

Pfizer Final Report: Pain Action Consulting Team (PACT): An Innovative Mentorship-Based Strategy to Teach Responsible Opioid Prescribing

Maura McGuire, Edith Vargo, Michael Clark

Abstract:

Background: Management of chronic non-cancer pain is commonly done by primary care providers (PCPs) using opioid analgesics. We developed a Pain Action Consulting Team (PACT) to study and improve pain management by PCPs in our organization using mentoring and education.

Methods: Participants were self-selected from a large academically oriented primary care group. Local and national experts were invited to serve as PACT mentors. We completed a baseline systematic chart audit (SCA) of 12 key domains of pain management practice and met with PCPs to share results. All PCPs completed a four-hour modular curriculum and four hour-long mentoring sessions. Program outcomes were determined using chart-stimulated recall (CSR), and by repeating SCA at 6 and 12 months after the intervention and comparing these with baseline audits.

Results: 23 providers completed the training and mentoring program. CSR was completed for 22 of 23 participants, and demonstrated improved practice in 5 areas. The SCA of 157 patients managed by participants showed increased documentation of pain using a quantitative scale (OR 2.92, $P < 0.001$) and alleviating factors (OR 7.96, $P < 0.001$). Participants requested improved electronic health records (EHR) functionality to enhance pain management practice.

Conclusion: Our PACT program achieved limited improvements in evidence-based pain management practice in a self-selected pilot cohort. Expanded training and new EHR templates to enhance clinical decision-making and documentation are being developed.

Background

Chronic non-cancer pain (CNCP) is an increasingly common problem among primary care patients, and opioid analgesics (OAs) are frequently used to manage this pain. Over the past 20 years, there has been an over 200% increase in the number of OA prescriptions with a concomitant rise in abuse and diversion. It has been estimated that only 25% of the 50-70 million Americans who have chronic pain are receiving appropriate therapy, with a tripling of overdose deaths from opioid pain relievers compared to 1999 to 2006 [CLAAD 2012].

Most CRNPs are managed by primary care providers (PCPs). However, many PCPs lack sufficient training in management of pain and substance abuse, and struggle with time limitations, and when working with CRNPs need to attend to management of many health issues in addition to chronic pain.^{4,5} PCPs may be especially challenged by CNCP patients, who use more healthcare resources than typical patients, averaging 12.9 visits per year compared to 3.8 for other patients visits). In addition there is evidence that patients who seek treatment for CNCP in primary care are younger and report more severe pain choose to seek treatment in a tertiary care setting, (Miller et al., 2014), possibly making their management even more complex.

In 2011 the Institute of Medicine recommended that PCPs be prepared to deliver coordinated, evidence-based, interdisciplinary pain assessment with assistance from interdisciplinary teams and pain specialists as needed. [IOM 2011][Turk 2010]. .As part of ongoing work to improve care of these patients by primary care physicians, we developed a Pain Action Consulting Team

(PACT), which incorporates systematic online education with peer support systems and expert mentoring.

Methods

Setting

Our organization is a large multispecialty group practice which, at the time of this study, had 29 primary care offices providing care to 220,000 patients. These practices are staffed by 180 primary care clinicians including 75 internists and 90 family physicians. We have central resources that support provider education, quality improvement, and safety. We have employed an integrated EMR since 2007 with features and organizational use as described elsewhere (McGuire 2012).

Prior to 2013, our EMR which provided an online opioid agreement and several other tools to assist PCPs with documentation and management of CRNP patients. In 2013, one year prior initiating PACT, our organization adopted a new EMR which required adoption of new workflows and learning. In addition, our state implemented a new PDMP in 2013.

Selection of participants:

Primary care providers were invited to participate in PACT program by email solicitations sent to more than 150 physicians and CRNPs from our large group practice. Participants were selected from volunteers who managed CNCP patients and who had at least 10 CRNP empanelled patients based on a review of our EMR. In order to incent participation, we provided continuing medical education credits for this activity. Because this represented part of an organizational quality improvement initiative, and because all primary care providers in

our practice are subject to productivity expectations, we provided productivity protection equivalent to a time commitment is about 10 hours. PCPs earned 8.5 hours category I CME, 20 hours of PI CME, and 22 e-RVU (education RVU) for participating.

PACT Program Overview

Each enrolled in the PACT program were assigned to one of four mentors, based on the best match of schedules. Mentors were chosen from a group of nationally known pain management experts recruited by the project team.

Participants completed the curriculum and mentor meetings over a 2 month period. Both mentors and mentees attended 4 webinars which covered a unique aspect of chronic pain management. At the conclusion of the webinar mentors and mentees met in virtual meeting rooms to further review topics related to chronic pain management. Finally, each mentor and mentee completed two individual mentoring meetings. These educational modules covered best practices, medication management, monitoring and interdisciplinary care as shown in Table 0. Evaluation of the curriculum included self-rated change in knowledge, practice, use of objective assessment tools, and value of the mentoring aspects of the program.

Documentation Quality

Best practice documentation markers were developed based on national pain management guidelines as shown in Table 00. Audit tools to evaluate for these elements were created and used for program evaluation. The impact of the program on documentation was assessed

using both a (1) systematic audit (SA) of patient records before and after education and (2) chart-stimulated recall.

Systematic Audit of Records

Prior to participating in education, each mentees identified 6-10 challenging chronic pain patients, and an internal reviewer from our organization conducted a chart audit; the same records were audited 6 months after training was completed. The audit tool was developed by the study team and included patient demographics, diagnoses, total medications, pain related therapies, evidence of screening for abuse or diversion, evidence of a narcotics agreement, and a review 4 A's related documentation. The second audit employed the same tool. The initial SA was a 12 month look-back and the second SA was a 6 month look back. The 12 month look back included a review of 2 months of documentation in the prior system, as well a review of data uploaded into the new system previous EMR.

Stimulated chart recall

In order to assess subjective measures of the program success, each participant agreed to participate in a chart stimulated recall. CSR is a validated methodology that has been used to study outcomes of educational interventions. CSR allows gathering qualitative and quantitative data simultaneously for comparison purposes and supports meaningful outcomes findings at relatively low cost. It also collects subjective data and therefore allows for explanation of barriers to best practices and/or documentation. It also allows for unanticipated outcomes findings, and interviews serve as additional reminder and stimulus of best practice.

The CSR interviews were conducted by contracting group, and were scheduled by the study team at times mutually agreeable to the participants. Trained interviewers conducted 60 minute telephone interviews; prior to these interviews each participant was requested to have access to 5 records managed by participants in their practices. The interviewers collected qualitative interview data and quantitative chart data using a script developed together with the study team. Records for a clinician may show change in some patients, not in others (not “all or nothing”).

Evaluation of Education Component

All learners completed an assessment of this continuing medical education activity, indicating achievement of learning objectives, program quality, speaker skills, and mentor skills.

Participants received CME for hours of participation in the program. CME was accredited thorough our continuing medical education department.

Analysis

We compared the pre and post chart reviews to determine the percentage which completed the indicators for chronic pain management listed above. We compared the percentages of completion in the pre and post reviews for each indicator. Analyses were conducted in Stata 13.

We conducted a bivariate analysis using symmetry analysis. We then conducted a multivariate analysis using logistic regression controlling for age and individual provider. Multivariate analysis were conducted controlling for age and provider individually and collectively. (*How was CSR data analyzed?*)

Results

Participants: 26 PCPs joined the program; 69% were female, 81% were physicians (65% internists and 35% family physicians); 3 PCPs were unable to complete the program.

Characteristics of participants are shown in Table 1.

Baseline SA: Results if the baseline SA are shown in table 2, which included 197 patients. The average CPNP patient was 55 years old, had 3.5 PCP visits in the preceeding year, but >30 other office contacts, and had 4.6 chronic pain diagnoses (mainly related to multiple pain locations), and 17 other diagnoses listed in the EMR. At baseline, documentation demonstrated that only 40% had an opioid agreement and less than ___ had evidence of urine tox or screening for aberrant behavior.

Post intervention SA: Results of the post intervention SA are compared with baseline characteristics in Table 2. Univariate and multivariate analysis of changes in best-practice documentation are shown in Table 4 and Table 5. The univariate analysis of the systematic audit showed significant improvement in pain score, and alleviating factors documentation and a significant decline in use of non-pharmacologic treatment, other analgesics, and referrals to other specialists. Multivariate analysis: While only a few items showed a statistically significant increase, individual providers seemed to improve their approach to pain management. Although, overall screening for functional activity, aggravating factors, pain

severity, urine toxicology, and adverse drug reactions decreased in the 6 months following the intervention, some individual providers showed a significant increase.

Curriculum Evaluation: The PACT curriculum evaluation is shown in Table 7. Overall PACT was well rated, although webinars were rated as less useful than mentor meetings and the audit review with the RN. The chart stimulated recall demonstrated ongoing gaps in perceived vs. actual documentation (Figure 1),

Stimulated chart recall analysis: 22 of 29 participated in the CSR 21 of 22 made changes in best practices that were documented in the EPIC medical record. There were a total of 165 documented changes, an average of 7.5 per participant. Most common changes were use of OTA, use of UDT, and assessment of functional status. Participants made an average of 7.5 changes in practice across all patient records (average # records 3.6, total # charts reviewed 80) 21 of 22 participants had at least one documented change; 10 of 22 had multiple documentations for at least one measure; The changes reported most frequently, (% of each metric with pre- and post-activity data documenting a change in practice) were (1)Opioid agreement 41% (2) Urine toxicity screen 36% (3) Assess functional status 33% (4) Substance abuse screening 31% (5) Assess pain severity 27%. Based on the CSR review, Better documentation of practices such as pain assessment, functional assessment, etc. They felt the quality of data in charts increased, for example more detail on functional assessment including description of activities, etc. and they were utilizing more tools such as pain scales.. Staff indicated they had developed better monitoring for aberrant behavior – use of PDMP, pill

counts, refill activity, UDT; they also reported improved use and documenting opioid treatment agreement.

Discussion

The significant national increase in use of opioid analgesics in patients with CNCP, and the fact that these are often prescribed by primary care providers suggests a compelling need for effective training of primary care providers in management of CNCP. Our goal in the PACT program was to develop and test an educational strategy that would be effective in a large group of busy, practicing primary care providers, with a mentoring component to augment learning. Mentoring has been shown to be an effective method for enhancing education in areas that require significant support and integration of behavioral and interpersonal domains into education. In our setting we found that participants found the mentoring aspects very valuable, based on analysis of comments in the final evaluation.

Participants overall were very satisfied with the PACT program. Participants indicated raised confidence level with overall opioid management. Based on learning from mentors and fellow participants, they indicated more comfortable dealing with difficult patients, and saying no when appropriate. Some had supplemented the group and online learning with additional outside readings. Importantly, participants indicated that they felt their patients were better off with overall more appropriate opioid treatment compared to before participation in the program. All participants indicated that they hoped the program would be continued and expanded.

The intervention did not result in consistent enhancements in documentation: While there was limited success in the overall group, some providers did demonstrate an improvement in their management of individuals with CNCP. For instance provider #2 improved in all areas of management, although they were not all statistically significant. There were some statistically significant results but they showed a significant decrease from pre to post: non-pharmacological intervention, pain management, non-opioid analgesics prescribed, and functional activity screening. The items that were significant for an increase from pre to post were documenting alleviating factors and documenting a quantitative pain score. The reasons for the decrease may relate to the time period for the chart review...

However the CSR and Educational outcomes survey suggested that learners perceived that their knowledge and preparedness to treat CNCP patients had improved. This suggests that providers felt confident providing appropriate care that was not apparent in the chart audit.

Documentation challenges in the EMR?

Can EMR help? EMR documentation tools

Limitations:

There are several limitations that must be considered in evaluating our program. Outcomes obtained via the CSR process could be limited by a sample size too small to allow for meaningful statistical comparisons; time constraints precluding complete data collection. In addition this data must be considered self-reported because researcher does not view the chart and is therefore subject to reported bias. Additionally there is limited controlled data

supporting the validity of CSR in trainee evaluations. These outcomes were mitigated by the SA, in which a sample of patient records were reviewed before and following the intervention. However, because participants were involved in selection of these patients, there could have been bias towards improving practice in this selected subset that did not extend to all patients. We changed our EMR during this study, which provided confounding factors related to usability, additional stress to participants, and may have limited data availability. Three participants did not complete the program, reducing the sample size. Documentation may be used as a marker for care, but does not necessarily reflect patient outcomes. While participants felt they provided better care, we did not assess the impact of provider education on patient satisfaction or outcomes.

Conclusion

We implemented this program to provide accessible, learner-oriented education to help primary care providers more appropriately manage opioid analgesics in patients with CRNP. Our overall goal was to improve patient care and experience. At baseline, audits of primary care visits indicated deviations from best practices for chronic opioid management, and even after completing our curriculum, there was little objective change in documentation. Despite this, participants indicated that their knowledge and comfort in managing chronic pain had improved. The difference between self-rated improvements in the CSR assessment, and relative lack of change in the systematic audits may relate to documentation inertia, and ongoing issues with use of decision and support and documentation tools within our EMR. We are currently developing pain management decision support tools to support best practices across all EMR users.

Table 0: Key domains in Reviews of Patient Visits

Non-cancer Pain Management with Opioid Analgesics Practice Assessment
<ol style="list-style-type: none"> 1. Opioid Agreement completed at least once 2. Assessment of severity (qualitative or quantitative) 3. Alleviating or Aggravating Factors 4. Activities of Daily Living and Functional Assessment 5.

Table 0: Webinar Topics

<ol style="list-style-type: none"> 1. Orientation to program 2. Pain and Risk Assessment Tools 3. Clinical Pharmacology 4. Monitoring and Risk Mitigation Strategies 5. Interdisciplinary Approaches to Managing Chronic Pain

Table 00: Pain Management best Practices for Primary Care

Best Practices	Primary Care Documentation
General Documentation	Was there a relevant history of pain (location, duration, onset, etc..) Was an examination of affected areas reported? Was a pain diagnosis documented? “chronic pain”, “Chronic low back pain” either (1) in visit note (2) on problem list Was there an overall treatment plan? Were appropriate consultations, tests, and referrals considered? Were other adjunctive therapies considered?
Analgesia	Was pain severity assessed? (Quantitative vs. Qualitative)
Activities of Daily Living	Was functional status assessed? (ADLs, iADLs, work, etc)
Adverse Drug Reactions	Was there screening for adverse reactions (ie sleep, constipation, mood changes)
Aberrant Behavior	Was screening for substance abuse completed? (initial vs each visit) Was there evidence of adherence screening (ask, pill count, etc) Was a urine tox screen performed in last year ? Was there a PDMP (CRISP) check
Agreement	Was there an opioid agreement in the record (once, yearly)
Follow-up	Was regular followup arranged: (3-6 months)

Table 1: Characteristics of PACT Participants:

Characteristics of PACT Participants	#	%
Number	26	100%
Female	18	69.2%
Specialty		
IM	17	65.4%
FP	9	34.6%

Med-Peds	1	3.8%
Physician vs Nurse Practitioner		
Physician	21	80.8%

Table 2: Characteristics of patients

Item/Question	Number	% of Patients with item assessed in last year
Sample characteristics		
Number of Patients Reviewed	197	
Number of PCP Reviewed	23	
AVE Pt's age	54.55	
AVE # PCP visits per patient	3.24	
AVE # total contacts (Phone, refills, other provider visits)	32.92	
AVE. # PCP visits with some pain assessment documented	2.30	
AVE. # PCP visits pain severity documented	1.49	
AVE Months since last severity assessment	4.80	
Patient Diagnoses: Percentage of patients with the listed diagnosis		
6a. C-P related cond LUMBAR BACK (Y/N)	42	26.8%
6a. C-P related cond CERVICAL	28	17.8%
6a. C-P related cond MIGRAINE/HA	32	20.4%
6a. C-P related cond NEUROPATHY	14	8.9%
6a. C-P related cond Fibromyalgia	11	7.0%
6a. C-P related cond MUSCULOSKELETAL	108	68.8%
6a. C-P related cond ABD & PELVIC PAIN	21	13.4%
6a. C-P related cond ARTHRITIS	44	28.0%
6a. C-P related cond SICKLE	1	0.6%
6a. C-P related cond CANCER	6	3.8%
6a. C-P related cond OTHER	132	84.1%
Number chsrts with "CHRONIC PAIN - " listed as Dx	43	27.4%
Ave Total Number of chronic Pain Dx	4.56	
AVE Total Dx on Problem List (count total # of dx on problem list)	17.86	

Table 3: Baseline Documentation

157 patients, 500 visits, 23 PCPs	%
Functional activity assessed in last year (Y/N)	49.0%
Non-Pharm intervention advised	41.4%
Opioid Agreement In Chart	39.5%
Urine tox screen done in last year	26.8%
Pain mgmt specialist consulted	21.7%
Adverse drug reaction ccreen in last year	16.6%
Number with Pain QUANTITATED	14.6%
Aggravating factors screening	7.6%
Aberrant behaviors assessed in last year	7.0%
Other drug monitoring/adherence screening in last year	5.7%
Alleviating factors documented	3.2%
Substance Abuse screen documented in past year	0.6%
Depression screen in last year	0.0%

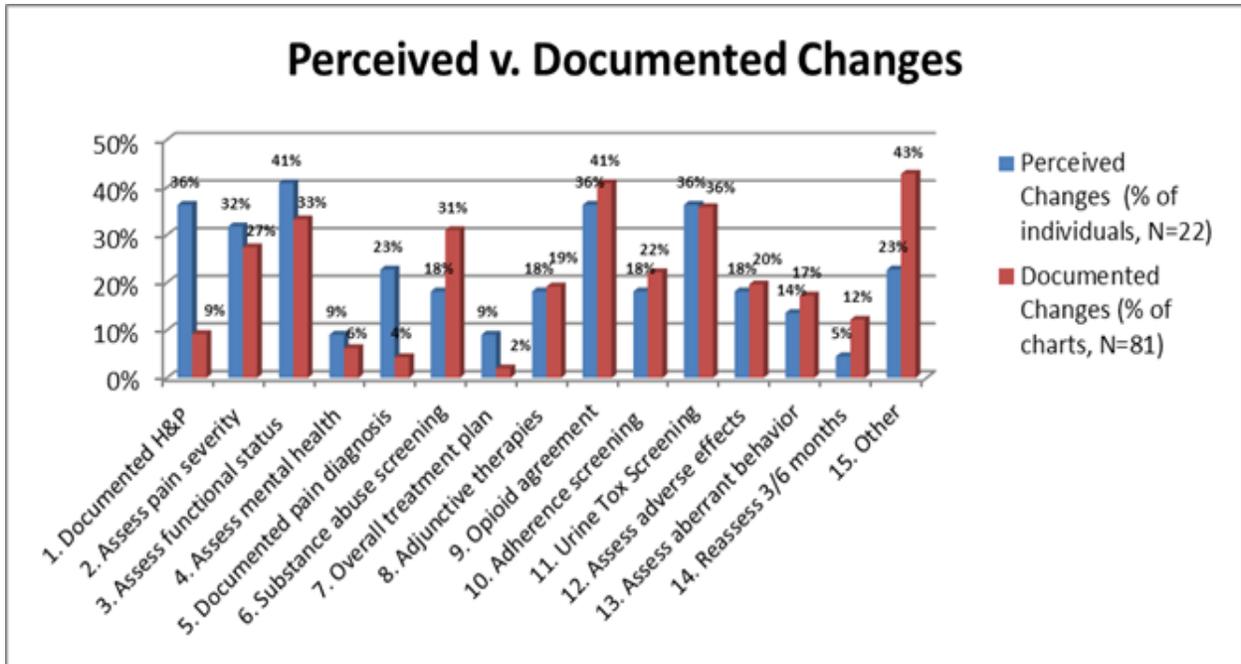
Table 4: Univariate Analysis

	OR	95% CI	p-value
Urine Tox	0.98	0.63-1.50	0.929
Non-Pharmalogical Tx	0.27	0.17-0.43	0
Depression			
Opioid Agreement	1.21	0.85-1.72	0.3
Pain Severity Documented	0.76	0.52-1.11	0.15
Quantitative Pain Score	2.92	1.80-4.73	0
Alleviating Factors	7.96	3.00-21.13	0
Aggravating Factors	1.19	0.64-2.21	0.576
Functional Activity	0.68	0.46-1.01	0.055
Adverse Drug Reaction	0.93	0.55-1.56	0.772
Aberrant Behavior Assessment	1.26	0.70-2.28	0.448
Pain Management	0.18	0.094-0.36	0
Opioids Prescribed	0.15	0.03-0.68	0.013
Other Analgesics Prescribed	0.18	0.11-0.29	0

Table 5: Multivariate Analysis

Provider	Assess Functional Activity	Assess Adverse Events	Depression Screening	Opioid Agreement	Pain Severity	Quantitative Pain Score	Aggravating Factors	Alleviating Factors
1	0.7 (0.3-1.9)	0.2 (0.1-0.8)	0.8, (.02-3.4)	0.7 (0.3-1.9)	3.1 (1.1-9.2)	0.1 (0.3-0.4)	0.1 (0.01-0.6)	Not Calculable
2	5.3 (1.3-20.7)	4.1 (0.8-22.1)	2.0, (0.3-14.3)	4.1 (0.9-18.4)	4.0 (0.7-23.2)	13.4 (2.9-62.2)	2.8 (0.2-31.6)	4.9 (0.5-51.3)
3	4.7 (1.3-16.4)	6.6 (1.3-34.5)	2.7, (0.3-20.6)	1.3 (0.3-5.6)	2.2 (0.5-11.2)	5.1 (0.99-26.6)	5.1 (0.5-48.4)	2.3 (0.2-29.2)
4	0.8 (0.12-3.8)	1.2 (0.2-9.2)	4.0, (0.3-60.8)	0.4 (0.1-2.0)	0.6 (0.1-2.8)	0.5 (0.05-5.0)	Not Calculable	Not Calculable
5	1.2 (0.3-4.2)	1.8 (0.3-10.1)	Not Calculable	1.2 (0.3-4.0)	0.5 (0.1-1.8)	Not Calculable	3.0 (0.3-33.0)	Not Calculable
6	2.5 (0.7-8.3)	1.0 (0.1-7.1)	2.0, (0.3-14.3)	0.6 (0.1-2.2)	1.5 (0.3-5.7)	0.6 (0.1-4.1)	3.5 (0.3-37.1)	14.6 (1.4-150.4)
7	0.7 (0.2-2.8)	1.6 (0.3-9.6)	4.0 (0.4-36.0)	1.0 (0.3-3.5)	0.4 (0.1-1.8)	2.3 (0.5-11.5)	2.1 (0.2-27.8)	4.4 (0.4-48.8)
8	0.2 (0.04-1.2)	0.3 (0.03-3.6)	1.3 (0.2-9.4)	0.1 (0.02-0.8)	0.02 (0.002-0.2)	0.2 (0.02-2.3)	0.7 (0.04-12.2)	Not Calculable
9	2.7 (0.7-10.0)	0.9 (0.1-6.6)	3.1 (0.4-23.5)	1.5 (0.3-6.4)	1.1 (0.3-4.5)	3.3 (0.8-13.1)	3.2 (0.3-34.3)	0.9 (0.1-16.5)
10	2.9 (0.8-10.2)	0.7 (0.1-8.3)	0.7 (0.1-5.2)	Not Calculable	1.4 (0.4-5.8)	0.2 (0.02-2.3)	0.7 (0.04-13.2)	1.9 (0.1-24.3)
11	0.6 (0.1-2.6)	0.3 (0.03-3.7)	0.9 (0.1-6.4)	6.7 (1.6-28.0)	0.3 (0.1-1.1)	Not Calculable	Not Calculable	Not Calculable
12	1.3 (0.3-4.7)	Not Calculable	3.1 (0.4-23.5)	0.6 (0.2-2.5)	0.1 (0.02-0.5)	1.1 (0.2-5.4)	0.7 (0.04-12.4)	Not Calculable
13	2.3 (0.5-11.6)	0.5 (0.05-5.8)	Not Calculable	0.7 (0.2-2.4)	0.4 (0.1-1.8)	4.5 (1.0-20.0)	2.8 (0.2-31.9)	Not Calculable
14	2.4 (0.6-8.8)	Not Calculable	13.3 (1.0-170.8)	0.1 (0.01-0.7)	0.4 (0.1-1.8)	0.5 (0.1-3.3)	4.3 (0.4-52.4)	4.5 (0.4-47.1)
15	3.2 (0.8-12.4)	0.9 (0.1-6.3)	Not Calculable	3.5 (0.9-13.7)	1.4 (0.1-1.8)	8.9 (1.6-48.0)	4.6 (0.5-43.0)	13.5 (1.4-131.1)
16	3.5 (1.0-11.9)	20.0 (3.3-120.0)	1.7 (0.2-12.3)	3.4 (0.8-14.2)	0.8 (0.2-3.7)	0.9 (0.1-7.0)	0.9 (0.1-17.5)	3.4 (0.3-38.5)
17	4.7 (1.2-8.8)	Not Calculable	1.7 (0.2-12.3)	0.7 (0.1-3.2)	1.5 (0.4-6.5)	5.6 (1.1-29.5)	6.4 (0.6-63.9)	2.0 (0.2-25.8)
18	3.3 (0.8-14.3)	1.4 (0.2-10.0)	5.3 (0.4-76.3)	0.3 (0.1-1.4)	0.8 (0.2-4.0)	2.9 (0.4-21.7)	Not Calculable	8.4 (0.7-94.3)
19	0.9 (0.2-3.7)	2.2 (0.4-13.3)	2.0 (0.3-14.3)	0.3 (0.1-1.2)	0.4 (0.1-1.6)	Not Calculable	0.9 (0.1-17.2)	2.0 (0.2-26.1)
20	2.1 (0.6-7.7)	0.4 (0.04-4.3)	1.3 (0.2-10.3)	0.2 (0.03-0.8)	0.7 (0.2-2.6)	1.0 (0.2-6.1)	Not Calculable	Not Calculable
21	0.2 (0.02-1.5)	Not Calculable	Not Calculable	5.3 (0.8-32.9)	Not Calculable	Not Calculable	Not Calculable	Not Calculable
22	2.3 (0.6-8.5)	1.1 (0.2-6.7)	0.6 (0.1-4.3)	1.8 (0.4-7.4)	0.7 (0.2-3.1)	0.2 (.02-2.3)	1.5 (0.1-18.1)	1.9 (0.2-23.8)
23	1.6 (0.4-6.1)	1.3 (0.2-8.0)	5.3 (0.6-46.3)	0.9 (0.8-15.3)	1.3(0.3-5.0)	2.2 (0.5-9.4)	0.8 (0.04-15.2)	Not Calculable
24	2.6 (0.9-7.5)	1.5 (0.2-9.1)	1.3 (0.2-10.3)	3.5 (0.8-15.3)	3.5 (0.6-21.8)	Not Calculable	4.7 (0.5-44.9)	Not Calculable
25	0.2 (0.02-1.9)	Not Calculable	Not Calculable	0.5 (0.1-2.9)	0.1 (0.004-0.5)	Not Calculable	Not Calculable	Not Calculable

Table 6: Chart Stimulated Recall



These data reflect qualitative participant responses about best practices. The responses were classified as to whether the participant reports that they do not do (“Never did”), have done in the past (“Always did”), or something they changed due to the program (“Improved”). Due to time limitations – not every metric was discussed with every participant.

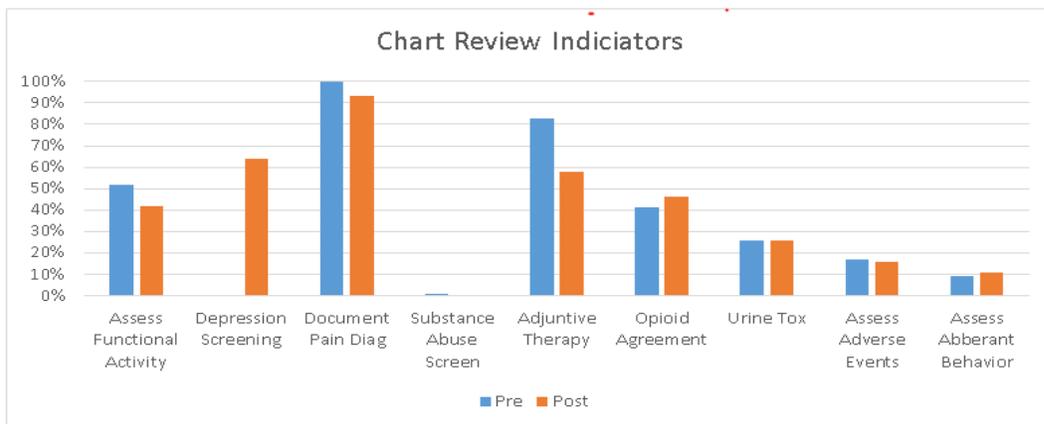


Table 7: Educational Program Evaluation (qualitative)

Level of agreement regarding ability to perform in the learning areas below. (1=strongly disagree/5=strongly agree)	Average Rating	SD
Describe how to wean patients off opioids when appropriate	3.8	0.83
Educate members of the support team as to their role in managing patients with chronic pain	3.9	0.79
Explain how the neural pain pathways work	4.0	0.46
Interpret urine drug tests as an aid to monitoring patients	4.0	0.56
Compare the pharmacological mechanisms of medications commonly used to treat chronic pain	4.1	0.55
Based on a chart review, describe strategies to address care and documentation challenges	4.2	0.88
Assess chronic non-cancer pain through the use of the four A's	4.2	0.62
Describe best practices in documenting management of chronic pain patients in the EMR	4.2	0.70
Describe use of Maryland's CRISP-based Prescription Drug Monitoring Program (PDMP).	4.3	0.55
Identify risk factors for opioid misuse	4.4	0.49
Describe a "team" approach to pain management	4.4	0.49
Use strategies from mentoring calls to improve the management of my patients and their pain	4.4	0.59
Explain why 'treatment agreements' are recommended.	4.5	0.51
Identify one or more adjunct therapies to use as opioid-sparing agents	4.5	0.51
Work with a mentor in a way that enhanced my learning	4.5	0.51
How often do you use the tools and resources discussed during the PACT program? (1=never/5=always)		
Opioid risk - ORT (Opioid Risk Tool)	2.4	0.94
Pain screening tools - Smart documentation tool to assess the 4A's on follow-up visits	2.5	0.89
Pain screening tools - PADT (Pain Assessment and Documentation Tool)	2.7	1.34
CRISP (Maryland's PDMP) to look for other prescribers/drugs	3.4	1.54
Opioids Agreement Letter	4.1	1.39
Using a scale of 1 to 5, rank the usefulness of each learning modality (1 = most /5 = least useful)?		
Webinars -	2.5	1.31
Individual meetings with mentors -	3.0	1.70
Group meetings with mentors -	3.4	1.16
Chart documentation validation meeting with RN -	3.5	1.26

References

References

Ballantyne JC, LaForge KS. Opioid dependence and addiction during opioid treatment of chronic pain. *Pain*. 2007;129:235-255.

Bhamb B, Brown D, Hariharan J, Anderson J, Balousek S, Fleming MF. Survey of select practice behaviors by primary care physicians on the use of opioids for chronic pain. *Curr Med Res Opin*. 2006;22:1859-1865.

Bohn TM, Levy LB, Celin S, Starr TD, Passik SD. Screening for abuse risk in pain patients. *Adv Psychosom Med*. 2011;30:113-124.

Bollinger LC, Bush C, Califano JA, et al. The National Center on Addiction and Substance Abuse at Columbia University (CASA). Under the Counter. The Diversion and Abuse of Controlled Prescription Drugs in the U.S. July 2005.

Breuer B, Cruciani R, Portenoy RK. Pain management by primary care physicians, pain physicians, chiropractors, and acupuncturists: a national survey. *South Med J*. 2010;103:738-747.

Burnham R, Day J, Dudley W. Multidisciplinary chronic pain management in a rural Canadian setting. *Can J Rural Med*. 2010;15:7-13.

Casebeer L, Brown J, Roepke N, et al. Evidence-based choices of physicians: a comparative analysis of physicians participating in Internet CME and non-participants. *BMC Med Educ*. 2010;10:42.

Center for Lawful Access and Abuse Deterrence (CLAAD). Drug facts. <http://www.claad.org/resources/drug-facts> Accessed October 22, 2012.

Chisholm CD, Weaver CS, Whenmouth LF, Giles B, Brizendine EJ. A comparison of observed versus documented physician assessment and treatment of pain: the physician record does not reflect the reality. *Ann Emerg Med*. 2008;52:383-389.

Chou R, Fanciullo GJ, Fine PG, et al. Clinical guidelines for the use of chronic opioid therapy in chronic noncancer pain. *J Pain*. 2009;10:113-130.

comScore Physician Online Usage Analysis, Q2 2010.

Guzmán J, Esmail R, Karjalainen K, Malmivaara A, Irvin E, Bombardier C. Multidisciplinary bio-psycho-social rehabilitation for chronic low-back pain. *Cochrane Database Syst Rev*. 2007;(2):CD000963.

Institute of Medicine (IOM). Improving the Quality of Health Care for Mental and Substance-Use Conditions: Quality Chasm Series. *Board on Health Care Services*. 2006. http://books.nap.edu/openbook.php?record_id=11470&page=78#p2000e8e19970078001 Accessed November 5, 2012.

Institute of Medicine of the National Academies. Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research. June 29, 2011.

<http://www.iom.edu/Reports/2011/Relieving-Pain-in-America-A-Blueprint-for-Transforming-Prevention-Care-Education-Research.aspx> Accessed October 19, 2012.

Jennett P, Affleck L. Chart audit and chart stimulated recall as methods of needs assessment in continuing professional health education. *J Contin Educ Health Prof.* 1998;18:163-171.

Kohn M. Maryland seeks to tackle prescription drug problem. *Baltimore Sun.* April 2, 2011. Available at: http://articles.baltimoresun.com/2011-04-02/health/bs-hs-prescription-drugs-20110330_1_states-with-monitoring-programs-model-state-drug-laws-prescription Accessed October 21, 2012.

Liebschutz JM, Alford DP. Safe opioid prescribing: a long way to go. *J Gen Intern Med.* 2011;26:951-952.

^aManhattan Research. Taking the Pulse[®] v7.0 and v9.0, 2009.

^bManhattan Research. Physician HEALTHForum 2009.

McGuire MJ, Noronha G, Samal L, Yeh HC, Crocetti S, Kravet S. Patient Safety Perceptions of Primary Care Providers after Implementation of an Electronic Medical Record System. *J Gen Intern Med.* 2012 Aug 11. [Epub ahead of print]

Paulozzi LJ, Weisler RH, Patkar AA. A national epidemic of unintentional prescription opioid overdose deaths: how physicians can help control it. *J Clin Psychiatry.* 2011;72:589-592.

Schuettinger K. Data on file. JHCP; 2012.

Stamos S, Houle T. Multidisciplinary and interdisciplinary management of chronic pain. *Phys Med Rehabil Clin N Am.* 2006;17:435-450.

Starrels JL, Becker WC, Weiner MG, Li X, Heo M, Turner BJ. Opioid risk reduction strategies in primary care. *J Gen Intern Med.* 2011;26:958-964.

Turk DC, Palermo T, Jamison R, et al. Interdisciplinary Pain Management. APS Position Statement. 2010. <http://www.ampainsoc.org/advocacy/downloads/2010%20Interdisciplinary%20White%20Paper-FINAL.pdf> Accessed October 18, 2012.

Webster LR, Dove MB. Optimizing opioid treatment for breakthrough pain. *Medscape Education Neurology (CME Metrics Report).* September 28, 2007. <http://www.medscape.org/viewprogram/7869> Accessed October 22, 2012.