Translation of the Primary Care Provider-centered Project ECHO Model into a Tool to Support Frontline Nurses in Complex Care Management Using the Knowledge to Action® Framework

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Problem Statement:

- Patients continue to increase in complexity, requiring significant support, education, coaching, coordination and care management to achieve an improved health status and ultimately self-management.

- Primary Care Nurses are key players

- However, they need ongoing support to:
  - Expand their role to include complex care management
  - Enhance their content knowledge
  - Enhance their leadership identity within the overall care team
  - Improve collaboration among both internal and external health care team members
Our Vision: Since 1972, Community Health Center, Inc. has been building a world-class primary health care system committed to caring for underserved and uninsured populations and focused on improving health outcomes, as well as building healthy communities.

CHC Inc. Profile:
• Founding Year - 1972
• Primary Care Hubs – 14
• No. of Service Locations - 201
• Licensed /Total SBHC locations – 28 comprehensive/39 behavioral health only/190 mobile dental
• Organization Staff - 658

Innovations
• Integrated primary care disciplines
• Fully integrated EHR
• Patient portal and HIE
• Extensive school-based care system
• “Wherever You Are” Health Care
• Centering Pregnancy model
• Residency training for nurse practitioners
• New residency training for psychologists

Three Foundational Pillars
Clinical Excellence
Research & Development
Training the Next Generation
# CHC Patient Profile

- **Patients who consider CHC their health care home**: 130,000
- **Health care visits**: more than 429,000

## Top Chronic Diseases

<table>
<thead>
<tr>
<th>Disease</th>
<th>Chronic Pain</th>
<th>Depression</th>
<th>Obesity/Overweight</th>
<th>Cardiovascular Disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asthma</td>
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</tr>
</tbody>
</table>

## Patient Care Model

- PCMH (NCQA Level 3 and TJC)
- Advanced access scheduling
- “Planned Care” and the Chronic Care Model
- Integrated behavioral health services
- Comprehensive dentistry/oral health
- Clinical dashboards
- Expanded hours and 24/7 coverage
- Comprehensive HIV /AIDS & Hep C care and other key populations
- Formal research program
- Neighborhood outreach, screening, enrollment

## Care Delivery

- Medical Care & Ancillary Services
- Dental Care
- Behavioral Health Care
- Prenatal Services

## CHC Patient Profile

- 0.00%
- 20.00%
- 40.00%
- 60.00%
- 80.00%
- 100.00%
- 90.80%
- 13%
- 68%
- 42%
- 6%
- 65%

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RN Complex Care Management

- Comprehensive didactics for Complex Care Management
  - Transition Care, Medication Reconciliation, CHF, DM, Pediatric Asthma, COPD, Psych, Motivational Interviewing, Self Management Goal Setting
  - Supervision Case Reviews via videoconference
  - Care Plan/Zone Sheet development & Self-Management

- EHR Templates/Electronic Tools
  - Structured Intakes/Follow up
  - Outcome Measures
  - Dashboards

- Community Engagement
  - Open House
  - Data Sharing
ECHO Origins

“The mission of Project ECHO is to develop the capacity to safely and effectively treat chronic, common and complex diseases in rural and underserved areas and to monitor outcomes.”

Dr. Sanjeev Arora, University of New Mexico

NEJM 6/2011

- Prospective cohort study comparing HCV Rx at UNM with Rx by primary care clinicians at 21 ECHO sites in rural areas and prisons in NM.
- 407 patients with no previous treatment
- Primary endpoint was SVR.
- 57.5% at UNM and 58.2% at ECHO sites achieved SVR.
- Serious adverse events occurred in 13.7% at UNM and 6.9% at ECHO sites
The Project ECHO® Model

Benefits

- Increased knowledge and confidence to manage complex chronic conditions in primary care
- Increased patient access to evidence-based treatments
- Increased provider satisfaction and retention
- Reduction in unnecessary imaging and other laboratory services
- Reduction in overuse/misuse of specialty, surgical, and procedural services
- Reduction in inappropriate medication usage
**STUDY PROJECT DETAILS**

- **Project Director & Investigator:** Mary Blankson, APRN, FNP-C, DNP
- **Project Timeline:** July 2015-2018
- **Funding:** Health Resources and Services Administration (HRSA)
- **Partners:**
  - Internal Evaluation Team
  - Crossroads Group, Inc.
  - Quinnipiac University
  - Middlesex Homecare
  - Middlesex Hospital
  - University of Connecticut

- **Data collection/evaluation**
- **Dedicated Education Unit**
- **IPCP Project ECHO**
STUDY GOALS & OBJECTIVES

Goal One: Improve and expand the Interprofessional Collaborative Practice (IPCP) environment, developing capacity and excellence in knowledge transfer and decision support in care management.

– **Objective 1:** Develop and expand care management programs at CHCI.
– **Objective 2:** Develop capacity and excellence in knowledge transfer and decision support for care coordination.
– **Objective 3:** Improve patient outcomes and patient experience through Objective 1 and 2.
– **Objective 4:** Reduce unnecessary health care utilizations through Objective 1 and 2.

Goal Two: Build RN leadership skills and experience.

– **Objective:** Assign and support nursing leadership roles in complex care management and patient care teams.

Goal Three: Build RN student competencies in IPCP by providing training and experience in care management to RN students in an IPCP environment.

**Objective:** Provide training and experience in IPCP and care management.
PROJECT OVERVIEW

Logic Model for CHCI NCM/IPCP Interventions and Evaluation

A. IPCP & NCM Interventions
- NCC interventions
  - Nurse Care Manager (NCM) training A1
  - NCM Dashboard A2
  - NCM Scorecard A3
- IPCP interventions
  - Panel Mgt & Patient Care mtgs A4
  - Shared Care Plan A5
- Meso-system
  - ECHO CCM A6
- Dedicated Education Unit (DEU) A7

B. IPCP & NCM Environment & Functioning
- Environment
  - Nurse Leadership Skills and Experience B1
  - Interprofessional Collaboration B2
- Functioning
  - Care Management Components B3
    - Patient identif. and assessment
    - Care planning
    - Essential care mgmt tasks
    - Care monitoring
    - Communication among care participants
    - Decision support
    - Care transitions

C. Care Process
- Patient (Pt) receipt of prevention, education, & care mgmt services
  - Specific conditions: C1
    - Diabetes
    - COPD
    - Asthma
    - Cardiac
    - Hypertension
    - Controlled Substance
  - General care mgmt: C2
    - Medication reconcil, mgmt
    - Patient education (indiv or group)
    - Care plan receipt/review
    - Motivational Interviewing
    - Self Mgt
    - NCM Tool Eval

D. Outcomes
- Patient-level
  - Pt experience D1
  - Pt health outcomes D2
- Organizational-level
  - Sustained NCM capacity D5
  - Sustained IPCP environment D6
  - Replicability of model D7
  - Nurse Preparation & Education
  - Student Experience and Leadership D8
  - NCM Experience and Leadership D9

E. Other CHCI Context and Programs
- CHCI Leadership Roles & Support E1
- Clinical Micro-system Implementation Teams E2
Knowledge-to-Action Framework
Knowledge Creation

*Ongoing process to filter from general knowledge to specific recommendations and then finally to specific interventions*
Action Cycle

Identify the Problem
  • Nurses Need Support

Review/Select the Knowledge
  • Project ECHO Model

Adapt to the Local Context
  • Provider Participants : Nurse Participants
  • Integrate into current CHCI Project ECHO Programming
Action Cycle (cont.)

Assess Barriers
- Academic Training
- Lack of Job Experience
- Time
- Resources
- Geography

Select/Tailor/Implement
- Project ECHO CCM: 1st Session 9/24/2015
Key Elements of an ECHO Session

Case Presentations
- 2-3 Cases per ECHO session
- Often co-presented by 2+ care team members
- Complex cases
- Multi-disciplinary consultation available
- Valuable for discussion and teaching
- Total time = 1.5 hours

Didactic Presentations
- 1 per session
- Focused and topical
- By expert faculty
- Total time < .5 hour
# Project ECHO CCM Case Presentation Form

**Complex Care Management Case Presentation Form**

| Date: | Click here to enter a date. |
| Check one: | □ New Case or □ Follow-up |
| Presenter: | Click here to enter text. |
| Patient Initials: | Click here to enter text. |
| CHC Site: | Click here to enter text. |
| ECHO ID: | [Project ECHO staff will fill out] |
| Gender: | □ Male □ Female □ Other: __________ |
| Age: | Click here to enter text. |
| Consent Signed: | □ Yes or □ No |

**Date enrolled in Care Coordination:**

| Reason(s) for enrollment: | Click here to enter text. |

**Reason for case presentation:**

| Three main questions for faculty: | Click here to enter text. |
| 1. | Click here to enter text. |
| 2. | Click here to enter text. |
| 3. | Click here to enter text. |

**Active Self-Management Goals:**

| Yes or No |
| □ Yes or □ No |

**Medical History:**

| Click here to enter text. |

**Hospitalization/Surgical History:**

| [This can be found on Care Coordination Dashboard] | Click here to enter text. |

**Psychiatric History:**

| Click here to enter text. |

**Social History:**

| [e.g., family support, social organizations involved] | Click here to enter text. |

**External Care Teams:**

| [e.g., specialty care, telehealth, Community Care Teams] | Click here to enter text. |

**Current Medications:**

| Click here to enter text. |

**Vital Signs:**

| BP: | PR: | Wgt: | Hgt: | BMI: |
Project ECHO Complex Care Management

- First session on 9/24/15
- Duration: 2 hours; 1 didactic and ~2 cases
- All 12 sites involved – Approx. 35 nurses
- Faculty consists of:
  - Nurse Practitioner and Nurse Executive
  - Homecare nurse
  - Medical Provider
  - Pharmacist
  - Behavioral Health Provider
  - Complex Care Management Specialist and Certified Diabetes Educator
  - Registered Dietician and Certified Diabetes Educator
  - Access to Care Coordinators
Project ECHO CCM In Action!

Access Video Here: https://www.dropbox.com/s/s0fax1c1rffjune/Complex%20Care%20Management%20Master%205%20Min.mp4?dl=0
Monitor Use

• # of patients enrolled in CCM
• # of cases presented
• # of nurses presenting
• Qualitative evaluation of nurse questions/types of cases

Evaluate Outcomes

• Impact on patient experience/patient outcomes
• Impact on nurse/provider retention/nurse leadership

Sustain Knowledge Use

• Faculty Development
• Quantify visits added or Budget neutrality
• Savings from retention (both provider and nursing)
• Spread Model
Training the Next Generation
Program Evaluation

• IRB approved evaluation study
• Goal: Implement the plans and evaluate staff experience with Complex Care Management and impact on patient outcomes
• Evaluation Methods:
  - Observational Study
  - Focus groups
  - Interviews
  - Surveys
  - Clinical outcomes data
<table>
<thead>
<tr>
<th>Component</th>
<th>Research Question(s)</th>
<th>Type of Evaluation</th>
<th>Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPCP Project ECHO</td>
<td>Did Project ECHO increase NCMs’ leadership?</td>
<td>Pre- and post-survey: Leadership</td>
<td>All NCMs participating in Project ECHO</td>
</tr>
<tr>
<td></td>
<td>What did participants think of Project ECHO?</td>
<td>Pre- and post-survey: Satisfaction on each ECHO session</td>
<td>All NCCs participating in Project ECHO</td>
</tr>
<tr>
<td></td>
<td>What do the faculty members think of IPCP ECHO?</td>
<td>Focus group</td>
<td>IPCP ECHO Faculty</td>
</tr>
<tr>
<td>Component</td>
<td>Research Question(s)</td>
<td>Type of Evaluation</td>
<td>Subjects</td>
</tr>
<tr>
<td>----------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
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<td>---------------------------------------------</td>
</tr>
<tr>
<td>Overall IPCP Initiative</td>
<td>How do the different components of CCM look in the clinical setting?</td>
<td>Observational Study</td>
<td>NCCs</td>
</tr>
<tr>
<td></td>
<td>How do the key stakeholders perceive CCM and its components?</td>
<td>In-person Interviews</td>
<td>- Up to NCMs</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>- Nurse managers</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>- Providers (APRN, DO, MD)</td>
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<td></td>
<td></td>
<td></td>
<td>- MAs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- On-site directors</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Clinical Chiefs</td>
</tr>
<tr>
<td></td>
<td>What is the general opinion of CCM and its components?</td>
<td>Focus groups</td>
<td>- ECHO faculty team</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- DEU Students</td>
</tr>
</tbody>
</table>
ECHO CCM Learning Network

- Operational data for ECHO sessions between September 2015 – July 2016
  - 12 CHCI sites
  - 35 Primary Care Nurse Care Managers
  - 19 ECHO sessions
  - 42 case presentations
    - 35 unique patients presented
    - 7 f/u presentations

- Attendance and presentation intensity
  - On average 22 nurses confirm attendance per ECHO session (range 18 - 29 nurses)
  - 23 unique nurse presenters (at least one case presentation so far; 66%)
  - 2 cases - 4 nurses
  - 3 cases - 3 nurses
  - 4 cases - 1 nurse
ECHO CCM Satisfaction

<table>
<thead>
<tr>
<th>ECHO Didactic</th>
<th>Satisfaction Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Information Technology</td>
<td>4.39</td>
</tr>
<tr>
<td>Complex Pain Care in a CHC Part I</td>
<td>4.06</td>
</tr>
<tr>
<td>Substances of Abuse and an Introduction to Effective Treatments Part I</td>
<td>3.73</td>
</tr>
<tr>
<td>Complex Pain Care in a CHC Part II</td>
<td>4.29</td>
</tr>
<tr>
<td>Substances of Abuse and an Introduction to Effective Treatments Part II</td>
<td>3.75</td>
</tr>
<tr>
<td>Motivational Interviewing</td>
<td>3.73</td>
</tr>
<tr>
<td>The Nursing Guide to MNT and Nutrition Counseling</td>
<td>4.54</td>
</tr>
<tr>
<td>Diabetes Disease Management</td>
<td>3.88</td>
</tr>
<tr>
<td>Health Care at Home 101: How it Can Work for You</td>
<td>4.08</td>
</tr>
<tr>
<td>Diabetes Medication Management</td>
<td>4.23</td>
</tr>
<tr>
<td>Personality Disorders</td>
<td>4.04</td>
</tr>
<tr>
<td>Intensive Care Management Provider Collaboration</td>
<td>3.75</td>
</tr>
<tr>
<td>Medication Reconciliation</td>
<td>4.17</td>
</tr>
</tbody>
</table>

Question: How meaningful was today’s ECHO CCM session to your work?
1 = Not at all  2 = Slightly  3 = Moderately  4 = Very  5 = Extremely
ECHO Related Statements

... I thought it was really helpful to do the ECHO project here at the DEU ... it showed us how to work on an interdisciplinary team.

... in a hospital we only work with nurses, we don’t really see many other disciplines and especially ... nutrition and pharmacy which I know we don’t really get to work with so that was really helpful for us.

... it’s something that really opened all of our eyes to seeing how inter-professional collaboration really does help.

... the didactics really helped with that and seeing the patients. But I think the ECHO sessions helped even more with that. To really see how providers have such problems taking care of patients, and how you need to look at every perspective to figure out how to take care of them.

... ECHO for nursing is really great and I think it’s something that really could be implemented throughout the country.

(quotes taken directly from the focus group with the first group of DEU students)
Thank You

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