Using the Quadruple Aim Framework to Measure Impact of Health Technology Implementation: A Case Study of eConsult

Champlain BASE™ eConsult service improves access to specialist care for patients by facilitating electronic communication between Primary Care Providers (PCPs) and specialists.

From 2011 to 2017:
- 28,838 cases were completed
- 105 specialty groups available

58% of cases provided advice on a new or additional course of action.
71% of cases were resolved without requiring a face-to-face referral.

The eConsult service has demonstrated its effectiveness in the following 4 dimensions:

**Patient Experience**
- 86% of patients found eConsult useful in their situation
- 97% considered it as an acceptable alternative to face-to-face consultation

Patients valued improved access, care quality, and the strengthened role of the PCP.

“What a great and efficient way to do something versus continually going back to the office.”

**Provider Experience**

**PCPs’ Experience**
- 94% of PCPs rated the service as having high or very high value

Stated benefits: speed and quality of responses, capacity for improving patient care, and educational opportunities.

**Specialists’ Experience**
- Specialists indicated that eConsult...
  - is a feasible way to improve access to specialist care and communication (94%)
  - has educational value for PCPs (91%)
  - is user friendly (82%)

**Cost Analysis**

<table>
<thead>
<tr>
<th>Description</th>
<th>eConsult Service</th>
<th>Traditional Referral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly Case Volume</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>13 cases/month</td>
<td>969 cases/month</td>
</tr>
<tr>
<td>Population Health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increasing Patient Safety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>eConsults resulted in referral, where one had not been originally contemplated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.4%</td>
<td></td>
<td>$47.35/case</td>
</tr>
<tr>
<td>Accounting for societal factors nets an additional savings of $11/eConsult</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Reference:**

*Among the 14,460 people who received an eConsult between May 2016 and August 2017.*