

An Interprofessional Strategy for Improving Primary Care Management of Patients with Chronic Pain: Project TEAMS (Teleconference Education And Management Support)

Co-Principal Investigators:

Nancy Elder, MD, MSPH

Jill Boone, PharmD, FASHP

Project Team members:

Susan McDonald, MA

Harini Pallerla, MS

Jack Kues, PhD

Barbara Speer, BS

Amy Short, MHSA

Charles Doarn, MBA

Organization:

University of Cincinnati College of Medicine, Department of Family and Community Medicine and
Center for Continuous Professional Development

University of Cincinnati College of Pharmacy

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Abstract:

Purpose: Chronic pain (CP) is a common and difficult clinical condition for both patients and primary care providers (PCP). We sought to develop and evaluate a Project ECHO tele-mentoring program [TEAMS (Teleconference Education And Management Support)] for primary care providers to assist them in their management of patients with chronic pain.

Scope: All primary care providers at UHealth were invited to participate in the evaluation, and all primary care providers in the region were encouraged to participate in the tele-mentoring sessions; CP has been estimated to occur in up to 26% of primary care patients.

Methods: We created and implemented monthly TEAMS sessions between 9/2015 – 5/2017. We evaluated the effect of the sessions with pre- and post- online surveys to all UHealth PCPs, as well as analysis of electronic health record data [presence of PEG (Pain, Enjoyment, General activity) scores for CP assessment and CP referrals]. Due to poor survey response rates and minimal use of the PEG by providers, we were unable to compare findings between those attending and not attending TEAMS sessions.

Results: 83 unique PCPs attended, with 81% attending fewer than 5 sessions. Post-session evaluations were strongly positive. Only 19 providers completed both pre and post surveys, and there were no statistically significant changes between the two surveys. Approximately 60% of respondents felt they could easily assist patients with CP to get timely referrals, and more than half felt confident in managing chronic opioids; but fewer than 40% regularly used structured tools to assess or manage chronic pain. The EHR data revealed that the use of the PEG actually decreased from the pre- to the post- time period (16% of patients to 10%); the percentage of PCPs documenting a PEG at least once decreased from 21% to 15%; and only 9% of PCPs documented a PEG in both periods. The use of referrals was statistically the same in both time periods (57% and 55% of patients), with most referrals going to physical therapy and pain management.

Purpose of the research project:

The purpose of this research study was to develop and evaluate a practical, teleconference-based, interprofessional consultation coaching “rounds,” called **Teleconference Education And Management Support (TEAMS)**, that connected a group of UHealth primary care providers (PCPs) with each other and experts from a variety of disciplines who work with patients with chronic pain (CP). The coaching rounds are a local replication of a national program called Project ECHO (<http://echo.unm.edu/>). They occurred occur monthly for 1 hour and were open to all UHealth PCPs.

Our specific AIMS were:

1. Develop a provider-driven interprofessional pain teleconference series (TEAMS coaching) readily available in PCP offices of the UHealth Primary Care Network and the offices of interprofessional pain management practitioners.
 - a. Arrange for PCPs to present active patient cases for discussion and problem-solving by other PCPs and interprofessional pain practitioners using evidence-based best practices and real time regional resources.
 - b. Work with pain management, physical therapy, mental health, addiction medicine, pharmacy, nursing, and integrative medicine as well as community agencies and support services (Arthritis Foundation, YMCA, social workers, etc.) to produce interactive and evidence-based presentations of clinical pearls addressing the specific concerns of PCPs related to pain assessment and management.
2. Create an online archive of the TEAMS coaching sessions that will be available via our Center for Continuous Professional Development Learning Management System (LMS).
 - a. TEAMS coaching sessions will be edited to remove information that could violate HIPAA regulations. They will be configured as enduring materials and accredited for *AMA PRA Category 1 credit™* and posted on the University of Cincinnati CPD web site. The site is available to an international audience.
 - b. The TEAMS enduring materials will include the ability to post questions and comments. The questions and comments will be integrated into subsequent live TEAMS sessions for discussion and the results of the discussions will be posted with the enduring materials.
3. Use an ongoing evaluation strategy to assess and improve the applicability of the TEAMS coaching to maximize provider participation; and to assess any resultant increase in PCP self-efficacy, the impact on patient care, and the effectiveness of interprofessional involvement in the care of patients with pain. Additionally, the evaluation data from the enduring materials will be integrated into the assessment of the TEAMS project.

Background:

The Institute of Medicine, in its report, *Relieving Pain in America*, notes that, “Chronic pain has a distinct pathology, causing changes throughout the nervous system that often worsen over time. It has significant psychological and cognitive correlates and can constitute a serious, separate disease entity.”¹ CP is particularly common in primary care settings with prevalence estimated anywhere from 5% to 50%, depending on the source.¹⁻⁶ In alignment with the Patient Centered Medical Home (PCMH) and Chronic Care Model,⁷ many experts and clinicians agree that CP requires a multi-modal, interprofessional approach to achieve maximum benefit for patients.^{1,8}

This project was designed to evaluate the provision of resources and a support mechanism for primary care providers to discuss their challenging cases with an interprofessional team of pain care providers. The format of the ECHO/TEAMS coaching promoted information-sharing and the development of integrated, interprofessional approaches to addressing the clinical challenges of chronic pain care. Incorporating information technology into the delivery of curricula, including mentoring by means of video technology and “telementoring,” has demonstrated an ability to improve physician knowledge and patient outcomes in several areas, including chronic pain management.⁹ We used readily available and easy-to-use telecommunication technology to implement our interprofessional pain TEAMS coaching, as an approved replication partner of Project ECHO Pain, an American Pain Society Center of Excellence in New Mexico.^{10,11} While adapting this model to our local UHealth PCPs, we adhered to best practices to reduce variation in care, and utilized case-based learning to support CP expertise and team-based care among primary care physicians.

Settings and local context:

We have been actively assessing and working to improve the quality of care provided to patients with CP in our region since 2009. The Cincinnati Area Research and Improvement Group (CARInG) Practice Based Research Network, a regional primary care PBRN directed by Dr. Nancy Elder, initiated this work with a study in 2009, in which 21 family physicians reported on 533 patients presenting for office visits. The physicians identified 138 patients (26%) as having chronic pain; of those patients, 65 (47%) were currently taking chronic opioids.¹² The Primary Care Network (PCN) of UHealth is a subset of CARInG that, at the time, included 14 primary care practices affiliated with the University of Cincinnati. Three PCN practices participated in the 2009 study; 23% of office visits at these practices involved patients with CP. This study, along with a second study in 2012 funded by the Association for Hospital Medical Education, identified important practice gaps. In 2013, we received a Pfizer Independent Grant for Learning and Change to improve the care of patients with chronic pain in primary care. Our initial assessment of 12 primary care practices in the PCN (via chart reviews and PCP and nursing staff surveys) confirmed the practice gaps from our earlier studies, including:

- Poor documentation of CP assessment and management (chronic pain was adequately addressed in the charts of 68% of 485 patients with CP);
- Underuse of structured assessment instruments (pain severity was assessed with an instrument in 77% of patient charts, functional disability with an instrument in 47%);
- Limitations by the provider to assess and understand functional disability and emotional stress of CP (of 65 PCPs, 36% had high self-efficacy to assess functional disability, 61% to assess emotional states);
- Wide variations in prescribing medications for CP (56% of patients were on opioid medications);
- Minimal use of and coordination with other pain care providers (30% of patients had been referred to pain management, 11% to mental health, 34% to physical therapy and 3% to integrative medicine).

In order to better understand how PCPs coordinated care with other providers, we interviewed 32 providers in primary care, pain management, mental health, physical therapy and integrative medicine (physicians, acupuncturists, massage therapists and chiropractors) about their care of

patients with CP and their communication with primary care. A qualitative analysis of these interviews found that many had a poor understanding of the scope of practice of other CP caregivers and did not know how and when to best utilize services for patients. Silos of care were the norm, rather than cohesive treatment by an effective pain care team.¹³ There are currently 19 practice locations with 87 providers in both urban and suburban locations; practices are up to 40 miles apart. Several of the practices have large populations of underserved and vulnerable patients. The PCN saw over 52,000 patients in 2013. All, except the newest practices, have received National Quality Forum certification as Patient Centered Medical Homes, and the newer practices are in the process of becoming PCMH certified.

AIM 1: Develop a provider-driven interprofessional pain teleconference series (TEAMS coaching) readily available in PCP offices of the UHealth Primary Care Network and the offices of interprofessional pain management practitioners.

- a. Arrange for PCPs to present active patient cases for discussion and problem-solving by other PCPs and interprofessional pain practitioners using evidence-based best practices and real time regional resources.
- b. Work with pain management, physical therapy, mental health, addiction medicine, pharmacy, nursing, and integrative medicine as well as community agencies and support services (Arthritis Foundation, YMCA, social workers, etc.) to produce interactive and evidence-based presentations of clinical pearls addressing the specific concerns of PCPs related to pain assessment and management.

Description of Educational ECHO/TEAMS telehealth coaching sessions

Based on the existing Project ECHO Pain from the University of New Mexico, and replicated in a number of academic and clinical institutions, we created and implemented our own ECHO/TEAMS telehealth coaching sessions, beginning first in the UHealth Primary Care Network (PCN), but quickly offered to any PCP in the greater Cincinnati region. The process of creating our TEAMS telementoring program included the successful completion of the following steps:

- Project team training in ECHO via onsite training in New Mexico by one of the PIs and the project manager, followed by training in Cincinnati of the rest of the team
- Legal contracting between UC and the University of New Mexico to certify UC as an ECHO replication site
- Assembling a team of ECHO/TEAMS consultants, who were then trained in ECHO techniques and motivational interviewing techniques (ECHO/TEAMS telehealth consultants were from pain management, integrative medicine, psychiatry, addiction medicine, physical therapy and pharmacy.)
- Training and practice in the ZOOM teleconferencing platform
- Holding two practice training ECHO/TEAMS sessions with volunteer PCPs
- Ongoing quality review by a Quality Improvement specialist who observed several TEAMS sessions and provided feedback to improve the quality of communication, technology and follow up

Work on each ECHO/TEAMS telehealth coaching session actually began several weeks prior to the scheduled session, when PCPs were emailed an opportunity to submit a de-identified patient case for coaching by the TEAMS consultant/mentors. This submission included the key questions

the PCP was asking of the consultants. During the ECHO/TEAMS telehealth coaching sessions, the TEAMS leadership and the TEAMS consultant/mentors gathered in a conference room with a video camera and hooked up to ZOOM webinar software. PCPs logged in from any internet device (i.e., phone, tablet, or computer).

Each session began with a TEAMS consultant giving a 10 minute clinical update (“pearl”) on a key topic which was independent of the submitted case presentation. Topics were provided by our consultants, with each area of expertise responsible for four topics (see Table 7, under AIM 3). Local resources and community partners were included in the pearl presentations as appropriate. For the case presentation, the PCP who submitted the case summarized the relevant patient history and noted the key clinical questions of interest. Participants and consultants were invited to ask clarifying questions of the case. The consultants then discussed, taught and coached all those present in best practices care for patients with the presenting concerns, also encouraging verbal and written questions and comments by the PCP participants. A brief survey followed each session, sent by email to all who participated, as required for CME credit.

While initially offered to UCHealth physicians, within a few months invitations were extended to all primary care physicians in the region. This was done via email reminders to primary care physicians with informal ties to UC (via community precepting, former students and residents, previous participation in practice based research); presentation at a regional meeting for CPCi (Comprehensive Primary Care initiative) practices; and publicity, including UC and UCHealth press releases, and participation in a regional public radio news show.

We held 20 TEAMS sessions between September, 2015 and May, 2017 and 83 unique participants logged into the TEAMS sessions. In addition to the individual participants, some sessions were observed by groups of medical residents and pharmacy students.

AIM 2: Create an online archive of the TEAMS coaching sessions that will be available via our Center for Continuous Professional Development Learning Management System (LMS).

- a. TEAMS coaching sessions will be edited to remove information that could violate HIPAA regulations. They will be configured as enduring materials and accredited for *AMA PRA Category 1 credit™* and posted on the University of Cincinnati CPD web site. The site is available to an international audience.
- b. The TEAMS enduring materials will include the ability to post questions and comments. The questions and comments will be integrated into subsequent live TEAMS sessions for discussion and the results of the discussions will be posted with the enduring materials.

We created a website (cme.uc.edu/echo-pain), hosted under the Center for Continuous Professional Development, as a lasting resource for providers interested in more information about caring for patients with chronic pain. In addition to an archive of each webinar’s de-identified case presentation and consultant recommendations, we have also chronicled all of the chronic pain pearl presentations, which have been requested by University faculty and clinicians to share with their learners. All of the live teleconferences were recorded and saved, and are available to any practitioner who is interested in viewing the videos. At this time, no one has requested to view a past webinar.

The website also contains instructions on how to join the monthly teleconference, what to expect when you join, troubleshooting/IT tips and tricks, information on submitting a patient case

for discussion, and who to contact with questions or comments. We also provide community resources, focusing mostly on low cost and accessible options. Some of these resources include public swimming pools for aquatic therapy, group yoga in public parks, or low-cost group acupuncture.

AIM 3: Use an ongoing evaluation strategy to assess and improve the applicability of the TEAMS coaching to maximize provider participation; and to assess any resultant increase in PCP self-efficacy, the impact on patient care, and the effectiveness of interprofessional involvement in the care of patients with pain. Additionally, the evaluation data from the enduring materials will be integrated into the assessment of the TEAMS project.

Evaluation: Methods

1. Using a pragmatic before and after trial design, compare the following outcomes between those PCPs who choose to participate in ECHO/TEAMS telehealth coaching sessions and those who do not:
 - a. Assess the change in chronic pain care self-efficacy, opioid monitoring self-efficacy and knowledge of and self-reported use of both chronic pain assessment tools and chronic pain care providers by UHealth PCPs via an electronic survey sent by email to all UHealth PCPs prior to the first ECHO/TEAMS telehealth coaching session and again 10 months later.
 - b. Assess change in PEG scores (**P**ain severity, **E**njoyment of life and **G**eneral activity) in patients with CP seen by UHealth PCPs from a chart review of patients with CP before vs. after the provision of ECHO/TEAMS telehealth coaching sessions.
 - c. Assess changes in the number of referrals to pain consultants, including integrative medicine, pain management, physical therapy and behavioral/mental health from a chart review of patients with CP before vs after the provision of ECHO/TEAMS telehealth coaching sessions.
2. Assess satisfaction and knowledge gained of each ECHO/TEAMS telehealth coaching session via a post-session online survey from all participating PCP.
3. Perform qualitative case studies of the first 10 ECHO/TEAMS telehealth coaching sessions using notes made by facilitators and consultant/coaches, as well as reviewing archived sessions and the follow up emails and phone interviews.

Evaluation: Data collection

The evaluation for Aim 3.1 consisted of data from an online survey of PCPs and an electronic medical record (EPIC) chart review of PCP patients with chronic pain.

Aim 3.1a: An electronic survey was sent by email to all UHealth PCPs prior to the first ECHO/TEAMS telehealth coaching session and again 10 months later. The survey asked questions about physicians' self-efficacy with caring for patients with CP, their self-efficacy prescribing and managing chronic opioids and their familiarity and use of instruments and tools to assess and manage CP.

Aim 3.1b and 3.1c: For all patients with a chronic pain diagnosis, pain assessment and referral data was retrieved from EPIC for a 12-month period prior to the start of TEAMS and a 6-month period after monthly TEAMS sessions began (beginning after the 5th monthly session had occurred). Patients were identified through EPIC with the diagnosis ICD-9/10 codes for chronic pain syndrome, and at least 2 visits 6/2014 – 6/2015 and again 9/2015 – 8/2016 in a UHealth primary care clinic. Presence of PEG scores and referrals to pain consultants, including integrative medicine, pain management, physical therapy and behavioral/mental health, were evaluated for patients with CP seen by PCPs.

Aim 3.2: A brief email survey was sent after each TEAMS telehealth coaching sessions to participating PCPs. The survey assessed satisfaction and knowledge gained from the session with both closed- and open-ended questions.

Aim 3.3: Data for qualitative assessment of all the TEAMS sessions was obtained from participants, facilitators and consultants. We summarized highlights from the clinical pearls, key questions asked by the PCP presenters, as well as details about the types of pain patients presented. A small number of PCP presenters were interviewed 3-6 months after their presentation to the consultants about their experiences with the TEAMS session and clinical changes made as a result of their participation.

Evaluation: Data analysis:

Quantitative data from both the survey and the EPIC data retrieval were entered into a REDCap database and descriptive and comparative statistics (chi-squares) were performed using SPSS, looking for changes from the pre- and post- time periods. Due to low participation in the survey, we were unable to compare pre- to post- changes by participation in the TEAMS sessions. EPIC data were organized by distinct patient to assess if a PEG was done or not. Data tables were summarized by PCP and office practice with a presence of PEG or referrals. Chi-squares were done to see the change in presence of PEGs from pre- to post- time frame.

Qualitative data (free text answers on the surveys, text and details of each TEAMS session) were summarized and sorted into categories that emerged from the data. The categories were summarized into themes by discussion between study team members.

Evaluation: Results

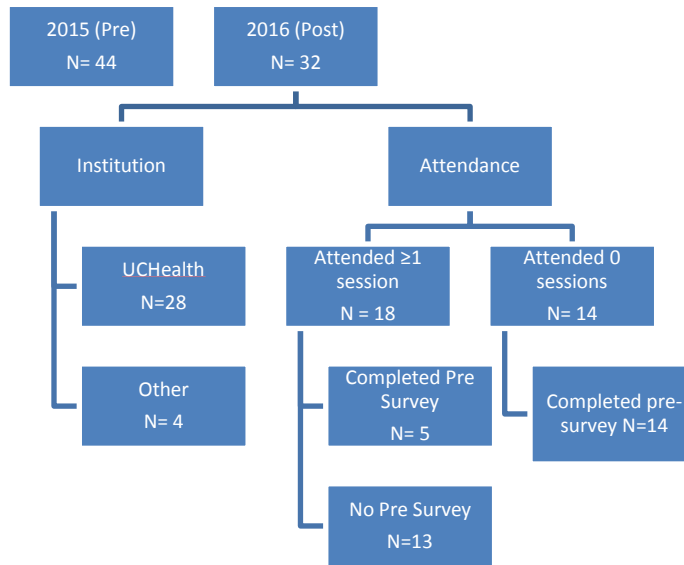
Participation

We held 20 TEAMS sessions between September, 2015 and May, 2017; 83 unique participants logged into the TEAMS sessions. Most (81%) of the participants attended fewer than 4 of the 19 sessions; we received a total of 129 after-session participant evaluations.

Provider survey (Aim 3.1a)

The provider survey was sent by email to all UCHealth primary care physicians prior to the institution of the TEAMS sessions (August – September, 2015, the “pre” surveys) and again after 10 TEAMS sessions had been held (August – October 2016, the “post” surveys). In addition, the post-survey was sent to all non-UCHealth providers who had attended at least one TEAMS session. In Figure 1 below, the number of returned post-surveys are broken down by practice location (UCHealth, other) and whether the provider attended any TEAMS sessions. Only 19 providers completed both a pre- and a post- survey, and since only 5 of them had attended any TEAMS sessions, we were unable to compare changes in scores by TEAMS participation.

Figure 1: Breakdown of survey participation



Analyses of the 19 matched surveys are presented in the tables below. Participants answered questions about their self-efficacy (confidence) in caring for patients with chronic pain, their self-efficacy in managing chronic opioids for chronic pain, and their familiarity and use of chronic pain assessment and management tools. In the tables below, the percentage of participants who agreed or strongly agreed (chronic pain care and chronic opioid management) or who had good familiarity and frequent use of the tools are presented from the pre- and post- surveys. There are no statistically significant differences between the two surveys.

Table 1: Provider self-efficacy in caring for patients with chronic pain (n=19, agree/strongly agree)

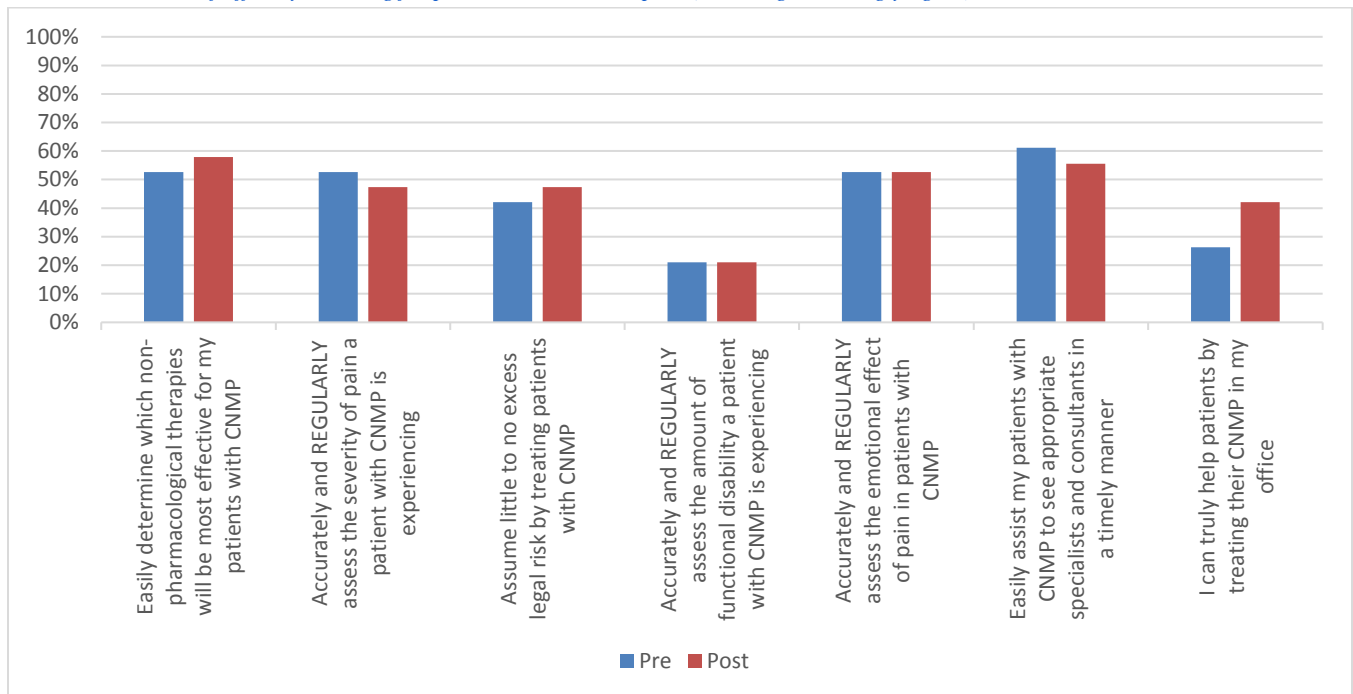


Table 2: Provider self-efficacy in managing opioids for chronic pain (N=19, agree/strongly agree)

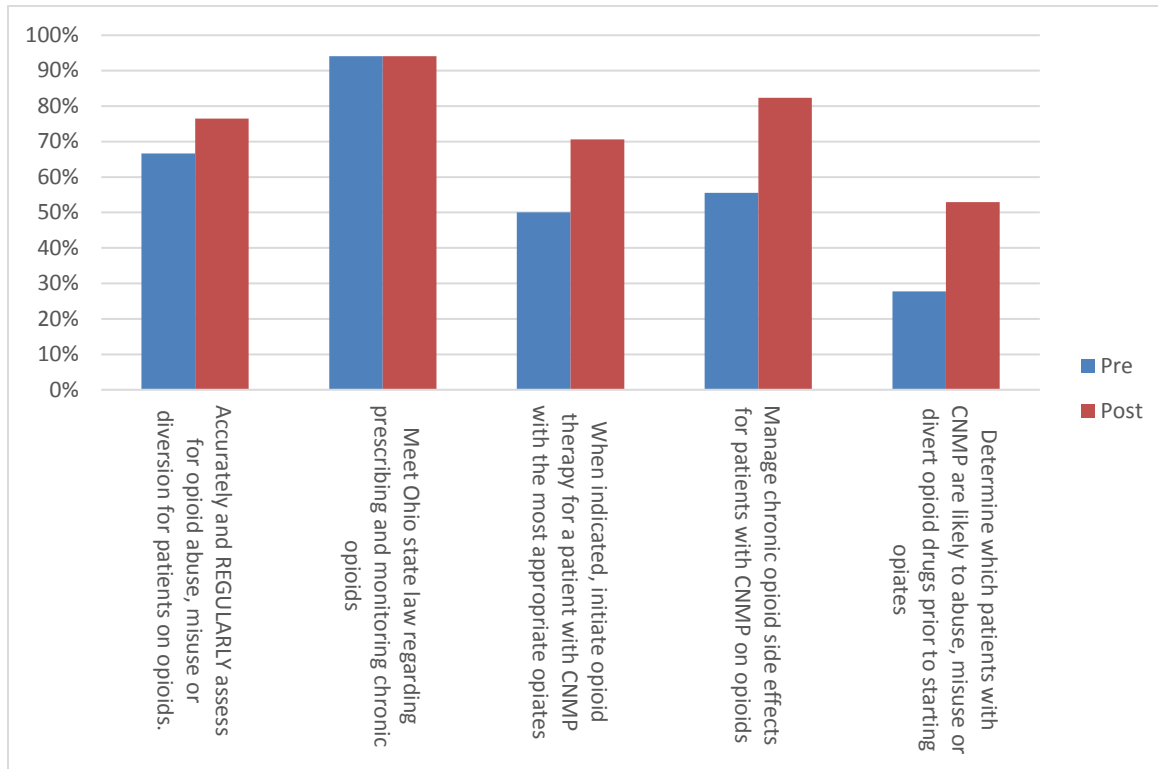


Table 3: Familiarity and use of tools for CP care (N=19, familiar/very familiar and regular use)

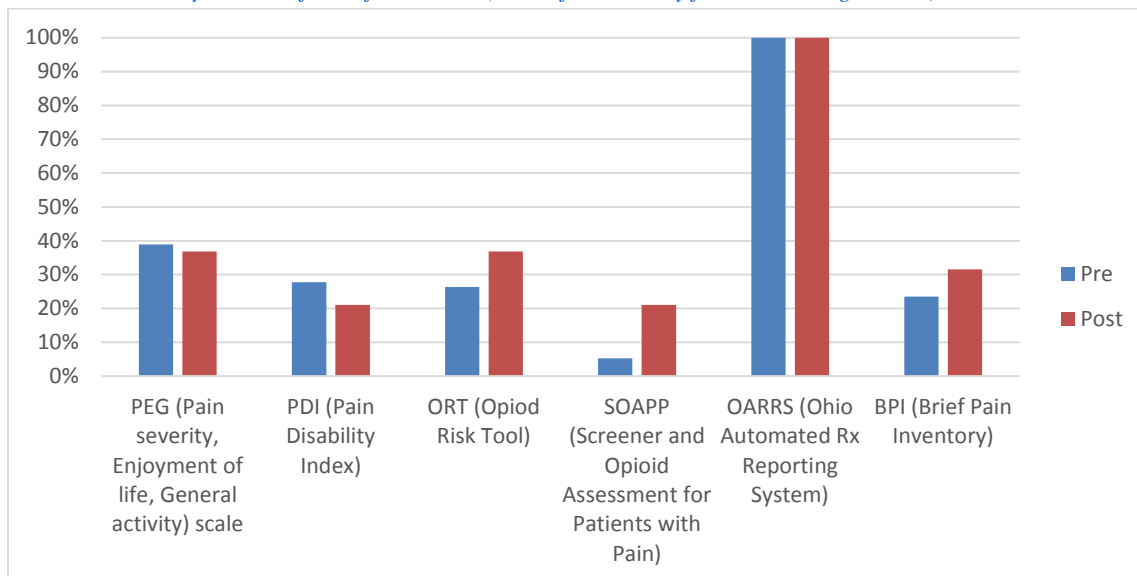


Chart review (Aim 3.1b and 3.1c)

We obtained data through EPIC for patients who had been seen by UHealth PCPs with two visits for CP during two time periods: 12 months prior to the first TEAMS session (July 2014-June 2015, labeled “pre”); and a 6-month period beginning after five TEAMS sessions had been held (January 2016 – June 2016, labeled “post”). Two key outcomes were assessed: use of the PEG tool to assess chronic pain; and referrals made by PCPs to specialists likely involved in chronic pain care. Due to the small number of providers who participated in the TEAMS sessions, we were unable to compare the pre- and post- data sets by TEAMS participation. Rather, we are presenting the aggregate data for all providers.

PEG: During the pre-period, 18 PCPs had at least 1 PEG completed for a patient with CP, while 13 PCPs had at least 1 PEG complete in the post-period. Eight PCPs completed PEGS in both time periods, demonstrating use of the tool by only a small percentage of the 87 PCPs. Of the 19 UHealth primary care offices, only 9 had any CP patients who had a PEG for at least one patient documented in the data pull. As is seen in Table 4 below, the use of the PEG actually decreased from the pre- to the post- time period.

Table 4: Documentation of PEGs in patients with CP

Practice	PRE			POST		
	Total CP pts	PEGs	%pegs	Total CP pts	PEGS	%pegs
A*	25	1	4%	60	0	0%
B	68	6	9%	75	4	5%
C*	68	26	38%	48	21	44%
D	3	1	33%	51	5	10%
E	3	1	33%	5	0	0%
F*	18	9	50%	30	15	50%
G*	45	3	7%	30	0	0%
H*	36	0	0%	92	1	1%
I*	24	8	33%	24	6	25%
Total	366	60	16%	504	52	10%

*at least one provider in the practice has attended at least one TEAMS session

Referrals: A significant number of patients with CP were referred during the chart review periods. Almost 57% of patient’s charts demonstrated referrals in the pre- period and 55% in the post- period, as illustrated in Table 5 below. Most referrals were to physical therapy and to pain management.

Table 5: Type and number of referrals in patients with chronic pain

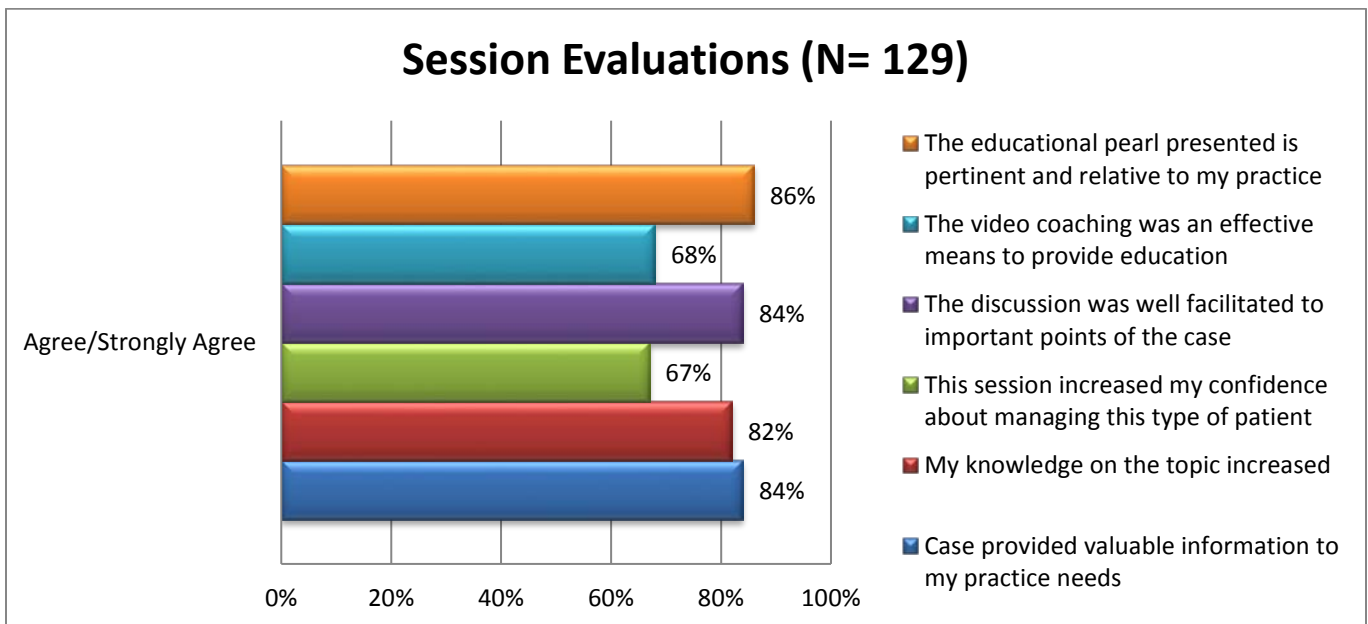
	PRE (n=366)	POST (n=504)
Physical Therapy	63	139
Pain Management	93	98
Rheumatology	8	2
Neurology	22	19
Psychiatry	6	6
Psychology	3	0
Orthopedic Surgery	1	0
Physical Med & Rehab	12	12
Total number of referrals	208	276

Participant satisfaction and knowledge gained (aim 3.2)

After each TEAMS session, participants were asked questions about their satisfaction with the session, and ways they planned to use the information and skills from the TEAMS session. Selected comments from participants are below and in table, the summaries from all of the TEAMS sessions are summarized, and participants were generally very pleased with the TEAMS sessions.

- “This is a great program and a model for perhaps other collaborative learning programs with other specialties.”
- “This is really a very valuable resource. I feel I learn a lot.”
- “Excellent format to learn about this topic.”
- “Really appreciate the interdisciplinary approach; well organized format.”
- “The case submission process was quite easy. It didn’t take too much time to complete, just some time to review the chart and collect my thoughts re: what did I really want/need to learn.”
- “All [sessions] have been excellent learning opportunities and I do feel that I am learning more from each one and trying to implement in my practice.”

Table 6: Session Evaluation Responses (N=129, agree/strongly agree)



Description and qualitative assessment of TEAMS/ECHO sessions (aim 3.3)

Each TEAMS session began with a 10-minute evidence based clinical pearl given by one of the TEAMS consultants. The selected topics were suggested by PCPs on their post-session evaluations, as well as during initial discussions with potential participants and from our previous research in CP in primary care.

Table 7: Chronic Pain Pearl Topics

Pain Management
An Update on Interventional Procedures for Chronic Pain
2016 CDC Guidelines & Surgeon General Letter for Opioid Prescribing Review
Simple Tools to Assess Pain in a Primary Care Patient (e.g. PEG)
Ohio Prescribing Law: Or, How to Stay Out of Trouble with the State Medical Board
Pharmacy
Effective Interpretations of Urine Drug Screens
Non-Opioid Pharmacological Treatments for Chronic Pain
Opioid Conversions & Tapers
Comparing Tolerability of 3 Non-Opioid Medications for Chronic Pain
Physical Therapy
Does Bracing Help Chronic Pain?
Aquatic Therapy: Evidence and Area Resources
Exercise Prescription for Chronic Pain
Benefits of Massage for Chronic Pain
Integrative Medicine
Acupuncture for Pain
Pain-less Eating: The Anti-Inflammatory Diet
Two-Needle Acupuncture Technique Demonstration
Movement for Myalgia
Behavioral Health/Addiction Medicine
Psychotherapy Tips for Patients with Chronic Pain
Working with Patients Who Have Chronic Pain and Substance Use
The Role of Marijuana in Treatment of Chronic Pain
Assessment and Treatment of Anxiety in the Chronic Pain Patient

Patient cases submitted to and discussed by the TEAMS consultants represented a variety of CP problems. Patients ages ranged from 35 to 70 years old and 60% were women. Seventy percent of patients had back/joint pain; other pains included headache, phantom pain, and neuropathy. Complicating issues included renal failure, COPD, sickle cell disease, substance use, obesity, depression and anxiety, and current Suboxone® treatment. Each PCP was asked to provide key questions for the

consultants to discuss when they submitted a patient case for telementoring. An analysis of these questions shows that while questions about opioids were common, there was a wide variety of questions asked by the PCPs.

Table 8: Categories of Key Questions in Primary Care Pain Cases

Opioid management
Tapering and changing opioid treatment
Opioid use with other chronic diseases (respiratory, renal, substance use, sickle cell)
Medication management
Best non-opioid medications
Medication interactions
Procedures and injections for chronic pain
Motivating patients for care changes and self-care
Physical therapy and other physical modalities
Coordinating care with multiple providers and specialists
Laboratory and imaging for diagnosis and management

Although we attempted to contact and interview all PCPs who presented cases during a TEAMS session 3-6 months after the case discussion, we were only able to interview seven presenters. All the PCP interviewees found the TEAMS process easy to do – from case submission to logging in and participating in the sessions. Four of the interviewees found the advice applicable to their patient, and indicated that it led to changes in care. Two interviewees had not seen the patient in follow-up by the time of the interview and one interviewee found that the discussion did not add benefit to care.

One physician who found the advice applicable noted that, “I have seen the patient and discussed with them the multiple approaches we can take to manage his pain better. Unfortunately, the patient was not willing to make changes to his current regimen with medications and declines additional physical therapy etc. He however decided to give up gambling which did improve his financial status.” Another physician told us, “In the case of this particular patient I was ultimately able to convince her to pursue physical therapy and to try to use her prosthetics by telling her that the only purpose I was writing for the opiates was to improve her functional status and if we were not able to accomplish that then we would not refill the opioids. The patient begrudgingly was willing to pursue physical therapy and to start using her prosthetics. During our last visit she came with her prosthetics on and she did walk in the room and hallway to demonstrate she had learned to walk with them.”

Barriers and limitations:

We experienced three significant barriers to the success of our project and of its evaluation:

- *Competing time demands* – Other, and equally important, events occurring during the 1st Thursday lunch hour (our time slot) led to poor participation by PCPs, both as online attendees and case presenters. We visited practices, reached out via e-mail, spoke to practice leadership meetings, and obtained UHealth primary care leadership support for participation in TEAMS sessions, yet we continued to have minimal participation in the sessions. In discussion with physicians and providers, they described a desire to become more comfortable caring for patients with chronic pain, but competing demands for the specific day and time of the monthly TEAMS sessions, the extra hour away from daily activities of patient care and charting, and other patient health concerns limited their ability to participate in the TEAMS sessions.

- *Poor response rate for the physician survey* – Despite a relatively short online survey and a financial incentive to complete the survey, only a small number of physicians completed the survey. We tried to increase our response rate by sending out multiple email reminders, had UCHHealth primary care leadership send out a request to physicians to complete the survey and spoke personally to many physicians asking them to complete the survey.
- *Limitations of electronic medical record data* – Referral data are not robust within EPIC and we could not identify the relationship of the referral to the chronic pain. We made assumptions, based on previous research in which we identified that musculoskeletal was the most common type of pain, followed by headaches and neuropathy, that referrals to orthopedics, neurology, physical medicine and rehabilitation were likely to be related to chronic pain. Due to the importance of mental health with chronic pain management, we included all referrals to mental health providers. We were unable to capture referrals outside of the UCHHealth system, which are especially prevalent for mental and behavioral health.

Conclusions:

We successfully created and implemented a CP telehealth mentoring program for local PCPs. Those PCPs who participated found the sessions helpful and well run, and useful to them in caring for their patients with CP. Despite positive experiences from participants, there were significant barriers to the expanded success of the program and of the evaluation. Competing time demands led to poor participation by community PCPs, even though our project team made many attempts to notify, educate, encourage and support their participation. This limited participation also affected our evaluation, which was also limited by poor PCP response to the survey.

At a time when chronic pain is recognized as an epidemic, investment in processes to improve care are greatly needed. Building on this initial TEAMS experience, it is recognized that additional resources are needed to further this effort. Additional funding attempts have been made to achieve this goal. Additionally, the potential for including this approach into residency training is being explored to facilitate a more integrated, practice-based approach to CP management for the future.

List of Publications and Products:

Elder NC (presenter), McDonald S, Pallerla H, Forbringer A, Boone J. Identification and Assessment of Chronic Pain in Primary Care Practices using Existing electronic Health Record Data. A presentation at the annual meeting of the North American Primary Care Research Group, Colorado Spring, CO, November, 2016.

Forbringer A (presenter), Elder N, Pallerla H, McDonald S. Referrals as a tool for an interprofessional approach to chronic pain management in primary care. Poster presented at the University of Cincinnati College of Medicine Research Week, Cincinnati, OH, August 2016.

[Http://cme.uc.edu/echo-pain/](http://cme.uc.edu/echo-pain/)

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