Webinar notes:

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AzCRH www.crh.arizona.edu
Let’s improve health in Arizona, and let’s do it fast.
The 13 biggest threats to global health, according to the WHO

1. Climate crisis
2. Healthcare delivery in areas of conflict & crisis
3. Healthcare equity
4. Access to treatments
5. Infectious disease prevention
6. Epidemic preparedness
7. Unsafe products
8. Underinvestment in health workers
9. Adolescent safety
10. Improving public trust of healthcare workers
11. Capitalizing on technological advancements
12. Threat of anti-microbial resistance & other medicines
13. Healthcare sanitation
Threats to accessing healthcare the United States

- **24.1** year age difference in life expectancy between the highest & lowest performing counties in the US²
- **23,438** medically underserved areas (MUAs) and medically underserved populations (MUPs) in the United States³
- **7,214** health professional shortage areas (HPSAs) in the United States³
- **125.3 vs 59.7** PCPs per 100,000 population in urban vs. rural America⁴
A path to improve healthcare disparities

Understanding the relationship between CME activities & program outcomes

Effective & accessible continuing medical education

Amplify capacity of local healthcare providers

Improved access to healthcare services

Lessen healthcare disparities
understanding the relationship between CME activities & program outcomes
<table>
<thead>
<tr>
<th>Activity Type</th>
<th>Definition/Activity Characteristics</th>
<th>Number of Activities</th>
<th>AMA PRA Category 1 Credits</th>
<th>Physician Interactions</th>
<th>Other Learner Interactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enduring Material</td>
<td>Independent learning materials design as self-study activities</td>
<td>89,389</td>
<td>191,756</td>
<td>9,982,167</td>
<td>20,649,246</td>
</tr>
<tr>
<td>Live Course</td>
<td>Takes place in real time; must involve two or more physicians; provide opportunity for real time, face-to-face interaction between mentors and learners</td>
<td>79,673</td>
<td>392,432</td>
<td>1,650,933</td>
<td>2,943,286</td>
</tr>
<tr>
<td>Regularly Scheduled Series</td>
<td>Live activity; planned as a series with multiple, ongoing sessions; session content varies (e.g. Project ECHO)</td>
<td>26,766</td>
<td>544,940</td>
<td>6,225,162</td>
<td>2,979,231</td>
</tr>
<tr>
<td>Journal-based CME</td>
<td>Learner reads one or more articles from a peer-reviewed, professional journal</td>
<td>4,930</td>
<td>9,022</td>
<td>1,310,201</td>
<td>231,995</td>
</tr>
<tr>
<td>Other/blended learning</td>
<td>Hybrid, new, or unique approaches that do not fall into any of the other activity types</td>
<td>2,035</td>
<td>36,880</td>
<td>340,945</td>
<td>207,401</td>
</tr>
<tr>
<td>Performance Improvement</td>
<td>Structured, long term projects; participant learns specific performance measures, retrospectively assesses practice, applies performance measures, reevaluates performance</td>
<td>444</td>
<td>9,063</td>
<td>169,288</td>
<td>10,696</td>
</tr>
<tr>
<td>Committee Learning</td>
<td>Live participation in a committee process centered upon a subject which (if delivered in another CME format) would be considered an appropriate CME activity</td>
<td>204</td>
<td>1,975</td>
<td>9,632</td>
<td>9,309</td>
</tr>
<tr>
<td>Manuscript Review</td>
<td>Critical review of assigned journal manuscript during pre-publication process</td>
<td>177</td>
<td>2,305</td>
<td>91,445</td>
<td>4,434</td>
</tr>
<tr>
<td>Test-Item Writing</td>
<td>Learning structured through contributions to the development of examinations; peer-reviewed self-assessment activities by researching, drafting, and defending potential test-items</td>
<td>132</td>
<td>1,326</td>
<td>2,495</td>
<td>115</td>
</tr>
<tr>
<td>Internet Searching and Learning</td>
<td>Self-directed research, online learning; content must be vetted by accredited CME provider</td>
<td>63</td>
<td>2,143</td>
<td>1,953,344</td>
<td>1,021,438</td>
</tr>
<tr>
<td>Learning from Teaching</td>
<td>Facilitation of practice-based learning and improvement; practice can be defined as professional teaching practice, clinical practice, or research practice</td>
<td>48</td>
<td>783</td>
<td>3,294</td>
<td>284</td>
</tr>
</tbody>
</table>
theory alignment
with continuing medical education activities

01 Deliberate practice
02 Social cognitive & self-determination
03 Situated learning & communities of practice
04 Adaptive expertise
05 Experiential learning (Kolb’s cycle)
06 Diffusion of innovation
tele-mentoring integrates 88% of theoretical elements, while live courses integrate 33% and enduring material 27%, respectively.
effective & accessible continuing medical education

amplify capacity of local healthcare providers

improved access to healthcare services

lessen healthcare disparities

understanding the relationship between CME activities & program outcomes
Project ECHO
(extension for community healthcare outcomes)

Our mission is to democratize medical knowledge and amplify capacity to get best practice care to underserved people all over the world.\(^\text{14}\)

**01 All teach, all learn.**
Subject matter experts connect virtually with local primary care teams across Arizona in biweekly teleECHO sessions.

**02 Moving knowledge, not people.**
Knowledge is shared across the learning network through didactic presentations and case-based learning.

**03 Patients get healthcare close to home.**
As knowledge and confidence grows among primary care teams, patient’s get increased access to the care they need within their local community.
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 Deming, Pharm.D., Summers Kalishman, Ph.D., Denise Dion, Ph.D., Brooke Parish, M.D., Thomas Burke, B.S., Wesley Pak, M.B.A., Jeffrey Dunkelberg, M.D., Martin Kistin, M.D., John Brown, M.A., Steven Jenkusky, M.D., Miriam Komaromy, M.D., and Clifford Qualls, Ph.D.
Program growth since 2003

Project ECHO Programs | 2545 Programs | 193 Countries
ECHO BY THE NUMBERS AS OF YEAR END 2022

- **4,003,407** ECHO Session Attendances
- **896** ECHO Hubs Launched + 33 Superhubs
- **63** Countries Have ECHO Hubs
- **193** Countries Have ECHO Participants
- **505** Peer-Reviewed Publications Validated the ECHO Model

**Attendances by year**

<table>
<thead>
<tr>
<th>Year</th>
<th>Attendances</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>0K</td>
</tr>
<tr>
<td>2007</td>
<td>1K</td>
</tr>
<tr>
<td>2008</td>
<td>1K</td>
</tr>
<tr>
<td>2009</td>
<td>2K</td>
</tr>
<tr>
<td>2010</td>
<td>7K</td>
</tr>
<tr>
<td>2011</td>
<td>11K</td>
</tr>
<tr>
<td>2012</td>
<td>14K</td>
</tr>
<tr>
<td>2013</td>
<td>21K</td>
</tr>
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<td>2014</td>
<td>31K</td>
</tr>
<tr>
<td>2015</td>
<td>57K</td>
</tr>
<tr>
<td>2016</td>
<td>90K</td>
</tr>
<tr>
<td>2017</td>
<td>142K</td>
</tr>
<tr>
<td>2018</td>
<td>232K</td>
</tr>
<tr>
<td>2019</td>
<td>1,151K</td>
</tr>
<tr>
<td>2020</td>
<td>1,299K</td>
</tr>
<tr>
<td>2021</td>
<td>1,005K</td>
</tr>
<tr>
<td>2022</td>
<td>302K</td>
</tr>
<tr>
<td>2023</td>
<td>4,378K</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4,378K</strong></td>
</tr>
</tbody>
</table>

**Notes:**

1. **ECHO** stands for Early Childhood Hunger Outreach Network.
2. The data reflects attendances as of Year End 2022.
THE TELE-MENTORING MODEL

TRADITIONAL
TELEMEDICINE

Knowledge flow from Expert Hub Team to Local Primary Care Teams and then to Patients.
anatomy of an ECHO

0:00 – 5:00  Introductions
5:00 – 20:00  Didactic Presentation
20:00 – 55:00  Case Presentations & Recommendations
55:00 – 60:00  Summary
improved access to healthcare services

- lessen healthcare disparities
- amplify capacity of local healthcare providers
- effective & accessible continuing medical education
- understanding the relationship between CME activities & program outcomes
ASU’s healthcare focused ECHO programs

1. Behavioral Health Integration
2. Dermoscopy
3. Human Trafficking*
4. Liver Disease
5. Medications for Opioid-Use Disorder
6. Nursing Home Covid-19 Action Network*
7. Palliative Care
8. Substance Use Disorder Treatment for Women
9. Veteran Community Care
10. Long COVID

*program has been retired
ASU’s education-focused ECHO programs

1. Business Practices for Child Care Programs*
2. Strengthening Business Practices in Child Care Programs*
3. Early Language and Literacy*
4. Advancing Equity in Early Childhood Settings*
5. Teaching Phonological Awareness in Early Childhood Program*
6. Supporting the Emotional Well-Being of Teachers and Children in Early Childhood Environments*
7. Developmentally Appropriate Practices (DAP)
8. Literacy Rich Center or Classroom Environments
9. Institutes for Higher Education (IHE) Pre-Service Faculty
10. Building Expertise with Early Childhood Professionals
11. Supporting Collaborative Services in Schools

*program has been retired
supported by 63 subject matter experts from 39 community partner organizations...
funded with over $2.1 million in external grants and sponsorship from...
summary of program outcomes
7 ECHO programs* (January 1, 2020 – December 31, 2022)

- 359 teleECHO sessions
- 2,251 unique Participants
- 12,184 learning hours
- 4.68 average session satisfaction Rate** (n=2,923)

*Nursing Home ECHO and Liver Disease ECHO program data not included.
**5 point Likert scale (5=extremely satisfied, 1= extremely dissatisfied)
Near 108,000 people died of drug overdoses in 2021, two-thirds of which involved fentanyl or another synthetic opioid. However, only 3% of waivered providers are treating OUD patients, citing lack of knowledge on MOUD and continued stigma surrounding patients with OUD.

**need**

Establish a state-wide collaborative partnership to scale evidence-based education and practice in the management of patients with opioid use disorder.

**program aim**

Establish a state-wide collaborative partnership to scale evidence-based education and practice in the management of patients with opioid use disorder.
**curriculum topics**

**clinical**
- Diagnosing OUD
- Medications for OUD
- Precipitated withdrawal
- MOUD in pregnant & post-partum women
- MOUD treatment considerations for surgical patients
- Pain management
- Treating OUD with mental health comorbidities
- Suicide prevention
- Treating LGBTQ patients
- OUD in adolescents
- Infectious disease & injection drug use

**non-clinical**
- Stigma
- Historical context of racism in OUD policy
- Quarterly research updates
- Engaging families in OUD treatment
- OUD in rural Arizona
- Provider biases & impacts on patient care
Summary statistics of the Medications for Opioid Use Disorder ECHO program
February 1, 2020 – December 31, 2022

<table>
<thead>
<tr>
<th>Program Measure</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sessions</td>
<td>71</td>
</tr>
<tr>
<td>Average Attendance per Session</td>
<td>39.0</td>
</tr>
<tr>
<td>Total Unique Individual Attendees</td>
<td>587</td>
</tr>
<tr>
<td>Total Learning Hours</td>
<td>2,768</td>
</tr>
<tr>
<td>Mean Session Satisfaction (2022)*</td>
<td>4.68</td>
</tr>
</tbody>
</table>

*(n=455); 5-point Likert scale (5=extremely satisfied; 1=extremely dissatisfied)
### Program outcomes

**January 1, 2022 – December 31, 2022**

#### MOUD ECHO Participant Self-Reported Changes in Knowledge & Confidence

<table>
<thead>
<tr>
<th></th>
<th>Before Attending</th>
<th>After Attending</th>
<th>Change</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate your knowledge about medications to treat opioid use disorder</td>
<td>3.09</td>
<td>4.00</td>
<td>0.91</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Rate your confidence to provide comprehensive opioid use disorder treatment</td>
<td>2.95</td>
<td>3.70</td>
<td>0.75</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

*5-point Likert scale (5=extremely high; 1=extremely low)*

#### MOUD ECHO Participant Self-Reported Changes in Clinician Wellness

<table>
<thead>
<tr>
<th>Perception</th>
<th>BEFORE Participating in ECHO</th>
<th>AFTER Participating in ECHO</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am satisfied with my job</td>
<td>4.16</td>
<td>4.27</td>
<td>.021</td>
</tr>
<tr>
<td>I am experiencing provider burnout</td>
<td>2.84</td>
<td>3.00</td>
<td>.003</td>
</tr>
<tr>
<td>I am meeting my patient needs</td>
<td>3.93</td>
<td>4.16</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>
When surveyed, 92% of medical providers in Arizona report having little or very little knowledge on how to effectively treat victims of trafficking. However, these providers are often the first point of contact for victims when they seek care, leaving a large gap for potential life-saving interventions.

**need**

Equip medical providers with the necessary awareness, tools, and confidence to screen, identify, and connect patients affected by human trafficking to appropriate resources from the clinical setting.

**program aim**

Equip medical providers with the necessary awareness, tools, and confidence to screen, identify, and connect patients affected by human trafficking to appropriate resources from the clinical setting.
curriculum topics

clinical

• Screening tools
• Mandatory reporting & patient safety
• **Trauma informed care**
  • Labor trafficking vs. sex trafficking
  • Treating pediatric populations
  • Provider-patient communication strategies
  • Medical forensic exam
  • Referring patients of trafficking
  • LGBTQ populations

non-clinical

• Definitions & distinctions (dispelling myths)
• Key players in trafficking
• Community-based resources
• Vicarious trauma
• Law enforcement interactions
• **Intersection of medical care and the legal system**

End of session: grounding techniques
Summary statistics of the Human Trafficking ECHO program
January 1, 2021 – December 31, 2022

<table>
<thead>
<tr>
<th>Program Measure</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sessions</td>
<td>60</td>
</tr>
<tr>
<td>Average Attendance per Session</td>
<td>44.8</td>
</tr>
<tr>
<td>Total Unique Individual Attendees</td>
<td>532</td>
</tr>
<tr>
<td>Total Learning Hours</td>
<td>2,681</td>
</tr>
<tr>
<td>Mean Session Satisfaction* (n=1,503)</td>
<td>4.71</td>
</tr>
</tbody>
</table>

*5-point Likert scale (5=extremely satisfied; 1=extremely dissatisfied)
### Self-Reported Changes in Knowledge & Confidence (n=86)

<table>
<thead>
<tr>
<th>Self-reported change among human trafficking ECHO participants</th>
<th>Before Attending</th>
<th>After Attending</th>
<th>Change</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate your <strong>knowledge</strong> on identifying key indicators of human trafficking that may exist during a medical or human service encounter</td>
<td>2.67</td>
<td>3.96</td>
<td>1.29</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Rate your <strong>confidence</strong> using screening tools to provide interventions safely</td>
<td>2.38</td>
<td>3.72</td>
<td>1.34</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

*p=0.008*  
*p=0.080*  
*p<0.001*

*5-point Likert scale (5=extremely high; 1=extremely low)*
Replicability.
Project ECHO has proven to be an effective model for delivering evidence-based, quality continuing medical education to simultaneously increase knowledge and confidence to an interdisciplinary audience.

Responsive.
The model proved to be highly responsive in times of rapidly changing healthcare environments, acting as a centralized resource for medical providers to obtain clearly outlined, evidence-based information.

Emerging.
Project ECHO is still emerging as a thoroughly understood model. Several integral elements have struggled to keep pace with overall program growth, including 1) A comprehensive body of research outlining its efficacy to improve patient outcomes and clinician well-being; and 2) Effective instruments to measure program fidelity.
References:


2. County Health Rankings.


References:


Scan the QR Code to Register for an ECHO program today