/2025) and 3,891 visits per month (2024/2025), respectively. The estimated market share of first contact care services in Ontario is depicted in **Figure 1** and [Appendix 7](#).

Market Share of First Contact Care in Ontario

Analysis *based on available data on approximate average monthly visits* across first contact care services in Ontario



* Internet & AI chatbot Individuals who consulted these sources about their health and medical conditions. Source: Canada Health Infoway's Canadian Digital Health Survey, 2024. Terms not formally defined.

Figure 1. Market Share of First Contact Care in Ontario

3.2. What is a Digital Front Door (DFD)?

Surveys #1 was completed by a Health811 working group member from each of the 11 provinces and territories, and survey #2 was completed by eight members.

Each participant (n=11) provided a definition of a DFD in survey #1; when synthesized and condensed, a working definition was generated:

A digital front door is a single, seamless, patient-facing entry point that integrates digital tools and services to help people easily access, navigate, and engage with healthcare from anywhere.

The 59 potential DFD components assessed within this work were collated into a preliminary framework, organized into four high-level domains: patients, systems, quality improvement, and governance (**Figure 2**).

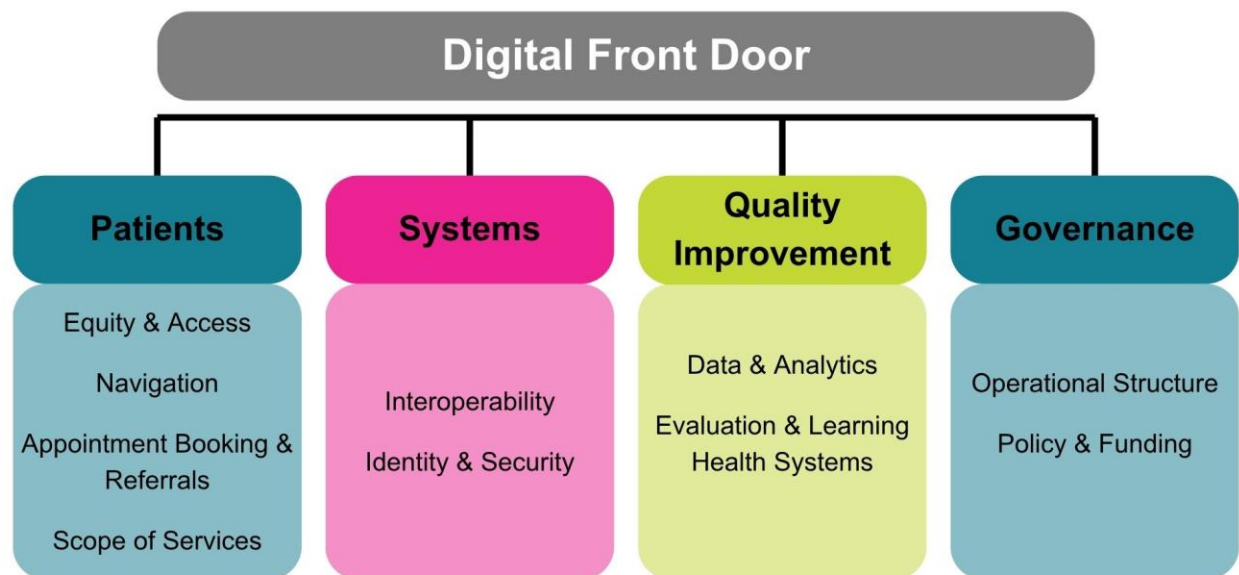


Figure 2. Preliminary Digital Front Door framework

3.3. Current status of DFD implementation in Ontario

The implementation status of 59 potential DFD components (54 original and 5 newly added based on survey #1 responses; see [Appendix 8](#) for component definitions) was assessed comparing 10 provinces and territories to Ontario. **Table 2** below is a snapshot of the implementation status for some equity and access components under the patient DFD domain; the complete list of components and their implementation status across regions is available in [Appendix 9](#). A brief overview highlighting common components that are implemented and others that are not, is provided below, across DFD framework domains: patient-facing, systems, quality improvement, and governance.

PATIENTS: EQUITY & ACCESS

Equity and access components include different modalities of accessing virtual services and equitable adaptations to improve access. Ontario is aligned with other regions across Canada across equity and access components.

Table 2. Implementation status of Patient: Equity & Access Components

Region	PHONE	VIDEO	WEBSITE	MOBILE APP	CHAT ON THE WEB	NAVIGATION-BASED CHATBOT	24/7 ACCESS	AFTER-HOURS DOCTOR'S OFFICE	MULTILINGUAL SUPPORT	AUTOMATED ALERTS FOR MONITORING HEALTH
ON	5	5	5	2	5	2	5	3	5	2
A	5	4	5	1	1	1	5	4	5	1
B	5	2	5	1	3	2	5	5	5	2
C	5	3	2	2	1	2	5	1	5	1
D	5	2	5	1	5	5	5	1	5	1
E	5	1	5	1	7	7	5	7	5	1
F	5	5	4	5	2	2	5	1	2	5
G	5	2	5	2	2	1	5	2	5	5
H	5	2	5	2	7	7	5	4	5	1
I	5	2	5	1	7	7	5	1	2	1
J	5	5	3	2	1	1	5	5	1	1

Legend

1	Not implemented & no plan for future implementation
2	Not implemented, but there is a plan for implementation
3	Implementation in progress
4	Pilot implementation complete
5	Widespread implementation & use
6	Previously implemented but is no longer in use
7	Not reported or unknown

PATIENT-FACING: NAVIGATION

Ontario is aligned with or further developed in their stage of implementation, compared to most other regions. Ontario has no plans to implement automated triaging, whereas this has been piloted or implemented at scale in two other regions (F, H). Region J reported that they had previously implemented a self-symptom checker which is no longer in use due to diminished demand; this could be due to the increasing use of ChatGPT and Dr Google for health information.

PATIENTS: APPOINTMENT BOOKING & REFERRALS

Ontario's implementation status is well aligned with regions across Canada for most appointment booking and referral DFD components with the exception of virtual physician appointments. This component is being planned or already implemented in most other regions such as Petal MD which is offered through Quebec's Guichet d'accès première ligne (GAP) program, whereas there are no plans for implementation in Ontario.

PATIENTS: SCOPE OF SERVICES

Ontario is still in the planning stage for most components, compared to other regions who are piloting or implementing components at scale. For the remote monitoring component, most regions have no plans for implementation, whereas Ontario is planning implementation. Also, Ontario Health811 has no plans to implement services to prescribe medications and order tests, whereas this component has been piloted or implemented at scale in five other regions (A-C, F, J); however, test ordering is implemented within Ontario's EAVC service Region A reported that prescription renewals, chronic disease management, self-management, and patient-reported outcomes were previously implemented but are no longer in use.

SYSTEMS: INTEROPERABILITY

Interoperability components involve how digital health solutions are integrated with other systems and structures to support patient health. Ontario is somewhat consistent with other regions for three of five components. Regarding integration with provincial provider waitlists for unattached patients, Ontario has plans for implementation, whereas five other regions (A, D, F, H, I) have piloted or widespread implementation. Also, Ontario has no plans to implement a provincial viewer for pharmacy dispensing records, whereas this has been implemented at scale in four other regions (A-C, I) and is planned or in progress of implementation in four other regions (D, F, G, J).

SYSTEMS: IDENTITY & SECURITY

Identity and security components include methods to ensure patient privacy is upheld. Ontario's implementation status for identity and security system components are aligned across Canada's other Health811 programs including widespread implementation of privacy safeguards and secure communication channels, and planned implementation for provider specific identity management and consent management. Ontario also has plans to implement a federated patient ID, whereas most other regions have no plans for this component with the exception of regions B and D which already have widespread implementation and use.

QUALITY IMPROVEMENT: DATA & ANALYTICS

The implementation status of these components varied across Canada's Health811 programs. Ontario was similar to most regions with widespread implementation and use for basic utilization metrics and predictive analytics for demand forecasting. For population health insight metrics, Ontario has no plans for implementation, whereas this component has been planned for or implemented in seven other regions. One region (A) reported that they had previously implemented basic utilization, advanced service, and population health insight metrics, but that these components were discontinued after the COVID pandemic.

QUALITY IMPROVEMENT: EVALUATION & LEARNING HEALTH SYSTEMS (LHS)

Evaluation and LHS components include methods and metrics used to assess current and future health outcomes. Ontario is similar in implementation status in three of seven components compared to other regions. Components including patient experience surveys, attachment outcomes, and cost-effectiveness metrics are in early stages of planning in Ontario, whereas they are piloted or being used widely in at least four other regions. Ontario also has no plans to implement formal system learning loops which is a process that uses data and feedback to continuously improve triage and care pathways, whereas this component is planned or implemented in all other regions.

GOVERNANCE: OPERATIONAL STRUCTURE

Operational structure components include having an established centralized oversight and service level agreements. These components were largely implemented with widespread use across all jurisdictions, including Ontario.

3.4. Barriers and Facilitators to DFD Implementation

Eight key informant interviews were conducted to identify barriers and facilitators to implementing DFD components within Health811. Findings are organized according to relevant implementation outcomes specified in the Proctor Implementation Outcomes Framework, including **acceptability** (satisfaction, value), **appropriateness** (relevance, suitability, compatibility), **feasibility** (fit, utility, resources), **cost** (cost-effectiveness, cost benefit), **penetration** (reach, spread, scale), and **sustainability** (continuity, maintenance, integration, evaluation). [Appendix 10](#) captures participant quotes from the interviews.

ACCEPTABILITY

PERCEIVED VALUE OF A DFD WITHIN THE CONTEXT OF HEALTH811

Key informants perceived significant value of a DFD framework for Health811 service, particularly if the service is mandated to be a “single service one-stop shop”. However, if Health811’s primary role is system navigation and triage assessment, implementation of a DFD may be limited by the narrow scope of certain features (e.g., medical libraries) and patients’ tendency to seek information from more advanced platforms such as Google or ChatGPT.

APPROPRIATENESS

UNCLEAR DEFINITION OF WHAT IS ENCOMPASSED WITHIN A DFD

Definitions of a DFD varied among informants, with some viewing it as navigation through a traditional website, and others as a more integrated experience involving a trusted patient user profile. If the latter definition is adopted, a clear value proposition must be established. It is also unclear whether Health811 would be the DFD to the healthcare system or a piece of the DFD.

COMPETING PRIORITIES INFLUENCING THE ADVANCEMENT OF HEALTH811 AS A DFD

Differing stakeholder priorities poses a barrier to DFD implementation. Health811 operates within a complex network of decision-makers and services providers with distinct priorities that can influence implementation decisions. For example, frontline perspectives often emphasize patient-facing components, while funders may prioritize system-level outcomes such as reducing the number of unattached patients and/or emergency department use. Moreover, implementation

may be further complicated in regions served by multiple health authorities with misaligned priorities. Additionally, tradeoffs between time and quality can be a barrier. Implementing a component to the highest standard can be time-consuming; however, service providers are often operating under strict timelines.

PUBLIC AND KEY INTEREST HOLDER ENGAGEMENT

Public engagement through ideation sessions, partner advisory committees and feedback surveys was a perceived facilitator to DFD implementation, helping identify potential service enhancements and patient feedback. Key informants noted opportunities to expand public engagement and involve specific groups (e.g., LGBTQ+ community) to ensure the service is more representative. Engagement with key interest holders such as individuals who have oversight over hospital systems, vendors, and frontline workers was also important when considering implementation of Health811 components and enhancements.

PRIVACY CONSIDERATIONS

Privacy was identified as a barrier to DFD implementation, noting that safeguards related to data collection and sharing need to be established when implementing certain components (e.g., prescription renewals).

NATURAL COMPATIBILITY OF HEALTH811 AS A DFD

Key informants indicated that DFD implementation is facilitated when components are a “*natural extension*” of Health811. The increasing use of AI-based tools like ChatGPT to check symptoms and get instant answers has prompted the exploration of AI-based components.

CONTEXT WITHIN WHICH HEALTH811 OPERATES

The context within which Health811 services operate can impact DFD implementation. For example, rural regions that have more remote communities may have limited health services and reduced access to healthcare providers. As a result, regional needs may shape the implementation of specific Health811 services (e.g., by providing a range of virtual services).

FEASIBILITY

VENDOR LIMITATIONS INFLUENCE IDEAL VS ACTUAL DFD IMPLEMENTATION

Vendor limitations was a reported barrier, as it can be difficult for vendors to implement solutions that are interoperable with other health information systems.

TIME AND REGULATORY CONSTRAINTS

Key informants identified time as a barrier to DFD implementation, noting that there are often a “*backlog of enhancement ideas*” and certain features have lengthy development timelines.

Approval processes were also noted as a challenge, as proposed changes need to be embedded into a statement of work which can take considerable time to be processed and limit ability to move quickly. Considering feasibility of components early in the planning process was identified as a facilitator to successful implementation and long-term sustainability of the components

COST

COST-EFFECTIVENESS, FUNDING AND RESOURCE CONSTRAINTS

Costs associated with implementing a component was cited as a barrier, noting that certain digital features may not be cost-effective to deploy. Lack of funding, insufficient nursing and healthcare staff, and limited physical space (e.g., workstations) were additional constraints.

PENETRATION

LACK OF PUBLIC AWARENESS OF HEALTH811

Limited public awareness of Health811 was a commonly cited barrier. Suggested strategies to increase reach included public presentations, the use of media advertising (e.g., TV and/or YouTube), transit advertising, and the promotion of the service in doctor's offices and clinics. Additionally, public awareness campaigns are needed to help the public navigate the appropriate use of services such as 911, 211, and 811.

INTEROPERABILITY BETWEEN DFD AND OTHER SERVICES AND SYSTEMS

Lack of interoperability between new DFD components and existing Health811 services (e.g., phone, medical library) and systems was reported as barrier to implementation.

SUSTAINABILITY

SHARED LEARNING AMONG HEALTH811 PROGRAMS ACROSS CANADA

Shared learning through the pan-Canadian Health811 Knowledge Exchange Group, supporting the advancements of 811 programs across Canada was identified as a facilitator.

LACK OF DATA AND EVALUATION RELATED TO HEALTH811 PROGRAMS

Limited data related to patient reported outcomes (e.g., feedback on 811 services), compliance with legislative requirements (e.g., Is 811 meeting legislative requirements as a bilingual service?), and provider competency (e.g., are navigators up to-date on regional/geographic based resources?) was identified as a barrier. In addition, dedicated time is needed to evaluate the Health811 service to inform enhancements and support quality improvement.

INCONSISTENT CENTRALIZED OVERSIGHT AND COMMUNICATION GAPS

Lack of clarity regarding the decision-making authority for funding certain Health811 programs, as well as who to approach when proposing service enhancements was a barrier. This was compounded by limited communication among stakeholders, as some informants were unaware of Health811's priorities, mandates, and decision-making processes.

3.5. Assessing Health811 as a Platform

Health811 has the potential to evolve into a comprehensive digital *platform* that functions as a central infrastructure connecting patients to timely and appropriate care, supporting the creation of and integration of new services, and reducing health system burden. Advancing Health811 in this direction requires evaluating performance through a platform lens.

Drawing on industry and technology literature, digital platforms are defined by three core elements: *gravity*, *flow*, and *connection*. Within the context of Health811, *gravity* reflects how well the platform attracts users (i.e., do people come to Health811 and do they return?); *flow* reflects how well the platform enables exchange and co-creation of value (i.e., are patients matched to appropriate service?); and *connection* reflects how easily new services can integrate with the platform (i.e., how easily can new services plug into Health811?). Based on these core elements, our research team has developed a working definition of a digital health platform to guide measurement and evaluation:

A centralized digital service that operates as a primary source for clinical and health service questions, and provides a central infrastructure for connecting, directing or matching users to appropriate healthcare services.

To assess Health811's performance as a platform, metrics were mapped to relevant DFD components using the platform elements of gravity, flow, and connection (**Figure 3**). Through Survey #3, completed by Health811 working group members representing five provinces and territories (n= 5), participants reported the metrics currently captured by their respective Health811 programs. A comparison of the reported metrics across four provinces and territories, and Ontario is provided in [Appendix 11](#).

Structure		Process		Outcome
DFD Components	Gravity how well the platform attracts users	Flow how well the platform enables exchange and co-creation of value	Connection how easily new services can integrate with the platform	
Website	- Total visit - Number of unique visitors - Number of repeat visitors	Patient feedback on satisfaction	% of services accessible via website	
After hours access through doctor's office	Total after-hours volume	- Number of successful care handoffs - Patient feedback on satisfaction	% of practices integrated with after-hours workflow	
Multilingual support	- Number of users indicating language preference - Number of languages supported - Availability of interpreter services	Patient feedback on satisfaction	% of services available with multilingual support	
Automated alerts for monitoring health	Alert engagement rates	- Number of alerts acted upon resulting in early intervention - Rate of avoided adverse events or admissions - Patient feedback on satisfaction	Number of services integrated into monitoring workflow	
Online primary care appointment booking	Number of appointments booked online	Booking completion rate	% of primary care providers bookable online - Integration status of scheduling systems - Average time to onboard clinic or provider to online booking	
Prescribing medication and ordering tests	Number of patients receiving prescription or test orders	- Number of prescriptions issued - Number tests ordered - Average time from order to completion	% of services integrated with pharmacy/lab systems	
Access to viewer for lab test results and imaging	Number of patients accessing viewer	Number of follow-up actions initiated after viewing results	% of labs and imaging providers connected - Average time to integrate lab and images	

Figure 3. Select metrics to evaluate Health811's performance as a platform

Note: Not all relevant DFD components are included in Figure 3. Please see [Appendix 11](#) for all included components and their respective metrics.

Overall, metrics currently captured by Health811 programs varied across jurisdictions. Ontario collects more metrics related to platform gravity, including service utilization, access and reach (e.g., total call volumes, website visits,) across several DFD components. In contrast, compared with other jurisdictions (e.g., Regions G, J, F), Ontario captures fewer metrics related to platform flow and connection, such as care outcomes, and system integration. For example, for components such as phone, video, website, and 24/7 access, Ontario does not capture metrics such as service availability and integration, or proportion of encounters resulting in appointment, referrals, or care completion.

Ontario collects a broader range of metrics for components such as after-hours access through doctor's offices and the searchable service directory, including measures related to service integration and use (e.g., number of services plugged into service directory, percentage of practices integrated with after-hour workflow). For components such as multilingual support and nurse or navigator-led triage, metrics collected are broadly consistent across jurisdictions.

Participants also identified additional metrics that are not currently captured by their respective Health811 program but may be of interest for future measurement. These metrics included abandonment rates, average abandonment time, calls answered in less than 30 and 60 seconds, number of call backs, RN productivity (i.e., calls processed per hour per RN).

Overall, Ontario collects metrics that provide a foundation for platform measurement. Expanding metrics, particularly those related to platform flow and connection (e.g., care outcomes, system integration), represents a key opportunity to strengthen evaluation. Viewing Health811's advancement through a comprehensive platform lens aligns with the Donabedian Structure, Process, Outcome Framework (10), in which DFD components define the *structure* (what's available?), the digital platform shapes the *process* of how services are accessed and navigated (how well does it work?), and *outcomes* such as improve care access, coordination, and patient experience can be assessed (**Figure 4**). This approach provides a comprehensive and effective way to plan, deliver, and evaluate the DFD going forward.

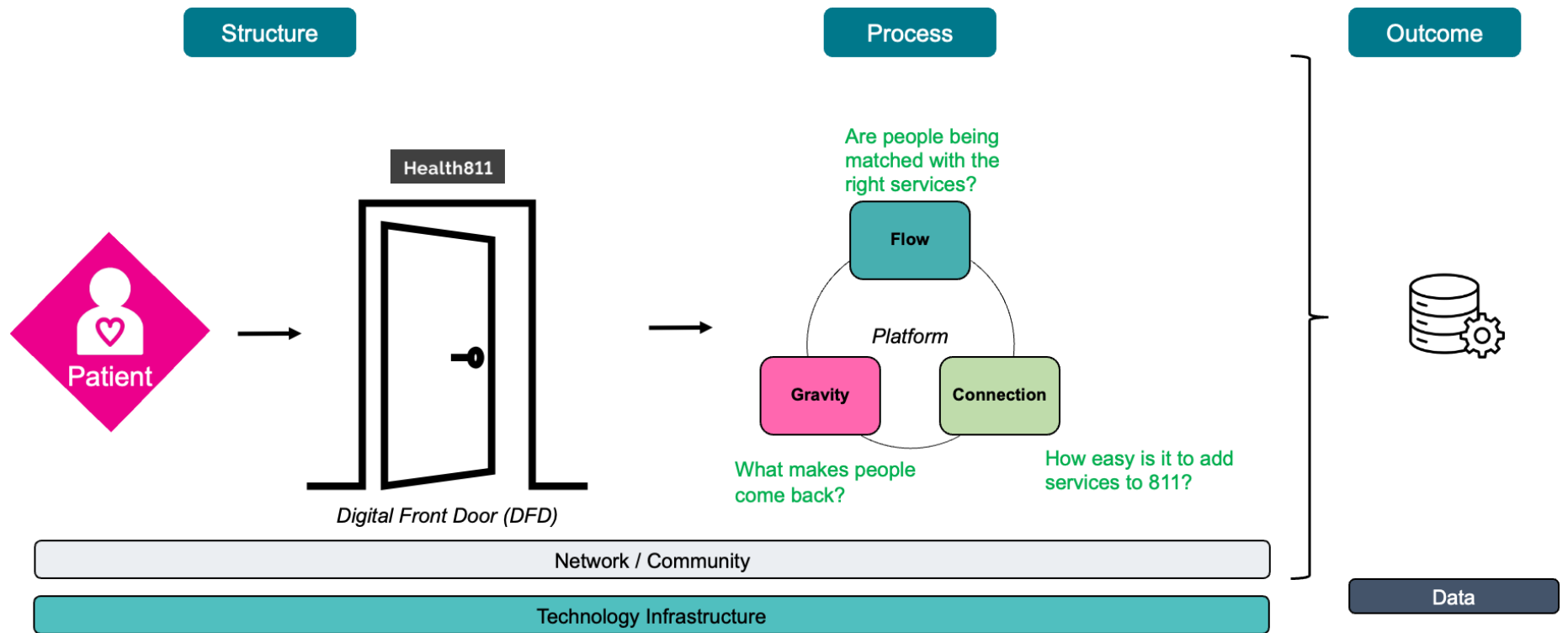


Figure 4. Applying the Donabedian Structure, Process, Outcome framework to Health811

4. Discussion and Recommendations

4.1 Key Findings

This evaluation assessed the current state of first contact care services in Ontario and explored the potential of Health811 to function as a comprehensive DFD and platform. The findings provide insight into how Health811 fits within Ontario's first contact care landscape, as well as opportunities to support DFD implementation and strengthen the measurement and evaluation of its platform capabilities.

The first contact care analysis generated key insights into the relative market share of first contact services in Ontario. VTAC and EAVC are both episodic virtual care programs with similar budgets that average similar monthly visit volumes (3444 and 3891 visits per month, respectively); however, VTAC serves a single county whereas EAVC serves the province. Health811 occupies a marginal position in the first contact care market. Its monthly visit volumes are below the pharmacist-led minor ailments program (59,047 vs. 61,311 visits per month), which is notable given that Health811 offers virtual access and addresses a broader range of health services and topics compared with pharmacy-based services that require in-person visits. Health811 monthly volumes are also far below walk-in clinics, emergency departments, and primary care clinics.

Moreover, among virtual services, Health811 is outpaced by internet-based health information seeking and AI chatbots (506,973 and 69,893 visits per month vs. 59,047 visits per month). This is not a failure of the service, rather, it reflects the fact that Health811 was designed as a nurse-led phone and web service in a period when consumer expectations and available technology were different. It is important to interpret these visit volumes with caution as the Canada Health Infoway 2024 survey, from which this data was extrapolated, does not clearly define what constitutes 'internet' and 'AI chatbot' use (11). These numbers are likely underestimated as a 2026 report released by OpenAI indicates that nearly 600,000 healthcare-related ChatGPT messages are sent each week by users in underserved rural communities in the United States alone (11). Although Canadian-specific data is limited, the report suggests that an increasing number of individuals already use AI chatbots to check symptoms and learn about their health and treatment options. Therefore, there is an opportunity to integrate AI within Health811 services, such as an AI chatbot similar to ChatGPT that is calibrated to system capacity and informed by Ontario-specific information and guidelines. Overall, the examination of the market share of the

first contact care services in Ontario indicates that Health811 plays a marginal role and there is significant opportunity for it to expand its reach and maximize its impact within the system.

This evaluation highlighted several components and performance metric trends that can inform how Health811 Ontario can evolve in the near future to be a comprehensive DFD and platform. The DFD components synthesized for this work were based on available evidence from the literature and expert opinion from the Health811 Knowledge Exchange Working Group. Our preliminary DFD framework that was used to inform surveys 1-3 also aligns well with the established Digital Health Indicator framework by the Healthcare Information and Management Systems Society (HIMSS) (12). Similar to our DFD framework, the HIMSS Digital Health Indicator (DHI) includes the following domains: person-enabled health, predictive analytics, interoperability, and governance and workforce (**Figure 5**) (12). Our DFD components are largely aligned with the person-enabled health domains (i.e. patient components), with overlap across the other domains (predictive analytics DHI aligns with quality improvement DFD; interoperability DHI aligns with systems DFD; governance and workforce DHI aligns with governance DFD). This alignment reinforces the credibility and relevance of our DFD framework and components.

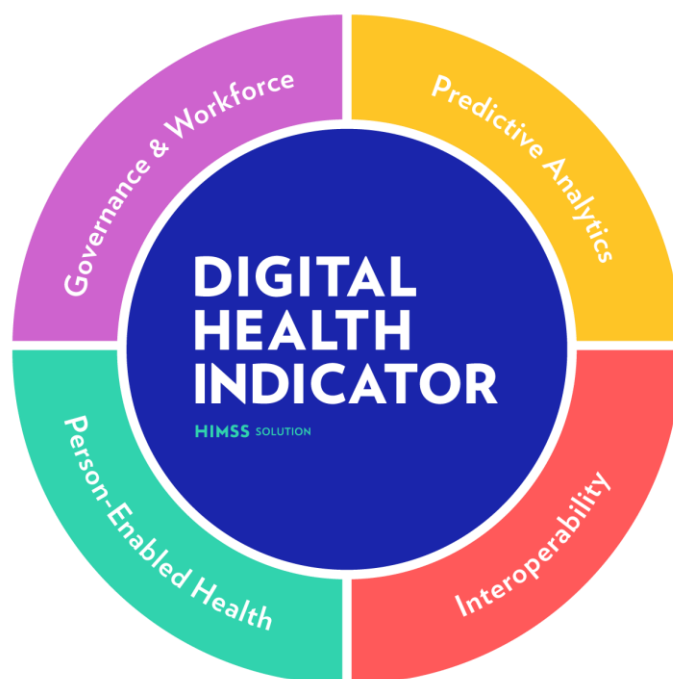


Figure 5. Digital health indicator framework, taken from HIMSS digital health indicator rapid assessment tool (<https://dhi.himss.org/rapid/>)

A key finding from our evaluation is the opportunity to improve the marketing and reach of Health811 Ontario as there is a lack of public awareness of the evolution of Health811 from the prior THO service. This finding was consistent across jurisdictions with many Health811 programs across Canada reporting limited public awareness and service utilization. Therefore, active promotional strategies such as those identified from the key informant interviews in this evaluation (e.g., media advertising), along with public education efforts may improve service utilization and build public trust and confidence in the program, enhancing its public health impact.

The integration of AI was also highlighted as a timely opportunity for Health811 programs. Across Canada, Health811 programs are seeking to learn about how AI can be integrated within services, while keeping feasibility and capability in mind. The growing use of consumer AI tools to address general health problems (e.g., ChatGPT and AI-based Dr. Google) reflects a rapidly evolving digital health landscape. While these platforms operate at a scale Health811 is neither intended or positioned to match, Health811's value lies in its governance, clinical oversight, integration with the Ontario health system, and mandate to provide equitable, trusted access to care for all Ontarians, attributes that unregulated consumer AI tools cannot replicate. In this context, the development of AI-enabled support within Health811 represents an opportunity to enhance service delivery while building on these unique system-level strengths.

Additionally important to consider moving forward is the effective utilization of data to drive decisions and improve Health811 functions. Health811 Ontario currently collects various performance metrics, with a focus on metrics related to platform gravity (e.g., utilization metrics). It could enhance its measurement approach by incorporating more metrics related to platform flow and connection (e.g., outcome and system integration-based metrics). Additionally, Health811 has the opportunity to act as a LHS by utilizing data for learning and advancements. The program can work towards optimizing their regulatory processes so that evaluation data can be meaningfully used to improve Health811 for the public.

Our findings suggest a need for stronger communication and alignment among the diverse stakeholders responsible for the governance and operations of Health811. Ensuring a shared understanding of service scope, priorities, goals, performance metrics, and future planning is critical to improve coordination and advancement of the service. Health811 Ontario currently consults with multiple interest-holders including vendors, ministry representations, and the public. There is an opportunity for the program to diversify its engagement to ensure Health811 services are relevant, timely, and optimal, such as through engaging with frontline providers on a regular basis. In addition to the program's frequent consultations with the public through ideation

sessions, Health811 may benefit from engaging with a patient or community member that is actively involved in decision-making processes.

Lastly, Ontario Health811 is an active member of the pan-Canadian Health811 Knowledge Exchange Working Group which represents all Health811 programs across 11 provinces and territories. Involvement in this group can support shared learning across Canada, standardization of systems for Health811 across Canada, and Health811 Ontario's future advancements.

4.2 Recommendations

Key recommendations to support the growth of the Ontario Health811 service and advance its role as a comprehensive DFD and platform include:

- 1. Enhance marketing and reach:** Conduct active efforts to support Health811's brand recognition as an advanced program of the previous THO service, including collaborating with or learning from other 3-digit services in Ontario (e.g., 311 city services, 211 social and mental health services, and 911 emergency services). Promotional activities can include public presentations, and advertising via media (e.g., TV and/or YouTube), transit, and in doctor's offices and clinics. Public education efforts can also help to build trust and confidence in the program which can increase utilization. The province should track the evolution of "market share" over time to see what role Health 811 comes to play in the future. This could be done through a mix of population-based surveys (e.g., Canada Health Infoway), along with operational and administrative data.
- 2. Integrate AI within Health811 services and workflow:** Seek feasible opportunities to integrate AI within Health811 services (e.g., AI-based chatbot) and workflow, making an effort to ensure that the program's AI capabilities provide localized information. Reliance solely on Canadian clinical practice guidelines may result in advice that is overly aggressive, as these guidelines are often derived from specialty care. To address this, a curated knowledge base that a chatbot can preferentially reference could be designed by primary care providers that is more appropriate for the general public, as demonstrated in the Netherlands.
- 3. Strengthen evaluation and data driven decisions:** Expand beyond utilization metrics to incorporate outcome and system integration measures. Support Health811's establishment as a learning health system by ensuring evaluation data is used to iteratively improve the service. Health811 currently operates at a small scale, and as it grows, it may provide advice that is either too aggressive which can inadvertently drive-up ED volumes or too conservative which can lead to missed or delayed diagnoses. Aligning the service

with health system capacity requires constant monitoring of what advice is given and the downstream services used by patients.

4. **Ensure communication and alignment among stakeholders:** Ensure that the stakeholders responsible for the governance and operations of Health811 have a shared understanding of service scope, priorities, goals, performance metrics, and future directions. Enhance existing two-way communication channels or establish new modes of communication to facilitate information exchange and dialogue among decision-makers, frontline workers, and vendors.
5. **Broaden stakeholder engagement:** Diversify the type of key interest-holders that are engaged in Health811 decision-making processes at all stages of the program implementation (e.g., planning/design, refinement, evaluation), including patient and community partners and frontline care providers.
6. **Continue cross-jurisdictional knowledge exchange & learning:** Continue active contributions by Ontario representatives at monthly Health811 Knowledge Exchange Working Group meetings to learn about how other provinces and territories are advancing their programs and to share what has worked well within Ontario.

5. Evaluation Limitations

Despite the use of methodologically rigorous data collection and synthesis approaches, this evaluation has a few limitations that should be considered.

Market share estimates. Estimates for some first contact care services (e.g., internet, AI-chatbot, walk-in) were extrapolated from available survey data and may therefore impact the precision and accuracy of the estimates. In addition, certain first contact care services such as private care services, and virtual walk-in clinics could not be captured due to lack of data availability.

Survey representation. Surveys #2 and #3, and key informant interviews did not have representation from all provinces and territories. The individuals representing each province and territories may also have differed across Surveys #1-3, which could have introduced some inconsistencies in reporting. While the research team made efforts to have the same representative from each province and territories complete all surveys, there were instances where different respondents participated across survey rounds.

Performance metrics for new DFD components. Due to the fact that the validation of the new DFD components identified in Survey #1 was ongoing through Survey #2, their performance metrics were not assessed in Survey #3 and should be evaluated in future work.

6. Conclusion

Health811 currently functions as a service for non-urgent health information, advice, and referrals within Ontario's first contact care landscape, with the goal of reducing unnecessary emergency department visits and delays in care. This evaluation highlights significant opportunity for Health811 to expand its reach and maximize system impact by evolving into a comprehensive DFD and platform.

Findings demonstrate that Ontario has strong implementation of DFD components related to equity, access, and operational structure, while implementation of components related to interoperability and evaluation can be strengthened. There is also a timely opportunity to integrate AI-enabled support aligned with system capacity and patient needs. While Health811 Ontario currently captures metrics related to platform gravity (e.g., service utilization), there are opportunities to strength measurement of metrics related to platform flow and connection (e.g., care outcomes, system integration).

As we consider the potential evolution of Health811 toward a DFD, it is important to address key implementation barriers such as competing stakeholder priorities, lack of public awareness, and gaps in data and evaluation to support its development into a comprehensive platform that streamlines patient interactions, enhances access to care, and enables service integration.

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8. Appendices

8.1. Appendix 1. Digital Front Door - Survey 1

Health 811 Knowledge Exchange Survey-DFD Component Implementation

1. How would you define a “Digital Front Door”?

2. From the following list of potential components that make up a digital front door, please indicate the **status of implementation** in your 811 program. These components are related to DOMAIN: SUB-DOMAIN.

Potential Components	1. Not implemented & no plan for implementation	2. Not implemented, but there is a plan for implementation	3. Implementation in progress	4. Pilot implementation complete	5. Widespread implementation & use	6. I don't understand this component
Domain 1: PATIENT-FACING						
1A: Equity & Access						
1. Phone Call	☐	☐	☐	☐	☐	
2. Video Call	☐	☐	☐	☐	☐	
3. Asynchronous messaging	☐	☐	☐	☐	☐	
4. Website	☐	☐	☐	☐	☐	
5. Mobile App	☐	☐	☐	☐	☐	
6. Texting/SMS	☐	☐	☐	☐	☐	
7. 24/7 access	☐	☐	☐	☐	☐	
8. After-hours access through doctor's office	☐	☐	☐	☐	☐	
9. Alternate accessibility options	☐	☐	☐	☐	☐	
10. Multilingual support	☐	☐	☐	☐	☐	
11. Plain language content	☐	☐	☐	☐	☐	
12. Automated alerts for monitoring health	☐	☐	☐	☐	☐	
1B: Navigation						
1. Self-assessment/symptom checker	☐	☐	☐	☐	☐	
2. General health information	☐	☐	☐	☐	☐	

3. Chatbot for general health information	☐	☐	☐	☐	☐
4. Searchable service directory	☐	☐	☐	☐	☐
5. Personalized patient dashboard	☐	☐	☐	☐	☐
6. Nurse or navigator-led triage	☐	☐	☐	☐	☐
7. Automated triage	☐	☐	☐	☐	☐
8. Tailored tools and content for marginalized populations	☐	☐	☐	☐	☐
1C: Appointment Booking & Referrals					
1. Online primary care appointment booking	☐	☐	☐	☐	☐
2. Real-time primary care provider availability	☐	☐	☐	☐	☐
3. Specialist referrals	☐	☐	☐	☐	☐
1D: Scope of Services					
1. Prescribing medications and ordering tests	☐	☐	☐	☐	☐
2. Preventative care	☐	☐	☐	☐	☐
3. Prescription renewal	☐	☐	☐	☐	☐
4. Chronic disease management	☐	☐	☐	☐	☐
5. Self-management	☐	☐	☐	☐	☐
6. Remote monitoring	☐	☐	☐	☐	☐
7. Patient-reported outcomes	☐	☐	☐	☐	☐
Domain 2: SYSTEMS					
2A: Interoperability					
1. Integration with provincial provider waitlists for unattached patients	☐	☐	☐	☐	☐
2. Access to viewer for lab test results and imaging.	☐	☐	☐	☐	☐

3. Access to provincial viewer for hospital records	☐	☐	☐	☐	☐
4. Access to provincial viewer for primary care records.	☐	☐	☐	☐	☐
5. Access to provincial viewer for pharmacy dispensing records.	☐	☐	☐	☐	☐
2B: Identity & Security					
1. Federated patient ID	☐	☐	☐	☐	☐
2. Provider-specific identity management	☐	☐	☐	☐	☐
3. Consent management	☐	☐	☐	☐	☐
4. Privacy safeguards (i.e., PHIPA)	☐	☐	☐	☐	☐
5. Secure communication channels	☐	☐	☐	☐	☐
Domain 3: QUALITY IMPROVEMENT					
3A: Data & Analytics					
1. Basic utilization metrics	☐	☐	☐	☐	☐
2. Advanced service analytics	☐	☐	☐	☐	☐
3. Predictive analytics for demand forecasting	☐	☐	☐	☐	☐
4. Population health insights	☐	☐	☐	☐	☐
3B: Evaluation & Learning Health Systems					
1. Patient experience surveys	☐	☐	☐	☐	☐
2. Attachment outcomes	☐	☐	☐	☐	☐
3. Continuity outcomes	☐	☐	☐	☐	☐
4. Equity metrics	☐	☐	☐	☐	☐
5. Real-time equity monitoring	☐	☐	☐	☐	☐
6. Cost-effectiveness metrics	☐	☐	☐	☐	☐

7. System learning loops to improve triage and care pathways	☐	☐	☐	☐	☐
Domain 4: GOVERNANCE					
4A: Operational Structure					
1. Established centralized oversight (provincial/ regional health authority)	☐	☐	☐	☐	☐
2. Clear roles outlined for physicians, nurses, navigators, etc., and tools	☐	☐	☐	☐	☐
3. Service level agreements (e.g., wait time)	☐	☐	☐	☐	☐

3. Are there any other components that should be added to this list? If so, please describe the components and their status of implementation in your 811 program.

8.2. Appendix 2. Digital Front Door - Survey 2

Health 811 Knowledge Exchange Survey-DFD Component Validation & New Components

- The following components were identified by you as “I don’t understand” in survey #2. We have now added definitions for each component. Please indicate the **status of implementation** of each component in your 811 program.
 - Not implemented & no plan for implementation*
 - Not implemented, but there is a plan for implementation*
 - Implementation in progress*
 - Pilot implementation complete*
 - Widespread implementation & use*
 - I don't understand this component [option to explain if selected]*

Component	Definition	1	2	3	4	5	6
Automated triage	A digital process (rules-based or AI-supported) that sorts patients by urgency and directs them to the most appropriate level of care.	☐	☐	☐	☐	☐	☐
Predictive analytics for demand forecasting	Use of data to anticipate future service needs and staffing requirements.	☐	☐	☐	☐	☐	☐

- The following components were newly identified in survey #2. We have now added definitions for each component. Please indicate the **status of implementation** of each components in your 811 program.
 - Not implemented & no plan for implementation*
 - Not implemented, but there is a plan for implementation*
 - Implementation in progress*
 - Pilot implementation complete*
 - Widespread implementation & use*
 - I don't understand this component*

Component	Definition	1	2	3	4	5	6
Post nurse assessment data shared with patients via e-mail	A summary of the nurse's assessment and advice is sent to the patient by email after their interaction, so they can review instructions and next steps.	☐	☐	☐	☐	☐	☐
Virtual physician appointments	Appointments with a doctor delivered remotely by phone, video, or secure messaging instead of in person.	☐	☐	☐	☐	☐	☐

Medical library	A collection of trusted, evidence-based health information (articles, videos, FAQs) that patients can use to learn about conditions and care options.	☐	☐	☐	☐	☐	☐
Navigation-based chatbot	An automated chat tool that helps patients find the right service or next step by asking simple questions and guiding them through options.	☐	☐	☐	☐	☐	☐
Chat on the web	Live or automated text-based communication between patients and healthcare staff through a website.	☐	☐	☐	☐	☐	☐

3. Is there any additional information you would like to share about the 811 program to help us better understand the current and future Canadian landscape of these services?

8.3. Appendix 3. Digital Front Door - Survey 3

Health 811 Knowledge Exchange Survey- Performance Measurement Framework

PERFORMANCE METRICS USED TO ASSESS DIGITAL FRONT DOOR COMPONENTS

For each Digital Front Door components listed below, please indicate which performance metrics are currently captured by your 811 program.

Select all that apply. If your program captured additional metrics not listed, please specify them in the “Other” field.

1. Phone
 - ☐ Total call volumes
 - ☐ Number of unique callers
 - ☐ Number of repeat callers
 - ☐ Average wait time from request to initial encounter
 - ☐ Number of users referred to from external services
 - ☐ Number of services deliverable via phone
 - ☐ Percentage of calls resulting in appointment, referral, or care completion
 - ☐ Patient feedback on satisfaction
 - ☐ Other (Please indicate _____)
2. Video call
 - ☐ Total number of video visits
 - ☐ Average number of repeat video visits per patient (within reporting period)
 - ☐ Average wait time to video visit
 - ☐ Number of services deliverable via video
 - ☐ Percentage of video visits resulting in appointment, referral, or care completion
 - ☐ Patient feedback on satisfaction
 - ☐ Other (Please indicate _____)
3. Asynchronous messaging
 - ☐ Number of users selecting asynchronous messaging as preferred modality
 - ☐ Number of users with ≥ 1 active messaging thread
 - ☐ Number of messaging threads initiated
 - ☐ Average response time from message initiation to first provider response
 - ☐ Number of services deliverable via asynchronous messaging
 - ☐ Integration status with Health811's EMR
 - ☐ Percentage of messaging encounters resulting in appointment, referral, or care completion
 - ☐ Patient feedback on satisfaction
 - ☐ Other (Please indicate _____)
4. Website
 - ☐ Total website visits
 - ☐ Number of unique visitors
 - ☐ Number of repeat visitors
 - ☐ Percentage of services accessible via website
 - ☐ Patient feedback on satisfaction

- o Other (Please indicate_____)
5. Mobile app
 - o Total app downloads
 - o Number of active users
 - o Percentage of services accessible via mobile app
 - o Patient feedback on satisfaction
 - o Other (Please indicate_____)
 6. Texting/SMS
 - o Total SMS volume
 - o SMS engagement rate
 - o Number of services integrated with SMS modality
 - o Percentage of SMS interactions resulting in appointment, referral, or care completion
 - o Average response time
 - o Patient feedback on satisfaction
 - o Other (Please indicate_____)
 7. 24/7 access
 - o Number of users accessing services outside regular hours
 - o Distribution of unique users by time of day
 - o Percentage of services accessible outside regular hours
 - o Percentage of after-hours encounters resulting in appointment, referral, or care completion outside of regular hours
 - o Patient feedback on satisfaction
 - o Other (Please indicate_____)
 8. After-hours access through doctor's office
 - o Total after-hours volume
 - o Percentage of practices integrated with after-hour workflow
 - o Number of successful care handoffs
 - o Patient feedback on satisfaction
 - o Other (Please indicate_____)
 9. Alternate accessibility options
 - o Frequency of accessibility features usage
 - o Number of users requiring accommodations
 - o Percentage of services compliant with accessibility standards
 - o Patient feedback on satisfaction
 - o Other (Please indicate_____)
 10. Multilingual support
 - o Number of users indicating a language preference
 - o Number of languages supported
 - o Availability of interpreter services
 - o Percent of services available with multilingual support

- o Patient feedback on satisfaction
- o Other (Please indicate_____)

11. Plain language content

- o Number of content views
- o Average time spent engaging with content
- o Patient feedback on satisfaction
- o Other (Please indicate_____)

12. Automated alerts for monitoring health

- o Alert engagement rates
- o Number of services integrated into monitoring workflow
- o Number of alerts acted upon resulting in early intervention
- o Rate of avoided adverse events or admission
- o Patient feedback on satisfaction
- o Other (Please indicate_____)

13. Self-assessment/symptom checker

- o Number of assessments initiated
- o Number of assessments completed
- o Percentage of assessments resulting in recommended next steps
- o Patient feedback on satisfaction
- o Other (Please indicate_____)

14. Evidence-based educational content

- o Total page views
- o Number of return visits
- o Patient feedback on satisfaction
- o Other (Please indicate_____)

15. Chatbot for general health information

- o Number of chat sessions initiated
- o Number of unique users
- o Number of repeat users
- o Percentage of chats resolved without escalation
- o Percentage resulting in appointment, or referral
- o Patient feedback on satisfaction
- o Other (Please indicate_____)

16. Searchable service directory

- o Number of searches performed
- o Number of services plugged into the service directory
- o Patient feedback on satisfaction
- o Other (Please indicate_____)

17. Personalized patient dashboard
- o Number of users using the dashboard
 - o Number of services integrated into dashboard
 - o Patient feedback on satisfaction
 - o Other (Please indicate_____)
18. Nurse or navigator-led triage
- o Number of triage encounters initiated
 - o Percentage of triage encounters resulting in appointment, referral, or care completion
 - o Patient feedback on satisfaction
 - o Other (Please indicate_____)
19. Automated triage
- o Number of automated triage encounters initiated
 - o Percentage of automated triage encounters resulting in appointment, referral, or care completion
 - o Patient feedback on satisfaction
 - o Other (Please indicate_____)
20. Tailored tools & content for marginalized populations
- o Engagement rate among target populations
 - o Percentage of services specifically tailored to marginalized populations
 - o Patient feedback on satisfaction
 - o Other (Please indicate_____)
21. Online primary care appointment booking
- o Number of appointments booked online
 - o Percentage of primary care providers bookable online
 - o Integration status of scheduling systems
 - o Average time to onboard clinic of provider to online booking
 - o Booking completion rate
 - o Other (Please indicate_____)
22. Real-time primary care provider availability
- o Number of availability views
 - o Percentage of providers with real-time availability
 - o Other (Please indicate_____)
23. Specialist referrals
- o Number of referral requests initiated
 - o Number of specialists available
 - o Integration status with referral management system
 - o Referral acceptance rate
 - o Referral completion rate
 - o Referral drop-out rate
 - o Other (Please indicate_____)

24. Prescribing medication and ordering tests
- o Number of patients receiving prescription or test orders
 - o Number of prescriptions issued
 - o Number of tests ordered
 - o Percentage of services integrated with pharmacy/lab systems
 - o Average time from order to completion
 - o Other (Please indicate_____)
25. Preventative care
- o Number of patients enrolled in preventative programs
 - o Integration with registry and scheduling systems
 - o Number of preventative programs completed
 - o Reduction in preventable acute events
 - o Other (Please indicate_____)
26. Prescription renewal
- o Number of patients requesting prescription renewals
 - o Integration status with pharmacy systems
 - o Number of refill requests submitted
 - o Number of refills completed
 - o Other (Please indicate_____)
27. Chronic disease management
- o Number of patients enrolled in chronic disease management programs
 - o Percentage of chronic disease management care services integrated
 - o Condition-specific outcomes measures
 - o Adherence rate
 - o Follow-up completion rate
 - o Other (Please indicate_____)
28. Self-management
- o Number of patients engaging with self-management tools/resources
 - o Percentage of services with linked self-management resources/tools
 - o Number of referrals to self-management tools/resources
 - o Other (Please indicate_____)
29. Remote monitoring
- o Number of patients enrolled in remote monitoring programs
 - o Percentage of devices and services integrated with monitoring feeds
 - o Number of alerts acted upon
 - o Provider response time to alerts
 - o Other (Please indicate_____)
30. Patient-reported outcomes (PRO)
- o Percentage of services incorporating PRO measures

- o Number of care adjustments informed by PRO data
- o Other (Please indicate_____)

31. Integration with provincial provider waitlists for unattached patients

- o Percentage of regions/programs connected to provincial waitlist systems
- o Successful attachment rate
- o Other (Please indicate_____)

32. Access to viewer for lab results and imaging

- o Number of patients accessing viewer
- o Percentage of labs and imaging providers connected
- o Average time to integrate lab and images
- o Number follow-up actions initiated after viewing results
- o Other (Please indicate_____)

33. Access to provincial viewer for hospital records

- o Number of patients accessing viewer
- o Percentage of hospitals connected to the viewer
- o Other (Please indicate_____)

34. Access to provincial viewer for primary care records

- o Number of patients accessing viewer
- o Percentage of practices integrated with viewer
- o Other (Please indicate_____)

35. Access to provincial viewer for pharmacy dispensing records

- o Number of patients accessing viewer
- o Percentage of pharmacies integrated with viewer
- o Other (Please indicate_____)

36. Please list any additional performance metrics that are not already included in this survey and that your program does not currently capture, but that you would have interest in exploring in the future.

8.4. Appendix 4. Interview Guide

Interview Purpose: Barriers and facilitators of implementing different Health 811 digital front door (DFD) components in the region

Guiding Frameworks: CFIR, RE-AIM, Proctor

Questions:

1. To what extent is there a need for the DFD framework within the Health811 service?
 - a. How well do the DFD components align with the priorities of Health811?
2. How are decisions made about which DFD components to implement for Health811? Who is engaged in the decision-making process? and what criteria, evidence and/or data inform the decision?
 - a. Which key interest-holders are involved?
 - b. Are there any perspectives or groups that you feel are under-represented or missing? If so, what are the limits bringing in these voices?
 - c. Are patients and/or caregivers part of the decision-making process?
3. How do you prioritize which components to implement as part of Health811 and when? What information, evidence, and criteria inform the decision?
 - a. Refer back to survey responses and probe re: components implemented vs. not, comparing to other regions
4. How do you approach adapting or modifying components after they are implemented? Is there a process for this?
 - a. How are these components monitored and evaluated?
 - b. Are there things you wish you had considered earlier in the implementation process
5. Overall, what have been the general barriers to implementing some of the DFD components within Health811?
 - a. Probe: survey responses
 - b. Probe as needed on: Penetration, Fidelity, Feasibility, Uptake, Cost, Sustainability, Acceptance, Infrastructure
 - c. Which of these barriers should be addressed early on in implementation?
6. Overall, what have been the general facilitators to implementing some of the DFD components within Health811?
 - a. Probe: survey responses

Probe as needed on: Penetration, Fidelity, Feasibility, Uptake, Cost, Sustainability, Acceptance, Infrastructure

8.5. Appendix 5. Characteristics of First Contact Services

Service Purpose	Service Type	Description	Modality	Staff Composition	Services Provided	On-Ramps	Off-Ramps
System Navigation and Health Advice	Internet	Individuals that consulted the internet about their health and medical conditions.	Virtual	Not applicable	General health information seeking, searching for care options and services	Self-initiated (e.g., search engines, websites)	Self-care, seeking other first contact services (e.g., primary care clinic, walk-in clinic, emergency department or other services depending on need)
	AI chatbot	Individuals that consulted an AI chatbot about their health and medical conditions.	Virtual	Not applicable (algorithm-based)	Symptom assessment, health information recommendations based on person-generated description of care need	Self-initiated via app, websites or digital platform	Self-care, seeking other first contact services (e.g., primary care, emergency department, or other services depending on need)
	Health811	A free, secure, and confidential 24/7 digital health service that allows Ontarians to call or chat	Virtual	Registered nurses, nurse practitioners	Health services and information guide. AI-powered symptom checker, health services directory, specialized supports (nutritional	Self-referral	Self-care, virtual care, primary care clinic, walk-in, community service,

Service Purpose	Service Type	Description	Modality	Staff Composition	Services Provided	On-Ramps	Off-Ramps
		online with a registered nurse and access the health information and services needed through a website and/or phone line.			counselling, breastfeeding assistance/lactation consultant support, smoking cessation/referrals for vaping cessation services, colorectal cancer screening, refugee health line), medical library		emergency department
Clinical Services	Emergency Department	Hospital-based rooms that provide care for severe, life-threatening concerns 24/7 (13).	In-person	Registered nurse, nurse practitioner, physician, technicians, administrative staff, allied health professionals	Urgent medical care, triage, diagnostic testing, treatment	Self-referral	Self-care, primary care clinic, specialist, community service
	Pharmacy	Local pharmacies that support medication refills, offer medication counselling, and prescribe certain treatment options for common medical ailments (14).	In-person	Pharmacist, pharmacy assistants and technicians	May vary by location; prescription dispensing services, medication counselling, smoking cessation programs, diabetes management, MedsCheck program, flu shot/vaccine administration, prescription/treatment of common ailments (e.g., urinary tract	Self-referral	Self-care, primary care clinic, emergency department

Service Purpose	Service Type	Description	Modality	Staff Composition	Services Provided	On-Ramps	Off-Ramps
					infection, acne, acid reflux, hay fever, yeast infections, etc.)		
	Walk-in Clinic	Provides care (e.g., diagnosis and treatment of minor illnesses, prescriptions, referrals) for people without regular access to a primary care provider (15).	In-person	Physician, registered nurse, administrative staff (e.g., receptionists, medical office assistants), allied health professionals	May vary by location; primary care services, non-urgent care	Self-referral	Self-care, primary care clinic, community service, emergency department
	Urgent Care Centre	Provides treatment for most issues including sprains, broken bones, fever, minor burns, nose and throat complaints (16).	In-person	Physicians, registered nurses, nurse practitioners, administrative staff	Services vary by location; diagnosis and treatment (except surgery), casts, eye care, laboratory, stitches, x-ray.	Self-referral	Self-care, follow-up, primary care clinic, emergency department, specialist

Service Purpose	Service Type	Description	Modality	Staff Composition	Services Provided	On-Ramps	Off-Ramps
	Episodic Access to Virtual Care	Nurse practitioner-led episodic virtual care program that provides episodic care for non-urgent issues for patients without regular access to a primary care provider. Includes all funded sites: Durham Community Health Centre (East), St. Joseph's Healthcare Hamilton and London Health Sciences Centre (West); Oak Valley Health (Central), Sunnybrook Health Sciences Centre and University Health Network (Toronto). (17)	Virtual	Varies by program site; includes various healthcare professionals such as primary care and emergency nurse practitioners, administrative staff, with physician consults	Urgent non-life-threatening conditions that can be addressed virtually	Self-referral; H811; community clinics; local hospitals	Prescription pick-up; requisitions for imaging or labs; referrals to specialists, emergency department, community resources, or primary care provider

Service Purpose	Service Type	Description	Modality	Staff Composition	Services Provided	On-Ramps	Off-Ramps
	Virtual Triage and Assessment Centre	Hybrid virtual care program serving patients without a regular primary care provider in Renfrew County. (18)	Virtual	Physician, nurse practitioner, registered nurse, community paramedics, administrative staff	Provides services related to acute and chronic issues, patient education, order investigations (e.g., blood work, imaging).	Self-referral	Specialist
Clinical Services	Primary Care Clinics	Encounters with a regular health provider or place of care (e.g., family physician, nurse practitioner, or family health teams/health centre/clinic. (19)	Hybrid	Physician, registered nurses, administrative staff (e.g., receptionists, medical office assistants), allied health professionals	Primary care services	Self-referral, walk-in, Health 811, emergency department, pharmacy	Specialist, emergency department, community service

8.6. Appendix 6. Service Utilization of First Contact Services

Service Purpose	Service Type	Description	Modality	Service Volume (monthly average)	Data Source	Data Limitations
System Navigation and Health Advice	Internet	Individuals that consulted the internet about their health and medical conditions.	Virtual	506,973*	Canada Health Infoway's 2024 iteration of the Canadian Digital Health Survey (Q17_A14)	Survey question derived from Canada Health Infoway's 2024 iteration of the Canadian Digital Health Survey. The terms "internet" and "AI Chatbot" were not defined in the survey.
	AI Chatbot	Individuals that consulted an AI chatbot about their health and medical conditions.	Virtual	69,893*	Canada Health Infoway's 2024 iteration of the Canadian Digital Health Survey (Q17_A15)	*estimated as annual prevalence (used at least once in past 12 months) divided by 12 to approximate an average monthly volume; assumes usage is evenly distributed across months

Service Purpose	Service Type	Description	Modality	Service Volume (monthly average)	Data Source	Data Limitations
	Health811	A free, secure, and confidential 24/7 digital health service that allows Ontarians to call or chat online with a registered nurse and access the health information and services needed through a website and/or phone line.	Virtual	59,047 (calls/chat/symptom assessment)	Data as provided by Ontario Health	
Clinical Services	Emergency Department	Hospital-based rooms that provide care for severe, life-threatening concerns 24/7.	In-person	551,369	Canadian Institute for Health Information. NACRS Emergency Department Visits and Lengths of Stay by Province/Territory, 2024–2025 (Q1 to Q4). Ottawa, ON: 2025	
	Pharmacy	Local pharmacies that support medication refills, offer medication counselling, and prescribe certain treatment options for common medical ailments.	In-person	61,311	Early findings from Ontario's Pharmacist-Led Minor Ailments Program.	

Service Purpose	Service Type	Description	Modality	Service Volume (monthly average)	Data Source	Data Limitations
	Walk-in Clinic	Provides care (e.g., diagnosis and treatment of minor illnesses, prescriptions, referrals) for people without regular access to a primary care provider.	In-person	787,530	Extrapolations made from Canada Health Infoway 2023 Digital Health Survey.	Virtual walk-in clinics also exist, however, service volume data is not available and therefore, not captured in this total.
	Urgent Care Centre	Provides treatment for most issues including sprains, broken bones, fever, minor burns, nose and throat complaints.	In-person	32,920*	Data provided by Ministry of Health for the 2024/2025 year.	

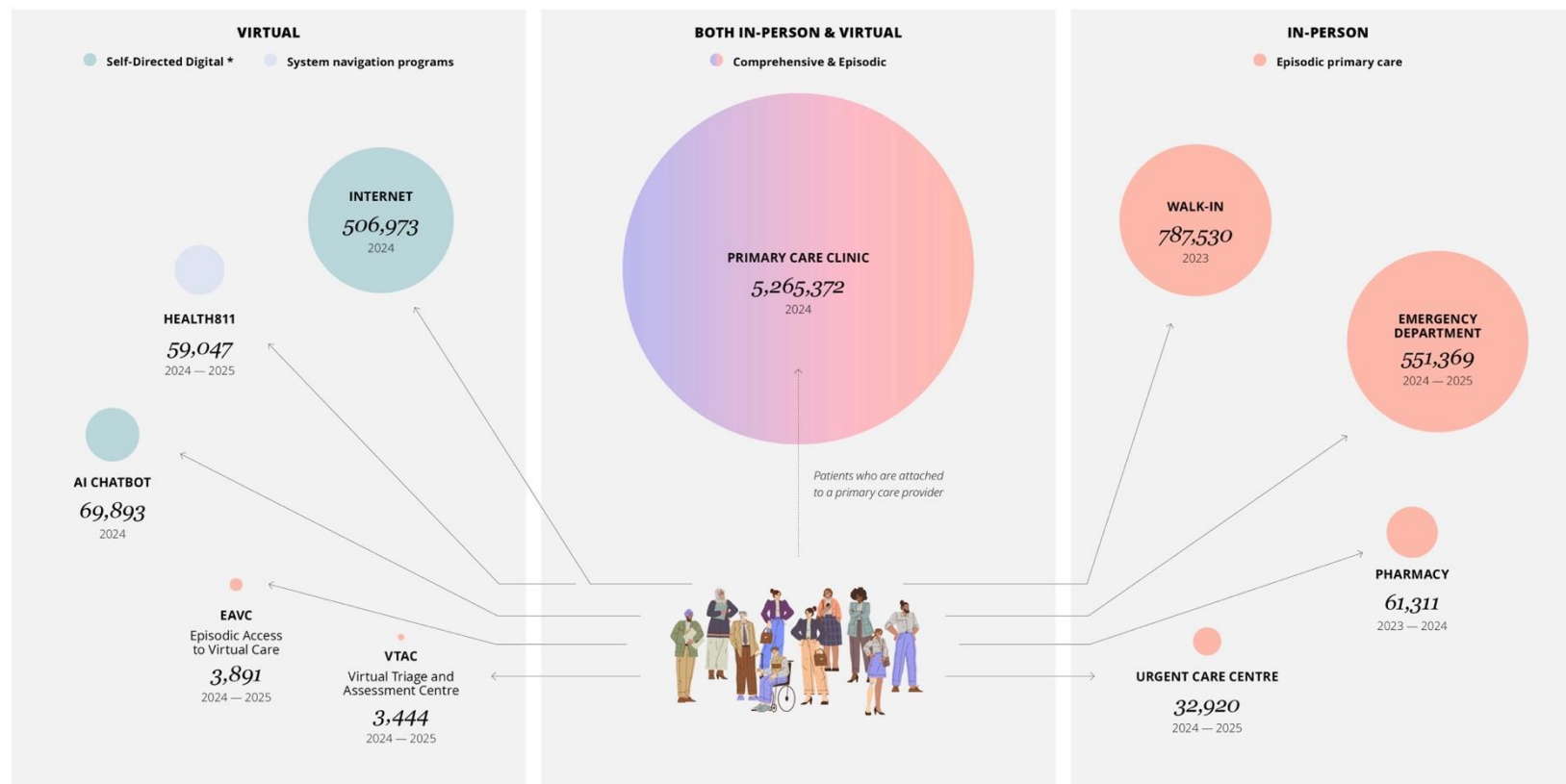
Service Purpose	Service Type	Description	Modality	Service Volume (monthly average)	Data Source	Data Limitations
	Episodic Access to Virtual Care	Nurse practitioner-led episodic virtual care program that provides episodic care for non-urgent issues for patients without regular access to a primary care provider. Includes all funded sites: Durham Community Health Centre (East), St. Joseph's Healthcare Hamilton and London Health Sciences Centre (West); Oak Valley Health (Central), Sunnybrook Health Sciences Centre and University Health Network (Toronto).	Virtual	3,891	Data as provided by Ontario Health	
	Virtual Triage and Assessment Centre	Hybrid virtual care program serving patients without a regular primary care provider in Renfrew County.	Virtual	3,444	Data as provided by Ontario Health	

Service Purpose	Service Type	Description	Modality	Service Volume (monthly average)	Data Source	Data Limitations
	Primary Care Clinics	Encounters with a regular health provider or place of care (e.g., family physician, nurse practitioner, or family health teams/health centre/clinic.	Hybrid	5,265,372	Data provided by Ministry of Health for the 2024/2025 year.	Analysis uses data from the Claims History Database (CHDB) and Corporate Provider Database (CPDB) It includes family and general practice physicians (derived specialty '00') with service dates from April 1, 2024 to March 31, 2025. Claims were excluded based on specific fee codes, indirect virtual care codes, error or payment codes, WSIB, community labs, out-of-province physicians and temporary palliative virtual care claims.

8.7. Appendix 7. Map of First Contact Services

A. MARKET SHARE OF FIRST CONTACT CARE SERVICES IN ONTARIO

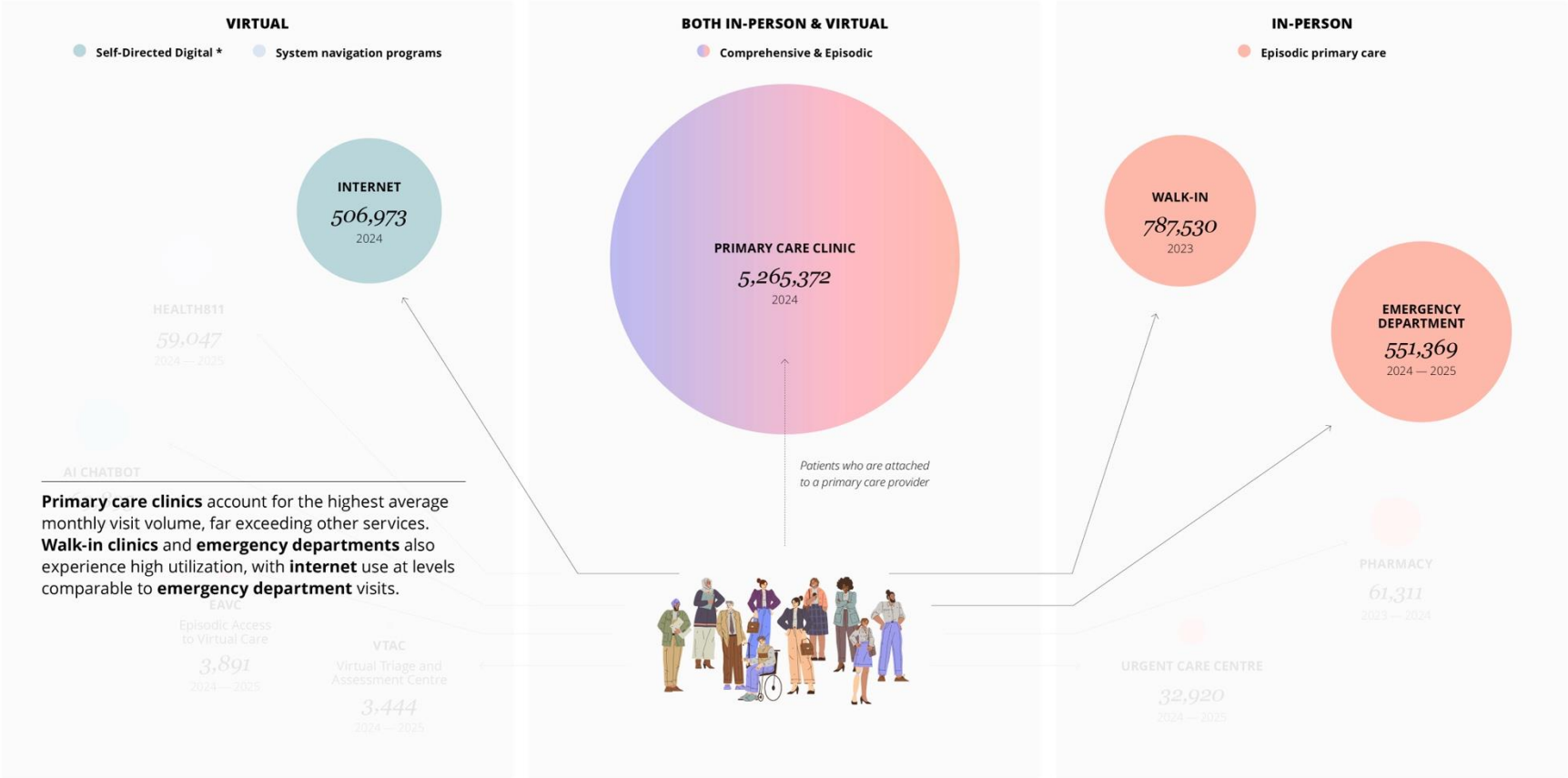
Market Share of First Contact Care in Ontario Analysis based on available data on approximate average monthly visits across first contact care services in Ontario



* Internet & AI chatbot: Individuals who consulted these sources about their health and medical conditions. Source: Canada Health Infoway's Canadian Digital Health Survey, 2024. Terms not formally defined.

B. MARKET SHARE OF FIRST CONTACT CARE SERVICES IN ONTARIO: COMPARISON OF PRIMARY CARE CLINIC WITH OTHER FIRST-CONTACT SERVICES

Market Share of First Contact Care in Ontario Analysis *based on available data on approximate average monthly visits* across first contact care services in Ontario



* Internet & AI chatbot: Individuals who consulted these sources about their health and medical conditions. Source: Canada Health Infoway's Canadian Digital Health Survey, 2024. Terms not formally defined.

C. MARKET SHARE OF FIRST CONTACT CARE SERVICES IN ONTARIO: COMPARISON OF HEALTH811 AND AI CHATBOT TO PHARMACY

Market Share of First Contact Care in Ontario Analysis *based on available data on approximate average monthly visits* across first contact care services in Ontario



* Internet & AI chatbot: Individuals who consulted these sources about their health and medical conditions. Source: Canada Health Infoway's Canadian Digital Health Survey, 2024. Terms not formally defined.

8.8. Appendix 8. List of Digital Front Door Components & Definitions

DOMAIN 1: PATIENT-FACING

1A. EQUITY & ACCESS

1. Phone call
Patients can access care or information by speaking with a person by telephone.
2. Video call
Patients receive care through live video visits with clinicians.
3. Asynchronous messaging
Patients and providers communicate through secure messages that do not require both to be online at the same time.
4. Website
A publicly accessible site where patients can access health information, services, and tools.
5. Mobile app
A smartphone application that allows patients to access health services, information, or care on their device.
6. Texting / SMS
Health information, reminders, or two-way communication delivered via text message.
7. Chat on the web
Live or automated text-based communication between patients and healthcare staff through a website.
8. Navigation-based chatbot
An automated chat tool that helps patients find the right service or next step by asking simple questions and guiding them through options.
9. 24/7 access
Patients can access information or services at any time, including nights and weekends.
10. After-hours access through doctor's office
Patients can receive care or advice from their primary care practice outside regular

business hours.

11. Alternate accessibility options

Features that support people with disabilities or limited digital access (e.g., screen readers, voice support, phone alternatives).

12. Multilingual support

Health information and services available in multiple languages.

13. Plain language content

Health information written in clear, simple terms that are easy to understand.

14. Automated alerts for monitoring health

System-generated notifications triggered by health data or schedules (e.g., reminders, abnormal readings).

1B. NAVIGATION

15. Self-assessment / symptom checker

A digital tool that asks about symptoms and suggests appropriate next steps for care.

16. General health information

Evidence-based educational content about health conditions, services, and care options.

17. Chatbot for general health information

An automated chat tool that answers common health questions or directs users to resources.

18. Searchable service directory

An online list of health services that patients can search by location, type, or eligibility.

19. Medical library

A collection of trusted, evidence-based health information (articles, videos, FAQs) that patients can use to learn about conditions and care options.

20. Personalized patient dashboard

A secure page showing a patient's appointments, messages, care plans, or reminders.

21. Nurse- or navigator-led triage

Assessment and care guidance provided by trained clinical or navigation staff.

22. Automated triage

A digital system that assigns urgency and care pathways based on patient input.

23. Post nurse assessment data shared with patients via e-mail

24. A summary of the nurse's assessment and advice is sent to the patient by email after their interaction, so they can review instructions and next steps.

25. Tailored tools and content for marginalized populations

Resources adapted to the needs of specific populations to improve access and relevance.

1C. APPOINTMENT BOOKING & REFERRALS

26. Online primary care appointment booking

Patients can schedule primary care appointments digitally without calling a clinic.

27. Real-time primary care provider availability

Patients can see current appointment openings across providers or clinics.

28. Virtual physician appointments

Appointments with a doctor delivered remotely by phone, video, or secure messaging instead of in person.

29. Specialist referrals

Digital processes that allow referrals to specialist care, including tracking and follow-up.

1D. SCOPE OF SERVICES

30. Prescribing medications and ordering tests

Clinicians can prescribe medications and order diagnostic tests through the platform.

31. Preventative care

Services that help prevent illness, such as screening, immunizations, and health counseling.

32. Prescription renewal

Patients can request refills for ongoing medications without an in-person visit.

33. Chronic disease management

Ongoing care and monitoring for long-term conditions such as diabetes or asthma.

34. Self-management

Tools or resources that help patients manage their own health between visits, such as education, action plans, reminders, or tracking symptoms on their own.

35. Remote monitoring

Use of devices or digital tools to collect health data (e.g., blood pressure, glucose levels) from patients at home and share it with healthcare providers.

36. Patient-reported outcomes (PROs)

Information about a patient's health status, symptoms, or quality of life that is reported directly by the patient, not measured by a clinician.

DOMAIN 2: SYSTEMS

2A. INTEROPERABILITY

37. Integration with provincial provider waitlists for unattached patients

Ability to connect patients without a primary care provider to official attachment systems.

38. Access to viewer for lab test results and imaging

Ability to view laboratory and imaging results from provincial systems.

39. Access to provincial viewer for hospital records

Ability to view hospital encounter records through a provincial system.

40. Access to provincial viewer for primary care records

Ability to view primary care notes and records through a provincial system.

41. Access to provincial viewer for pharmacy dispensing records

Ability to view medication dispensing history from pharmacies.

2B. IDENTITY & SECURITY

42. Federated patient ID

A single patient identifier that works across multiple health systems and platforms.

43. Provider-specific identity management

Unique digital identities that control what systems and data providers can access.

44. Consent management

Tools that allow patients to control who can access their health information.

45. Privacy safeguards (e.g., PHIPA)

Legal, policy, and technical protections that keep personal health information secure.

46. Secure communication channels

Encrypted systems that protect patient and provider communications.

DOMAIN 3: QUALITY IMPROVEMENT

3A. DATA & ANALYTICS

47. Basic utilization metrics

Counts of service use, such as visits, calls, or logins.

48. Advanced service analytics

Analysis of care pathways, wait times, appropriateness, and system performance.

49. Predictive analytics for demand forecasting

Use of data to anticipate future service needs and staffing requirements.

50. Population health insights

Analysis of aggregated data to understand health trends across groups or regions.

3B. EVALUATION & LEARNING HEALTH SYSTEMS

51. Patient experience surveys

Tools that collect patient feedback on access, usability, and satisfaction.

52. Attachment outcomes

Measures showing whether unattached patients are connected to primary care.

53. Continuity outcomes

Measures showing whether care is coordinated and followed over time.

54. Equity metrics

Indicators that measure differences in access or outcomes across populations.

55. Real-time equity monitoring

Ongoing tracking of equity indicators to identify access gaps as they occur.

56. Cost-effectiveness metrics

Measures comparing service costs to health outcomes achieved.

57. System learning loops to improve triage and care pathways

Processes that use data and feedback to continuously improve services.

DOMAIN 4: GOVERNANCE

4A. OPERATIONAL STRUCTURE

58. Established centralized oversight (provincial / regional health authority)

A defined organization responsible for managing and coordinating the digital front door.

59. Service level agreements (e.g., wait time)

Formal performance standards such as response times or access targets.

8.9. Appendix 9. Heatmap of Implementation Status of DFD Components

Regions other than Ontario have been anonymized.

PATIENT-FACING: EQUITY & ACCESS

Region	PHONE	VIDEO	ASYNCHRONOUS MESSAGING	WEBSITE	MOBILE APP	TEXTING/SMS	CHAT ON THE WEB	NAVIGATION-BASED CHATBOT	24/7 ACCESS	AFTER-HOURS DOCTOR'S OFFICE	ALTERNATE ACCESSIBILITY	MULTILINGUAL SUPPORT	PLAIN LANGUAGE CONTENT	AUTOMATED ALERTS FOR MONITORING HEALTH
ON	5	5	2	5	2	2	5	2	5	3	2	5	5	2
A	5	4	3	5	1	3	1	1	5	4	3	5	5	1
B	5	2	2	5	1	1	3	2	5	5	2	5	5	2
C	5	3	1	2	2	2	1	2	5	1	2	5	1	1
D	5	2	3	5	1	5	5	5	5	1	2	5	5	1
E	5	1	2	5	1	2	7	7	5	7	5	5	5	1
F	5	5	4	4	5	3	2	2	5	1	2	2	5	5
G	5	2	2	5	2	5	2	1	5	2	2	5	5	5
H	5	2	4	5	2	2	7	7	5	4	2	5	5	1
I	5	2	1	5	1	2	7	7	5	1	1	2	7	1
J	5	5	1	3	2	1	1	1	5	5	1	1	5	1

LEGEND

1	Not implemented & no plan for future implementation
2	Not implemented, but there is a plan for implementation
3	Implementation in progress
4	Pilot implementation complete
5	Widespread implementation & use
6	Previously implemented but is no longer in use
7	Not reported or unknown

PATIENT-FACING: NAVIGATION

Region	SELF-SYMPTOM CHECKER	GEN HEALTH INFO	CHATBOT FOR GEN HEALTH	SEARCHABLE SERVICE DIRECTORY	MEDICAL LIBRARY	PERSONALIZED PATIENT DASHBOARD	NURSE LED TRIAGE	AUTOMATED TRIAGE	POST-NURSE ASSESSMENT DATA SHARED WITH PATIENT	TAILORED TOOLS FOR MARGINALIZED
ON	5	5	2	5	5	2	5	1	2	2
A	5	5	3	2	5	1	5	1	7	2
B	2	2	2	2	2	2	2	1	2	1
C	2	5	2	2	1	2	5	3	1	1
D	1	5	5	5	5	1	5	1	5	2
E	1	5	2	1	7	1	5	1	7	1
F	4	2	4	2	2	5	5	4	2	2
G	2	5	2	2	1	2	5	2	1	2
H	5	5	3	3	7	4	5	5	7	1
I	1	3	3	5	7	3	5	3	7	7
J	6	5	1	1	2	1	5	1	1	2

LEGEND

1	Not implemented & no plan for future implementation
2	Not implemented, but there is a plan for implementation
3	Implementation in progress
4	Pilot implementation complete
5	Widespread implementation & use
6	Previously implemented but is no longer in use
7	Not reported or unknown

PATIENT-FACING: APPOINTMENT BOOKING & REFERRALS

Region	ONLINE PRIMARY CARE APPOINTMENT	REAL-TIME PRIMARY CARE PROVIDER AVAILABILITY	VIRTUAL PHYSICIAN APPOINTMENTS	SPECIALIST REFERRALS
ON	2	2	1	1
A	3	3	5	1
B	2	2	5	1
C	2	3	3	1
D	2	2	2	2
E	1	1	7	1
F	5	5	2	5
G	2	2	2	2
H	3	3	7	1
I	5	5	7	1
J	2	2	1	1

LEGEND

1	Not implemented & no plan for future implementation
2	Not implemented, but there is a plan for implementation
3	Implementation in progress
4	Pilot implementation complete
5	Widespread implementation & use
6	Previously implemented but is no longer in use
7	Not reported or unknown

PATIENT-FACING: SCOPE OF SERVICES

Region	PRESCRIBE MEDICATIONS & ORDER TESTS	PREVENTATIVE CARE	PRESCRIPTION RENEWAL	CHRONIC DISEASE MANAGEMENT	SELF-MANAGEMENT	REMOTE MONITORING	PATIENT-REPORTED OUTCOMES
ON	1	2	2	2	2	2	2
A	5	2	6	6	6	1	6
B	2	2	1	2	2	1	1
C	4	5	4	4	5	1	2
D	2	5	5	1	5	1	2
E	1	5	1	5	5	1	7
F	5	1	5	4	4	4	4
G	2	2	2	2	2	2	2
H	1	5	1	5	5	1	2
I	1	5	1	1	5	1	1
J	5	2	2	3	5	3	2

LEGEND

1	Not implemented & no plan for future implementation
2	Not implemented, but there is a plan for implementation
3	Implementation in progress
4	Pilot implementation complete
5	Widespread implementation & use
6	Previously implemented but is no longer in use
7	Not reported or unknown

SYSTEMS: INTEROPERABILITY

Region	INTEGRATION WITH PROVINCIAL PROVIDER WAITLIST FOR UNATTACHED PATIENTS	ACCESS TO VIEWER FOR LAB TEST RESULTS & IMAGING	ACCESS TO PROVINCIAL VIEWER FOR HOSPITAL RECORDS	ACCESS TO PROVINCIAL VIEWER FOR PRIMARY CARE RECORDS	ACCESS TO PROVINCIAL VIEWER FOR PHARMACY DISPENSING RECORDS
ON	2	2	2	2	1
A	5	5	5	1	5
B	2	5	5	2	5
C	2	3	1	1	5
D	5	2	2	2	2
E	1	1	1	1	1
F	4	2	2	2	2
G	2	2	2	2	2
H	5	1	2	2	1
I	5	5	1	1	5
J	3	3	3	3	3

LEGEND

1	Not implemented & no plan for future implementation
2	Not implemented, but there is a plan for implementation
3	Implementation in progress
4	Pilot implementation complete
5	Widespread implementation & use
6	Previously implemented but is no longer in use
7	Not reported or unknown

SYSTEMS: IDENTITY & SECURITY

Region	FEDERATED PATIENT ID	PROVIDER-SPECIFIC IDENTITY MANAGEMENT	CONSENT MANAGEMENT	PRIVACY SAFEGUARDS	SECURE COMMUNICATION CHANNELS
ON	2	2	2	5	5
A	1	2	5	5	5
B	5	2	2	5	5
C	1	1	1	1	1
D	5	5	5	5	5
E	1	7	7	7	5
F	1	5	5	5	5
G	1	1	1	5	5
H	1	1	5	5	5
I	7	5	3	7	5
J	1	2	5	5	5

LEGEND

1	Not implemented & no plan for future implementation
2	Not implemented, but there is a plan for implementation
3	Implementation in progress
4	Pilot implementation complete
5	Widespread implementation & use
6	Previously implemented but is no longer in use
7	Not reported or unknown

QUALITY IMPROVEMENT: DATA & ANALYTICS

Region	BASIC UTILIZATION METRICS	ADVANCED SERVICE ANALYTICS	POPULATION HEALTH INSIGHTS	PREDICTIVE ANALYTICS FOR DEMAND FORECASTING
ON	5	2	1	5
A	6	6	6	2
B	2	5	2	5
C	3	3	3	1
D	5	2	2	5
E	5	5	1	1
F	5	5	5	5
G	2	2	1	2
H	5	5	2	5
I	5	2	3	5
J	5	5	2	1

LEGEND

1	Not implemented & no plan for future implementation
2	Not implemented, but there is a plan for implementation
3	Implementation in progress
4	Pilot implementation complete
5	Widespread implementation & use
6	Previously implemented but is no longer in use
7	Not reported or unknown

QUALITY IMPROVEMENT: EVALUATION & LEARNING HEALTH SYSTEMS

Region	PATIENT EXPERIENCE SURVEYS	ATTACHEMENT OUTCOMES	CONTINUITY OUTCOMES	EQUITY METRICS	REAL-TIME EQUITY MONITORING	COST-EFFECTIVENESS METRICS	SYSTEM LEARNING LOOPS TO IMPROVE TRIAGE AND CARE PATHWAYS
ON	2	2	2	2	1	3	1
A	5	4	5	4	4	4	4
B	5	2	2	1	2	2	5
C	3	3	3	3	1	1	3
D	5	2	2	2	2	2	2
E	5	7	7	5	1	1	7
F	5	5	1	1	1	5	5
G	5	5	2	5	5	5	2
H	5	5	3	1	1	5	5
I	2	7	7	1	1	2	2
J	5	2	1	2	1	1	5

LEGEND

1	Not implemented & no plan for future implementation
2	Not implemented, but there is a plan for implementation
3	Implementation in progress
4	Pilot implementation complete
5	Widespread implementation & use
6	Previously implemented but is no longer in use
7	Not reported or unknown

GOVERNANCE: OPERATIONAL STRUCTURE

Region	ESTABLISHED CENTRALIZED OVERSIGHT	SERVICE LEVEL AGREEMENTS
ON	5	5
A	5	5
B	5	1
C	3	2
D	5	5
E	5	5
F	5	5
G	2	5
H	5	5
I	5	5
J	2	5

LEGEND

1	Not implemented & no plan for future implementation
2	Not implemented, but there is a plan for implementation
3	Implementation in progress
4	Pilot implementation complete
5	Widespread implementation & use
6	Previously implemented but is no longer in use
7	Not reported or unknown

8.10. Appendix 10. Key Informant Quotes

Example Key Informant Quotes Mapped to Proctor Implementation Outcomes

Proctor Implementation Outcomes	Example Key Informant Quotes
Acceptability	<i>"We do think there's...significant value to a digital front door"</i> <i>"System navigation and or triage of assessment triage then I think there may be some limits to what we have in our DFD and we were. I was just in a meeting. Last hour and we're talking about our global search, our MCL library, medical conditions library and it's very limited and so as a consumer and not as an employee, I wouldn't use it. I would Google it. If I needed to find a pharmacy near me, I'm going to Google it because the search capabilities are becoming much more advanced than we have on our ministry funded site"</i>
Appropriateness	<i>"I think how we define a digital front door is a bit different for everyone. There's that anonymous experience of just navigating a traditional website versus a more logged in trusted user patient profile approach. So I think that there are definite pros and cons for both. And I think as long as I what we haven't probably identified or done a clear job of communicating is kind of the value proposition or the benefits of that logged in experience in terms of interoperability with a patient profile that might exist through a community hospital, you know, your MyChart, your ocean, etc. So I think that we're hearing that that's valid"</i> <i>"Our vendor, so our frontline nurses, our frontline call center managers, those that are in the day-to-day operations of our services that deal with the public day in and day out, they are a huge gap. Because I always will say I can sit behind a desk and I can suggest that we need to do an enhancement or I can ask the public. But what about those that actually have the skills and the experience? Professional skills and professional experience and just day-to-day working with frontline staff. They need to be involved"</i> <i>"I think a concrete example, the virtual visits, I think are really key and such a natural extension, especially like look at how we're communicating right now. It's kind of part of the culture right now is to do like Teams, Zoom, FaceTime. So it's a bit of an easier sell. And that was a successful lift and being able to do more of that, you know, where it's appropriate, I think would be key"</i>
Feasibility	<i>"And there's also, I would say, limitations, you know, vendor limitations. Maybe our thinking was that the vendor could be able to implement a certain digital feature in a way that was very interoperable with the entire system that is not going to cost like multi-millions of dollars. Sometimes that isn't always the case of certain ideas, while they're great ideas, might not technically be viable or feasible in a way that's cost effective from a budgeting perspective."</i> <i>"Basically, depending on the amount of work it's gonna take. So as you know, with the AI, it's a huge, huge governance piece as well that needs to be rolled out first before they really get into a lot of the details of what they're going to use that"</i>

Proctor Implementation Outcomes	Example Key Informant Quotes
	<i>AI for and how they're going to prototype that. So, time is an issue for where that enhancement would land."</i>
Cost	<i>"We're not core funded yet or we just got core funded, so it's been difficult to add services and to grow the service. Although we've been able to do some minor things over the last few years, it's been difficult to get like a solid investment from even the government here in the program, because they don't want to necessarily invest in something if we don't know if it's going to be funded for a long period of time. Even now, we only have funding for one additional year."</i> <i>"I mean, there's always pieces around cost, there's pieces around the physical space as a limitation for us in our current state and then the availability of the resource, right? The availability of the provider is always gonna be, you know, another factor that needs to be considered, right"</i>
Penetration	<i>"But one of the biggest challenges is the... reach is very dependent on the public's understanding of what Health811 is [...] It's one of those areas that we're really regularly stressed about at [region] that we have significant limitations on the reach."</i> <i>"Health811 has grown significantly through COVID. You know, I would say that in terms of promoting the service, we do work with our communications department who quite regularly promotes the service. And then we also have, you know, invested in, you know, different promotional items that we send out to different clinics that find use for that. Just you know provide magnets or whatever the little things are that you know both the providers and the patients of those clinics you know would see as benefit as an opportunity to kind of further the reach and encourage folks to use the service"</i> <i>"There's a lot of integration. Our [smoking cessation] line is going through our 811 line. Our mental health and wellness line is going through our 811 line. We have health boxes in many of the communities and they all have big 811 posters on the side of them. If you're collecting a pregnancy test or you're getting condoms, you have questions, phone 811. We've done a lot of local integration with other programs, which helps."</i> <i>"Vendor considerations and like interoperability of systems is definitely. I think if we're thinking DFD, I think one key frustration that we're experiencing is the patient portals or patient viewers that are used by every single hospital or even home care has its own system. And so having that unified 1 provincial viewer can be complex and challenging because each hospital has their own unique business relationship with MyChart or Ocean or Wave, whatever. So that's a big barrier"</i>
Sustainability	<i>So yeah, I appreciate the larger meeting [Health811 Knowledge Exchange Group] because it sort of is a good place to get ideas and to hear about what other</i>

Proctor Implementation Outcomes	Example Key Informant Quotes
	<i>people are doing and then how they were able to add to their services and what steps they took to do that.”</i> <i>“What I would like to see is now is actual data, user feedback, you know, patient reported outcomes, something a bit more systematic from the calls, which we don't always get. So that goes to our [vendor] but we don't always transparently get the data of what's working, what isn't. You know, we get the numbers of calls, we get like a reason for call, but it's limited. I think there's more of an opportunity to find out why folks are calling. You know, we do get a report on the disposition, like where did they go? But it's just the surface. I think there's a lot more that we can learn from the data.”</i> <i>“And I think in part, in part I'm OK with that for some aspects of our data, others we do need to have data driving us and what we do. We collect data, but do we use that data to direct us for enhancements to the DFD? The answer is no.”</i> <i>“Yeah, I don't know. I mean, every request that we receive is a little bit unique in its own right. I do think kind of changing the question a little bit is that there might be more value within the organization to really understand how a Health811 operates, cause I think some of the requests that we get would probably be framed a little bit different if they you know other areas you know truly understood what the operations look like. And that is something that we've opened up more. We have had different leaders come through to really just understand like how things happen.”</i>

8.11. Appendix 11. Current Performance Metrics Captured by Health811 Programs for Relevant DFD Components

Regions other than Ontario have been anonymized.

DFD Component	Performance Metric	ON	G	J	F	D
Phone						
	Total call volumes	✓	✓	✓	✓	✓
	Number of unique callers		✓			✓
	Number of repeat callers		✓			✓
	Average wait time from request to initial encounter	✓	✓	✓	✓	✓
	Number of users referred to from external services		✓	✓		
	Number of services deliverable via phone		✓	✓	✓	
	Percentage of calls resulting in appointment, referral, or care completion		✓	✓	✓	✓
	Patient feedback on satisfaction	✓	✓	✓	✓	✓
	Other (Please indicate)					
	Not known					
	None					
	Not applicable					
Video call						
	Total number of video visits	✓			✓	
	Average number of repeat video visits per patient (within reporting period)				✓	
	Average wait time to video visit				✓	
	Number of services deliverable via video					
	Percentage of video visits resulting in appointment, referral, or care completion				✓	
	Patient feedback on satisfaction	✓			✓	
	Other (Please indicate)					

	Not known					
	None					
	Not applicable		✓	✓		✓
Asynchronous messaging						
	Number of users selecting asynchronous messaging as preferred modality					
	Number of users with ≥ 1 active messaging thread					
	Number of messaging threads initiated					
	Average response time from message initiation to first provider response					
	Number of services deliverable via asynchronous messaging					
	Integration status with Health811's EMR					
	Percentage of messaging encounters resulting in appointment, referral, or care completion					
	Patient feedback on satisfaction					
	Other (Please indicate)					
	Not known					
	None					
	Not applicable	✓	✓	✓	✓	✓
Website						
	Total website visits	✓	✓			✓
	Number of unique visitors	✓	✓			✓
	Number of repeat visitors		✓			✓
	Percentage of services accessible via website		✓			
	Patient feedback on satisfaction	✓				
	Other (Please indicate) ^a					✓
	Not known				✓	
	None					

	Not applicable			✓		
Mobile app						
	Total app downloads				✓	
	Number of active users				✓	
	Percentage of services accessible via mobile app					
	Patient feedback on satisfaction				✓	
	Other (Please indicate)					
	Not known					
	None					
	Not applicable	✓	✓	✓		✓
Texting / SMS						
	Total SMS volume					✓
	SMS engagement rate					
	Number of services integrated with SMS modality					
	Percentage of SMS interactions resulting in appointment, referral, or care completion					
	Average response time					
	Patient feedback on satisfaction					
	Other (Please indicate) ^b					✓
	Not known					
	None				✓	
	Not applicable	✓	✓	✓		
24/7 access						
	Number of users accessing services outside regular hours	✓	✓	✓		
	Distribution of unique users by time of day		✓		✓	✓
	Percentage of services accessible outside regular hours			✓		
	Percentage of after-hours encounters resulting in appointment, referral, or care completion		✓	✓		
	Patient feedback on satisfaction	✓	✓	✓		

	Other (Please indicate)					
	Not known					
	None					
	Not applicable					
After-hours access through doctor's office						
	Total after-hours volume	✓				
	Percentage of practices integrated with after-hour workflow	✓				
	Number of successful care handoffs					
	Patient feedback on satisfaction	✓				
	Other (Please indicate)					
	Not known					
	None				✓	
	Not applicable		✓	✓		✓
Alternate accessibility options						
	Frequency of accessibility features usage		✓			
	Number of users requiring accommodations		✓			✓
	Percentage of services compliant with accessibility standards					
	Patient feedback on satisfaction	✓				
	Other (Please indicate)					
	Not known					
	None				✓	
	Not applicable			✓		
Multilingual support						
	Number of users indicating a language preference	✓	✓		✓	✓
	Number of languages supported	✓	✓		✓	
	Availability of interpreter services	✓	✓			✓
	Percent of services available with multilingual support		✓			
	Patient feedback on satisfaction	✓			✓	

	Other (Please indicate) ^c					✓
	Not known					
	None					
	Not applicable			✓		
Plain language content						
	Number of content views	✓				✓
	Average time spent engaging with content					
	Patient feedback on satisfaction	✓				
	Other (Please indicate)					
	Not known				✓	
	None					
	Not applicable		✓	✓		
Automated alerts for monitoring health						
	Alert engagement rates					
	Number of services integrated into monitoring workflow					
	Number of alerts acted upon resulting in early intervention					
	Rate of avoided adverse events or admission					
	Patient feedback on satisfaction					
	Other (Please indicate) ^d			✓		
	Not known					
	None				✓	
	Not applicable	✓	✓			✓
Self-assessment / symptom checker						
	Number of assessments initiated	✓				
	Number of assessments completed	✓				
	Percentage of assessments resulting in recommended next steps					
	Patient feedback on satisfaction	✓				
	Other (Please indicate)					
	Not known					

	None				✓	
	Not applicable		✓	✓		✓
General health information						
	Total page views	✓				✓
	Number of return visits					
	Patient feedback on satisfaction					
	Other (Please indicate) ^e					✓
	Not known					
	None				✓	
	Not applicable		✓	✓		
Chatbot for general health information						
	Number of chat sessions initiated	✓				✓
	Number of unique users					
	Number of repeat users					
	Percentage of chats resolved without escalation	✓				
	Percentage resulting in appointment, or referral					
	Patient feedback on satisfaction	✓				
	Other (Please indicate)					
	Not known					
	None				✓	
	Not applicable		✓	✓		
Searchable service directory						
	Number of searches performed	✓				
	Number of services plugged into the service directory	✓				
	Patient feedback on satisfaction	✓				
	Other (Please indicate)					
	Not known					
	None				✓	
	Not applicable		✓	✓		✓
Personalized patient dashboard						

	Number of users using the dashboard					
	Number of services integrated into dashboard					
	Patient feedback on satisfaction					
	Other (Please indicate) ^f			✓		
	Not known					
	None				✓	
	Not applicable	✓	✓			✓
Nurse or navigator-led triage						
	Number of triage encounters initiated	✓	✓	✓	✓	✓
	Percentage of triage encounters resulting in appointment, referral, or care completion	✓		✓	✓	✓
	Patient feedback on satisfaction	✓	✓	✓	✓	✓
	Other (Please indicate)					
	Not known					
	None					
	Not applicable					
Automated triage						
	Number of automated triage encounters initiated					
	Percentage of automated triage encounters resulting in appointment, referral, or care completion					
	Patient feedback on satisfaction					
	Other (Please indicate)					
	Not known					
	None					
	Not applicable	✓	✓	✓	✓	✓
Tailored tools & content for marginalized populations						
	Engagement rate among target populations					
	Percentage of services specifically tailored to marginalized populations					

	Patient feedback on satisfaction					
	Other (Please indicate)					
	Not known					
	None				✓	
	Not applicable	✓	✓	✓		✓
Online primary care appointment booking						
	Number of appointments booked online				✓	
	Percentage of primary care providers bookable online					
	Integration status of scheduling systems					
	Average time to onboard clinic/provider to online booking					
	Booking completion rate					
	Other (Please indicate)					
	Not known					
	None					
	Not applicable	✓	✓	✓		✓
Real-time primary care provider availability						
	Number of availability views					
	Percentage of providers with real-time availability					
	Other (Please indicate)					
	Not known					
	None				✓	
	Not applicable	✓	✓	✓		✓
Specialist referrals						
	Number of referral requests initiated				✓	
	Number of specialists available					
	Integration status with referral management system					
	Referral acceptance rate					
	Referral completion rate					
	Referral drop-out rate					

	Other (Please indicate)					
	Not known					
	None					
	Not applicable	✓	✓	✓		✓
Prescribing medication and ordering tests						
	Number of patients receiving prescription or test orders				✓	
	Number of prescriptions issued				✓	
	Number of tests ordered				✓	
	Percentage of services integrated with pharmacy/lab systems					
	Average time from order to completion					
	Other (Please indicate)					
	Not known					
	None					
	Not applicable	✓	✓	✓		✓
Preventative care						
	Number of patients enrolled in preventative programs	✓				
	Integration with registry and scheduling systems					
	Number of preventative programs completed					
	Reduction in preventable acute events					
	Other (Please indicate) ^g			✓		✓
	Not known					
	None				✓	
	Not applicable		✓			
Prescription renewal						
	Number of patients requesting prescription renewals					
	Integration status with pharmacy systems					
	Number of refill requests submitted					

	Number of refills completed					
	Other (Please indicate) ^h			✓		
	None				✓	
	Not applicable	✓	✓			✓
Chronic disease management						
	Number of patients enrolled in chronic disease management programs			✓		
	Percentage of chronic disease management care services integrated					
	Condition-specific outcomes measures					
	Adherence rate					
	Follow-up completion rate					
	Other (Please indicate)					
	Not known					
	None	✓			✓	
	Not applicable		✓			✓
Self-management						
	Number of patients engaging with self-management tools/resources					✓
	Percentage of services with linked self-management resources/tools					
	Number of referrals to self-management tools/resources					✓
	Other (Please indicate)					
	Not known					
	None				✓	
	Not applicable	✓	✓	✓		
Remote monitoring						
	Number of patients enrolled in remote monitoring programs			✓		
	Percentage of devices and services integrated with monitoring feeds					
	Number of alerts acted upon					

	Provider response time to alerts					
	Other (Please indicate)					
	Not known					
	None				✓	
	Not applicable	✓	✓			✓
Patient-reported outcomes (PRO)						
	Percentage of services incorporating PRO measures					
	Number of care adjustments informed by PRO data					
	Other (Please indicate)					
	Not known					
	None		✓		✓	
	Not applicable	✓		✓		✓
Integration with provincial provider waitlists for unattached patients						
	Percentage of regions/programs connected to provincial waitlist systems	✓				
	Successful attachment rate	✓				
	Other (Please indicate) ⁱ					✓
	Not known					
	None				✓	
	Not applicable		✓	✓		
Access to viewer for lab results and imaging						
	Number of patients accessing viewer					
	Percentage of labs and imaging providers connected					
	Average time to integrate lab and images					
	Number of follow-up actions initiated after viewing results					
	Other (Please indicate)					
	Not known					
	None					
	Not applicable	✓	✓	✓	✓	✓

Access to provincial viewer for hospital records						
	Number of patients accessing viewer					
	Percentage of hospitals connected to the viewer					
	Other (Please indicate)					
	Not known				✓	
	None					
	Not applicable	✓	✓	✓		✓
Access to provincial viewer for primary care records						
	Number of patients accessing viewer					
	Percentage of practices integrated with viewer					
	Other (Please indicate)					
	Not known				✓	
	None					
	Not applicable	✓	✓	✓		✓
Access to provincial viewer for pharmacy dispensing records						
	Number of patients accessing viewer					
	Percentage of pharmacies integrated with viewer					
	Other (Please indicate)					
	Not known				✓	
	None					
	Not applicable	✓	✓	✓		✓

^aRegion D: top 5 webpages viewed, top 5 locations of website visited. ^bRegion D: number of new clients based on unique phone number, how many motivational messages sent and number of appointment reminders, total SMS volume. ^cRegion D: percentage of callers requesting service in French and percentage provided service in French. ^dRegion J: metrics possibly collected by health authority. ^eRegion D: total page views, top HITs accessed. ^fRegion J: metrics possibly collected by health authority. ^gRegion D: number of referrals to individual programs; Region J: total call volumes from [region]Booking include online vs phone call appt (for Lab & COVID19/flu immunizations). ^hRegion J: Prescription submitted by Virtual Physician to PIP (new or renewal). ⁱRegion D: incoming calls, serviced calls