Paediatric Project ECHO® for Complex Care: Acceptance and impact of a virtual medical education program for Canadian healthcare providers

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Background

What is Project ECHO®?

“Extensions for Community Healthcare Outcomes”

Innovative model for medical education that expands access and capacity to provide evidence-informed care to remote and underserved communities.

How does the ECHO® model work?

Virtually connects an interprofessional team of specialists at an academic “Hub” to community healthcare providers called “Spokes”.

Paediatric Project ECHO® for Complex Care

Focus on management of children with medical complexity (CMC)

Program Structure

TeleECHO Clinics (monthly)
- Didactic + Patient case + Best practice recommendations

Objective

To evaluate performance-related outcomes of Paediatric Project ECHO® for Complex Care:
- Acceptability and satisfaction
- Changes in provider knowledge and self-efficacy, and
- Practice impact related to managing complex cases.

Methods

- Study approved by local Research Ethics Board.
- Prospective, mixed-method study with repeated measures at baseline and 6-months (6M).
- Data collection managed via REDCap.
- Participants provided with $5 gift card for 6M survey.

Results

Participants

<table>
<thead>
<tr>
<th>Years of Practice</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 year</td>
<td>6 (12%)</td>
</tr>
<tr>
<td>1-4 years</td>
<td>12 (23%)</td>
</tr>
<tr>
<td>5-10 years</td>
<td>5 (9%)</td>
</tr>
<tr>
<td>More than 10 years</td>
<td>28 (54%)</td>
</tr>
<tr>
<td>Not applicable</td>
<td>1 (2%)</td>
</tr>
</tbody>
</table>

Acceptability and Satisfaction at 6M

Table 1. Years of practice, n = 52

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th>Min, Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Involvement in Paediatric Project ECHO® is a worthwhile experience for me</td>
<td>6.2</td>
<td>0.7</td>
<td>5, 7</td>
</tr>
<tr>
<td>2. I would recommend the program to my colleagues.</td>
<td>6.3</td>
<td>0.6</td>
<td>5, 7</td>
</tr>
<tr>
<td>3. The program has connected me with peers and diminished my professional isolation.</td>
<td>5.0</td>
<td>1.1</td>
<td>3, 7</td>
</tr>
<tr>
<td>4. Paediatric Project ECHO® has created a supportive community of practice.</td>
<td>5.7</td>
<td>0.9</td>
<td>4, 7</td>
</tr>
<tr>
<td>5. The program is an effective way for me to learn.</td>
<td>5.8</td>
<td>0.6</td>
<td>5, 7</td>
</tr>
<tr>
<td>6. I have learned new information through the program.</td>
<td>6.1</td>
<td>0.6</td>
<td>5, 7</td>
</tr>
<tr>
<td>7. I have learned best practice care through the program.</td>
<td>5.7</td>
<td>0.7</td>
<td>4, 7</td>
</tr>
<tr>
<td>8. I respect the knowledge of the program facilitators.</td>
<td>6.4</td>
<td>0.6</td>
<td>5, 7</td>
</tr>
</tbody>
</table>

Table 2. Acceptability and satisfaction with TeleECHO Clinics, n = 52

Knowledge Changes at 6M

Self-efficacy Changes at 6M

Practice Level Impact at 6M

Figure 3. Self-efficacy change from baseline to 6 month, n=26

Figure 4. Reported practice level impact at 6 month, n=26

Practice impact related to managing complex cases as a result of involvement in Paediatric Project ECHO® for Complex Care.

Conclusion

- Paediatric Project ECHO® for Complex Care participants report high acceptability and satisfaction.
- Increases in knowledge and self-efficacy observed at 6M.
- Impact at 12-month follow-up is currently being assessed.

Acknowledgements

- Project funded by the Ontario Ministry of Health and Long-Term Care.
- Thank you to Paediatric Project ECHO® participants!
**W18: Paediatric Project ECHO® for Complex Care: Acceptance and impact of a virtual medical education program for Canadian healthcare providers**

**Purpose:** In Canada universal healthcare is mandated; however, local access to specialty care remains inequitable for patients who reside in remote and rural areas. The *Paediatric Project ECHO® for Complex Care* program was launched in January 2018 in Ontario with the aim of training community-based healthcare providers (HCPs) in the management of children with medical complexity (CMC). This is the first program of its kind in Canada.

**Details of innovation:** *Paediatric Project ECHO® for Complex Care* is an innovative model for interdisciplinary medical education. By leveraging digital technologies, the program offers monthly virtual TeleECHO® clinics (didactic and case-based learning), at no-cost to Canadian HCPs. *Paediatric Project ECHO®* aims to increase HCP knowledge and self-efficacy in the management of paediatric complex care patients, with the ultimate goal of improving care for CMC.

**Outcome:** Evaluation of the *Paediatric Project ECHO® for Complex Care* program is being conducted to measure participant acceptance and satisfaction level, as well as impact on HCP knowledge and self-efficacy. This prospective study was approved by the locally responsible Research Ethics Board. HCPs who participated in the program were sent electronic surveys at baseline (immediately following registration) and 6-month (6M) timepoints. In order to be eligible for the 6M survey, a participant must have: (i) completed baseline survey, and (ii) attended ≥1 TeleECHO® clinic. Surveys used 7-point Likert scales (1=strongly disagree; 7=strongly agree) to assess the parameters of interest. Surveys were completed by n = 52 participants from across 10 different disciplines. On average, ratings of program acceptability (5.9±0.4) were moderate-to-high. At baseline, participants reported mean scores of 4.4±0.8 for topic-specific knowledge and 5.1±0.8 for self-efficacy, respectively. At 6M, participants (n = 26) reported uniform increases in knowledge (5.0±0.7) and self-efficacy (5.6±0.6) across items.

**Discussion:** *Paediatric Project ECHO® for Complex Care* is associated with high acceptability as well as increased knowledge and self-efficacy related to the management of CMC. Next steps include additional follow-up data collection and further exploration of clinical practice impact.

**Discussion question:** How could the Project ECHO® model impact your practice and health outcomes of patients in your community?

**Funding:** The Ontario Ministry for Health and Long-Term Care.

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