

# What are the costs of improving access to specialists through eConsultation? The Champlain BASE experience

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Champlain BASE

**eConsult**

# The eConsultation Team

**A collaboration between:**

The Ottawa Hospital (TOH)

The Bruyère Research Institute (BRI)

Winchester District Memorial Hospital (WDMH)

Champlain Local Health Integration Network (LHIN)



## **Funding:**

TOHAMO AFP Innovation Fund

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# 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...”

# Background

- Excessive wait times and inequitable access to care lead to patient anxiety, delays in diagnosis, and potentially further deterioration of the patient's condition
- There is an opportunity to improve access to care through innovative eHealth solutions including eConsultation



# What is an eConsultation?

- Asynchronous, electronic communication between providers
- Patient-specific question directed to a specialist
- May result in patient not needing a face-to-face visit with a specialist



# Champlain BASE eConsult service

- Developed in 2010
- Secure, easy-to-use, web-based platform
- Simple template for PCP to complete & submit to a “specialty”
- Assigned to appropriate specialist
- Answer expected within 7 days
- Allows back and forth exchange for clarification and add'l. information
- PCP closes eConsult and completes mandatory survey
- Specialists are remunerated \$200 per hour prorated to their self reported time to complete the eConsult

## Create an eConsult

**NOTE:** The system will log you out after 20 minutes of inactivity - you can save your information at any point by clicking on the save button

### Step 1 - Primary Care Practitioner Information

Amir Afkham  
Primary Care Practitioner Name

LHIN Office	Ottawa	ON	K1K1K1
Street Address	City/Municipality	Province	Postal Code
613-747-1234	613-747-1122	amir.afkham@lhins.on.ca	
Telephone	Facsimile	E-Mail	

### Step 2 - Specialty

Please Select Consultant Specialty:  \*Read

### Step 3 - Patient Information

Does the patient consent to this eConsult?  Yes  No

Date of birth \*Read  /  /  Select Gender

Would you like to attach electronic files to assist the consultant with better assessment?  Yes  No

Please upload your attachments (s) here (e.g.: Electronic Medical Record documents in a common format such as pdf, jpg, etc.)

[Click here to attach a file](#) [Click here to remove a file](#)

### Step 4 - Background/History

You may provide information concerning patient's medical history, social history, if this has not been provided elsewhere in the system.

Consultation request should include the following:

- Reason for consultation
- Specific treatments already prescribed
- Suggestions for possible treatments (i.e. I would like to optimize current treatment; I am inquiring about an alternative approach to the problem)

Please type request in the space provided below \*Read

**AVOID USING: & < >**

# Study Objective

1. To explore the costs of improving access to specialist care through eConsult



# Methods

- **Design:** cost analysis from the perspective of the payer
- **Data sources:** We used data collected from the Champlain BASE eConsult system over three consecutive one year periods:
  - Year 1: April 1<sup>st</sup>, 2011 to March 31<sup>st</sup>, 2012
  - Year 2: April 1<sup>st</sup>, 2012 to March 31<sup>st</sup>, 2013
  - Year 3: April 1<sup>st</sup>, 2013 to March 31<sup>st</sup>, 2014



# Methods

- **Operational Costs:** we calculated both direct and variable costs associated with the service
  - **Direct costs:** start up costs
  - **Variable costs:**
    - **Delivery costs:** user set up/registration, support costs, administration costs
    - **Consultation-specific costs:** all payments made to specialists and assignment costs for staff to direct each eConsult to the appropriate specialist
- **Referral Costs:** we used responses from a PCP close-out survey completed at conclusion of each eConsult to tally the number of avoided and added referrals

# Methods

- Overall cost savings were calculated as the total costs avoided minus the total operational and added referral costs:

$$\begin{aligned} & (\text{Referral Avoidance Costs}) - (\text{Operational Costs} + \text{Added} \\ & \quad \text{Referrals}) = \\ & \quad \text{Costs Saved} \end{aligned}$$

# Results

- **2606** eConsults to **27** different specialty services were completed over the three year period
- In **40.3%** (n=1051) of cases a face-to-face specialist visit was originally planned but avoided as a result of eConsult (in fact only **29%** of all eConsult cases led to a referral)
- In **3.6%** (n=93) of cases a referral was initiated where one was not originally planned

# Results

- Estimated costs per eConsult **decreased** over each annual period:
  - Year 1: **\$131.05**
  - Year 2: **\$10.34**
  - Year 3: **\$6.45**

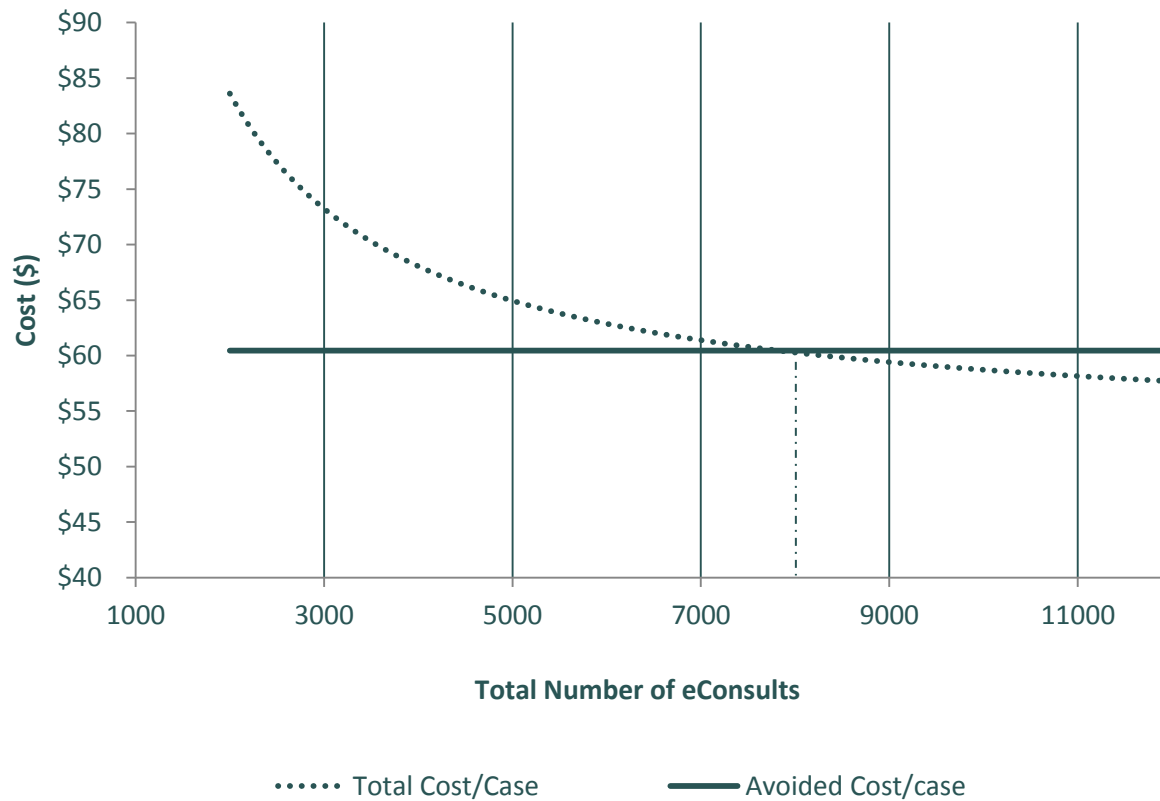


## What costs accounted for the majority of spending?

- Year 1: start-up and service delivery (76%)
- Year 2: specialist remuneration (63%)
- Year 3: specialist remuneration (72%)

# Results

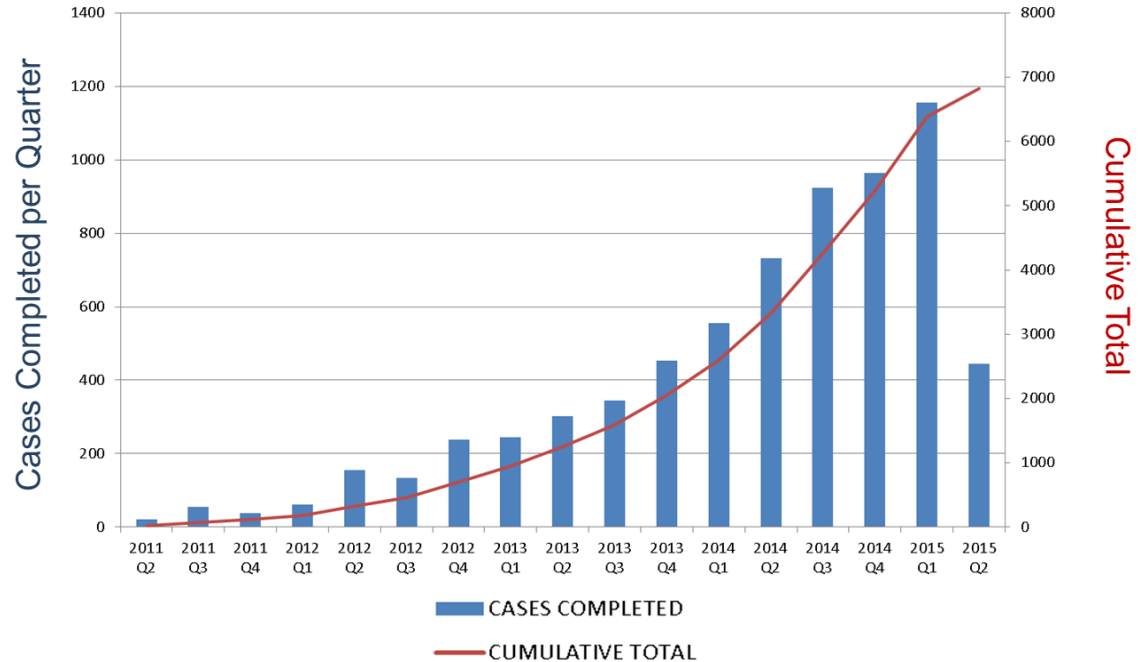
- We predict eConsult will break-even at **7818** eConsults



# Where are we now?

As of April 30<sup>th</sup>, 2015:

- **6824** cases completed
- **682** PCPs registered (567 MDs and 115 NPs)

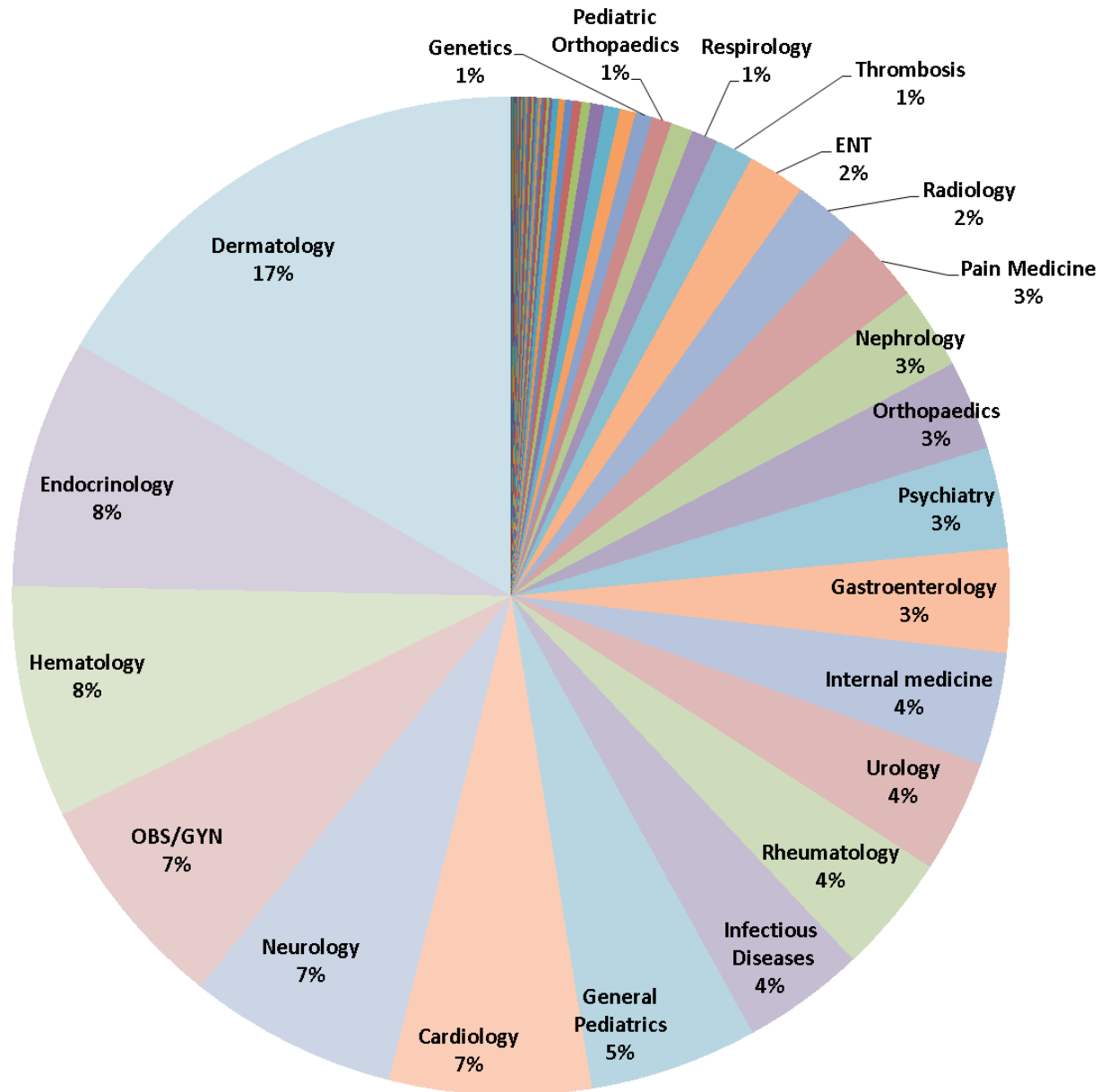


# Current specialty services (n=67)

- Addictions Assessment/  
Treatment Services
- Adolescent Medicine
- Anesthesiology (Adult) \*
- Back and Neck (spine) Care \*
- Bariatric Care – Medical
- Bariatric Care – Surgical
- Bariatric Care – Dietitian
- Cancer Screening
- Cardiology \*
- Champlain CCAC
- Chiropody
- Clinical Pharmacy \*
- Dermatology
- Diabetes Education
- Endocrinology \*
- ENT & Head/Neck Surgery
- Gastroenterology
- Genetics
- General Surgery
- Geriatrics
- Hematology
- Infectious Diseases
- ID-Viral Hepatitis
- Internal Medicine
- Musculoskeletal Rehabilitation \*
- Nephrology \*
- Neurology
- OB/GYN
- Ophthalmology
- Orthopaedics \*
- Pain Medicine
- Pain and Opioid Addictions/  
Addictions - Opioids
- Palliative Care
- Psychiatry
- Psychiatry-Perinatal
- Public Health - Ottawa
- Respiriology
- Rheumatology
- Sexual Assault/Domestic Violence
- Sports Medicine
- Thrombosis
- Urology
- HIV
  - Specialists
  - Pharmacist
  - Psychologist
  - Social Worker
- Pediatrics
  - ADHD
  - Anesthesiology
  - Cardiology
  - Chronic Pain
  - General \*
  - Hematology/Oncology
  - HIV
  - Infectious Disease
  - Neurology
  - Ophthalmology
  - Orthopedics
  - Palliative Care
  - Psychiatry
  - Radiology
  - Respiriology
- Radiology:
  - Abdominal
  - Musculoskeletal
  - NeuroRadiology
  - Thoracic
- Wound Care
- Vascular Surgery

\* Includes community-specific specialties

# Specialty Distribution – ALL (6824 cases)





# Ongoing research activities include:

- Impact on specialist referral rates
- Role and impact of eConsult on medically complex patients
- Specialist to specialist eConsults
- Development of an eReferral system
- Development of Case Conferencing
- Patient Perspectives
- Analysis of eConsult questions to inform CPD