Champlain BASE Project: Building Access to Specialists through E-consultation

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Eleven thousand years ago, the Champlain Sea covered most of what is now the Ottawa Valley all the way to the St. Lawrence. It left behind sea shells, remains of Beluga whales and a sense of shared destiny for the people who live here. It is most appropriate that our new Local Health Integration Network be called Champlain, after both the sea and the explorer whose adventures took him to these same shores many years afterwards.
Project Team

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A collaboration between The Ottawa Hospital (TOH); The Élisabeth-Bruyère Research Institute (EBRI); Champlain Local Health Integration Network (LHIN); Winchester District Memorial Hospital (WDMH)

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Outline

- Overview of referral-consultation process
- Development of our eConsultation service
- Implementation
- Evaluation
- Lessons learned
  - Key Success Factors
  - Challenges
- Sustaining success
Current consultation-referral process

1. PCP wants advice

2. Patient agrees to see specialist
   - Referral letter and information sent to specialist
   - Appointment booked and communicated

3. Patient waits…

4. Patient visits with specialist
   - Communications back to PCP
What happens in Ontario?
Average number* of various health care services accessed each day, in Ontario, 2002/03

- **137,000** General practitioner/family physician visits
- **54,000** Specialist visits
- **41,000** X-rays taken
- **12,000** Emergency Department visits
- **2,000** Computerized tomography/magnetic resonance imaging scans
- **3,000** Hospital admissions
- **50** Hip and knee replacements

In 2007, 3 million Canadians reported seeing a specialist for a new condition the preceding year

*Values rounded to the nearest thousand with the exception of hip and knee replacements, which were rounded to the nearest 10.

Age- and sex-specific distribution of adults aged 20 years and older seen for office-based care, by physician specialty type, in Ontario, 2002/03

No physician visit billings
Specialists only
GP/FP + specialists
GP/FP + GIM/OBGYN or GIM/geriatrician
GP/FP only

Proportion of adults (%)

<table>
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<th>Age group (years)</th>
<th>20–39 years</th>
<th>40–64 years</th>
<th>65–74 years</th>
<th>75–84 years</th>
<th>85 years and older</th>
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GP/FP = General practitioner/family physician; GIM = General internal medicine specialist; OBGYN = Obstetrician/gynecologist
Specialists comprise all specialists including GIMs, OBGYNs, geriatricians and consultant specialists.

Jaakkimainen et al. Primary Care in Ontario: ICES Atlas. 2006
Median Wait between Referral by GP and Treatment

Graph 5: Median Wait between Referral by GP and Treatment, by Province, 1993 and 2010

Source: The Fraser Institute’s national waiting list survey, 2010; and Waiting Your Turn, 1997.
Limiting factors of traditional consultations

ACCESS
• Inequitable access for patients and providers
• Transportation challenges
• Long wait times that may differ by provider

SAFETY

APPROPRIATENESS

PATIENT EXPERIENCE
Limiting factors of traditional consultations

ACCESS

SAFETY
- Lack of communication between providers
  - Loss of “doctors” lounge
  - Poor information exchange

APPROPRIATENESS

PATIENT EXPERIENCE
Limiting factors of traditional consultations

ACCESS

SAFETY

APPROPRIATENESS
- Lack of organization of specialty care
- Mismatched consult expectations – PCP, patient, specialist

PATIENT EXPERIENCE
Limiting factors of traditional consultations

ACCESS

SAFETY

APPROPRIATENESS

PATIENT EXPERIENCE
- Stress of waiting
- Seeing wrong provider, inadequate work-up prior to visit
- Confidence in process
Not a new problem,

- 1964
  “often incomplete and needlessly inefficient” (Kunkle)

- 1983
  “process often falls short of its goals” (Lee, Pappius, Goldman)

- 2000
  “not consciously designed and leaves much to be desired” (Gandhi)

- 2008
  “prominent aspect of the patient’s perilous journey through the health care system” (Bodenheimer)

but new energy and new opportunities for solutions

Mehrotra, Milbank Quarterly 2011
OMA Principles and Recommendations: Models and Processes of Delivery of Speciality Care (Oct 2011)

- Improve the coordination of specialty care to patients
- Improve information exchange between specialists and PCP’s
- Improve quality of the specialists work experience
- Improve the quality of patient care by specialists
- Increase patient access to specialty care
- Increase the efficiency and cost-effectiveness of the system
Types of referrals

- Formal vs. Informal
  - Face to face
  - Telemedicine
  - Electronic
  - Telephone
  - Corridor
Types of referrals

- Role of the specialist
  - Cognitive
  - Procedural
  - Co-manager
    - Shared care
    - Transfer of care for (un)defined time for specific health issue
Limitations of other systems

• Delayed communications with phone (i.e. phone tag)
• No record/documentation with phone conversations
• Email not secure for transferring patient information
• Telehealth – usually synchronous and often specialized equipment
Potential beneficial outcomes from e-consult service

- Improved access to clinics
- Fewer visits for patients
- Reduction in number of clinic referrals
- Receive patient-specific advice
Champlain BASE-eConsult service

- Consultation-referral process between primary care providers and specialists utilizing e-communication through SharePoint technology
  - Off the shelf
  - Important elements
    - Already available and being used as collaboration space
    - Electronic forms
    - Workflows
    - Reporting capabilities
Champlain BASE-eConsult service

- **Primary Care Provider** uses a template which prompts for key information and may attach additional information (i.e. test results)

- **Specialist** has several reply options:
  - Specific reply to question
  - Recommend a direct visit
  - Recommend a direct visit but do the following tests first
Why SharePoint vs. Email/fax/phone?

- Questions answered outside of clinic hours within a designated period of time
- Secure infrastructure hosted from a hospital server
- Guidelines/templates to properly formulate question
- Record of interaction and physician compensation possible

- Delayed communications with phone/fax (i.e. phone tag)
- Email not secure for transferring patient information
- Poorly formulated questions = less likely to be answered
- No record/documentation with phone conversations
Development of e-consultation service

Initial meeting with PCPs and develop e-form

Ongoing feedback and evaluation from users

Launch pilot of eConsult

Fall 2009

January 2010

Spring 2010

March 2011

April 2011

March 2012

Launch proof of concept with 5 specialties

End of proof of concept: Data collection and evaluation

Privacy Impact & Threat Risk Assessments done, CMPA contacted

?Future expansion
E-consult site Demo

- https://www.lhinworks.on.ca/eforms/ebconsult2
Who should be referred?

- Non-urgent cases
- Questions related to specific treatment choices
- Questions related to choice of diagnostic testing
- To confirm treatment decisions
- Pre-consultation work-up questions
Current status

- System functioning well
- 102 PCP’s registered, including 12 nurse practitioners
- Specialties:
  - Cardiology, Dermatology, Nephrology, Neurology, Endocrinology, ENT & Head/Neck Surgery, Diabetes Education, General Pediatrics, General Surgery, Internal Medicine, OB/GYN, Pediatric hematology/oncology, Thrombosis, Hematology, Pain Medicine and Anesthesiology, and Palliative Care
Proportion of PCP's using E-Consult after Sign-up

- Completed at least 1 E-Consult
- No E-Consults completed

Number of Practitioners by Specialty

<table>
<thead>
<tr>
<th>Specialties</th>
<th># of Practitioners</th>
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<tbody>
<tr>
<td>Cardiology</td>
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<tr>
<td>Dermatology</td>
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<tr>
<td>Endocrinology</td>
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<tr>
<td>General Pediatrics</td>
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<tr>
<td>Gynecology, Obs/gyn</td>
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<td>Internal Medicine</td>
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<td>Nephrology</td>
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<td>Neurology</td>
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<tr>
<td>Pediatric Hematology/Oncology</td>
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<tr>
<td>Rheumatology</td>
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<tr>
<td>Surgery</td>
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</tbody>
</table>

Graph showing distribution of practitioners by specialty.
**Question from a Primary Care Practitioner:**
This 48 year old non smoking woman, who has been on the birth control pill for many years, recently informed me that she has had 4 migraines in her life. Her last one was 6 years ago, and it is hard for her to remember the details. She does remember emesis and photophobia. I have told her that the BCP is contraindicated in migraine sufferers. She argues that because they are so infrequent that her risk is probably low. She really does not want to stop the pill. What would you recommend?

**Response from a Neurologist:**
If she is otherwise well and no other contraindications, migraine is a "relative" contraindication only. She is right to question the absolute recommendation you are making. I usually suggest a low dose oestrogen product and then monitor the patient to insure that her headache frequency is not increased by the pill. There are many patients with migraines who successfully use OCP without a problem. If her headache frequency or character changes at all, she should stop the pill and consider alternatives.
• 210 consults submitted as of January 23rd, 2012
  • 87 in proof of concept phase
  • 123 in pilot phase

• 17/123 (14%) recommended face to face consult

• 70/123 (57%) took specialist less than 10 minutes
Usage by PCP’s after sign-up

- 37/102 PCP’s have submitted an eConsult
- Median number of consults submitted = 3
- 25% have submitted ≥10

Number of PCP's using E-consult After Sign-up
“Attach a carrot to the stick and I might consider fetching it.”
Evaluation strategy

- Proof of Concept Phase
  - Usage
  - Qualitative study
    - Focus groups and semi-structured interviews
    - End of consultation survey

- Pilot Phase
  - Usage
  - “Mandatory” end of consultation survey
  - Question typology
Qualitative Study

• Question:
  • What do providers involved in the Champlain BASE proof of concept project think about the eConsultation service and how it may be improved?

• Participants
  • Semi structured interviews
    • Specialists (n=10, 7 different specialties)
    • Active PCP users (n=9)
  • Two focus groups in rural areas with non-adopter PCP’s (n=13)
• All recorded and transcribed
• Initial coding by experienced qualitative researcher
• Refined with other members of research team
• Analyzed with Nvivo8
• Themes were identified through review of the data within and across codes
• Coding summaries were reviewed by two other members of the research team.
• Inconsistencies were solved through consensus among the team
Experience with eConsultation

- Time to send referral-consult
  - PCP’s spent more time using eConsult than traditional methods
  - Specialists spent less time
- Both could clearly identify appropriate cases for eConsultation
  - One PCP working in a group of 10 suggested 10-20% of their 30-40 referrals/week would be appropriate for eConsult
- Both PCP and specialists saw a role for non-MD’s to aid in process ie. Office staff
- PCP’s commonly used information from an EMR and feel integration important
Perceived Benefits for PCPs

- **Improved patient management**
  “I think that the benefit would be largely for the referring physicians in terms of patient management”

- **Gaining confidence and comfort level**
  “...almost a filtering system to reassure family doctors”

- **Education/knowledge translation for PCPs**
  “...it provides vehicles for some feedback to family docs/education to let them know how we deal with things so that maybe they can feel more confident dealing with things themselves”

- **Improved interaction with specialists**
  - “So I think the more we interact with each other and communicate with each other I think we have a better understanding of where each other is coming from...”
Perceived Benefits for Specialists

• **Improved interaction with PCPs**
  “I think it helps in the interaction with the healthcare provider. They tell you what...information they have, you evaluate it and then if you need further information, you tell them “This is what you need.”

• **Reduced specialists’ wait times**
  • “...in our clinic sometimes we struggle to get in the urgent consults within a timely manner just because the wait times are getting longer, not just for the non urgent but also for the urgent clinic appointments...reducing wait times can be associated with less stress to [us] and so forth”
Perceived Benefits for Specialists

• Decision-making control on which patient should be referred

“[When] we get referrals to see you face to face, you book the patient in to see, you don’t really decide necessarily that they absolutely need to see you. Whereas if you recommend it with E-Consult, you are making the statement, you are saying that they absolutely need to see you because this is something that you can do…”

• Advanced work by PCP on a case before a consultation

“So for me it was nice to be involved in the situation where I’ve got a lot more from the family doctor. I had a good sense of what they’ve tried, what they didn’t try, what investigations they’ve done, everything was attached because to see it right there you don’t have to call them up and ask them for more’’...
Perceived Benefits to Patients

- **Avoids face-to-face consultation; avoids unnecessary travel**
  
  “That would be huge in our [rural] area, especially for seniors…"

- **Providing psychological reassurance**
  
  “There may be a…psychological benefit to the patient to know that their case has already been discussed. Because sometimes patients get very anxious especially if there’s a wait involved“

- **Reducing wait times**
  
  “I think that’s where I could see it affecting wait times is that the consultants wouldn’t be busy with cases that really aren’t necessary”

  [E-consult allowed me to] identify or clarify the urgency with which a patient should be seen and cut down on any other forms of communications that might take longer”
Concerns to PCP’s and specialists

- **Communication**
  - Impersonal
    - Would be nice to see them, “have a picture of the doc”

- **Duty of Care**
  - A concern to half of specialists
    - “we are always worried about giving advice over the phone,...everything being based on information that has been posted..” suggest proviso “this information based only on the information available to me...”

- **Renumeration**
  - “they need to have a fee code for probably a time based unit of how much time they spend per eConsult”
"It’s the new hallway consult.....we used to have the doctors lounge and the coffee room, that’s falling away because we don’t have time for that any more. This is sort of the coffee room/lounge of the future...."
PCP Responses to eConsult Surveys

- Incorporated into the closure process of the new enhanced eConsult form & workflow launched April ’11
- 4 questions about specific eConsult
  - Value to PCP
  - Value to patient
  - Outcome for the patient
  - Impact on referral
Overall value of the eConsult service in this case for PCP
(123 completed cases) AVG.: 4.54/5

5: Excellent
1: Minimal

Overall value of the eConsult service in this case for patient
(123 completed cases) AVG.: 4.51/5

5: Excellent
1: Minimal
The outcome of eConsult for patient

- 34%: I was able to confirm a course of action that I originally had in mind
- 58%: I got good advice for a new or additional course of action
- 3%: I did not find the response very useful
- 5%: None of the above (please comment)
Impact of e-Consult on Referral

35% of referrals were avoided

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)
Lesson Learned – Key Success Factors

• Start small (proof of concept) and keep going

• Small but committed team with “different lenses” and different strengths

• Keep it simple and fast with minimal technical glitches

• Specialists and PCP’s in same community of practice

• Make primary care engagement a priority
  • user orientation/education is a MUST
  • Physician engagement requires high touch, on site contact, follow-up and patience
Lesson Learned - Challenges

- Never happens fast enough
- Change in work flow limits adoption
- High level of support is needed for adoption of new technology in primary care
- Organization of care delivery amongst specialists is low
  - Primary care reform >> specialist reform
- No existing payment structures to support change in care delivery
PHYSICIAN TO PHYSICIAN TELEPHONE CONSULTATION

Physician to physician telephone consultation is a service where the referring physician, in light of his/her professional knowledge of the patient, requests the opinion of another physician (the “consultant physician”) by telephone who is competent to give advice in the particular field because of the complexity, seriousness, or obscurity of the case.

This service is only eligible for payment if the consultant physician has provided an opinion and/or recommendations for patient treatment and/or management.

For the purpose of this service, “relevant data” include family/patient history, history of the presenting complaint, laboratory and diagnostic tests, where indicated and feasible in the circumstances.
Definition/Required elements of service – Referring physician

The referring physician initiates the telephone consultation with the intention of continuing the care, treatment and management of the patient. In addition to the Constituent and Common Elements of Insured Services described in the General Preamble of this Schedule, this service includes the transmission of relevant data to the consultant physician and all other services rendered by the referring physician to obtain the advice of the consultant physician.

Definition/Required elements of service – Consultant physician

This service includes all services rendered by the consultant physician to provide opinion/advice/recommendations on patient care, treatment and management to the referring physician. The consultant physician is required to review all relevant data provided by the referring physician.

eConsultation meets all criteria and allows for more accountability measures
Summary

• An e-Consultation system can be established on existing off-the-shelf secure web-based platforms
• The service is highly effective and holds great potential to improve access through avoidance of face to face consult
• High level of satisfaction reported by physicians - specialist community is particularly enthusiastic and supportive of this type of service as it reduces unnecessary referrals
• Physician engagement requires high touch, on site contact, follow-up and patience
• Need to continue to evaluate effectiveness and cost savings
• Potential for new model of referral-consultation process
Future Goals and Opportunities

- Moving from pilot to “standard of care” in our region
- SharePoint deployed across many LHIN’s – opportunity to partner
- Offer to remote regions
- Expand service – include other services, follow-up “visits”
- Integrate with an eReferral strategy
- Establish billing code for e-consultation
Champlain BASE Project: Building Access to Specialists through E-consultation

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