



The successful integration of eConsult service into a Family Health Team's workflow

Erin Keely MD

Co-Executive Director, Ontario eConsult Centre of Excellence
Specialist Lead, Champlain BASE eConsult™
Endocrinologist, The Ottawa Hospital
ekeely@toh.ca

eConsult
Ontario eConsult Program

 Ontario

Conflict of Interest

- Faculty: Dr. Erin Keely
- Relationship with commercial interests
 - I receive compensation from MOHLTC for Co-Executive Director Ontario eConsult of Excellence
 - I answer eConsults and am remunerated for this
- Mitigation of potential bias
 - Presentation reviewed by leads of Ontario eConsult Program

Objectives:

- Provide overview of the Ontario eConsult program
- Assess the benefits of integrating eConsult into clinical workflow
- Explore how eConsult could be best integrated into your own practices

The problem: poor access

“I have been waiting a long time to get my appointment with the specialist”

“I refer and then wait and do not even know if the fax was received...”

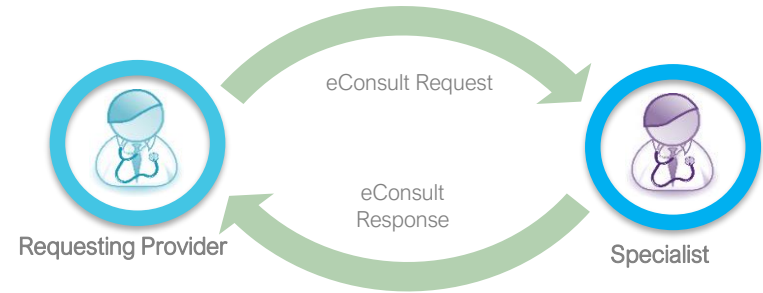
“Takes a long time to have a non-urgent patient seen in Endocrinology”

“I am frustrated by my wait list. I can't ever seem to catch up...”



The solution

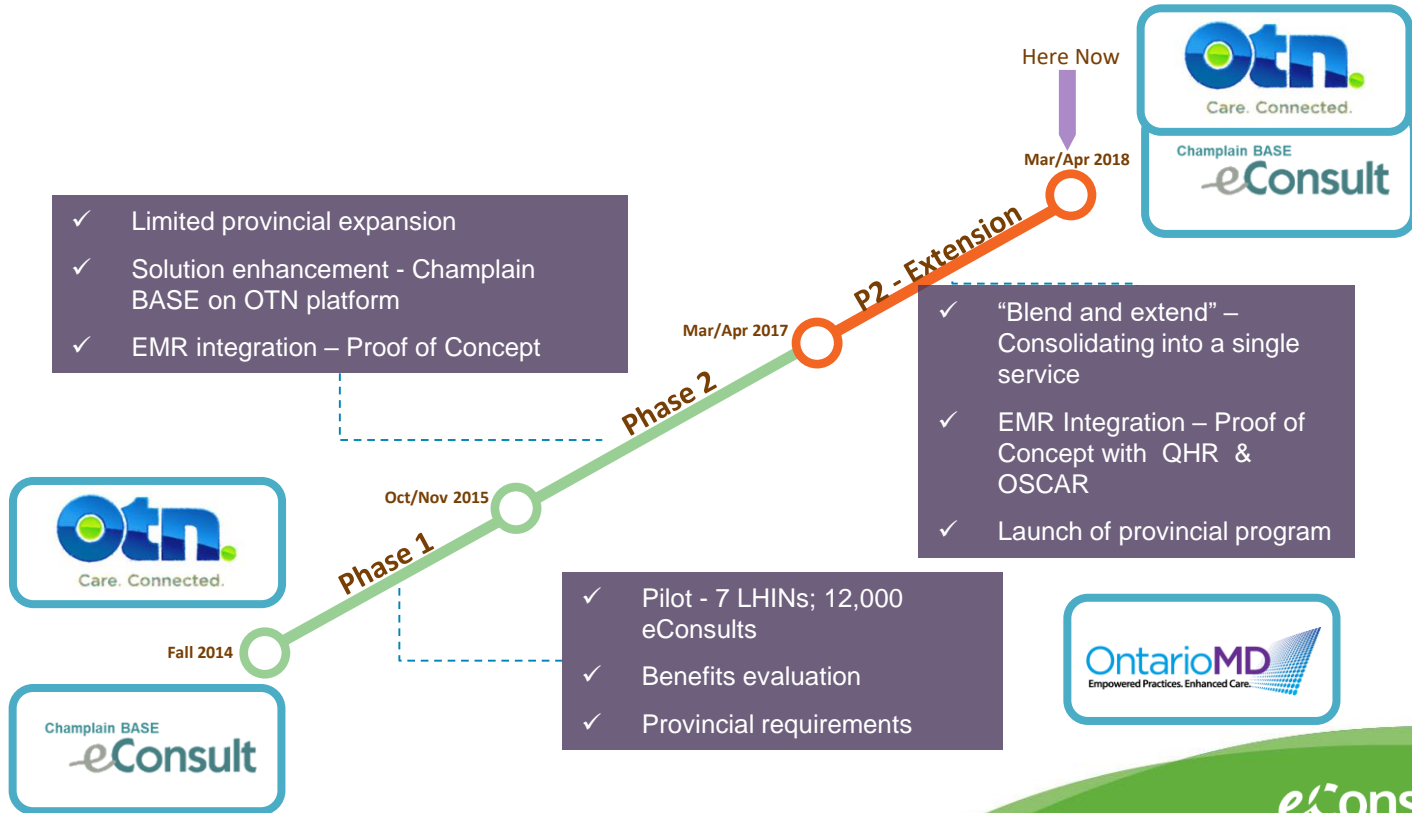
eConsult enables primary care providers to engage in a secured, electronic dialogue with specialists to manage patient care, often without the need for a patient visit with specialist.



Benefits

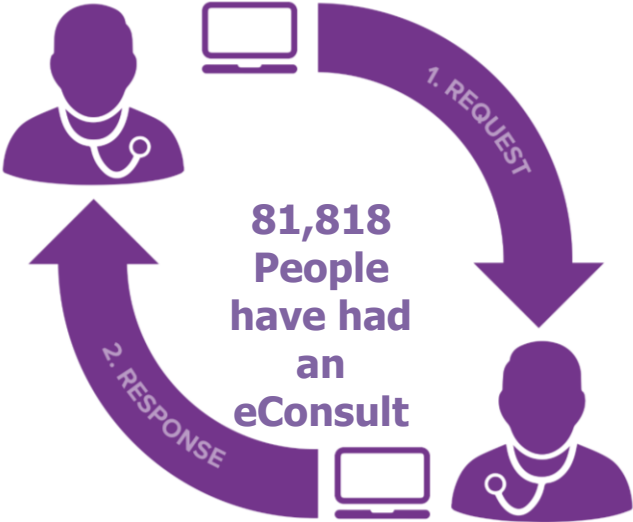
- ✓ Faster access to specialist advice
- ✓ Avoid unnecessary in-person specialist visits
- ✓ Improved care coordination
- ✓ More flexibility and better documentation than traditional phone calls, pages, or hallway conversations
- ✓ Builds relationships between primary care and specialists
- ✓ Prompts learning for primary care and specialists

The provincial eConsult pilot



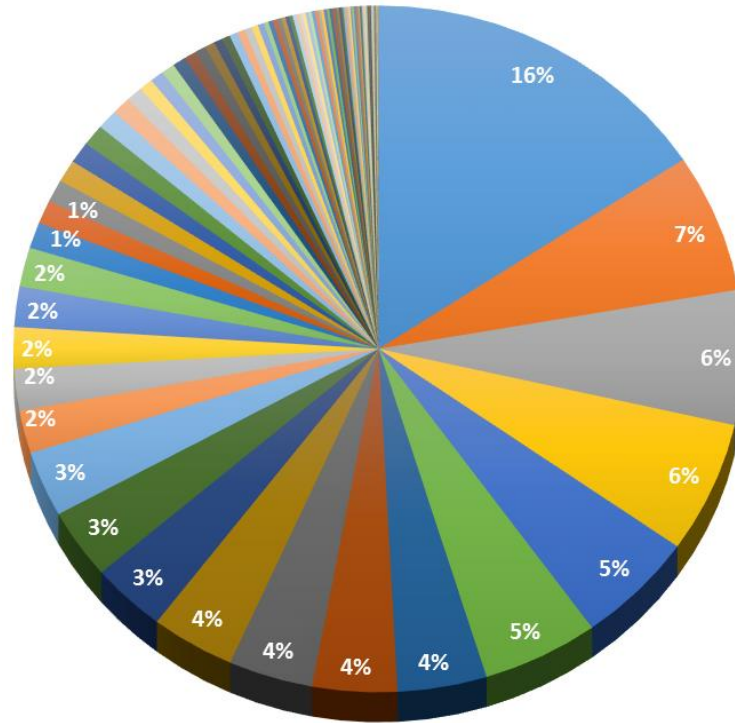
eConsult numbers from Jan 2015- June 2018

13,152
Primary Care
Providers



912
Specialists
in **150+**
specialties

Specialty Distribution (33,327 cases)

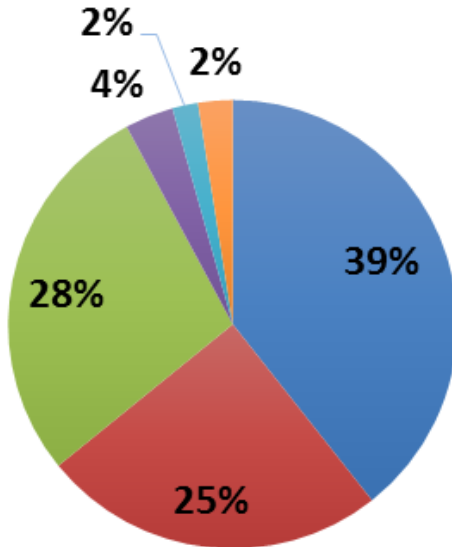


20 Most Frequently Used

- Dermatology
- OBS/GYN
- Hematology
- Endocrinology
- Cardiology
- Neurology
- Gastroenterology
- Orthopaedics
- General Pediatrics
- Infectious Diseases
- Urology
- Psychiatry
- Rheumatology
- Internal medicine
- Pediatric Dermatology
- Nephrology
- ENT
- Pain Medicine
- Radiology
- Respirology

Impact of eConsult on Access

- Specialists responded to eConsults in a median of 0.9 days* (**Improved access**)
- 67% of cases did not require a face-to-face specialist visit (**efficient, coordinated care**)
- In 4% of cases, eConsult prompted a medical referral (**patient safety**)



1. Referral was originally contemplated but now avoided at this stage
2. Referral was originally contemplated and is still needed - this eConsult likely leads to a more effective visit
3. Referral was not originally contemplated and is still not needed - this eConsult provided useful feedback/information
4. Referral was not originally contemplated, but eConsult process resulted in a referral being initiated
5. There was no particular benefit to using eConsult in this case
6. Other (please comment)

Evidence that supports eConsult

Better Population Health

- eConsult cuts response times from months to days (0.9 days median)
- Two-thirds of cases did not require a face-to-face specialist referral
- 8% decrease on referral rate for PCPs who use eConsult

Improved Patient Experience

- eConsult responds to previously articulated patient dissatisfaction with wait times
- Interviews with patients reveal high satisfaction with eConsult's impact on access, care quality, and continuity of care

Lower Costs

- Across specialty groups, the service cost a weighted average of \$47.35/case versus \$133.60/case for traditional referrals
- Accounting for societal factors nets additional savings of ~\$11/eConsult
- Impact of other indirect costs are being explored

Improved Provider Experience

- PCPs rank eConsult as high/very high value in over 90% of cases
- 94% of specialists report eConsult improves communication with PCPs
- eConsult provides a powerful teaching tool for PCPs

Exploring Policy/Implementation Issues

- eConsult services remain relatively uncommon in Canada
- Implementation of a successful service requires adherence to key steps
- A number of legal and policy challenges must be addressed to support the full and effective implementation of eConsult services

Ontario eConsult Program

- Led by newly formed **Ontario eConsult Centre of Excellence**
- **Incorporates 4 services**
 - Ontario eConsult service (through OTNhub)
 - Champlain BASE™ regional service (through Sharepoint, Champlain and MH LHINs)
 - Tele dermatology
 - Teleophthamology
- **Delivery partners**
 - OTN
 - OntarioMD
 - eHealth Ontario
- **Regional partners**
 - Champlain BASE
 - SEAMO

Provincial eConsult program leadership organizations/ partners

Ontario eConsult Centre of Excellence

- Established at The Ottawa Hospital, in partnership with Bruyere Research Institute
- Provide clinical leadership and program oversight

Ontario Telemedicine Network

- Primary technology service provider
- Responsible for maintaining a stable, secure platform
- Provide technical and administrative support to end users

OntarioMD

- Lead and manage EMR integration
- Provide change management support in collaboration with regional partner sites inline with program plans
- Contribute to program oversight through governance

eHealth Ontario

- Support EMR integration with provincial HIAL assets
- Provide ongoing support for the provisioning of ONE ID accounts for eConsult users

MOHLTC

- Provide strategic direction
- Make policy decisions for implementation

Provincial digital health governance (e.g., Clinician Digital Health Council)

- Provide ongoing advice and input for some implementation decisions (e.g. EMR integration priorities, integration with eReferral, regional digital health models)

Regional eConsult partner sites

- Locally coordinate and administer program in their region

Ontario eConsult Service accessed through the OTN hub

The screenshot displays the OTN Hub website interface. At the top left is the OTN HUB logo. A callout box highlights the 'Ask a Clinical Question' service, which includes a speech bubble icon, the text 'Ask a Specialist a clinical question and get advice within days using eConsult.', and a blue 'Launch eConsult' button with a 'learn more' link below it. The main content area, titled 'OTNhub Services', features several service cards: 'Connect with a Patient at Home' (with an 'enter patient email' field and 'Go' button), 'Make a Video Call' (with a 'Go' button), 'Find a Host Site' (with a 'city or postal code' field and 'Go' button), 'Find a Specialist' (with an 'enter a speciality' field and 'Go' button), and another 'Ask a Clinical Question' card (with a 'Launch eConsult' button). The bottom section contains a 'BEST PRACTICES' list (eConsult Help, eConsult FAQs, Specialist Workflow, Requesting Provider Workflow) and a 'GETTING STARTED' list (eConsult Course, Physicians: Submit a Request, Specialists: Respond to a Request, Telemedicine Case Studies). A navigation bar at the bottom includes links for Directory, Videoconference, Schedule, eConsult, Teledermatology, Telehomecare, and Professional Development.

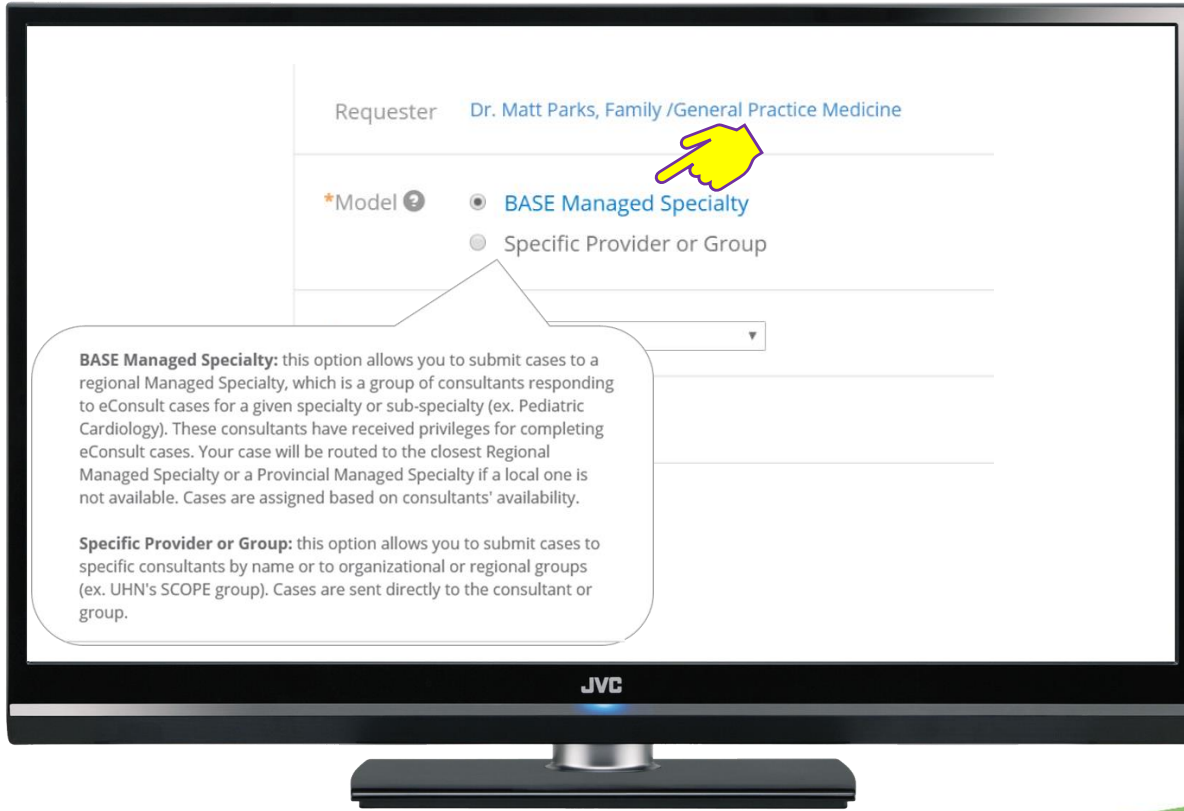
New platform went live June 29, 2018

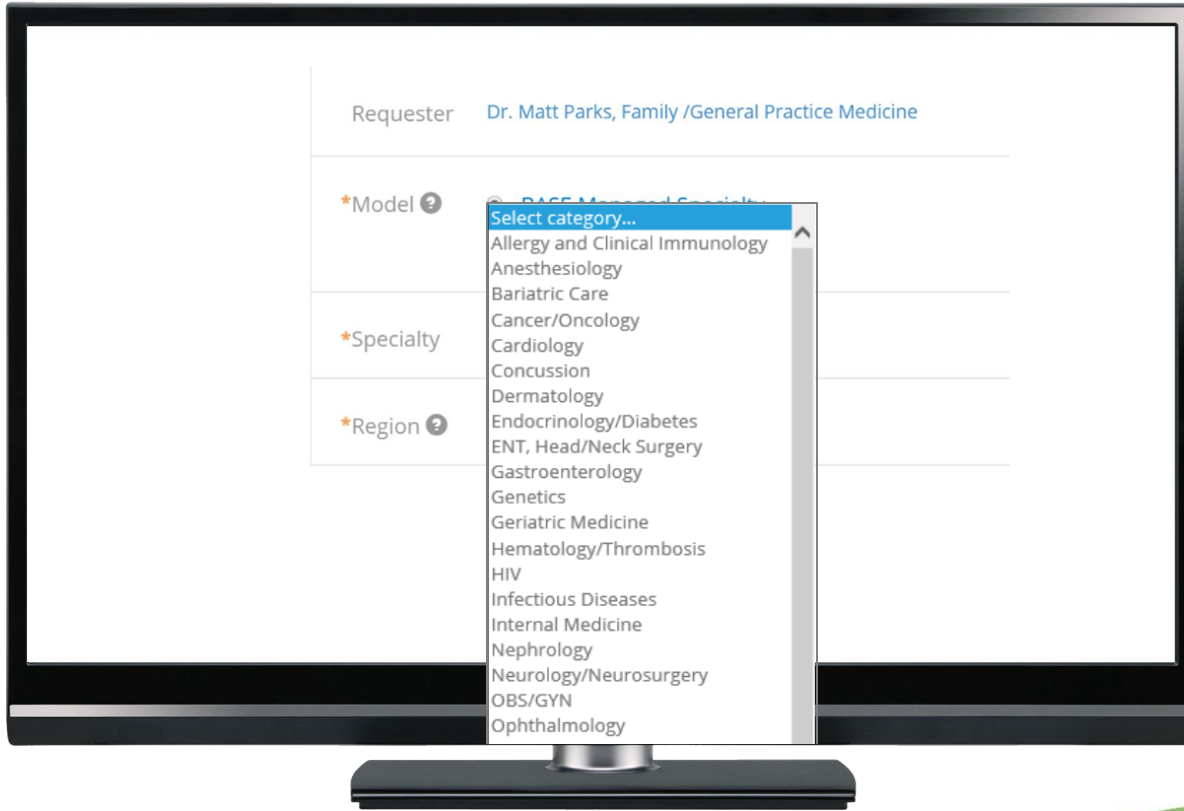
The screenshot displays the Otn eConsult platform interface. At the top, there are navigation tabs for Directory, Videoconference, eConsult (highlighted), Schedule, and Learn. The left sidebar contains a 'Request Consult' button and a list of filters: All Consults (Needs Attention, Waiting for More Info, Consult Provided, Consult Returned), All Requests (Needs Attention, Waiting for Response, Completed, Canceled), Drafts, Reports, Search, and Availability.

The main content area shows a 'Draft Cases' list on the left and a form on the right. The form includes the following fields:

- Requester:** Dr. Demo Specialist1, General Surgery
- *Model:** BASE Managed Specialty (selected), Specific Provider or Group
- *Specialty:** A dropdown menu is open, showing a list of categories. 'Cardiology' is selected and highlighted in blue. Other visible options include Allergy and Clinical Immunology, Anesthesiology, Bariatric Care, Cancer/Oncology, Concussion, Dermatology, Endocrinology/Diabetes, ENT, Head/Neck Surgery, Gastroenterology, Genetics, Geriatric Medicine, Hematology/Thrombosis, HIV, Infectious Diseases, Internal Medicine, Nephrology, Neurology/Neurosurgery, and OBS/GYN.
- *Region:** (Dropdown menu)
- Patient:** Fields for Patient name, Patient phone, and Patient email.
- *Request:** A text area with the prompt: 'Enter history of present illness and other relevant data (such as the laboratory tests) to help the specialist provide a more meaningful consult...'

At the bottom of the page, there are links for Website Terms & Conditions, Privacy Statement, Terms of Service, and User Agreement. On the right, there are links for otn.ca, Email Support or call 1.855.654.0888, and Feedback.

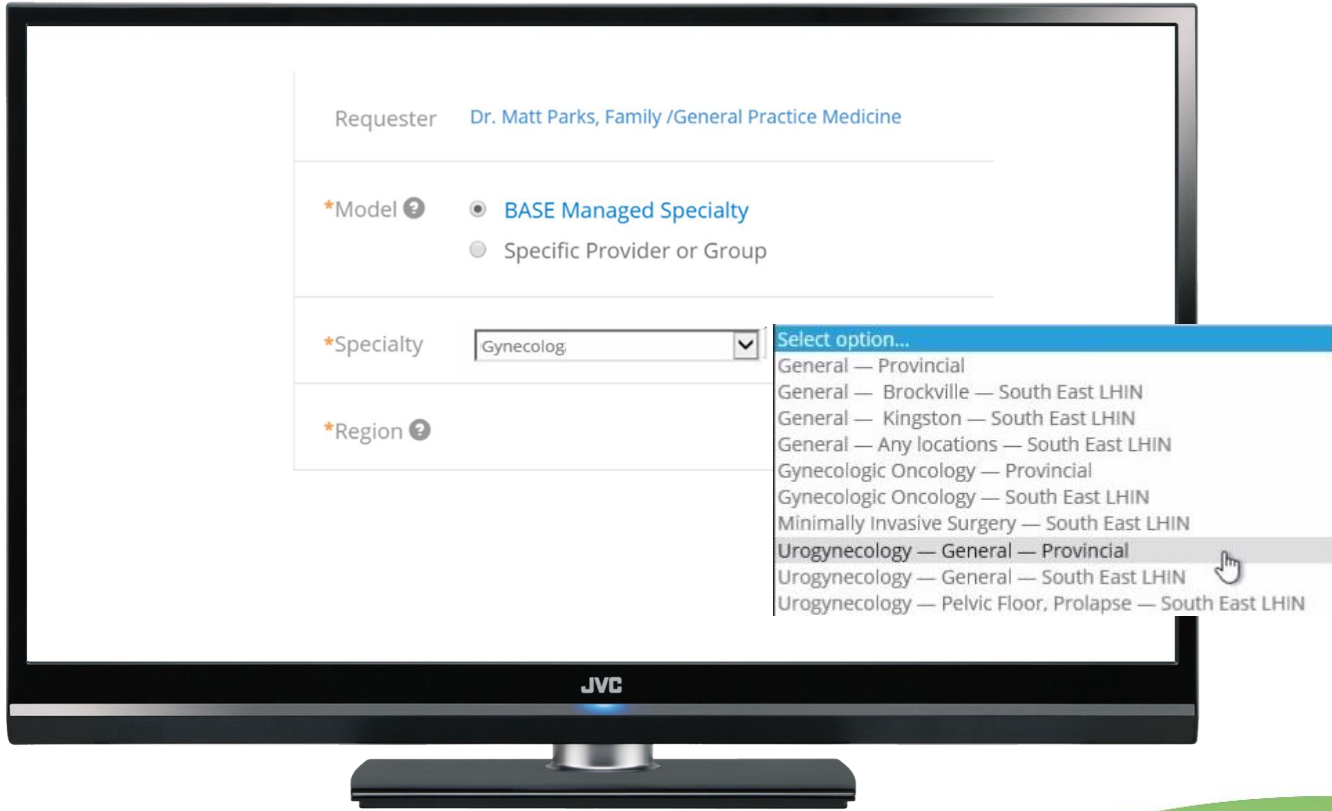


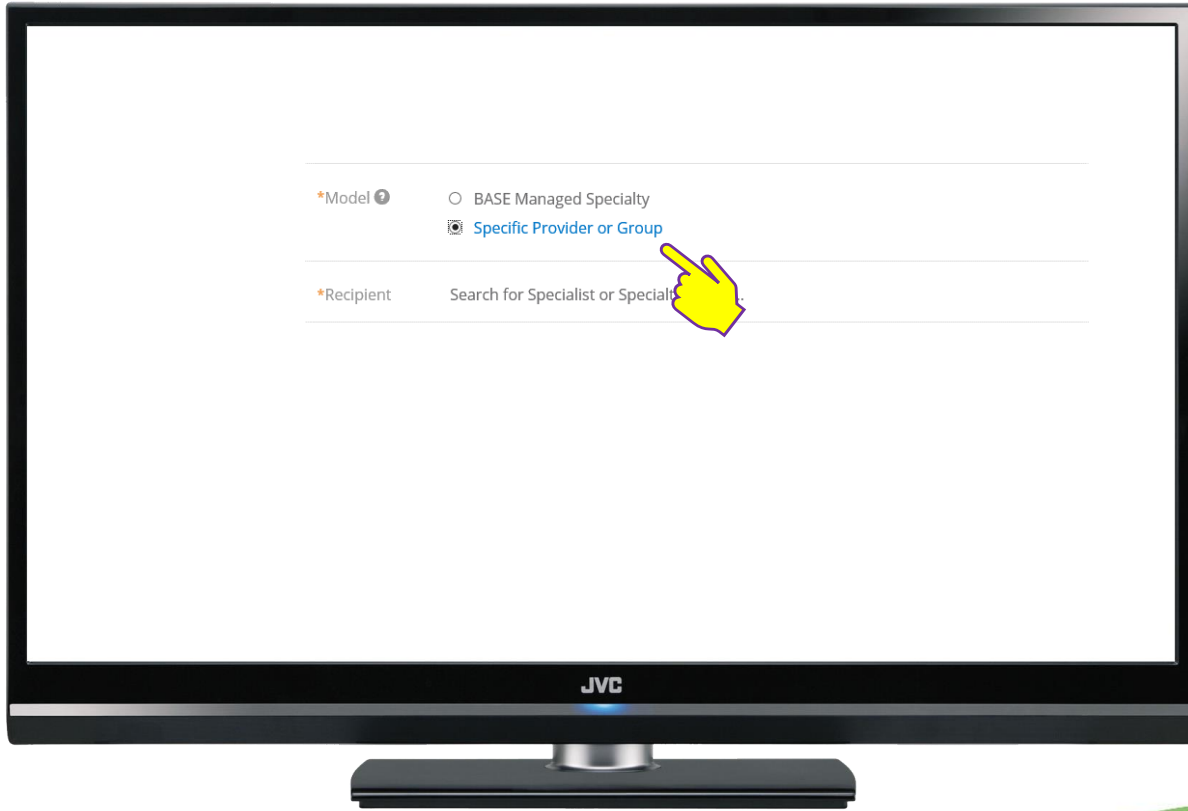


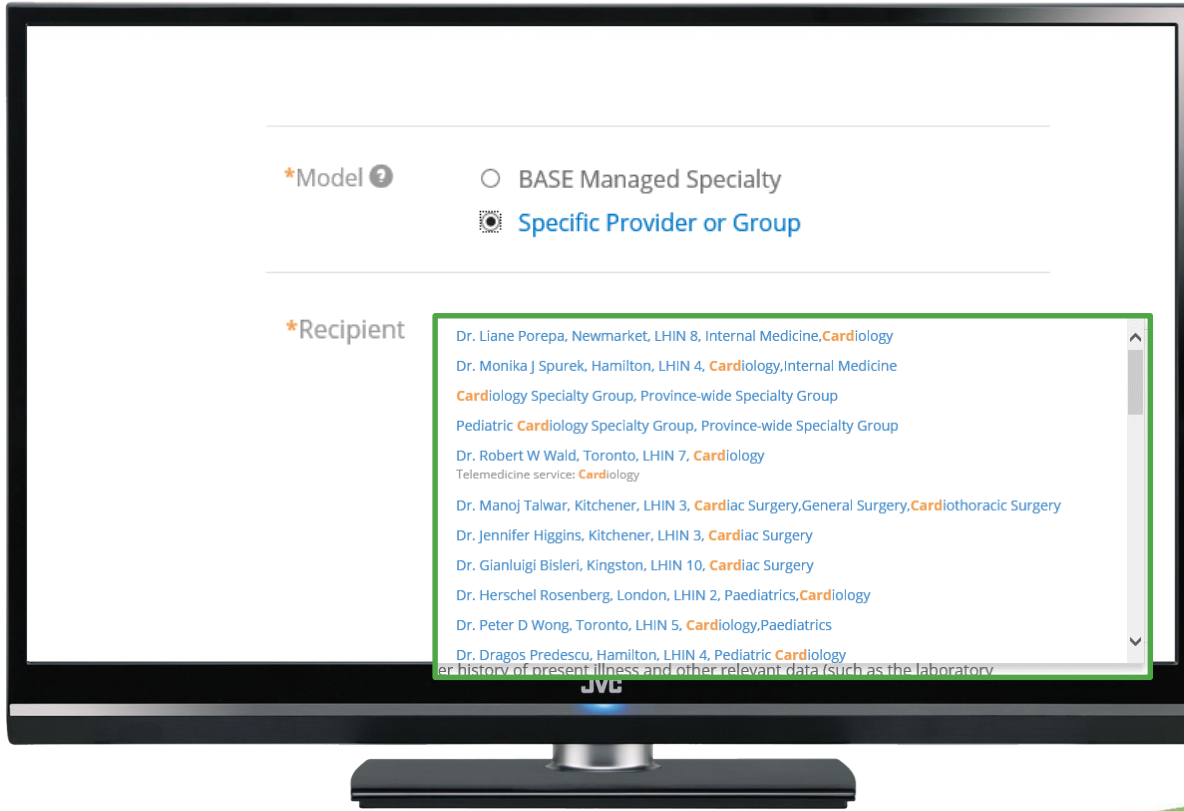
Current provincial BASE™ managed specialty groups (n=66)

Specialty Group	# of Specialists	LHINs
Addiction Medicine	4	2,7,10
Allergy & Clinical Immunology	3	7,8,10
Anesthesiology	2	7,10
Cardiac Surgery	1	10
Cardiology	8	3,4,5,7,8,14
Concussion	2	7,10
Dermatology	4	2,8,10
Endocrinology	11	2,3,5,7,8,10
ENT	1	9
Epilepsy Neurology	2	6,7
Gastroenterology	4	2,4
General Pediatrics	6	4,5,7,10
General Surgery	4	4,5,10,13
Geriatric Psychiatry	1	3
Geriatrics	4	2
Gynecologic Oncology	4	7
Gynecology	5	3,4,7,10
Head & Neck Surgery	1	9
Hematology	5	2,4,7,8,10
Hepatology	3	4,7,8
HIV	3	2,7
Infectious Disease	9	2,3,4,7,10,13
Inflammatory Arthritis	2	10
Internal Medicine	14	1,2,4,5,7,10,13
Male infertility/sexual medicine	1	10
Medical Oncology	2	5,10
Medically complex psychiatry	1	7
Neonatal/Perinatal Pediatrics	1	5
Nephrology	10	2,4,7,9,10,13
Neurology	4	2,3,8,10
Neuromuscular	1	10
Neurosurgery	1	10
Obstetrics	5	3,4,7,10

Specialty Group	# of Specialists	LHINs
Ophthalmology	3	10,13
Opioid	2	4,6
Orthopaedic Surgery	3	4,7,10
Osteoporosis	1	10
Pain Medicine	7	4,6,7,8,10,14
Pediatric Cardiology	2	2,4
Pediatric Endocrinology	1	10
Pediatric Gastroenterology	1	2,8
Pediatric Hepatology	1	8
Pediatric Infectious Diseases	1	10
Pediatric Nephrology	3	2,4,5
Pediatric Neurology	2	2,7
Pediatric Orthopaedic Surgery	2	10,11
Pediatric Psychiatry	2	3,7
Pediatric Rheumatology	1	2
Pediatric Urology	1	10
Perinatal Psychiatry	2	3,7
Phys Med/Rehab	2	7,10
Plastic Surgery	3	2,4,7
Psychiatric Sleep Medicine	1	2
Psychiatry	18	2,3,4,7,10,12
Radiation Oncology	1	2
Respirology	7	3,4,5,7,10
Respirology Sleep Medicine	1	10
Rheumatology	6	2,4,7,9,10
Spinal Surgery	1	10
Stroke	1	4
Thoracic Surgery	1	7
Thrombosis	3	4,7
Transgender	2	2
Urogynecology	1	4
Urology	5	2,7,9,10
Vascular Surgery	2	8,9







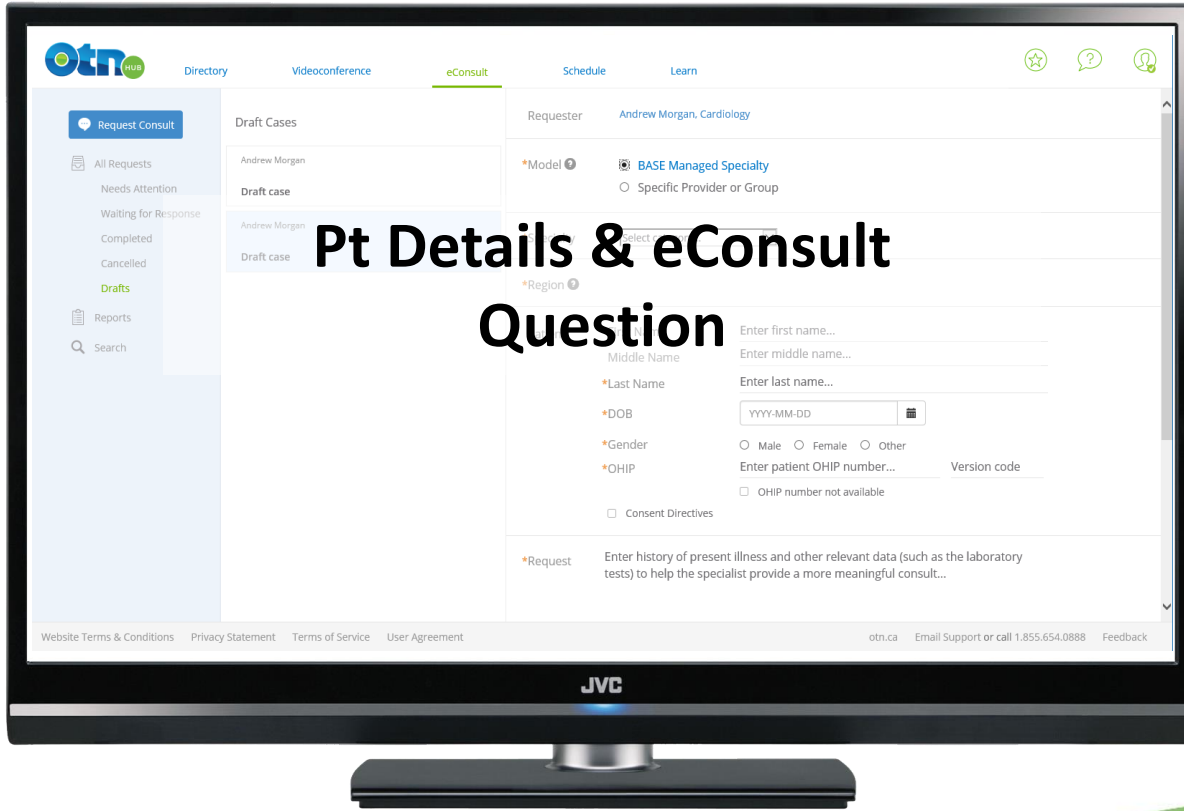
*Model ?

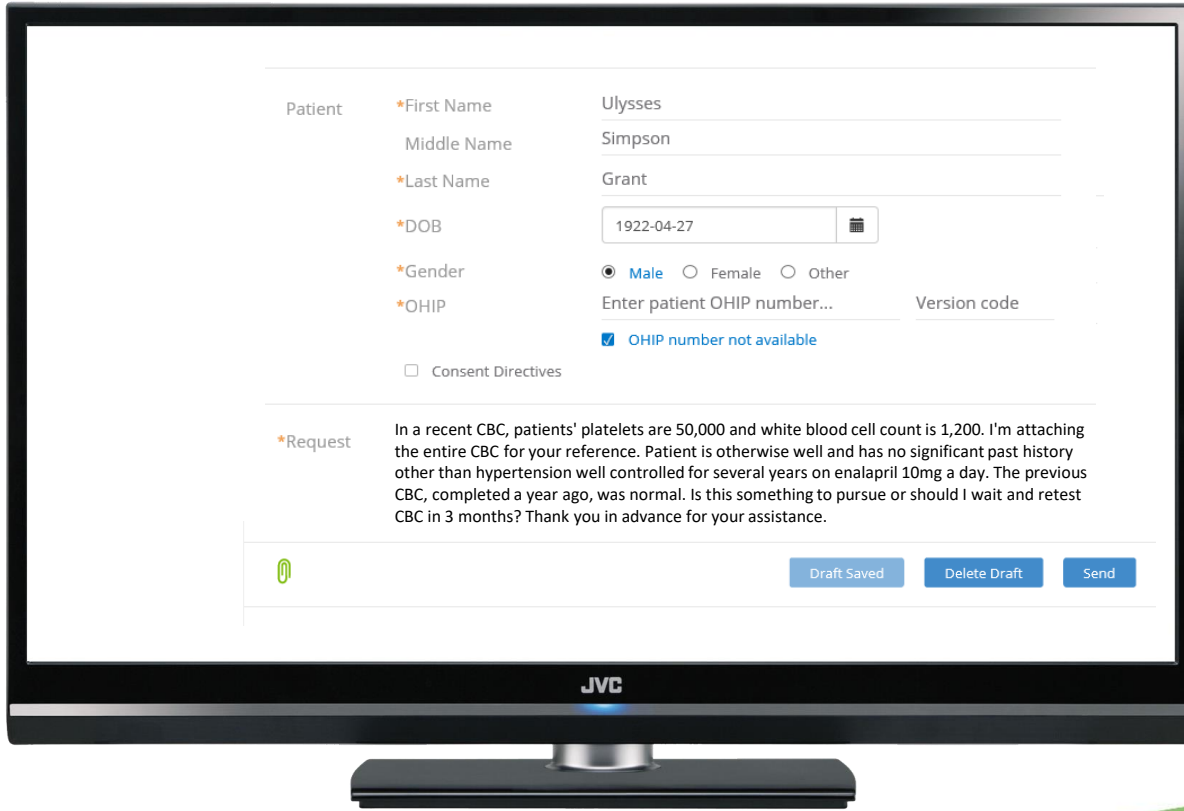
BASE Managed Specialty

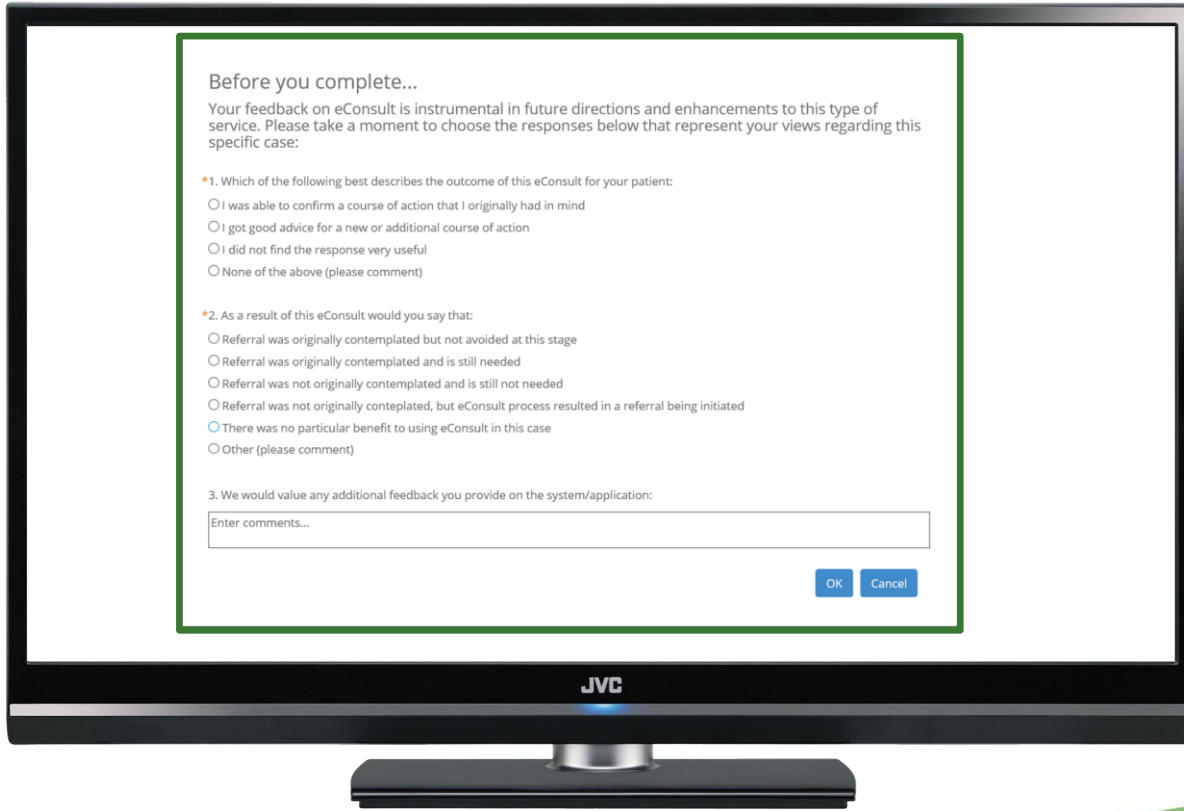
Specific Provider or Group

*Recipient

- Dr. Liane Porepa, Newmarket, LHIN 8, Internal Medicine, **Cardiology**
- Dr. Monika J Spurek, Hamilton, LHIN 4, **Cardiology**, Internal Medicine
- Cardiology** Specialty Group, Province-wide Specialty Group
- Pediatric **Cardiology** Specialty Group, Province-wide Specialty Group
- Dr. Robert W Wald, Toronto, LHIN 7, **Cardiology**
Telemedicine service: **Cardiology**
- Dr. Manoj Talwar, Kitchener, LHIN 3, **Cardiac** Surgery, General Surgery, **Cardiothoracic** Surgery
- Dr. Jennifer Higgins, Kitchener, LHIN 3, **Cardiac** Surgery
- Dr. Gianluigi Bisleri, Kingston, LHIN 10, **Cardiac** Surgery
- Dr. Herschel Rosenberg, London, LHIN 2, Paediatrics, **Cardiology**
- Dr. Peter D Wong, Toronto, LHIN 5, **Cardiology**, Paediatrics
- Dr. Dragos Predescu, Hamilton, LHIN 4, Pediatric **Cardiology**



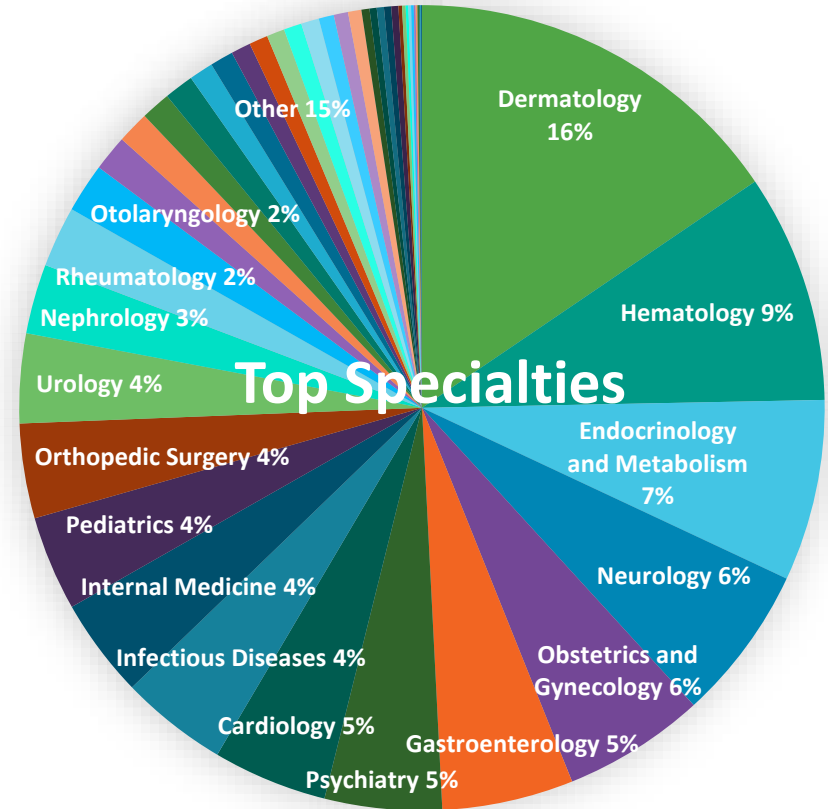




Ontario eConsult Service - July-August 2018

Response Interval	Mean	2.71 days
	Median	1 day
Time Spent	Mean	13.5 min
	Median	11 min
Cost per Case	Median	\$50.01

LHIN	Number of eConsults
1 – Erie St. Clair	86
2 – South West	275
3 – Waterloo Wellington	425
4 – Hamilton Niagara HB	374
5 – Central West	93
6 – Mississauga Halton	53
7 – Toronto Central	411
8 – Central	186
9 – Central East	101
10 – South East	344
11 – Champlain	67
12 – N. Simcoe Muskoka	132
13 – North East	201
14 – North West	39
TOTAL	2787



*Does not include Champlain BASE™

Your peers comments

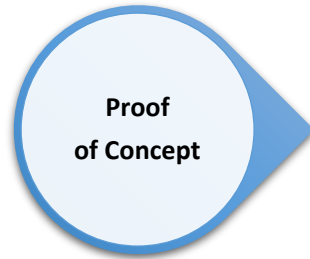
- “Thank you for your rapid response. The patient is very appreciative of the rapid response, clarification of his concerns, and suggestions for treatment.”
- “The patient preferred the eConsult as it was more convenient for her.”
- “This helped me better organize a future referral on a complex patient. I will have more things sorted out and ready for the future consultant as a result of this eConsult.”
- “This is such a super means to get a comprehensive answer to a question in a prompt way. The patient is going to be thrilled.”

This looks great, but I really need this to be part of my EMR to make this work for me

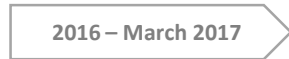
Options

- Full integration
- Use a delegate

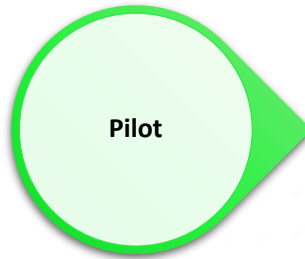
EMR Integration Roadmap



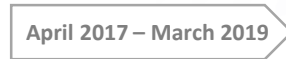
To demonstrate the technical feasibility of eConsult – EMR Integration, involving QHR and OSCAR through KAI EMR



Completed



To finalize the provincial delivery model including the incorporation of the Blended Service Model and to prepare for provincial rollout



In Progress



All EMR vendors have access to the published specification and are able to offer eConsult to their users



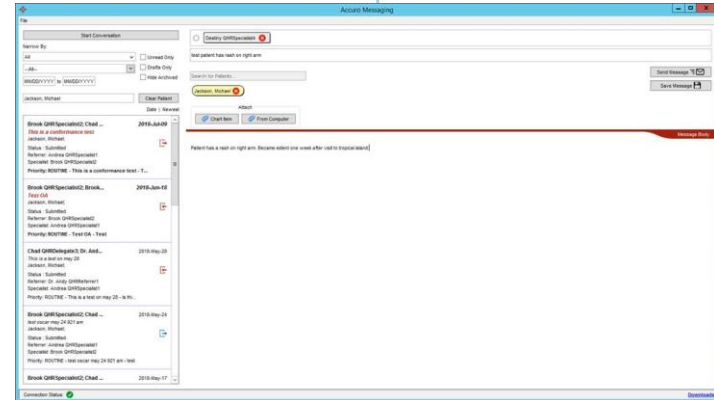
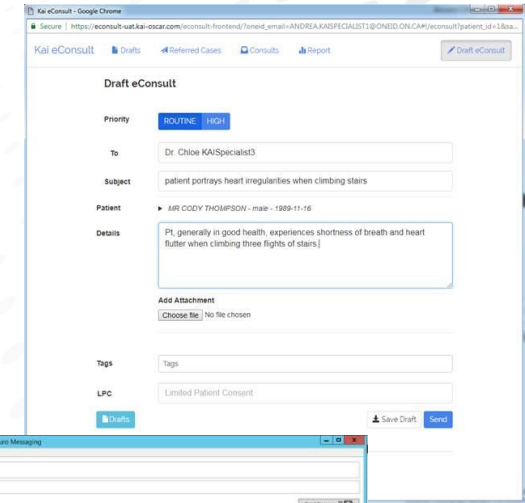
Not Started

EMR Service Offering & Benefits

OntarioMD is currently piloting an expansion of the service with OSCAR EMR. The pilot, done in partnership with the Ontario Telemedicine Network and eHealth Ontario, is aimed at incorporating the newly released Blended Service Model which offers the BASE Managed Service provincially into EMRs.

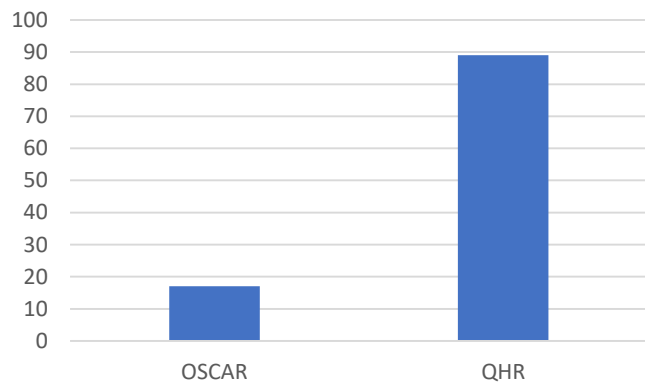
Benefits

- ✓ Service is available directly in the EMR, eliminating the need to use multiple applications;
- ✓ Ability to easily add additional patient information from their electronic records, as an attachment, into the consult;
- ✓ Responses from specialists are received directly in the physicians EMR;
- ✓ Any work completed in the EMR is seamlessly available on OTN Hub and vice versa ensuring continuity of information;



EMR Service Statistics

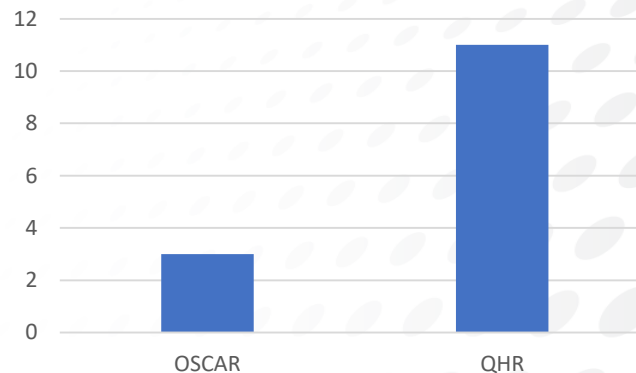
Referring Clinicians Enrolled



The graph above identifies the total number of referring clinicians (primary care and/or nurse practitioners) leveraging eConsult through their EMRs.

30/109 enrolled PCP's have sent 275 eConsults (1-29 per PCP)

Total Specialists Enrolled



The graph above identifies the total number of specialists leveraging eConsult through their EMRs.

*Note: The data provided is the property of OntarioMD and reflects a time period of November 2016 to August 2018. The time period captured reflects a **Limited Production Release** as the service was implemented and tested with a small user base.*

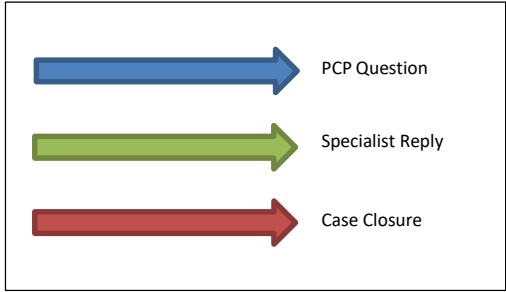
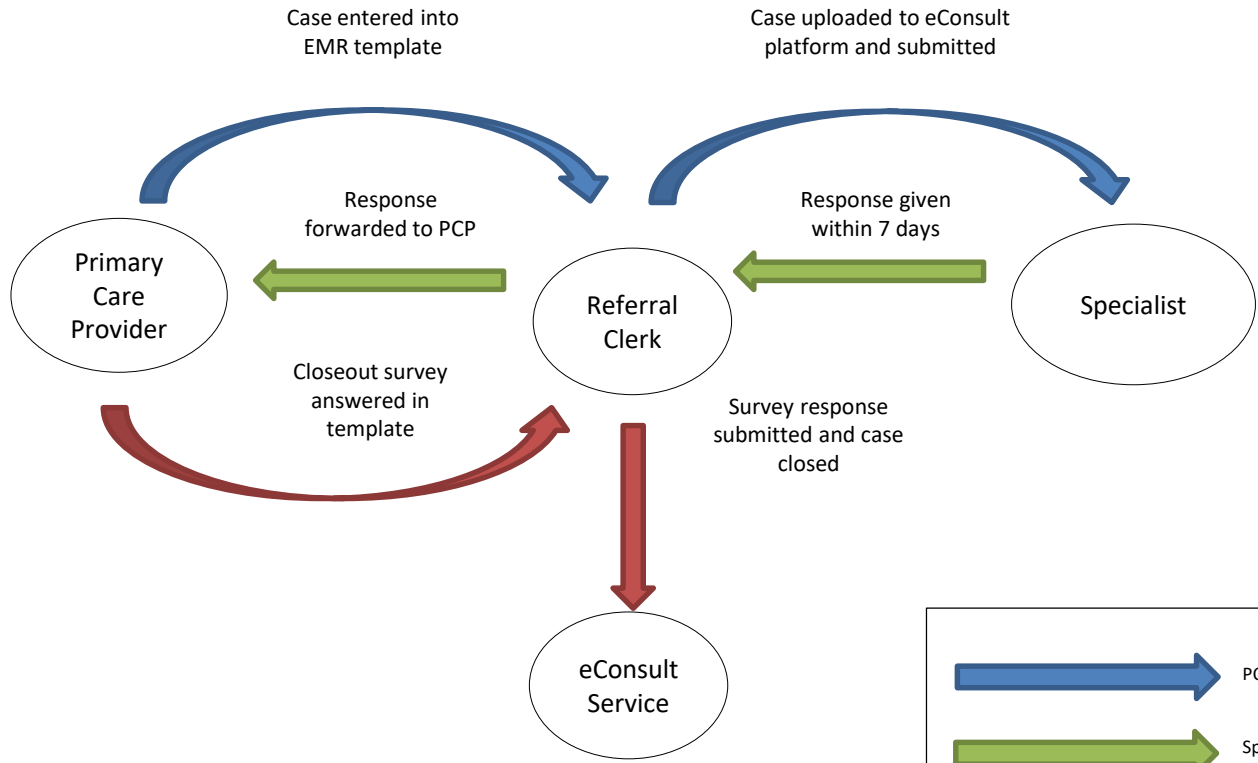
Using a delegate

- Several groups have developed a workflow using a delegate to enable the PCP to request an eConsult as they would a face to face consult
 - Examples
 - Champlain BASE™ service (Sharepoint platform) - Bruyere Family Health Team, Ottawa
 - Ontario eConsult service (OTN platform) - Queen's Family Health Team, Kingston

What does the delegate do:

Clinic referral/admin staff work with the eConsult system on behalf of providers to:

- Retrieve new eConsult request from EMR and create a new case in the eConsult system
- Get notified of specialist having responded
- Access the response
 - Add it to patient chart in the EMR
 - Notify PCP of new information that needs to be reviewed
- Per PCP instruction,
 - submit follow-up information/question to continue the case, or
 - Get closure survey input to complete the case



Using a delegate

Examples from PS/Telus [PCPs]

1 Creating

Provider initiates referral tracker:

- **Selects specialty** + enters "eConsult" as consultant's name in field + tab.
- **Adds** additional details, if required, for consult desk in "details" box.
- Selects "**create letter**".
- Selects "adds a message" + "done".

Create letter & add attachments:

- **In the letter view**, inserts "Ref-eConsult" **stamp and edits accordingly**.
- From the letter, "**green bars**" information ie reports etc., from the patient record, required for the referral package
- **Types** Ctrl + P to print, and selects "**print later**" in the pop up window.

2 Processing

- **Delegate** receives message indicating **pending referral**.

- Submits the referral to eConsult.

- **Delegate** then opens the "referral **tracker**" in the patient's record, and makes required notations (ie submitted to eConsult on 4/23/2014)

3 Monitoring

- **Delegate** ***monitors** and updates referral tracker window as well as notifies provider if additional action is required.

- Once the **specialist's response is received** in eConsult, the **delegate** copies the recommendation into the patient's record, using the report module, and the provider is notified.

4 Closing

(assuming there are no additional follow up questions to the recommendation)

- **Provider** completes the eConsult survey.

- **Delegate** transfers the responses to the survey in eConsult and closes the referral.

*Delegate will follow up if:

- Provider has additional questions following the recommendation from the specialist.
- Provide additional information if required.

Examples from PS/Telus [PCPs]

Creating the eConsult

1. Select consultation tab

2. Select specialty

3. Enter "eCon" in Consultant's name field + tab. Window will open to provide options (with details)

4. Make selection from the list

File

Quick Find:

Common Tests | Lab | Lab Text | Diagnostic Imaging | Diagnostic Tests | Consultations

On-Call Physician
On-Call Nurse
Urgent Care/Walk-in Clinic Physician
Hospitalist
Anesthesiology
Allergy & Immunology
Audiology
Blood Bank
Cardiology
Cardiovascular Surgery
Chiropractic
Clinical Biochemistry
Dentistry
Dermatology
Dietitian
Emergency Medicine / Emergency Report
Endocrinology
Family Practice
Gastroenterology
General Surgery
Genetics
Geriatrics
Hematology
Infectious Disease

Cancel Changes

Consultant's Name: econ

Not Yet Booked

Details:

PS Matching Addresses

eConsult (various)

Urogynecology And Reconstructive Pelvic Surgery (Obstetrics & Gynecology)

Cancel

Select

Examples from PS/Telus [PCPs]

Creating letter

Attachments: «Lab Table»

Jun 26, 2014
Needs Printing
To: eConsult
To Whom It May Concern
Re: John - TEST Travolta

Jun 26, 2014
Needs Printing
To: eConsult
To Whom It May Concern
Re: John - TEST Travolta

- QS-SOAP
- Recall_colpo2
- Recall_colpoAttie
- Recall_colpoWolfish
- ref
- REF-CHEOREF confirmation
- REF-Demo-Update
- REF-eConsult
- REFAppntNotifcRefMD
- REFAppntNotModG
- REFAppntNotRefMD-Attie
- REFAppntNotRefMD-Raynor-redir
- REFAppntNotRefMD-Wolfish
- REFcommfailure
- Referral
- Referral-returnof
- ReferralLetter-1822
- ReferralPtLetter
- ReferralPtletter-ChangeSpecialis
- ReferralPtLetter-Chiroprody
- ReferralPtLetter-Derm

Insert REF-eConsult stamp in letter and add additional details/Questions for eConsult specialist etc...



0.5% menthol, 1%HC in glaxal base cream 1 Application(s) Two times daily, PRN
vitamin B12 for use in MD office
physiotherapy for back strain
Clindoxyl Gel 1 Application(s) Once daily for 30 Day(s)
Ramipril 10 mg capsule 1 capsule daily (discharge Rx)

ALLERGIES
Penicillins-> GI upset
? Clindamycin Hd-> rash
? Food: Egg
Aeroallergen: Mold
Insect: Honey Bee...
Food: Peanuts...
Food: Gluten (Celiac Sprue)

IMMUNIZATIONS
Adacel Jun 18, 2012
Tetanus, Diphtheria - adult [Td] Sep 8, 2012
Refaxel Sep 12, 2012

Examples from PS/Telus

Completing and submitting the “e-Consult Close Case Survey”

1. Insert Encounter Assistant custom form “e-Consult Close Case Survey” custom form.

PS Select a Form

e|

- Diabetes FINDRISC doctor
- Diabetes FINDRISC patient
- Diabetes Management Action Plan
- Diabetes report
- Diabetic Followup - VNLab v2013
- Diabetic New - VNLab v2013
- Diabetic-LabUOHS v2013
- Diane-35
- DM report test
- Dr. Sullivan Psych Referral
- Dyslipidemia-Baseline-LabUOHS v2...
- e-Consult Close Case Survey**
- Echographie de l'Outaouais v3
- Encounter - asthma
- Encounter - CDMP Diabetes
- Encounter - Colorectal Screening
- Encounter - COPD CDM
- encounter - cvd
- Encounter - FLU Shot Call
- Encounter - HEP C - pre treatment ...
- Encounter - HEP C On treatment

Cancel

e-Consult Close Case Survey

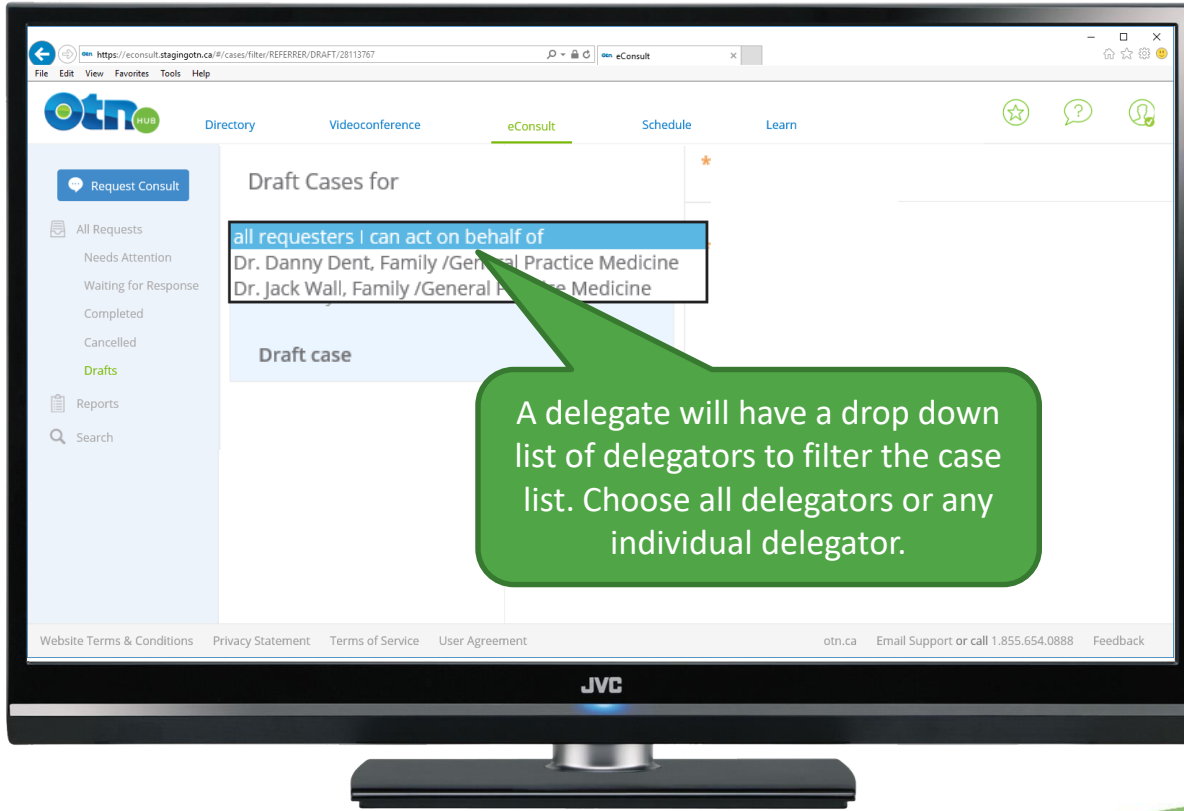
Please answer questions below

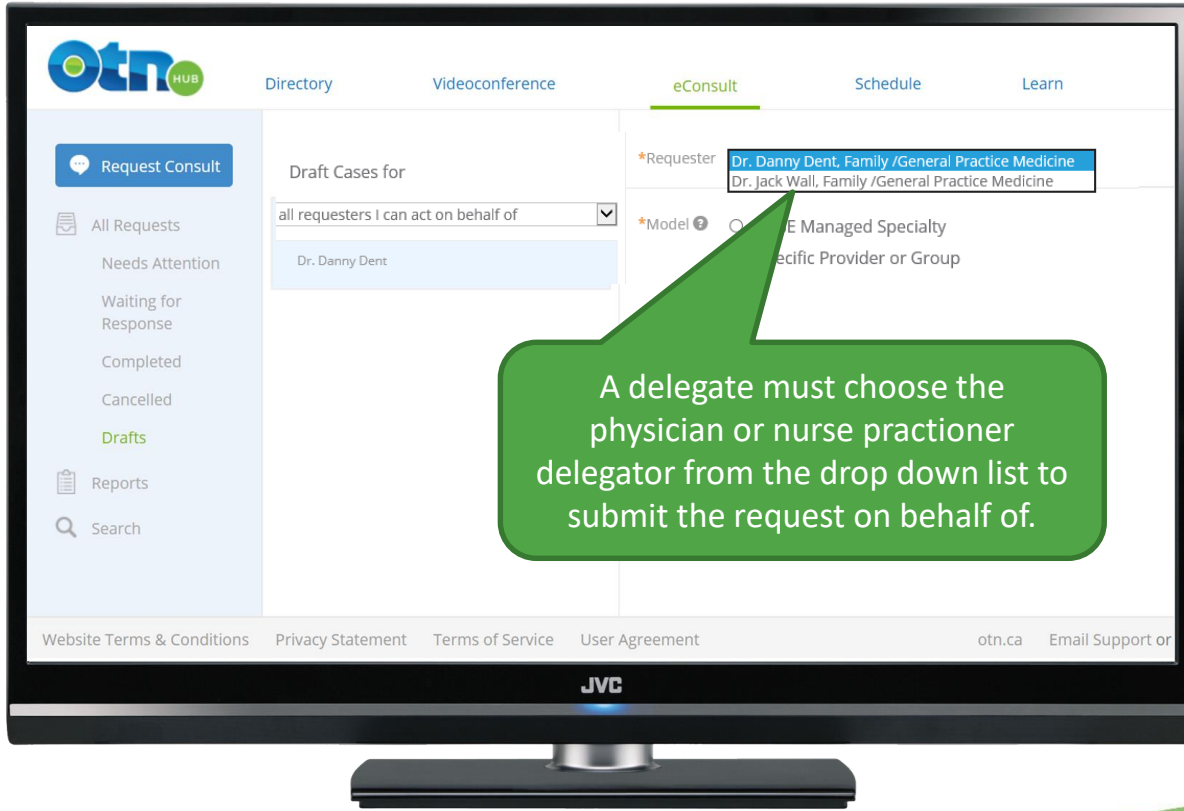
Do you have additional questions as a follow up to the recommendation by the specialist?

Yes

No

Choose This Form





A delegate must choose the physician or nurse practitioner delegator from the drop down list to submit the request on behalf of.

Do delegate workflows work?

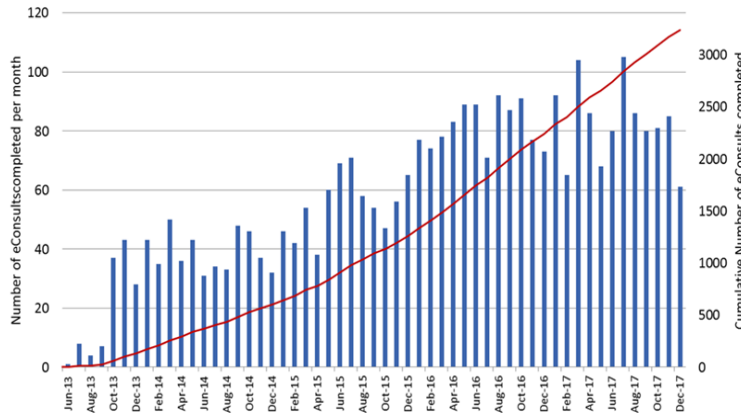
Methods

- Retrospective, cross sectional study of all eConsults submitted by Bruyere Family Health Team between May 1 2013 – Dec 31 2017
- 25 PCPs, 2 practice sites, 17,000 patients
- EMR - Practice Solutions
- Workflows and templates developed to mirror conventional consultations

Do delegate workflows work?

Utilization

- 3,233 cases submitted by 30 PCPs (26 MDs, 4 NPs)



Comparison to other PCPs

- Median number of cases per PCP in one year
 - Bruyere FHT users 25 (IQR 15-35)
 - Other active users 14 (IQR 8-24)

What next steps do you want to take?

1. Sign up for eConsult today

Primary Care Physicians & Nurse Practitioners:

1. Visit the **eConsult/ONE ID Booth (Booth #15)** for ONE ID registrations, eConsult demonstrations and to provide sign up information;
2. Email econsult@ontariomd.com for additional information;

Specialists:

1. Visit the eConsult/ONE ID Booth (Booth #15) for info gathering;
2. Email the Ontario eConsult Centre of Excellence at eConsultCOE@toh.ca

2. Learn how to incorporate delegate feature in your office and hear about resources to help you with this

eConsultCOE@toh.ca

3. General questions/concerns/feedback

ekeely@toh.ca