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

Mary L. Blankson DNP, APRN, FNP-C
Bernadette Thomas DNP, APRN, FNP-C, MPH
My Phuong Tong, BA

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

Community Health Center, Inc.

Where health care is a right, *not a privilege,* since 1972.

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

CHC Locations in Connecticut

Legend:
- Towns with CHC locations
- Towns with CHC mobile services
- Towns where CHC patients come from
- M Medical
- D Dental/Mobile Dental
- BH Behavioral Health
- SBHC School-Based Health Center
- WYA Wherever You Are Homeless Services
- QC Quick Care

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	
Cardiovascular Disease	Obesity/Overweight
Diabetes	Chronic Pain
Asthma	Depression

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

Chart values: 98.80%, Uninsured 13%, Medicaid 68%, Under age 18 42%, Over age 65 6%, Racial or Ethnic 65%

Y-axis: 100.00%, 80.00%, 60.00%, 40.00%, 20.00%, 0.00%

X-axis: 200% or more of, Uninsured, Medicaid, Under age 18, Over age 65, Racial or Ethnic
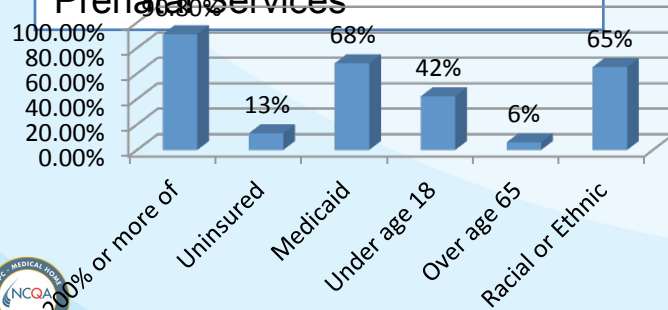
Patient Care Model

- 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
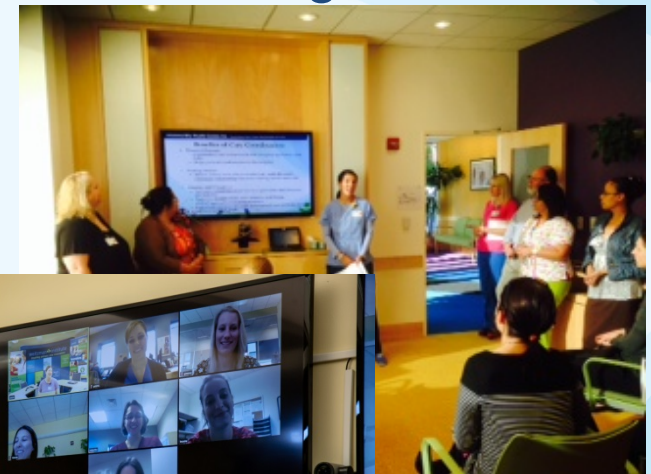- Neighborhood outreach, screening, enrollment

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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

PCA Española

Baton Rouge

Pecos Valley MC

ECHO Whale

DOH Las Cruces   SBRT-First Choice South V.   Memorial HDX7080   LAS VEGAS ECEH
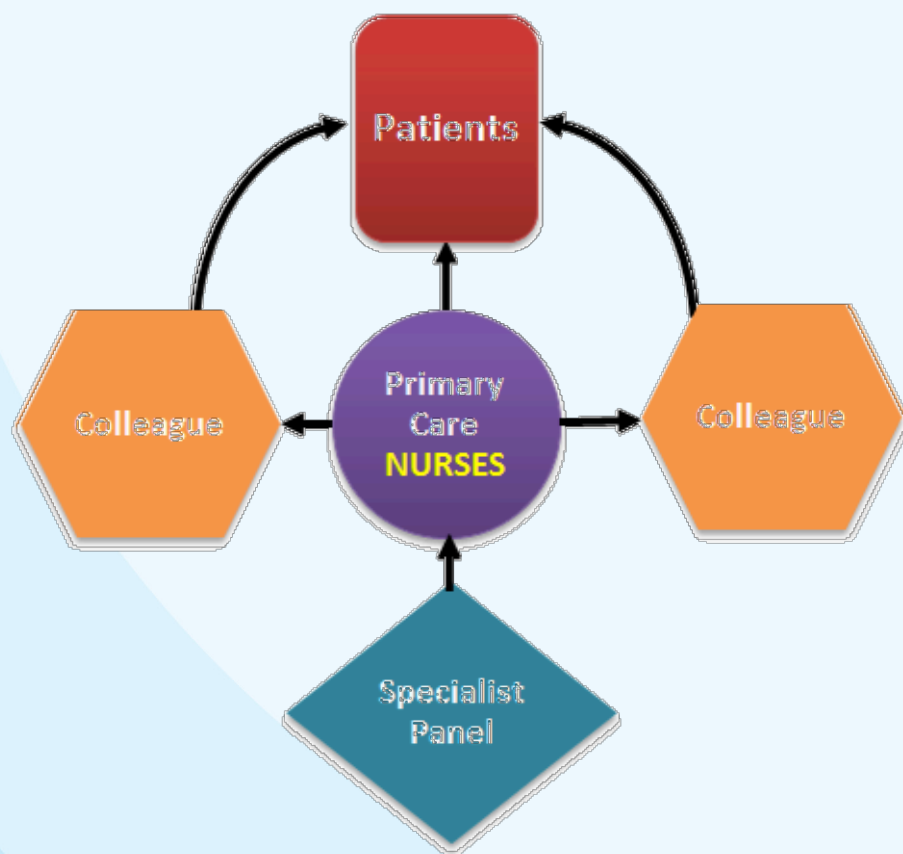
The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

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.

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."*

NEJM 6/2011

Dr. Sanjeev Arora, University of New Mexico

- 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.

  Data collection/evaluation

  - Quinnipiac University

  Dedicated Education Unit

  - Middlesex Homecare

  - Middlesex Hospital

  - University of Connecticut

  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.

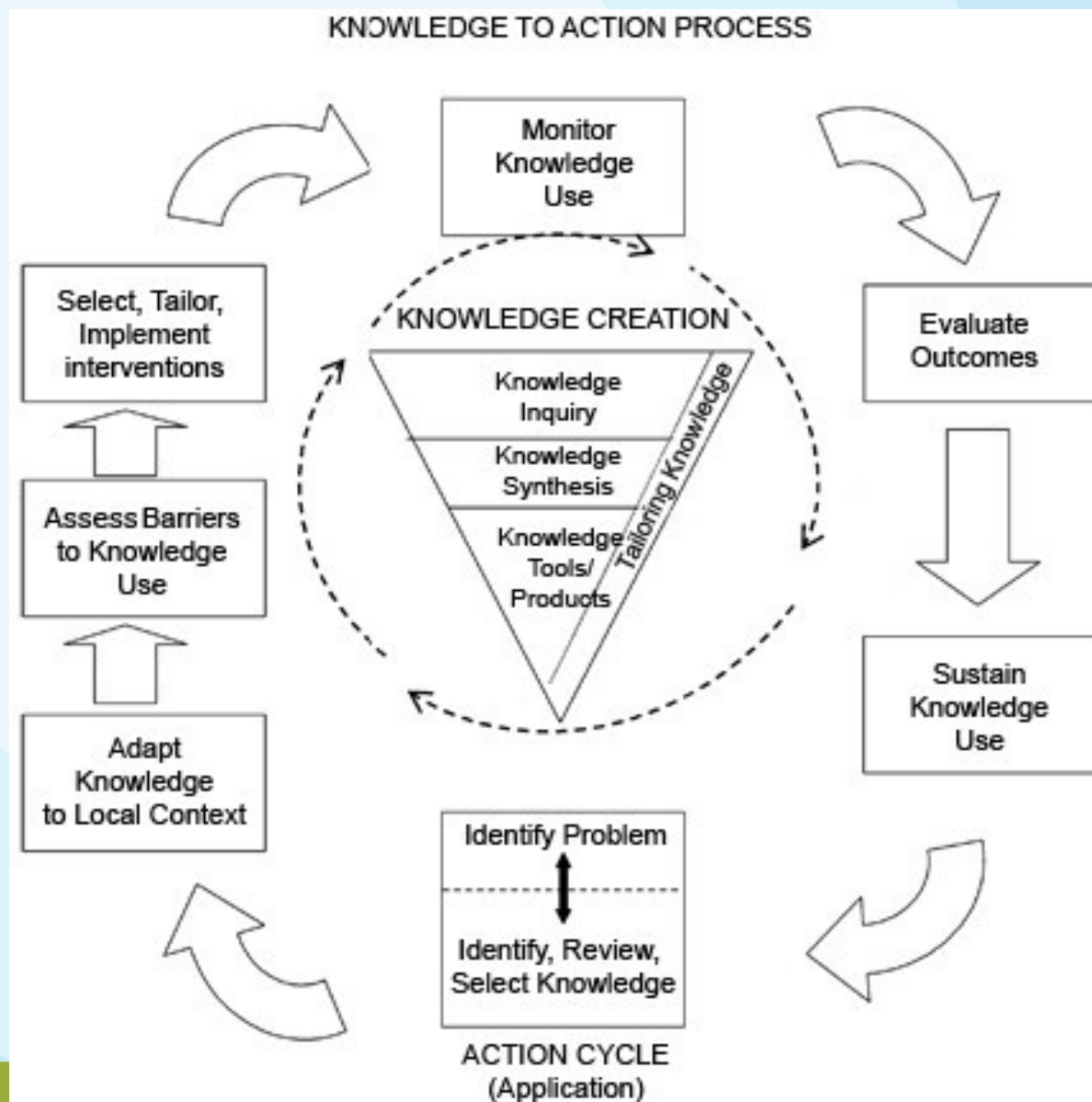**Objective:** Provide training and experience in IPCP and care management.
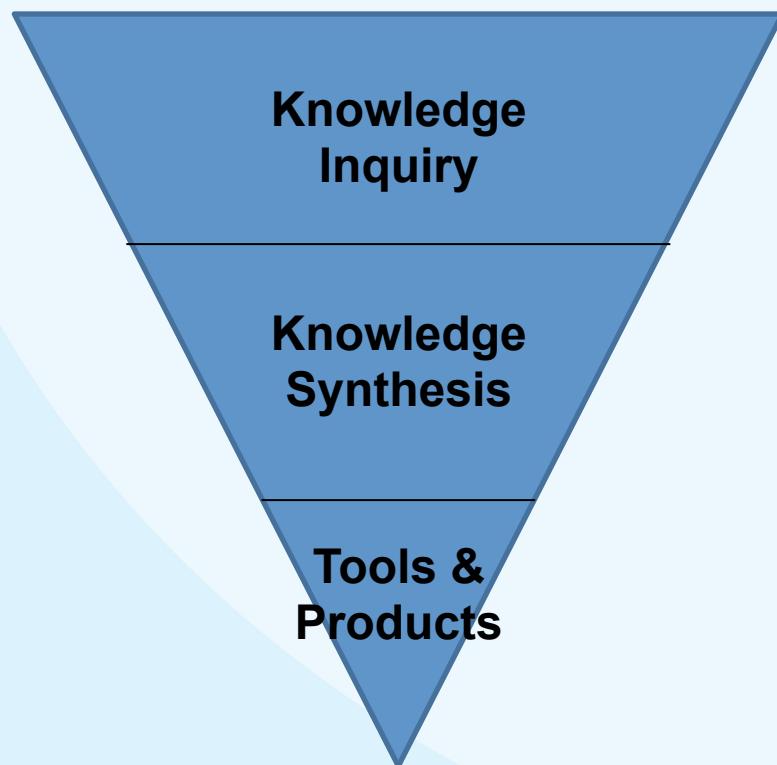
PROJECT OVERVIEW

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 mgt tasks
- Care monitoring
- Communication among care participants
- Decision support
- Care transitions

C. Care Process

Patient (Pt) receipt of prevention, education, & care mgt services

Specific conditions: C1
- Diabetes
- COPD
- Asthma
- Cardiac
- Hypertension
- Controlled Substance

General care mgt: C2
- Medication reconcil, mgt
- 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

Unnecessary utilization & hosp readmission D3

Per capita costs D4

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

Knowledge
Inquiry

Knowledge
Synthesis

Tools &
Products

*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.

CHC Site: Click here to enter text.

Patient Initials: Click here to enter text.

ECHO ID: [Project ECHO staff will fill out.]

Age: Click here to enter text.

Gender: ☐ Male ☐ Female ☐ Other:_____

Consent Signed: ☐ Yes or ☐ No

Date enrolled in Care Coordination:	Click here to enter text.
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 *If yes, what is the goal:* Click here to enter text.

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., Husky Care Management, Homecare, Community Care Team)	Click here to enter text.
Current Medications:	Click here to enter text.

Vital Signs:	BP:	PR:	Wght:	Hght:	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

Complex Care Management

Project ECHO CCM In Action!

Access Video Here:

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

Action Cycle (cont.)

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

Evaluation Components

Component	Research Question(s)	Type of Evaluation	Subjects
IPCP Project ECHO	Did Project ECHO increase NCMs' leadership?	Pre- and post-survey: Leadership	All NCMs participating in Project ECHO
	What did participants think of Project ECHO?	Pre- and post-survey: Satisfaction on each ECHO session	All NCCs participating in Project ECHO
	What do the faculty members think of IPCP ECHO?	Focus group	IPCP ECHO Faculty

Evaluation Components – cont.

Component	Research Question(s)	Type of Evaluation	Subjects
Overall IPCP Initiative	How do the different components of CCM look in the clinical setting?	Observational Study	NCCs
	How do the key stakeholders perceive CCM and its components?	In-person Interviews	- Up to NCMs - Nurse managers - Providers (APRN, DO, MD) - MAs - On-site directors - Clinical Chiefs
	What is the general opinion of CCM and its components?	Focus groups	- ECHO faculty team - DEU Students

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

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

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

Mary Blankson, DNP, APRN, FNP-C

Chief Nursing Officer

Community Health Center, Inc.

Middletown, CT

Mary@chc1.com

Bernadette Thomas, DNP, APRN, FNP-C, MPH

Former Chief Nursing Officer

Community Health Center, Inc.

My Phuong Tong, BA

CCM Program Manager

Community Health Center, Inc.

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