Disclosures

Grant Support
- Abbott, Genentech, Gilead, Merck, Janssen

Speaker’s Bureau
- Genentech, Gilead, Merck, Vertex

Advisory Board
- Vertex

PROJECT ECHO

A Model to Expand Access, Improve Care and Reduce Costs for Common, Complex Chronic Diseases

John Scott, MD, MSc
University of Washington

Vision of Project ECHO

To use case-based teleconferencing between rural communities and academic specialists to build clinician capacity and improve health outcomes.

Project ECHO: How it works

- 1 teledicine clinic/week, per discipline
- 10-15 min didactic
- De-identified cases sent in advance
- Primary care physicians present cases to specialist panel
- Multi-specialty co-management
- “Learning Loops”
First Pillar

Use Telehealth to Leverage Scarce Health Resources


Obstacles to Specialty care

- Distance
- Cost
- Discontinuity of Care

Technology

- Secure, encrypted
- Videoconferencing Bridge (Polycom RMX 2000)
- Videoconferencing Recording Device (Polycom RSS 2000)
- You Tube-like Website (Polycom VMC 1000)
- Webcam Interfacing Capacity (Polycom CMA 5000)

Second Pillar

Disease Management Model with Best Practices

Project ECHO: Accomplishments to Date

- 36-month Program
- Over 100 unique sites
- 500 clinicians

<table>
<thead>
<tr>
<th></th>
<th>Sites</th>
<th>Clinicians</th>
<th>Started</th>
<th>Cases</th>
<th>Hours of training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis C</td>
<td>23</td>
<td>203</td>
<td>May 2009</td>
<td>399 unique</td>
<td>1500</td>
</tr>
<tr>
<td>Chronic Pain</td>
<td>97</td>
<td>300</td>
<td>Mar 2011</td>
<td>390</td>
<td>600</td>
</tr>
<tr>
<td>Addiction and</td>
<td>16</td>
<td>239</td>
<td>Nov 2010</td>
<td>101 unique</td>
<td>400</td>
</tr>
<tr>
<td>Psychiatry</td>
<td>13</td>
<td>56</td>
<td>Jan 2012</td>
<td>50</td>
<td>75</td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>13</td>
<td>56</td>
<td>Jan 2012</td>
<td>50</td>
<td>75</td>
</tr>
</tbody>
</table>

Project ECHO Serves: Patients

- Rural Inhabitants
- Native Americans/Alaska Natives
- Hispanics
- Underinsured & Uninsured

Third Pillar

Case-Based Learning with Specialty Co-Management

Project ECHO Sites
[online clinic] is very worthwhile, and fun. I especially enjoy the camaraderie.
Clinical Trial

**Clinical Trial**

Outcomes of Treatment for Hepatitis C Virus Infection by Primary Care Providers

Sanjeev Arora, M.D., Karla Thornton, M.D., Glen Murata, M.D., Paulina Domag, Pharm.D., Summers Kalahman, Ph.D., Denise Oke, Ph.D., Brooke Parish, M.D., Thomas Burke, B.S., Wesley Park, M.B.A., Jeffrey Dunneberg, M.D., Martin Kist, M.D., John Brown, M.A., Steven Jenkutsky, M.D., Miriam Komaromy, M.D., and Clifford Qualls, Ph.D.

Results: Efficacy

<table>
<thead>
<tr>
<th>HCV Genotype</th>
<th>ECHO sites</th>
<th>UNM HCV</th>
<th>Difference</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>All genotypes</td>
<td>132/261 (50.2)</td>
<td>84/146 (57.1)</td>
<td>0.7</td>
<td>0.89</td>
</tr>
<tr>
<td>GT 2,3</td>
<td>78/112 (69.6)</td>
<td>42/59 (71.2)</td>
<td>-1.6</td>
<td>0.83</td>
</tr>
<tr>
<td>GT 1</td>
<td>73/147 (49.7)</td>
<td>36/83 (43.8)</td>
<td>3.5</td>
<td>0.57</td>
</tr>
</tbody>
</table>

Results: Safety

<table>
<thead>
<tr>
<th>Serious Adverse Event</th>
<th>ECHO sites</th>
<th>UNM HCV</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any</td>
<td>18 (6.0)</td>
<td>20 (13.1)</td>
<td>0.02</td>
</tr>
<tr>
<td>Hematologic</td>
<td>0</td>
<td>2 (1.4)</td>
<td></td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>0</td>
<td>3 (2.2)</td>
<td></td>
</tr>
<tr>
<td>Gastrointestinal</td>
<td>7 (2.7)</td>
<td>4 (2.7)</td>
<td></td>
</tr>
<tr>
<td>Infectious</td>
<td>3 (1.3)</td>
<td>5 (3.4)</td>
<td></td>
</tr>
<tr>
<td>Psychiatric</td>
<td>3 (1.3)</td>
<td>2 (1.4)</td>
<td></td>
</tr>
<tr>
<td>Other disorders</td>
<td>5 (1.9)</td>
<td>4 (2.7)</td>
<td></td>
</tr>
<tr>
<td>Treatment-related</td>
<td>13 (5.0)</td>
<td>15 (10.3)</td>
<td></td>
</tr>
<tr>
<td>Leading to discontinuation of therapy</td>
<td>11 (4.2)</td>
<td>13 (8.5)</td>
<td>0.03</td>
</tr>
</tbody>
</table>

Study Conclusions

- Treatment by primary care clinicians via Project ECHO is as safe and effective as by specialists
- Highest cure rates seen in community, higher even than registration trials
- High proportion of minorities in Project ECHO sites, reversing health disparity

**Global Telehealth Conference 2012**

**Project ECHO: Integration**

<table>
<thead>
<tr>
<th>Specialties</th>
<th>Public Health</th>
<th>Nurse Practitioners</th>
<th>Pharmacists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronic Pain</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integrated Addiction &amp; Adult Psychiatry</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Linking to Health Care Reform**

- Accountable care organizations
- Dual Medicare/Medicaid
- Best practices
- Comparative effectiveness research

**Strength of Project ECHO**

- Patient-hope
- Primary care-empowerment
- Academic medical center-knowledge

“Though one may be overpowered, two can defend themselves. A cord of three strands is not quickly broken”

**Contact**

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www.youtube.com/watch?v=bvhiE5yMkyA&noredirect=1