A. COVER PAGE

1. **Title**

"Primary Care Pain Management In Pennsylvania: Optimizing Treatment, Minimizing Risk – Part II"

Grant Request ID # 16509205

Collaborators

Pennsylvania Academy of Family Physicians
Pennsylvania Coalition of Nurse Practitioners
Integrated Learning Partners, LLC

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2. **Abstract**

This multimodal, interprofessional and interdisciplinary, quality improvement study will engage 7 family medicine practices in the Pennsylvania Academy of Family Physicians larger pain management project (~21 practices) to improve health outcomes of ~14,000 patients with non-malignant chronic pain. Practices will be selected from seven counties with high rates of opioid overdose hospitalization and death. Intervention activities will (1) improve both interprofessional and interdisciplinary team members' clinical and professional competencies and performance to assess, treat, and manage chronic pain, and (2) improve interprofessional and practice-based interdisciplinary coordination of care, and clinician-patient communication, shared decision-making, and patient engagement/satisfaction. Baseline data and follow-up assessments will measure pain assessment practices, pain treatment plan documentation, and patient satisfaction scores. Findings will be shared with practices during the Interdisciplinary/Interprofessional QI workshop. Participants will look at performance gaps and learn strategies to improve pain assessment and coordinated care management. QI coaches and pain management specialists will help participants develop practice goals and implement CQI plans. Participants will complete a series of live and enduring educational interventions, participate in a clinician-patient experience study, and submit patient panel data monthly to the PAFP. Improvement is expected in: 1) process measures, how well a facility is implementing related processes of care, 2) outcome measures that look at measurable changes in the documentation of pain management measures, 3) measurable changes in a patient's condition as a result of treatment or other interventions, and 4) patient engagement and satisfaction scores relative to the patients' experiences of quality of care and treatment.

C. MAIN SECTION

3. OVERALL GOAL AND OBJECTIVES

Goal: The initiative will measurably improve interprofessional and interdisciplinary team pain management practices in Pennsylvania by helping select primary care practices and community-based clinicians meet the dual challenges of implementing best practices in chronic pain assessment and management with an emphasis on safe and effective opioid therapy and coordination of care for their patients. Guided by the patient-centered medical home, a secondary goal is to increase the use of shared decision-making to help practices improve the patient experience, while meeting therapy goals and improving patient health outcomes.

This educational program will be designed to improve knowledge, skills, competence, and performance of multi-professional teams by bringing interprofessional practitioners and interdisciplinary primary care teams together to assess current practices, skill levels, roles, and by developing systematic processes that improve how they interact and communicate with each other and their patients.

Key Objectives:

1. Improve confidence to treat patients with chronic pain by utilizing evidence- and guideline-based strategies for risk assessment, management, and monitoring of opioid therapy.
2. Provide interdisciplinary primary care teams and interprofessional colleagues with tools and resources to improve the coordination of care among multidisciplinary professionals.
3. Demonstrate that improved coordination of care and communication among healthcare providers and patients improves clinical and professional performance, as well as patient engagement and health outcomes.
4. Provide training and resources for interprofessional and interdisciplinary teams that mirror real-world care, and implement best-in-class coordination of pain management protocols.

4. TECHNICAL APPROACH

a. Current Assessment of Need in target area: Chronic pain is one of the most frequent complaints of patients in primary care, yet both patients and providers report low satisfaction with chronic pain care.[1] Despite dramatic advances in pain management, many patients continue to suffer unrelieved pain.[2] Inadequate knowledge on the part of healthcare professionals and their teams is one of the most prevalent causal factors in studies documenting the under-treatment of pain.[3]

Of patients diagnosed with chronic pain and treated by family physicians, 64 percent report persistent pain two years after treatment initiation.[4] Due to the increasing prevalence of pain and co-morbid conditions, family physicians are treating patients with both episodic or persistent pain, specifically non-malignant pain associated with migraine or tension headaches, chest pain, pain from diabetes with neuropathy, arthritis, fibromyalgia, neuralgias, neck and

back disorders, facial pain disorders, functional or organic bowel disorders, or pelvic disorders.[5] Back pain is a common patient complaint and ranks behind only cold symptoms as the most frequent reason for a visit to a physician.[6] A further pain treatment complication is depression, which is a common comorbidity.[7] In fact, depression and pain co-occur in up to 50 percent of patients, and there's strong evidence to support recognition and management of both conditions.[10)8] With pain affecting patients' pain tolerance levels, physical mobility and functionality, sleep patterns, and mental health, multiple modalities may be needed for treatment (e.g., pharmacologic, naturopathic, occupational therapy, psychological counseling, etc.). Given the complexity of pain and its multidimensional nature, there is a growing call for more comprehensive approaches that incorporate the knowledge and skills of multiple practitioners caring for a patient locally (in Pennsylvania) and globally.

Pain is a multidimensional condition, cutting across professional boundaries, with physicians, nurses, physiotherapists, occupational therapists, and psychologists all having input on management. **Today, it is generally recognized that the complexities of healthcare cannot be met by the expertise of any one discipline.[9] Therefore, there is a need to recognize new ways of learning and working to improve the delivery of care across multiple professions who may share patients and/or treat a patient's pain symptoms.** Moreover, data suggest that improvements in coordinated care are only likely to occur when the range of professionals responsible for providing a particular service come together to share their different knowledge and expertise.[10] As a result, we believe that bringing professionals together to learn about pain management may offer opportunities for learners to understand different roles, and find new ways of working together that might improve patient care for patients.

In anecdotal discussions with PAFP and PCNP members, the terms multidisciplinary, interprofessional, and interdisciplinary were often used interchangeably. It is important to note that there are some subtle and very important differences in these terms. Multidisciplinary care is care provided by several disciplines. It may not be coordinated, and treatment may occur with different goals and in parallel, rather than as an integrated approach. Interprofessional care is the provision of comprehensive health services to patients by multiple healthcare providers who work collaboratively to deliver quality coordinated care within and across settings.[11] Interdisciplinary care usually refers to team-based care provided by healthcare professionals and staff who have complementary roles and belong to the same practice (or health system). For the purposes of this program, we are focusing on (1) interprofessional care and defining it as care provided by clinicians who are external to a family practice (e.g., Pain Management Specialists, Physical Therapists, Occupational Therapists, Pharmacists, Psychologists, etc.), and are committed to coordinating care efforts across the external team, and (2) interdisciplinary care that aligns diverse disciplines internal to a single family medicine practice (e.g., the practice team) who are providing team-based care within the practice (as well as coordinating care with external care providers). Via this educational program, it is our intention to bring together diverse primary care teams and pain management practitioners and have them *learn* and *practice* together in order to improve their practice of pain management and patient care within their communities.

In addition, ideally, the treatment team should include the patient (and his or her family), the primary care provider (including a nurse practitioner or physician assistant), a physical therapist, a behavioral health provider, and one or more specialists.[12] However, due to competing demands on time, an imbalance in power among health professionals, insufficient resources, and lack of practice-wide or interprofessional pain management processes, communication and interdisciplinary and interprofessional care are obstructed.[13] Organizations like the International Pain Society, American Pain Society, and others, believe that interprofessional pain education should link explicitly to the everyday world of clinical practice, and that education must address the knowledge, skills, and confidence required to deliver effective pain management across a multiprofessional environment. Therefore, PAFP, PCNP, and ILP are developing this interprofessional and interdisciplinary learning program with four expected outcomes for shared learning:

- Improved understanding of the roles and perceptions of other professionals;
- Increased cooperation among professional groups;
- Enhanced knowledge and skills levels; and
- Adoption of interdisciplinary and interprofessional pain management best practices.

This community-of-care model will improve the management of patients with chronic non-malignant pain in select communities across Pennsylvania, and aligns with Pennsylvania Governor Tom Corbett's goal for the treatment of chronic non-cancer pain, "*…chronic pain is best treated using an interdisciplinary, multimodal approach***.**" The *Primary Care Pain Management In Pennsylvania: Optimizing Treatment, Minimizing Risk* program is a two-part initiative. Part I, outlined in Pfizer grant request ID: 16215669, focuses on improving adoption of guidelines, shared decision-making, appropriate use of medication, etc., in the counties outlined in Figure 1 below. **This grant request, ID: 16509205 (Part II), focuses on implementing guidelines, improving interdisciplinary and interprofessional care models, processes, and practices, as well as enhancing patient engagement.**

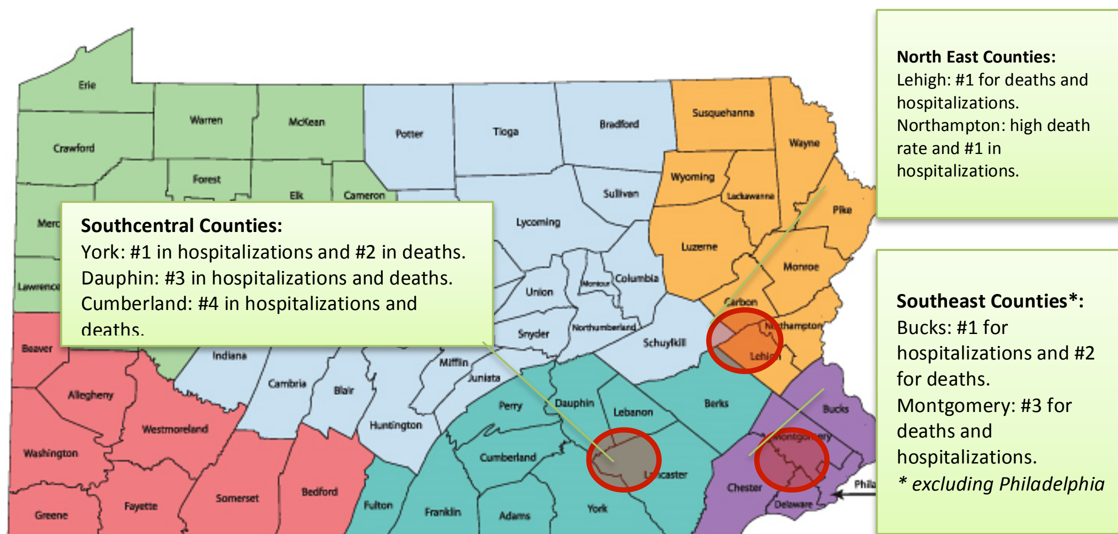


Figure 1. Pennsylvania Department of Health regional map.
Counties with both high hospitalization and death rates due to opioid misuse.

Based on quantitative and qualitative assessments, PAFP and PCNP have identified the following local and global gaps (relative to pain management) among their members and community-based providers:

GAP: 1	***A "know-do" gap clearly exists among primary care practitioners and their interdisciplinary teams with respect to the assessment and treatment of chronic pain.***	**Type:** Knowledge & Skill

Pain assessment is the cornerstone of pain management as it forms the basis for all decisions about interventions and their evaluation. Therefore, clinical practice guidelines are developed to assist practitioners and patients in choosing appropriate interventions for specific clinical situations. Despite the availability of guidelines (e.g., low back pain), patterns of practice vary widely and are notoriously resistant to change.[14] Healthcare providers also often rely on shared beliefs and personal opinion rather than research evidence to make treatment decisions. This ignorance of, or unwillingness to follow, evidence-based practice recommendations is responsible for what has become popularly known as the "know-do gap." The know-do gap is the gap between what is known and what is done in clinical practice. When PAFP practices were assessed to determine their levels of knowledge and skill (relative to the assessment and treatment of chronic pain), it was clear that knowledge and skills varied drastically across the team. There were no apparent workflows in place to demonstrate how pain is managed in the practices; it is primarily managed by the physicians, nurse practitioners or nurses (independently). Therefore, as a result of this educational program, family medicine interdisciplinary teams will learn how to effectively implement practice-based protocols to manage pain within their practices. The focus will be on developing consistency of knowledge and skill levels regarding pain assessment and management, defining roles and responsibilities among clinical and office staff, and implementing weekly meetings where patients' progress and pain management protocols will be reviewed. In addition, there will be an improved effort to document patients' pain in the EHR. Specifically, family medicine teams will be trained on improving the recognition, assessment, treatment, monitoring, and setting of clinical outcomes using SMART goal and PDSA best practices. Some areas of focus may include but are not limited to the following:

- % of patients with documented assessment for pain using standardized tool during exam
- % of patients with documented assessment for pain using standardized tool at each quarterly review
- % of patients with documentation by practitioner that summarizes the characteristics and causes of patient's pain
- % of patients with documentation of impact of pain on function and quality of life
- % of patients who are at-risk for opioid treatment (e.g., addiction or dependence issues)
- % patients with documented medication regimen with evidence of titration/adjustment in accordance with WHO step ladder

- % of patients referred to pain management specialists and/or community-based practitioners (e.g., OT, PT, Psychologists, etc.)
- % of patients who actually follow-up and make referral appointments
- % patients with periodic documented assessment of effectiveness of pain management by practitioner or nurse
- % patients with adjustments made to treatment plan by practitioner when pain management plan is not effective
- % patients with documented reduction in pain symptoms
- % patients documented with achieving pain control goals after treatment

GAP: 2	***Family physicians and interprofessional community-based clinicians are not effectively or routinely coordinating care for their patients.***	**Type:** Knowledge, Skill, Performance

One of the major barriers to good pain management is the effective communication and coordination of care between different professionals.[15] Despite calls from numerous organizations and payers to improve coordination of care, there are few accounts where pain management care is effectively coordinated between PAFP practices and interprofessional community-based providers. While there is no single recipe for coordination of care, it is recognized that there is a need to improve communications among PCPs and interprofessional providers, specifically in the area of referrals and follow-up consult notes. At a glance, referral notes and consult notes are poorly written and not shared in a timely or meaningful way between PAFP practices and other community-based providers. As a result, having a system that supports more effective communication and fosters care coordination is critical. It is also recognized that often the coordination of care becomes the burden of the patient, and this should not be the case. This initiative will not only focus on improving interprofessional communication and care coordination best practices, but it will engage and educate patients to improve their understanding of coordination of care and define their role in the process. Although the patient is the "captain" of the interprofessional team, coordination of care is the responsibility of his or her healthcare providers.

It is imperative that patients are not held responsible for dysfunction in a health system or interprofessional team care. Though there are particular patient characteristics and behaviors that make coordination of care more challenging, such as patients self-referring to numerous specialists, the most common challenges include patient noncompliance, risky behaviors, and misunderstanding of provider recommendations. Research suggests that this is often a result of poor communication by providers and, as some members noted, this is frequently the case when the providers are failing to "close the loop," by ensuring the patient/family can repeat instructions back to the provider.[16]

Another cause of ineffective coordination of care is that existing fee-for-service payment does not reimburse care coordination efforts. Because there are no payments for such activities as following up on referrals or communicating with patients outside of the office, physicians do so at the expense of other, billable activities. A primary care physician captured this common

experience, “If you don’t have face-to-face interaction, you can’t bill. We can talk to patients, and if you have to eat that cost, you have to eat that cost, but you also have to minimize the time it takes to do it.” Although coordinated care would likely lower overall costs to the patient and health care system over time, immediate costs are born by physicians. Therefore, it is important to teach physicians cost-effective and time-efficient strategies so they can effectively and efficiently improve interprofessional care of patients.[17]

Lastly, some family physicians noted that physicians simply are not aware of how to work within a team to accomplish the numerous coordination tasks required, and that this “requires a paradigm shift.”

In response to the numerous challenges listed above, PAFP, PCNP, and ILP will organize educational interventions into four categories: 1) within-practice efforts, including with the patient/family/caregivers; 2) between-practices and interprofessional providers; 3) between the primary care and hospital settings; and 4) with community-based services. Such education will focus on clarifying roles and responsibilities, improving team-based pain management, creating more effective referral and follow-up consult notes, and improving in-practice interdisciplinary care, as well as enhancing clinician-patient communication skills.

GAP: 3	***Inadequate education of healthcare professionals is a major and persistent barrier to safe and effective pain management.***	**Type:** Skill & Performance

Inadequately managed pain is a worldwide problem that leads to significant suffering, dysfunction and disability, loss in job productivity, and an increasing health care burden.[18 -19] Despite the health professions’ development of competencies in pain management for advanced learners, special populations, and specific types of pain, as well as the myriad guidelines and postion articles on pain management issued by numerous professional organizaions, core pain management competencies for prelicensure entry-level health professional learners have not yet been established. A recent editorial by John D. Loeser, MD, former president and founding member of the IASP, identified “inadequate education of primary care providers about pain and how to treat it” as one of five major crises in pain management today.[20] The limited pain education that is currently provided may be ineffective because it focuses on traditional impersonal topics such as anatomy and physiology that may have little direct relevance to the complex daily problems faced by patients, families, and clinicians. Additionally, there has been little interprofessional education among family physicians in Pennsylvania. Finally, pain management education has historically focused on the epidemiology of pain, treatment options, and myths vs. facts about opioid use.

A relevant trend in healthcare education is the recognition that increased collaboration and teamwork is necessary to improve the quality and safety of patients. The IOM, World Health Organization and other professional groups envision interprofessional education as an important part of preparing a workforce to practice collaboratively at a time when the number of patients with complex, long-term medical problems is expanding. The shift from

multidisciplinary to interprofessional team pain management resonates with the present emphasis on *interprofessional education*. The PAFP and NCNP realize that it is imperative to use interprofessional and interdisciplinary models to train their members so that primary care providers in Pennsylvania can improve skill sets for interdiscplinary and interprofessional pain management, and improve patient health outcomes via enhanced coordination of care.

GAP: 4	***Shared decision-making is not routinely practiced in primary care, leading to patients being poorly informed and adding to medication adherence issues.***	**Type**: Attitude, Knowledge & Skill

The Informed Medical Decisions Foundation states that "shared" means something different to each member of the healthcare team.[21] Shared decision-making is a process wherein a healthcare provider shares with a patient all of the relevant information on the pros and cons of all potential treatment or diagnostic testing options for a health condition, and the patient shares with the provider all of the relevant information related to his or her treatment/testing preferences and goals. Though shared decision-making improves the quality of care by helping to ensure that patients are well-informed and that their decisions are aligned with their preferences and goals, unfortunately, there is evidence that the majority of medical decisions today are being made by patients who are poorly informed. Implementing high-quality, shared decision-making processes can help to bridge that quality gap. In addition, most providers are not formally trained to assess knowledge or elicit patient's preferences and goals, and to integrate that information into their informed consent processes.[22]

Since the Pennsylvania Department of Health outlined its "vision of health service" in 2000,[23] the role of the patient is no longer a passive one. Emphasis has been placed on the patient-centered approach, and many PAFP physicians are recognized patient-centered medical homes. Information from the practices, the internet, and other sources have empowered patients. However, it is important that the patient receives the correct information about pain assessments, treatment, and care. One of the goals of this initiative is to ensure patients receive appropriate knowledge and support to enable them to make informed choices about their healthcare, especially as they engage in "shared decision-making" with their providers. To measure this goal, we will assess how the provider and patient engage in dialogue and in the treatment planning process.

PAFP and PCNP recognize the need to better understand patients. Assessing the patients' experiences will be a critical part of improving patient-centric care and health outcomes. Through an integrated learning model for clinicians and their patients, we will assess areas of discordance and teach clinicians and patients how to come together to improve shared decision-making practices. This model will ultimately improve patient engagement and satisfaction, as well as patient health outcomes.

Based on the gaps outlined above, PAFP, NCNP, and ILP understand that pain management regimens may include multimodal approaches and the involvement of diverse disciplines. Therefore, we are committed to teaching PAFP and NCNP members as well as community-

based interprofessionals how they can more effectively work together and improve the assessment, treatment, and ongoing management of chronic pain within their communities.

Primary audience: The intervention will be targeted at seven practices in the counties identified in Figure 1. The PAFP has already worked with 85 practices (and 215 physicians) in those 7 counties as part of Meaningful Use. Those practices will be targeted for recruitment. For the global initiative (grant request ID: 16215669), PAFP and PCNP aim to recruit 3 practices in each of the 7 counties for a total of 21 practices. However, for this grant request, a cohort of one practice in each of the 7 counties will be targeted to receive interdisciplinary and interprofessional training and coaching, as well as engage in the patient experience program. For these practices, we will also pilot the Smart Clinic smart phone app. SmartClinic is a mobile solution that enhances patient engagement, and will be used as a method of connectivity for coordination of care between family medicine practices, interprofessional team members, and their patients. The PAFP estimates 2.5 physicians per participating practice. Based on anticipated numbers of participating providers and assuming that 13% of office visits are pain-related, the number of patients impacted would be an estimated 13,650.

b. Project Design And Methods: This multimodal, multidisplinary education will be designed for family medicine interdisciplinary teams as well as interprofessional external team members and their patients. PAFP, PCNP, and ILP will use a mixed method approach integrating Merrill's approach to instruction design as described in Moore et al—presentation, demonstration, practice, feedback, and reinforcement—along with AGILE instructional design methods developed by Conrad Gottfredson. The AGILE method represents five core methodology areas: align, get set, iterate and implement, leverage, and evaluate. Because this project will prepare learners to meet the demands of ever-changing clinical environments, this iterative approach will enable us to rapidly adapt educational interventions to learners needs in real-time.

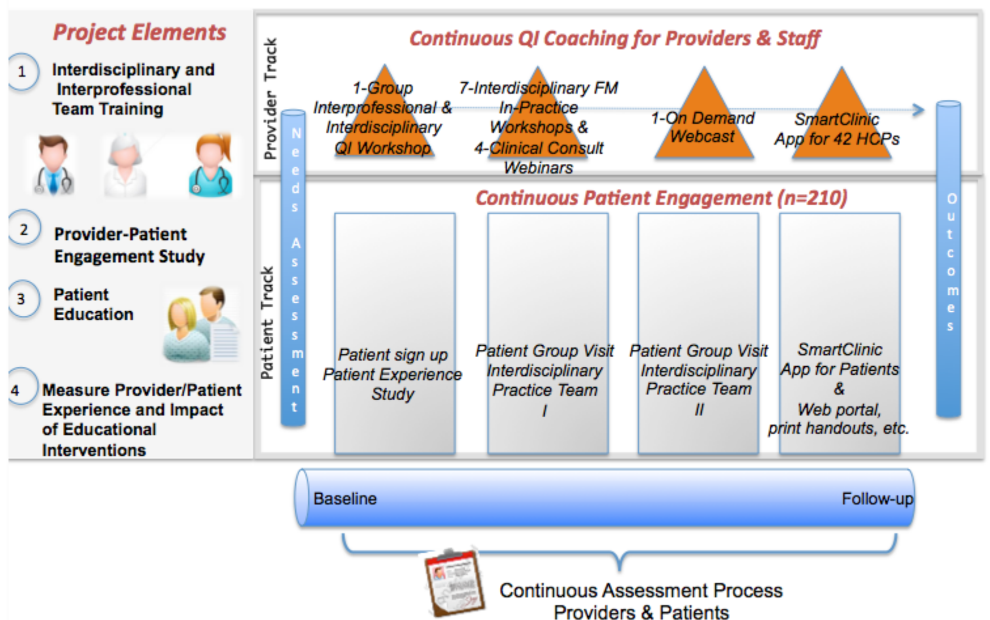
Learners will engage on a variety of levels and will leverage both active and passive learning tools. Learning groups will consist of practice groups and interprofessional teams. Learners will be engaged in problem-solving, self-reflection, guided learning, and virtual case simulations, as well as a patient experience study. The patient experience study involves a 360-degree feedback-training program that uncovers gaps in care and clinician-patient communications. Data from the patient experience study will inform practice-based and patient education activities that address areas of discordance between the clinicians and their patients. To modify behavior and improve health outcomes, we must also involve the patient. Therefore, this project will also include patient experience and engagement modules, as well as a technological solution to support and improve shared decision-making, medication adherence, patient engagement, and patient satisfaction. All practice groups will be assigned a quality improvement "coach" to guide the teams through a continuous quality improvement (CQI) plan, and will designate a clinical lead to be the "practice champion."

In addition, the PAFP's primary QI change package, the Chronic Care Model, will be the foundation for this curriculum. The Chronic Care Model emphasizes elements such as: Clinical Information Systems (e.g., EHR systems or patient registries), Decision Support (e.g.,

algorithms), Patient Self-Management (e.g., action plans), Delivery System Design (e.g., team-based care). PAFP's QI intervention model includes standard elements such as monthly data collection, analysis, and reporting, as well as regular live QI workshops aimed at the QI leaders within a practice, followed by a series of longitudinal activities for all members of the practice team. This QI model will be modified to engage interprofessional team members from the communities who are involved in the coordination of pain management care for patients in participating family practices. Practice data is unblinded to participating practices to encourage friendly competition. Personalized coaching helps the practices translate performance data into actionable strategies targeted at specific areas of need. Practices have access to their data run charts in real time to guide month-to-month PDSAs, and aggregate data from the project is shared during live activities. Lastly, the PAFP Data Diamond data management system includes an extranet that acts as a learning center to share resources, and as a social learning group platform to foster a collaborative learning environment among participants and faculty.

Project at a Glance:

The graphic below is an illustration of the Primary Care Pain Management in Pennsylvania: Optimizing Treatment, Minimizing Risk Part II CME/CE initiative. Additionally, there will be pre- and post-activity assessments to test knowledge, attitudes, skills, and performance for each educational intervention (as described in the next section).



c. Evaluation Design:

This CME initiative will measure the changes in participants' knowledge, skills, competence, and performance, and changes in patient health outcomes. PAFP, PCNP, and ILP will compile and

analyze activity data from activities such as responses to interactive case-based questions, immediate pre- and posttest confidence and practice questions, post-activity evaluation surveys, and in-practice provider and patient surveys. Evaluation data and outcomes data measurement provide comprehensive feedback, and will validate educational effectiveness, improve design and execution of future activities, help refine educational benefit assessment methodology, and ultimately determine effectiveness in changing clinical behavior. This model is based on Moore's seven-level expanded framework for planning and assessing CME.[24]

Although the PAFP has not collected pain assessment data in its previous work, this work plan includes data collection to establish a local and current baseline based on pain assessment practices, documentation of pain treatment plans, patient satisfaction scores, plus pain comorbidities and types as identified in the needs assessment. Metrics will include the following quality measures:

Mandatory: all practices must submit this data monthly	
NQF 0418	Depression screening. USPSTF calls for universal depression screening, which is resource intensive, but guidelines suggest primary care practices focus screening on high-risk patients including those with chronic pain. Therefore, the common denominator will be patients identified as having chronic pain.
Optional 2nd measures: practices must select and report 1 or both measures monthly, based on the needs of their patient population	
NQF 0052	imaging for low back pain
NQF 0050	OA assessment for pain and function. Osteoarthritis affects nearly 27 million people in the United States, accounting for 25% of visits to primary care physicians, and half of all NSAID prescriptions.

In addition, it is our goal to enhance documentation of some or all of the measures listed below in the practices' EHRs or SmartClinic portal. Measures may include but are not limited to the following:

- % of patients with documented assessment for pain using standardized tool during exam
- % of patients with documentation by practitioner that summarizes the characteristics and causes of patient's pain
- % of patients with documentation of impact of pain on function and quality of life
- % of patients receiving opioid treatment who are at-risk (e.g. addiction or dependence issues)
- % patients with documented medication regimen with evidence of titration/adjustment in accordance with WHO step ladder
- % of patients referred to pain management specialists and/or community-based practitioners (e.g. OT, PT, Psychologists, etc.)
- % of patients who make and keep their referral appointment(s)
- % patients with follow-up assessment of effectiveness of pain management by

practitioner, PCP or nursing staff

- % patients with adjustments made to treatment plan by practitioner when pain management plan is not effective
- % patients with documented reduction in pain symptoms
- % patients documented with achieving pain control goals after treatment

EHR technical assistance will be available immediately after practices sign a participation agreement so that a PAFP EHR expert can ensure that the practice is correctly running measure reports out of the practice EHR. Providing technical assistance upfront significantly compacts the time it takes for practices to reach data integrity, typically six months in most PAFP QI projects. This data will be entered monthly by the practice into the PAFP's Data Diamond data management system, an extranet that boasts high user satisfaction rates. Data Diamond training will be provided, and, in addition to internal systems, a data expert will monitor data input and provide customer service as needed. To add context to the data, Data Diamond can also collect PDSAs and their results. We are looking for statistically significant improvement between baseline and post-intervention. Typically, process measures such as these have a distal goal of 90 percent.

Data Diamond also includes a HIPAA-compliant patient registry module for practices that do not have a registry in their EHR, or they don't have a registry that functions well enough for their practice. This situation exists even in the age of meaningful use. A faculty member of the PAFP's largest QI initiative uses a paper chronic opioid patient registry in his large practice even though his hospital system uses a very common (and very expensive) EHR system. Participating practices will be required to have a chronic pain patient registry to identify all patients with chronic pain to support improved management through alerts, decision support, and data mining. The registry is key to helping to identify practice-wide gaps in care. For example, do all pain patients have a recent pain and function status documented, a current depression screening result documented? Are all patients using opioids receiving a UTS at every visit?

Practice engagement will be measured through metrics such as compliance with monthly data reporting and improvement activities reported in Data Diamond and the provider-patient experience research module. Patient engagement will be measured via qualitative methods of research. All practices and providers participating in this initiative are **required** to adhere to data collection policies, participate in the QI workshop, participate in their practice's In-Practice coaching sessions (total of 7; 1 per practice), complete 4 Clinical Consult webinars, and identify between 5-10 patients for the patient experience study. Below is a list of the sources of data to be analyzed:

- Baseline and follow-up comparative analysis of chart data
- ARS data from the Interprofessional and interdisciplinary QI workshop
- Pre-/Post-test and case quiz data from the eLearning activities and consult webinars
- Observational data from QI Coaching
- Patient survey data at baseline, midpoint, and follow-up
- Midpoint assessment of educational impact

- Qualitative patient assessment surveys and phone interviews
- Checklist report of suggested system changes that have been implemented
- Spot checking of referral and follow-up consult notes (pre and post interventions)

The PAFP, PCNP, and ILP team of quality improvement coaches, clinical experts, and data analysts will conduct qualitative research to examine the direct and observable secondary effects or outside forces that may have a cumulative impact on the project. The aim of this qualitative research will be to gain a better understanding through first-hand experience, truthful reporting, and transcripts of actual conversations with clinical and patient study participants. The goal will be to understand how the participants derive meaning from their environments and how this meaning influences behaviors relative to pain management practices. As part of the educational research methodology, from the planning phase and through to the conclusion of the project, the team will assess the secondary and cumulative effects that have impacted family medicine practice performance, patient engagement and satisfaction, as well as perceptions regarding appropriate use of opioids.

Gaps	Objectives	Activities	Metrics	Expected Outcomes
1. A "know-do" gap clearly exists among primary care practitioners and their interdisciplinary teams with respect to the assessment and treatment of chronic pain.	Improve knowledge and skills relative to pain management PCP and interdisciplinary team members. Implement practice-based pain management protocols that derive from team-based care and improve patient compliance and health outcomes	QI Practice-Based Interdisciplinary Workshop eLearning activity (webcast) Clinical Consult Webinars PM team reviews of patient charts Smart Clinic pilot Interdisciplinary In-Practice QI Coaching Monthly quality data review	Pre/post-project assessment Pre/post-test and quiz results from CME activities PDSA implementation review Use of Smart Clinic app for pain assessment Quality process measures Use of registry	20% improvement in pre/post assessment scores 20% improvement in pre/post CME results 90% of practices implementing pain improvement PDSAs 90% of practices using Smart Clinic use pain assessment tool 10% improvement in quality measures from baseline to

				final outcomes data review
2. Family physicians and interprofessional community-based clinicians are not effectively or routinely coordinating care for their patients.	Improve communication between family medicine physician practices and interprofessional team members, specifically the quality and timeliness of referral and follow-up consult notes Implement a pain management care model that improves the coordination of care among interprofessional team members and appropriately engages the patient in shared decision-making	Interprofessional QI Workshop Interdisciplinary In-Practice QI Coaching eLearning activities (webcast) Patient case webinars Smart Clinic pilot Monthly quality data review	Pre/post-project assessment Pre/post-test and quiz results from CME activities and QI workshop Use of Smart Clinic app for pain assessment, management PDSA implementatio n review	20% improvement in pre/post assessment scores 20% improvement in pre/post CME results 10% improvement in quality measures from baseline to final outcomes data review
3. Inadequate education of healthcare professionals is a major and persistent barrier to safe and effective pain management.	Deploy team-based interprofessional and interdisciplinary live and enduring materials that improve coordination of care among diverse	Interprofessional community-based and Interdisciplinary practice-based QI Workshop eLearning activity (webcasts) Interdisciplinary In-Practice QI Coaching	Pre/post-project assessment Pre/post-test and quiz results from CME activities Use of Smart Clinic app Checklist	20% improvement in pre/post assessment scores 20% improvement in pre/post CME results 95% of

	healthcare professionals	Clinical consults Smart Clinic pilot Monthly quality data review	report of implemented systems-based interventions with PDSA review. Use of registry	practices begin using a chronic pain patient registry 95% of practices implement at least 1 new strategy.
4. Shared decision-making is not routinely practiced in primary care, leading to patients being poorly informed and adding to medication adherence issues.	Increase use of an office infrastructure to implement shared decision-making to support pain management. Deploy patient experience program to assess patients' experiences and knowledge of pain management in order to more appropriately and effectively engage them in shared decision-making practices.	Patient Experience study Interprofessional and Interdisciplinary QI Workshop Interdisciplinary In-Practice QI Coaching eLearning (webcast) Clinical Consult Webinars Smart Clinic pilot	Checklist report of implemented systems-based interventions with PDSA review. Use of Smart Clinic app Review of quality measure(s)	95% of practices implement at least 1 new strategy. 10% improvement in quality measures from baseline to final outcomes data review.

Dissemination Plan: Goal 1: make the information generated publically available within the first 6 months of the initiative and as long as the information is clinically valid. Goal 2: share results through a full range of stakeholders. The PAFP will follow the Commonwealth Fund's dissemination strategies[25] including the following activities:

- Share information with the state Department of Health and Governor's Office to contribute to statewide efforts
- Summarize how this helps practices meet MU, PCMH recognition, local payor incentives, PQRS, etc.
- Launch activities at the PAFP's regional CME conference

- Recruit dissemination partners, such as the member associations for internal medicine, osteopathic family medicine, physician assistants, nurse practitioners, CHCs.
- Recognize a practice of the month on the project webpage
- Present at ACHeP and AAFP professional meetings

5. DETAILED WORKPLAN AND DELIVERABLES SCHEDULE:

PAFP, PCNP and ILP will recruit seven practices. There will be a project leader and two project managers overseeing this 15-month program. A schedule for data collection, development and the implementation of educational interventions, monthly practice and interprofessional team meetings will be planned in accordance with the Deliverables Schedule in Appendix C. Quarterly updates with commercial supporters will be provided via telephone conference calls and written status reports. Upon conclusion, an outcomes report will be generated and published.

The proposed deliverables include:

1. Baseline analysis (described in evaluation design)
2. EHR technical assistance
3. Data Diamond data management system for monthly data collection and collaborative learning
4. Patient experience/engagement study with patient portal (i.e., qualitative research)
5. SmartClinic smart phone app pilot with practice-based portal and patient engagement
6. Educational Interventions
    a. 1-Interprofessional and interdisciplinary QI Workshop, 1-Interactive case-based webcast, 4-Clinical Consult Webinars, and 7-In-Practice QI Interdisciplinary Workshops
7. Follow-up Data Analysis (described in evaluation design)

D. ORGANIZATIONAL DETAIL

Leadership and Organizational Capability

Pennsylvania Academy of Family Physicians Foundation – Educational Sponsor

The PAFP Foundation will lead the initiative using its infrastructure, resources and expertise, as described below.

Physician/provider education programming:

- Education development from traditional CME to PI, including needs assessments, topic and faculty selection, learning objective development, slide review, pre/post-tests, evaluations, use of audience response systems, outcomes measurement (Moore)

QI support to primary care practices:

- Stakeholder since 2008 in Pennsylvania's statewide, 150-practice Chronic Care Initiative
- Managing a 44-practice learning collaborative since 2010
- Program and field staff with training and experience in intervention models such as the Breakthrough Series, models of care such as the Chronic Care Model and PCMH, plus the Model for Improvement and PDSA cycles
- Data systems for collection and reporting of quality data
- Physician faculty and expert staff for data review

Project management:

- Effective communication with partners, faculty and participants
- Establishing high levels of customer service
- Cost-effective resource management

Accreditation:

- PAFP will oversee the accreditation for this initiative. This initiative will be certified by the American Academy of Family Physicians Continuing Medical Education (CME) Credit System.

Pennsylvania Coalition of Nurse Practitioners (PCNP) – Collaborative Partner

The PCNP is the state Nurse Practitioner (NP) association in Pennsylvania, representing the interests of more than 9,000 nurse practitioners across the Commonwealth. Founded in the 1980s, our mission is to improve access to care by promoting the role of the nurse practitioner and removing barriers to professional practice. PCNP strives to promote high quality educational forums, improve communications among nurse practitioners and other health care professionals, organizations and elected officials with the goal of improving health across communities in Pennsylvania.

Integrated Learning Partners – Quality Improvement and Technology Partner

Integrated Learning Partners (ILP) is a solutions-oriented consulting firm that was founded in 2009 and is located in Westport, CT. ILP excels in strategic planning, medical education, clinician-patient compliance training, performance optimization, interdisciplinary team training and patient health education. **ILP's mission is to pioneer integrative, team-based medical and health education solutions that improve health care providers' clinical and professional competencies as well as patient health.**

ILP will apply its award-winning experience to the development of this QI model, patient engagement research, and eLearning activities. For the past five years members of the ILP team have worked as QI Coaches in primary care clinics across the United States. Such programs improved practices' quality measures, clinician and staff performance as well as patient health outcomes. Our educational approach is guided by the Demming's Plan, Do, Study, Act model. ILP has been instrumental in pioneering state-of-the art digital learning and knowledge management solutions for Fortunate 100 and 500 healthcare organizations.

2. Staff Capacity:

The **PAFP project manager**, Angelia Halaja-Henriques, will be responsible for day-to-day management and project oversight. She will be the primary contact for the project and act as the liaison to partners and stakeholders, including the Department of Health. Responsibilities include program development, recruitment activities, meeting planning, agenda development, hosting faculty and participant conference calls, ensuring timely submission of data, evaluation and reports, and providing faculty and participant support during events. Angelia is a 15-year PAFP employee, experienced at clinical and quality improvement program management, working with multiple stakeholders including faculty and learners on curriculum design, managing large budgets, reviewing performance data, designing evaluations, and bringing even the most challenging projects to success.

Debra Hammaker, CHTS-CP, CHTS-IS, PCMH CCE, will provide the **EHR technical assistance**. She previously worked in a primary care office for 20 years and has been in the field working directly with practices on Meaningful Use since 2011 and on PCMH since spring 2013. She recently took the lead as senior consultant at the PAFP's new business named Primary Healthcare Consultants.

The **PAFP Data team** provides data management support to the practices through Data Diamond, our data management system, which offers population management and access to reports on data immediately after it's entered by practices. The individual who will be primarily assigned to the project has been working with practices on using data for improvement for several years at the PAFP on a number of data-driven quality projects. Not only is this person a competent data expert, but she has superb customer support skills and will support practices in extracting their performance data.

Heading up the PAFP team as **lead faculty** is William J. Warning II, MD, CMM, FAAFP, CAQ SpMed. Dr. Warning is a board certified family physician with a CAQ in Sports Medicine and a Certificate of Medical Management from Carnegie Mellon University. He is the Program Director of the Crozer-Keystone Family Medicine Residency Program located in Delaware County, outside of Philadelphia. Dr. Warning graduated from Jefferson Medical College in 1988 and completed his FM Residency training at Lancaster General Hospital in 1991. Dr. Warning led his office to Level 1 NCQA Medical Home Certification in 6 months and ultimately to Level 3 Certification within 1 year. The Crozer FM Residency is one of the first FM residencies in the country to achieve Level 3 NCQA Medical Home Certification. His office is also one of 25

practices selected to participate in Governor Rendell's SEPA Chronic Care Initiative and the CMS Advanced Primary Care initiative.

Susan M. Schrand, MSN, CRNP, NP-C, PCNP, will service as **PCNP team project manager** and is a certified registered nurse practitioner, board certified in Family Health. Susan has served as Chief Executive Officer for PCNP for the past 7 years, and in 2013 was selected as a Robert Wood Johnson Foundation Executive Nurse Fellow. In addition to be well-versed in primary care issues, association management and advocacy issues on behalf of nurse practitioners, Susan has collaborated on other organizations on grant initiatives in our state. Susan will serve as Project Manager on the grant on behalf of PCNP and will be the key contact to the Pennsylvania Academy of Family Physicians staff / project manager.

Sherlyn B. Celone, Chief Learning Officer at ILP, will function as the **QI Program Director and eLearning Specialist** specifically focusing on QI model design and implementation, interdisciplinary team care training and the development of web and mobile educational interventions. Sherlyn will manage the Smart Clinic component with Angelia. Sherlyn possesses more than 20 years in the healthcare industry where she's held senior leadership and management positions in Market Research, Medical Affairs, Scientific Communications, Medical Education, Patient Education, Patient Experience Research and Marketing with major pharmaceutical manufacturers, academic centers and medical education companies.

David J. DePalma, PhD Dave is a Senior Creative Change Consultant with Integrated Learning Partners, LLC, and for the past 40 years has practiced as a developmental psychologist in New Haven, CT. In 1980, he co-founded a comprehensive, patient-centered pain management practice that combined an interdisciplinary approach with a family and community support model. For this project, Dave will function as the **Patient Engagement Leader and QI Practice Consultant** where he will work with practices to improve clinician-patient communication systems thinking, patient engagement, and interdisciplinary team learning. He will lead the design and analysis of the patient engagement research and QI evaluation plan and outcomes process, as well as work with the team on content develop for all of educational interventions. As a group facilitator, Dave has conducted many dynamic personal growth workshops in stress management, chronic pain, meditation, whole person health, and related topics.

The **PCNP clinical faculty advisor** will be Mary Jo Cerepani, DNP, FNP-BC, CEN, a board certified family nurse practitioner who has a current appointment as assistant professor of Health Promotion and Development at the University Of Pittsburgh (UP) School Of Nursing. Additionally, Mary Jo works at the UP Medical Center in the Emergency Resource Management area, and has served as the Advanced Practice Provider Liaison for the nurse practitioner and physician assistants in Emergency Medicine. Mary Jo will help to develop curriculum, speak on issues of pain management and be instrumental in recruitment of other primary care NPs whose practice can share keys for successful pain management and avoidance of drug overdose.

LETTERS OF COMMITMENT

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October 14, 2014

Robert E. Kristofco, MSW FACME
Grants Officer, Medical Education Director
Women's Health and Pain Initiatives
Independent Grants for Learning & Change
External Medical Communications
Pfizer Inc.
235 East 42nd Street 219/02/107
New York, NY 10017

Dear Mr. Kristofco:

The Pennsylvania Academy of Family Physicians Foundation stands behind its proposed pain management project titled "***Primary Care Pain Management In Pennsylvania: Optimizing Treatment, Minimizing Risk***," that we will roll out in partnership with the Pennsylvania Coalition of Nurse Practitioners (PCNP) and Integrated Learning Partners (ILP) to twenty-one family medicine practices spanning over seven counties throughout the state of Pennsylvania.

Pain management typically falls to primary care practices, which are challenged by a lack of knowledge of the changing science and reluctance to prescribe medicines that can ease pain but also cause addiction. Practices are also hampered by insufficient time and resources to implement systems and tools to better manage pain. This RFP – "Employing Integrated and Coordinated Multimodal-Therapies in a Primary Care Setting to Improve Outcomes and Optimize Healthcare Utilization for Patients with Chronic Pain" – provides an opportunity for the PAFP and PCNP to generate and implement those resources into practices, with an emphasis on regions in Pennsylvania hit hardest by accidental opioid overdoses, a preventable public health tragedy.

The PAFP commits to recruiting and engaging a minimum of 21 practices in target counties where there is a high prevalence of opioid misuse, and will work in partnership with PCNP and ILP to collect data and develop a curriculum to overcome challenges, providing staff for project management, data management and EHR technical assistance. The PAFP's Data Diamond online data management system, including the patient registry module, is also available for the project. Further, we are committed to disseminating results and best practices throughout our communication channels.

The PAFP is committed to improved patient outcomes through patient-centered, team-based care using data to guide improvement efforts. We look forward to implementing this project and appreciate your kind consideration of our proposal.

Sincerely,

Douglas Spotts, MD
President

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KEYSTONES OF QUALITY HEALTHCARE

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Robert E. Kristofco MSW FACME
Grants Officer, Medical Education Director
Women's Health and Pain Initiatives
Independent Grants for Learning & Change
External Medical Communications
Pfizer Inc.
235 East 42nd Street 219/02/107
New York, NY 10017

October 13, 2014

Dear Mr. Kristofco:

The Pennsylvania Coalition of Nurse Practitioners (PCNP) supports the proposed pain management project with the Pennsylvania Academy of Family Physicians Foundation titled "Primary Care Pain Management in Pennsylvania: Optimizing Treatment, Minimizing Risk." Our two organizations have a shared commitment to improved patient outcomes in primary care through team-based, patient-centered care. Our members see patients in pain every day, and they do not lack the will to better manage pain, they lack the resources. This RFP – "Employing Integrated and Coordinated Multimodal-Therapies in a Primary Care Setting to Improve Outcomes and Optimize Healthcare Utilization for Patients with Chronic Pain" – provides a unique opportunity to develop and provide those resources through a targeted intervention.

The PCNP commits to this partnership and to the success of the project by agreeing to provide a clinical faculty advisor to the project so the curriculum reflects the concerns and needs of nurse practitioners. PCNP also agrees to recruit member practices into the project and to help disseminate lessons learned from the project.

Should you have any questions about our role within the project, please feel free to contact me at (412) 243-6149 or sschrand@pacnp.org

Sincerely,

Susan M. Schrand, MSN, CRNP
Chief Executive Officer
RWJF Executive Nurse Fellow

October 10, 2014

To Whom It May Concern

Integrated Learning Partners (ILP), has worked with the Pennsylvania Academy of Family Physicians (PAFP) as a quality improvement and technology partner for the past year. I am writing to express ILP's commitment to supporting PAFP in the educational grant titled, "***Primary Care Pain Management In Pennsylvania: Optimizing Treatment, Minimizing Risk***," that is being submitted to the Pfizer Medical Grants department on October 14, 2014.

ILP excels in strategic planning and instructional design, quality improvement, change management, clinician-patient compliance training, patient engagement programming, eLearning and interdisciplinary team coaching. Our team members possess between twenty and forty years experience in these areas and have significant experience working in the field of pain management as practitioners, educators, and patient advocacy specialists. **ILP's mission is to pioneer integrative, team-based medical and health education solutions that improve health care providers' clinical and professional competencies as well as patient health.**

For this initiative, ILP will provide strategic guidance and be responsible for working with PAFP on the program design, implementation, practice coaching, data analytics and patient engagement study components. ILP will be an integral member of the team responsible for writing and helping to disseminate key lessons leaned via publications, abstracts and society presentations.

Should you have any questions about ILP's role in the project, please feel free to contact us at 203-557-4225.

Sincerely,

Sherlyn B. Celone

Sherlyn B. Celone
President and Chief Learning Officer
Integrated Learning Partners, LLC.

122 Newtown Tpke., Suit B • Westport, CT 06880 • Ph: 203-557-4225 • Fax: 203663-8260

APPENDIX C– DELIVERABLES SCHEDULE

Deliverable	Description	Timeline
Baseline Analysis	Local, current baseline based on pain assessment practices, documentation of pain treatment plans, patient satisfaction scores plus pain comorbidities and types as identified in the needs assessment. Collected via surveys and quality measures.	January – March 2015
EHR Technical Assistance	Provided by a PAFP EHR expert via WebEx or on-site. TA is used to ensure that practices are reporting correct data out of their EHR into Data Diamond.	January – March 2015
Data Diamond data management system for monthly data collection	Data Diamond is a secure extranet where practices submit their monthly data and PDSA reports. Run charts are available in real time to the practices. Faculty can view data online and provide feedback.	March 2015 – March 2016
Data Diamond patient registry module	The Data Diamond patient registry is available to any practice with an EHR that does not include a registry function or does not include a registry that fits the needs of this project.	March 2015 – March 2016
Smart Clinic smart phone app pilot	One practice from each target county will use the Smart Clinic smart phone app to support patient engagement, collect pain assessment data, track med usage, provide appointment reminders and track patient satisfaction	April 2015 – April 2016
Qualitative Patient Experience Study	This two-pronged research model will assess interdisciplinary team members' perceptions of quality of care and their patients' care experiences. The team will look at areas of discordance and develop an integrated educational model for providers and their patients to help close the gaps. Blinded surveys will be conducted to assess patients' knowledge of pain management, medication use and adherence, quality of care/satisfaction measures, engagement with healthcare providers and health outcomes (i.e., decreased pain and improved functionality). There will be a comparative analysis conducted at the conclusion of the research.	January 2014 – March 2016

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<tr>
<td>Interdisciplinary and Interprofessional QI Workshop</td>
<td>Integrated 6-hour workshop for family physicians, nurse practitioners and staff members as well as interprofessional team members from select practices and/or communities. Titled "A Team-Based Approach To Pain Management: Improving Patient-Centered Care." Educational topics include:
• Pain Management QI practice champion roles & responsibilities
• PM Guidelines
• Overcoming coordination of care barriers
• Implementing the coordination of care model
• Appropriate assessment and treatment decision-making
• Shared decision-making best practices. Defining what it means for you and the patient.
• Patient engagement and improved health outcomes</td>
<td>March 19, 2015. Held live on-site at the PAFP’s spring CME conference in Valley Forge, PA.</td>
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<tr>
<td>1-Interactive case-based Webcast</td>
<td>An interactive rapid eLearning webcast with branching logic to appropriately level learners at their knowledge and skill levels. Content includes: didactic presentations, case presentations, interactive quizzing and polling, links to provider, staff and patient education resources.

This is designed specifically for various members of the interprofessional and interdisciplinary teams , including physicians, NPs, MAs and nurses, front and back office staff, OTs, PTs, Psychologists, Pharmacists, etc. Educational topics include mirror those presented in the live QI workshops.</td>
<td>Released May 2015</td>
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<tr>
<td>4-Clinical Consult Webinars</td>
<td>A series of four live online webinars focused on the pain subsets identified in the needs assessment and reflected in the quality data collection. Educational topics include:
• Pain Assessments and Practice Tools
• Opioid Use: Myth vs. Facts
• Back pain and Osteoarthritis</td>
<td>August – September 2015</td>
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	• Depression & Pain	
7- Interdisciplinary In-Practice QI Coaching	In-practice QI coaching sessions. Coaching will focus on overcoming coordination of care barriers, implementing interdisciplinary and interprofessional PM models, improving interprofessional and interdisciplinary communication as well as improving clinician-patient communication and patient engagement in shared decision-making.	March – December 2015

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