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## Application of a Secondary Opioid Risk Tool in the Management of Patients on Opioids in the Adult Pain Management Clinic: A Quality Improvement Project

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**Application of a Secondary Opioid Risk Tool in the Management of Patients on Opioids in  
the Adult Pain Management Clinic: A Quality Improvement Project**

Monica Kastanaras, BSN, RN

A DNP project submitted in partial fulfillment of the requirements for the degree of Doctor of

Nursing Practice

Dorothea Esposito, DNP MSN/ed, APRN, FNP-BC; DNP Project Faculty Advisor

Emily Mihailescu, MSN, FNP, APRN, NP-C; Practice Mentor

Sacred Heart University Davis & Henley College of Nursing

February 2022

This is to certify that the DNP Project Final Report by

Monica Kastanaras

has been approved by the DNP Project Team on

August 10, 2022

for the Doctor of Nursing Practice degree

DNP Project Faculty Advisor: Dorothy Esposito, DNP MSN/ed, APRN, FNP-BC

Practice Mentor: Emily Mihailescu, MSN, FNP, APRN, NP-C

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## Abstract

**Introduction—Significance and Background:** Aggressive opioid prescription practices play the biggest role in opioid-related behaviors and contribute to an epidemic of abuse. If started on long-term opioid therapy without screening, patients who are high risk for opioid abuse could overdose on their prescribed opioids. Current practice does not follow guidelines on monitoring opioid misuse behaviors utilizing a secondary screening tool for patients on long-term therapy.

**Purpose:** The purpose of this project is to help clinicians identify whether a patient, currently on long-term opioid therapy, may be exhibiting aberrant behaviors associated with misuse of opioid medications, using the Current Opioid Misuse Measure (COMM™).

**Interventions and Setting:** The project took place in a Pain Management Clinic, located in New Haven County. The population of focus was adult patients on long-term opioid therapy. Educational seminars were provided for the clinicians on utilizing the COMM™. The COMM™ was given to the clinicians to distribute to all eligible patients over a 12-week period. Each month the number of eligible patients were recorded as well as completed forms, total scores, and number of patients identified as high risk.

**Evaluation:** During 12-weeks of implementation, there were 75 patients out of 855 eligible patients that were screened. Out of the 75 patients screened, 7 (10%) were found to have positive screenings.

**Discussion:** The results identified 10% of patients that screened positive for the COMM™ tool. Since the COMM™ examines concurrent misuse, it is ideal for helping clinicians monitor patients' aberrant medication-related behaviors over the course of treatment with opioids.

**Keywords:** *Opioid abuse, COMM screening tool, pain management*



## **Problem Identification, Development of Clinical Question, and Evidence Review**

### **Background and Significance of Problem**

Chronic pain is among the most prevalent and debilitating medical conditions but also among the most controversial and complex to manage. The urgency of patients' needs, the demonstrated effectiveness of opioid analgesics for the management of acute pain, and the limited therapeutic alternatives for chronic pain have collectively joined to produce an overreliance on opioid medications in the United States, with associated alarming increases in diversion, overdose, and addiction (Volkow & McLellan, 2016). Given the lack of clinical consensus and research-supported guidance, providers reasonably have questions about whether, when, and how to prescribe opioid analgesics for chronic pain without increasing public health risks (Price et al., 2021).

Dowell et al. (2016) estimated 20% of patients presenting to physician offices with noncancer pain symptoms or pain-related diagnoses (including acute and chronic pain) receive an opioid prescription. The increase in the prescribing of opioid pain relievers in recent decades has contributed to an increase in addiction to opioids and overdose deaths. In 2020, an average of 44 people died each day from overdoses involving prescription opioids, totaling more than 16,000 deaths. Prescription opioids were involved in nearly 24% of all opioid overdose deaths in 2020, a 16% increase in prescription opioid-involved deaths from 2019 to 2020. (CDC, 2021). The misuse of and addiction to opioids—including prescription pain relievers—is a serious national crisis that affects public health as well as social and economic welfare. The CDC estimates that the total economic burden of prescription opioid misuse alone in the U.S. is \$78.5 billion a year (CDC, 2021). Therefore, healthcare providers must collaborate with other stakeholders to explore and apply appropriate risk assessment tools to mitigate this crisis.

Aggressive opioid prescription practices play the biggest role in opioid-related behaviors and contribute to an epidemic of abuse of opioid prescriptions. Current evidence indicates that most health care providers in the United States do not use a screening tool before initiating opioids to patients with chronic pain (Dowell et al., 2016). If started on long-term opioid therapy without proper supervision or screening, patients who are high risk for opioid abuse and/or misuse could overdose on their prescribed opioids (Guerriero, 2017). Stakeholders such as the Center for Disease Control and Prevention (CDC), the Food and Drug Administration (FDA), the American Pain Society, and the American Academy of Pain Medicine have highlighted the importance of assessing patients for risk of opioid abuse to ease the ongoing opioid epidemic (Dowell et al., 2016).

### **The Current Opioid Misuse Measure**

The Current Opioid Misuse Measure (COMM) is a brief patient self-assessment to monitor chronic pain patients on opioid therapy (Appendix A). The COMM™ was developed with guidance from a group of pain and addiction experts and input from pain management clinicians in the field. Experts and providers identified six key issues to determine if patients already on long-term opioid treatment are exhibiting aberrant medication-related behaviors: 1.) Signs & Symptoms of Intoxication, 2.) Emotional Volatility, 3.) Evidence of Poor Response to Medications, 4.) Addiction, 5.) Healthcare Use Patterns, 6.) Problematic Medication Behavior. The COMM™ was created to help clinicians identify whether a patient, currently on long-term opioid therapy, may be exhibiting aberrant behaviors associated with misuse of opioid medications (Butler et al., 2010). In contrast, the Screener and Opioid Assessment for Patients with Pain (SOAPP®) is intended to predict which patients, being considered for long-term opioid therapy, may exhibit aberrant medications behaviors in the future. Since the COMM™

examines concurrent misuse, it is ideal for helping clinicians monitor patients' aberrant medication-related behaviors over the course of treatment. It is valuable for the successful treatment of chronic pain, to be able to identify patients on opioid regimens currently exhibiting abuse behavior (Hudspeth, 2016).

### **Description of Local Problem**

The Pain Management Clinic was created by nurse practitioners who specialize in the treatment of pain, utilizing medical, holistic and psychiatric approaches. The clinic is located in the New Haven County, providing care in the greater New Haven and Bridgeport area. According to the Connecticut Department of Public Health, there were 1,378 opioid overdose deaths in Connecticut in 2020. This is an increase of 14.6% from the previous year, 2019 with 1,202 overdose deaths (Allen, 2020). This pain management clinic is in good position to improve care for individuals on opioids, especially in the state of Connecticut.

### **Organizational Priority**

The current policy in the Pain Management Clinic states that a SOAPP-R assessment score is required prior to treating patients with opiates for chronic pain. The SOAPP-R is a well-validated 24-item instrument constructed to predict the development of problematic drug-related behaviors (PDRB) (Black et al., 2018). However, there is no secondary screening tool being utilized for patients who are currently on opioids long-term, to assess their risk for abuse. Many pain management clinicians recommend the SOAPP for prescreening patients being considered for long-term opioid therapy, and the COMM™ for monitoring of PDRB in patients currently prescribed long-term opioid therapy (Ducharme & Moore, 2019). These self-report screening

instruments are a potential viable method for obtaining a quick and inexpensive estimation of a patient's likelihood of exhibiting aberrant drug-related behaviors (Black et al., 2018).

To support the Alternatives to Opioid for Pain (ALTOP) treatment of pain initiatives, the Pain Management Clinic's organizational priorities will include a Quality Improvement (QI) project to implement a secondary screening tool to assess patients' risk of opioid abuse. There will also be educational seminars on COMM™ to educate providers on best practices for opioid abuse assessment based on current evidence. Providers must recognize that the decision to prescribe opioids for chronic pain requires: ongoing, active risk assessment; frequent monitoring; responsibility for the patient's safety and management of the conditions that contribute to the patient's pain experience (Guerriero, 2017).

### **Focused Search Question**

In an adult pain management clinic (P) how does provider education via seminars (I) compared to no education (C) increase provider utilization of a newly adopted secondary screening tool for patients on opioids (O) over a 3-month period (T)?

### **Evidence Search**

#### ***External Evidence***

A literature review was conducted to obtain articles pertinent to the use of secondary screening tools for opioid abuse, revealing limited evidence to support the use of such secondary tools in clinical practice. All studies pertaining to risk assessment tools for opioid abuse were considered for use to contribute to the body of knowledge on the topic. A search of the following databases was conducted; CINAHL, MEDLINE, and the Cochrane Database of Systematic Reviews. The keywords searched were; Opioids, Opioid abuse, Opioids and adult patients,

Opioids and pain management, Opioids and pain management and clinic, Opioids and screening tool, Opioids and secondary screening tool, Opioids and screening tool and education, Opioids and screening tool and adherence, Opioids and screening tool and utilization, Barriers to opioid screening tool. Searches were limited to those published in English between 2012-2022 and limited to adults (see Appendix B). The final yield from all databases was a total of seven articles (Appendix C). The John Hopkins Nursing Evidence-Based Practice Quality Guide (JHNEBP) was used to rate the overall quality of the articles (Dang et al., 2022) and the Melnyk Level of Evidence Hierarchy was used to determine the level of evidence of each article (Melnyk & Fineout-Overholt, 2019).

### ***Internal Evidence***

Evidence from industry includes that validated opioid risk assessment tools were successfully implemented in different healthcare settings. Studies suggest that the COMM™ has promising psychometric properties among patients in pain clinic and primary care settings (Ashrafioun et al., 2015). These diagnostic screening tools provide a simple, low-cost method of identifying patients with problematic drug use, allowing an opportunity for early intervention (Rockne et al., 2019).

The Pain Management Clinic is currently not using a secondary screening tool, nor do they have a policy for assessing a patient's risk once initiated on long-term opioid therapy. The USPSTF has recommendations related to opioid use including screening for use of illicit drugs and misuse of prescription drugs and interventions to prevent drug use in adults (USPSTF, n.d.). The CDC Guideline addresses patient-centered clinical practices including conducting thorough assessments, considering all possible treatments and closely monitoring risks. The CDC recommends evaluation of risk factors for opioid-related harms and ways to mitigate patient risk

(CDC, 2021). The lack of screening of opioid abuse by the providers suggests the need for education on available validated screening tools for opioid abuse screening in the clinic.

### **Evidence Appraisal, Summary, and Recommendations**

The final seven articles were reviewed focusing on an opioid abuse screening tool in the adult population. Convincing evidence supported the use of several screening tools in different healthcare settings. Out of the seven articles, one article was LOE I, while the others were LOE IV. The articles were critically appraised for level of evidence (LOE) (Appendix D). The key points of each article were delineated for comparison in a synthesis table (Appendix E).

As noted in the evaluation and synthesis tables (see Appendices C, D, and E), the final recommendation was to implement a secondary screening tool for patients on opioids to improve the predictive value in estimating a patient's risk of addiction. According to the literature, the implementation of screening tools for opioid abuse improved identification of risk, contributed to the appropriate categorization of patients at risk, decreased length of stay, increased results of screening tests, and contributed to the understanding of utilizing these tools in different settings (Barclay et al, 2014; Pagé et al, 2016; Varney et al., 2018; Rockne et al., 2019; Chalmers et al., 2019; Nuckols et al., 2014; Skala et al., 2013). Higher LOE articles were not generalizable to a pain management clinic, however, newer studies showed favorable evidence supporting the use of validated screening tools for opioid abuse in several settings. The data supporting the use of opioid screening tools is promising, however, requires further research in outpatient settings. Screening tools such as the COMM™, has been validated by high quality studies (Ducharme & Moore, 2019). This is the type of secondary screening tool that can be used at the Pain Management Clinic (Appendix A). Utilizing the COMM™ as a secondary screening tool can aid

the providers in identifying patients at risk of misusing prescribed opioids, in order to prescribe and monitor opioid therapy safely (Appendix D).

## **Project Plan**

### **Project Goals**

1. Identify best practices for monitoring patients on long-term opioid therapy
2. Disseminate information to providers on the COMM™
3. Provide ongoing assessment for opioid abuse through the use of a validated tool
4. Attain a 50% or greater COMM™ screening tool completion rate for patients on long-term opioid therapy within a three-month period.

### **Framework**

According to the Institute for Healthcare Improvement (2020), the Model for Improvement (MFI) is a framework to guide accelerated work improvement. Process Improvement developed the model, which comprises three major parts. These parts are:

*What are we trying to accomplish?* Increase opioid abuse screening through utilization of a secondary screening tool in a pain management clinic.

*How will we know that a change is an improvement?* If the number of patients screened that are found to be high risk for opioid abuse/misuse increases, compared to current practice of not using secondary screening.

*What change can we make that will result in an improvement?* The adoption of the COMM™ screening tool by providers and further assessment for patients who have positive screenings.

The Plan Do Study Act cycle (PDSA) will guide the application of the MFI on this QI project. The PDSA cycle is an iterative, four step model for improving a process and is one of the most commonly used tools in quality improvement. (Christoff, 2018).

**Plan.** The first step is to develop a plan in which predictions of outcomes are clearly stated and tasks are assigned. This QI project plans to implement the COMM™ as a secondary screening tool for patients on long-term opioid therapy. The overview of project will be discussed separately with each stakeholder according to availability, permitting feedback to increase buy in. Final approval for the policy is pending.

**Do.** The second step of the cycle involves carrying out the plan and documenting relevant data that identify successes, problems, or unexpected outcomes. In this phase the COMM™ screening tool will be implemented and provider adherence to using the tool will be tracked. The implementation process will begin with the project manager providing educational seminars on utilizing the COMM™ as a secondary screening tool. The seminars will take place at the Pain Management Clinic and will include a luncheon while the project manager presents a PowerPoint presentation for all stakeholders. This PowerPoint will highlight current issues associated with opioid abuse and the advantages of utilizing a secondary screening tool. The screening tool will be given to patients on long-term opioid therapy to fill out in the waiting room. A project champion will be assigned to collect and store the forms. Chart audits will be conducted to track adherence to the screening tool and if it was implemented as planned. Written



and verbal feedback on utilizing a secondary screening tool will be collected to evaluate staff satisfaction, opinions, barriers, and facilitators.

**Study.** The third step involves analyzing the generated data or results to determine the plan's viability. The project manager will collect the completed forms from the project champion. Weekly chart audits will be done for staff adherence to the screening tool and will display the results on a run chart. One of the goals will be to attain a 50% or greater COMM™ screening tool completion rate for patients on long-term opioid therapy within a three-month period. The project manager will review the results with the ALTOP team at the monthly meetings as well as share results with the providers at the Pain Management Clinic via emails and on-site communications. The project manager will be onsite weekly to also answer questions and gather any further inputs and feedback. A summary of lessons learned will be developed by the project manager and used to inform any future changes.

**Act.** The final step of the cycle involves evaluating the project's results and making the relevant adjustments to ensure optimal outcomes. The project manager will revise the screening tool or process as needed.

## **Context**

The project setting will take place at the Pain Management Clinic, which provides high quality and accessible pain management care in the greater New Haven and Bridgeport area. Participants will include the clinic's providers (NPs) and their adult patient population on long-term opioid therapy.

## **Project Team and Roles**

The founder and chief medical officer of the Pain Management Clinic and their practicing providers will review and approve the final utilization of the secondary screening tool. The Practice mentor is Emily Mihailescu, MSN, FNP, APRN, NP-C and will offer overall guidance and support throughout the project. Dorothea Esposito, DNP MSN/ed, APRN, FNP-BC is the DNP project faculty advisor and evidence-based practice expert and will provide guidance throughout the project and ensure it meets quality improvement standards.

### **Key Stakeholders, Staff and Buy-in**

Key stakeholders include the practice sites founders, the prescribing providers, and their patients. For the nurse practitioners at the Pain Management Clinic, implementing a secondary screening tool is essential in detecting current misuse and abuse of prescription opioids. The providers have expressed interest of a complementary predictive screener of opioid misuse, that will improve their ability to periodically assess a patient's risk for abuse. The project leader will provide open dialogue with key stakeholders for buy-in, which will include clear communication of the project goal, mission, timeline and plans. There will be opportunities for everyone to ask questions and offer feedback. Since engaging patients may be challenging, they need to be made aware of the value of secondary screening tools so they can be safely managed on opioids. Some patients may be unaware that they are exhibiting aberrant behaviors associated with misuse of opioid medications, so the COMM™ will help in identifying those at risk.

### **Description of Practice Change**

The proposed practice change will begin with the key stakeholders to update New Solution's opioid abuse risk assessment policy to include the COMM™. The project manager will begin by assessing the providers knowledge on evaluating opioid abuse and providing educational seminars on current best practices. This will be done by an in-person PowerPoint presentation at

the clinic. Printed handouts will also be provided reinforcing education on the COMM™ tool and the value of utilizing a secondary screening tool for patients on opioids. patient medication touch points following the visit.

The current policy indicates that patients require an initial assessment with the SOAPP-R screening tool before prescribing opioids. Since there are many risks to patients who are prescribed opioids for pain, which include death, overdose and the development of an opioid abuse disorder, it would be extremely valuable for the clinic to develop a secondary tool to safely prescribe and monitor patients on long-term opioid therapy. The intervention will include implementing a secondary screening tool (COMM™), once long-term opioid therapy is in place. The project manager will review the ongoing and completed results of the COMM™ screening tool with the ALTOP team at the monthly meetings as well as provider emails and on-site communications.

### **Evaluation Plan**

**Process Measure.** Educating the providers on the COMM™ screening tool

**Outcome Measure.** The number of patients on long-term opioid therapy who are screened

**Data collection.** After implementing the project, data will be ongoing and evaluated weekly to determine the effectiveness of practice change. All patient identifiers will be kept anonymous and patient privacy will be protected. This will be accomplished by having the project champion make copies of the completed screening tools and removing all patient information (by using white-out). The project manager will then collect the edited copies at the end of each week. Data will include if the screening tool was completed and their overall score.

**Data analysis.** Once data collection is complete, the project manager will transfer the quantitative data into a Microsoft Excel spreadsheet to begin analysis. The project team will

mutually agree on data display tools. These display tools will consist of the number of patients screened and the number of patients found to have positive screenings. The total number of patients will be summarized in a table to determine if project goals were met.

### **Barriers to Implementation and Sustainability with Mitigation Plan**

One of the main barriers is that the Pain Management Clinic is implementing a new electronic health record (EHR) during the implementation phase. This could cause inconvenience of the screening tool being given to the patients, as the providers are navigating through a new EHR system while seeing patients. This lack of time may be a barrier for providers as well as lack of patient involvement and compliance with partaking in the secondary screening questionnaire. In order for there to be no interference with their workflow or workload, patients can be given the screening tool to complete while they're in the waiting room. Barriers to sustainability may include lack of organizational support for adoption of a secondary screening tool, and resistance to change due to culture or practice. It is important to continue to educate providers and patients on the importance of utilizing this screening tool to increase awareness of possible opioid abuse. There may also be language barriers. Perhaps, the utilization of qualified interpreters or video-assisted interpreters provided by the clinic can aid in overcoming this potential obstacle.

Another barrier is that patients may lack honesty answering the items on the COMM™ screening tool, thus skewing the total score of their questionnaire. Health care clinicians need complete and accurate information about patient behaviors and beliefs if they are to best serve and guide their patients. Perhaps by acknowledging how common it is for patients to withhold information, clinicians may be able to make it easier for patients to share their concerns and acknowledge their less-than-ideal behaviors. Such conversations will only occur, however, if

clinicians address patients' fears that they will be judged or lectured. It also important for clinicians to build a rapport with their patients so they continue to be open and honest with them, allowing them to answer questions truthfully.

Sustainability for this project will include continuing education and adapting as needed; the project manager will continue educating clinicians and key stakeholders to build knowledge and commitment actively. Education sessions will focus on the advantages of adopting the COMM™ screening tool, and presenting evidence on the importance of secondary screening for patients on opioid therapy. Another strategy to pursue integration and sustained use is celebrating progress. Celebrating the providers for complying with screening should be recognized during meetings and small token of appreciation will be provided. Celebration of achievements and recognition of success will encourage staff to maintain their momentum for practice change as well as having a positive influence on job satisfaction and commitment to the organization (Cullen et al., 2018).

### **Timeline**

Appendix F presents an outline that guides the project.

### **Resources/Budget**

The project will have potential costs that entails human capital and materials. The project manager will spend approximately 8 hours per week during implementation on providing education, answering questions or receiving any feedback from stakeholders. The project manager will also spend time reviewing questionnaires, collecting and analyzing data, and on dissemination. Figure 1 describes the anticipated costs for project implementation and evaluation.

Figure 1.

*Cost Analysis*


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<b>Expenses</b>	
Staples color printed paper 8x10 for screening tool (4,000 prints)	\$40
Staples poster board 22" x 28"	\$10
Small tokens of appreciation	\$75
Luncheon during educational seminar	\$100
Total Estimated Cost	\$225

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**Dissemination Plan**

The plan for dissemination includes a 1–2-page executive summary for the Pain Management Clinic. Monthly updates about the project to the ALTOP team. A poster of the project will be created for the DNP program faculty and students, and the providers at the clinic. An abstract will be submitted for presentation to a state practice organization like CTAPRNs and possibly a national organization like the National Nurse Practitioner Symposium June 2023 conference. Possible journals being considered for submissions are *Journal of Addiction Medicine* and the *Journal of Opioid Management*.

**Ethical Review**

This project has been reviewed by the ALTOP grant team and has received approval from the Chief Medical Officer at the Pain Management Clinic. A checklist that assists in differentiating a QI project from research activities is in Appendix G. The Pain Management Clinic does not require institutional review board (IRB) approval for Quality Improvement (QI)

projects. The Sacred Heart University IRB granted exemption status on Aug 24, 2022 (see Appendix H).

## **Project Implementation**

### **Description of actual project implementation**

In September of 2022, an educational seminar was held for all stakeholders at the Pain Management Clinic, on utilizing the COMM™ as a secondary screening tool. The seminar began with a 20-minute PowerPoint presentation, highlighting the evidence on why the use of the COMM™ would be beneficial to their practice. The screening tools were given to each provider to better understand the components of the tool (Appendix A). The proposed practice change was to add the COMM™ as a secondary screening tool for patients on long-term opioid therapy. The purpose of implementing this tool would be to aid clinicals in identifying whether a patient may be exhibiting aberrant behaviors associated with misuse of opioid medications. One main education point is that a screening tool only indicates possible misuse of opioids and requires further examination; it is not a diagnostic tool. Discussion included the importance to identify patients who have a possibility of misusing their medications than to fail to identify those who are abusing their medications.

A 12-week implementation phase was initiated on September 19 to December 19, 2022. Once checked into the clinic, those who met criteria (on long-term opioid therapy), were provided the COMM™ screening tool to fill out while waiting to be seen by the provider. Once the COMM™ was filled out, the provider copied the form and placed it into the patient's electronic health record. Based on the overall score on the screening tool, the provider would further assess the patient for opioid misuse. The assigned project champion collected and stored

the forms in a secure area within the office. Once a week the project manager met with all the providers during the visit to obtain verbal feedback on utilizing the COMM™ screening tool, to evaluate staff satisfaction, opinions, and any barriers. During the visit, the completed tools were collected from the project champion, and the scores were recorded. All data was kept confidential portraying no patient names.

### **Descriptions of deviations from project plan**

One limitation that impeded universal screening of all eligible patients was a lack of time for busy staff members, including medical assistants (MA's) and the providers. During the implementation process, patients were given the screening tool in the waiting room or while being roomed by the MA. With competing demands, staffing shortages, and high acuity patients in the clinic, it was a challenge for the providers to screen all patients consistently. Another barrier that created even more time restraint was that the clinic was also implementing a new EHR during the time frame of the project. The staff were trying to learn a new system while seeing a high acuity of patients, causing less time availability to screen all eligible patients. Now that the EHR has been in place, a better practice advisory or "pop-up" in the eligible patients EHR can be created. The screening tool was being completed on paper, now that the new EHR has commenced, the COMM™ screening tool can be implemented into the patients record and completed electronically.

Another barrier identified included the language barrier for some patients. The screening tool was only available in English, therefore if someone could not understand or read the questions on the questionnaire, it led to another screening tool not being completed. The impact of COVID-19 was a barrier as well. While the clinic was seeing patients in the office, if the patient being seen had tested positive for COVID-19, they were seen on telehealth instead. Due



to this possibility, overall COMM™ screening/completion could have been higher if those patients, who were seen on telehealth, came into the office. If a patient does not come into the office to be seen, they will not receive a questionnaire. One way to overcome the language barriers and telehealth visit, is for the clinic to obtain a Martti, which stands for My Accessible Real-Time Trusted Interpreter. The Martti allows staff and providers to make video calls, to a large network of certified interpreters, fluent in over 250 languages, including Arabic and American Sign Language. Martti integrates with the EHR, telehealth, making it more feasible to incorporate the COMM™ screening tool.

## **Evaluation**

### **Process Measures**

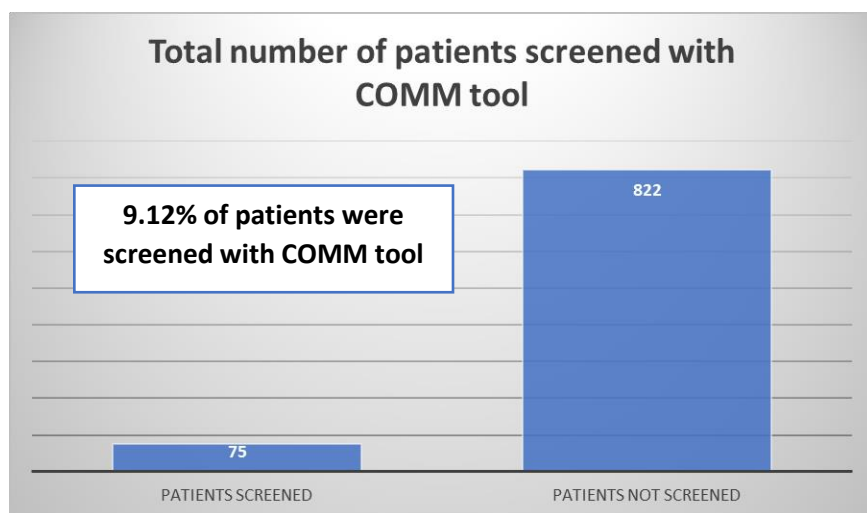
To evaluate effectiveness of this project throughout implementation, the process measure was introducing the COMM™ screening tool for substance abuse screening on an adult patient presenting to the clinic who has been on long-term opioid use for chronic pain. This was done by the patient or the Nurse Practitioner who interviewed the patient using the COMM™ questionnaire. If a positive screen, then the Nurse Practitioners would perform further assessment. A project goal was to attain a 50% or greater COMM™ screening tool completion rate for patients on long-term opioid therapy within a three-month period.

### **Outcome Measures**

The purpose of measuring aspects of healthcare delivery is to improve patient outcomes; in this project, the outcome measure is the number of patients screened and the number of patients found to be high risk for opioid abuse/misuse. Those patients that were found to be high-risk, were then further assessed by the provider.

Data was collected over a three-month period from September 2022-December 2022. Data collected included the number of patients who met eligibility for the COMM screening tool, the number of patients who completed the tool, and the total number of positive screenings yielded from the tool. At the Pain Management Clinic, adult patients on long-term opioid therapy are seen every 28 days. Those patients that were already screened were not needed to be screened again so they were excluded from the second and third month of the data. The data from September-December were examined to determine the compliance of providers screening those patients at the clinic who met inclusion criteria. The recording and analysis of data was completed with Microsoft Excel. Charts and graphs are displayed for a detailed look at the calculations and results of the project results (Appendix I). Post-implementation auditing found that in the three months of implementation, there were only 75 patients out of 855 eligible patients that were screened. This calculated a 9.12% screening compliance (See Figure 2.).

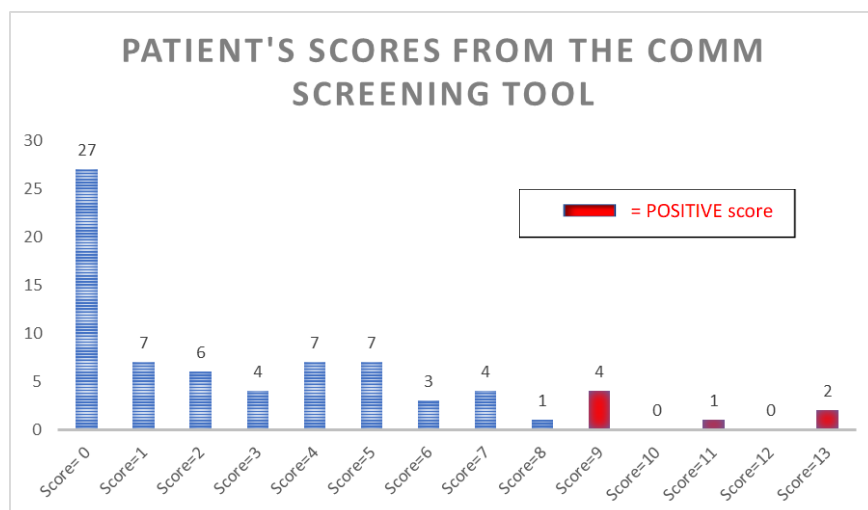
Figure 2.



For each patient screening tool collected, the sum of their questions were added and analyzed to determine which patients were found to have a positive screening. Out of the 75 patients

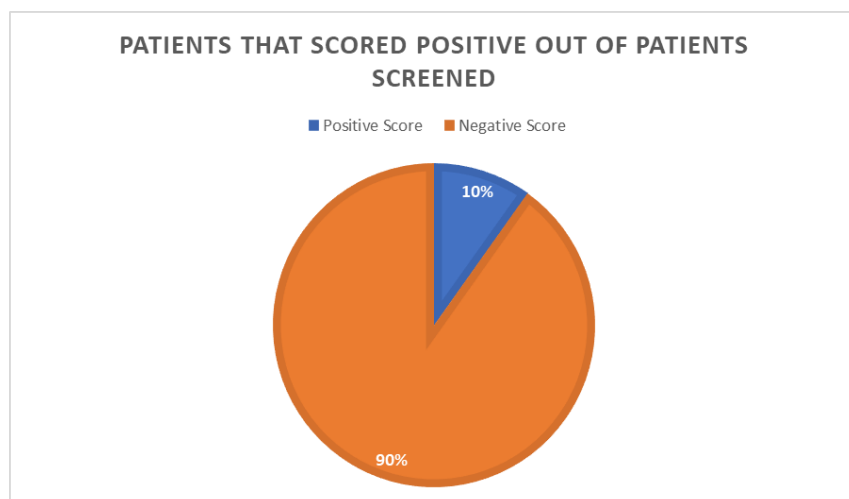
screened, 7 were found to have positive screenings. Each screening tool result value varied from 0 to the highest score of 13. As displayed in Figure 3. In Appendix I, each result is displayed with the number of patients found to have that individual score.

Figure 3.



Further calculations were made to determine the percentage of positive screenings, which were 10% out of the 75 patients that were screened with the COMM tool. (Refer to Figure 4 in Appendix I)

Figure 4.



The project data support that this quality improvement project's overall goal and objective to increase screening of patients in a pain management clinic at risk for opioid misuse were achieved. However, the goal of attaining a 50% or greater screening rate was not reached with the overall screening compliance of 9.12% during the implementation phase. The findings of the study did however show that the intervention was effective in revealing 10% of those patients screened, to be positive. The COMM™ is a sensitive test and is better at identifying who is misusing their medication than identifying who is not misusing. Clinically, a score of 9 or higher will identify 77% of those who turn out to be at high risk (McCaffrey et al., 2019). Therefore, the project goal of identifying best practices for monitoring patients on long-term opioid therapy and was met. Another goal that was met was that the providers were able to further assess those patients that scored positive, in order to re-evaluate if the patient is in fact at risk for misusing opioids. In addition, interviews with providers provided positive feedback about the knowledge learned from the education and implementation of utilizing the COMM screening in their practice.

### **Return on Investment**

The total project timeline was three months: from September 2022 to December 2022. Since then, discussion is being taken place with the Chief Officer of the Pain Management Clinic in regard to implementing the COMM screening tool into their EHR. At this time, the attainment goal of a 50% or greater COMM™ screening tool completion rate for patients on long-term opioid therapy was not met. The project did, however, show that the screening tool was able to identify 7 patients who scored positive (>9). The project also showed an overall increased knowledge in the COMM screening tool in the staff at the clinic as evidenced by the positive feedback of the

screening tool. Overall, this project did not require any additional resources in terms of capital and was a positive return on investment.

### **Key Lessons Learned**

Effectively implementing new approaches and achieving sustainable change can be challenging. Readiness is critical to effective change efforts. Organization leaders and staff at all levels must be both willing and able to put new programs and practices in place for such efforts to succeed. Assessing readiness involves taking a close look at factors that contribute to the organization's overall ability to change, those that help the organization prepare for specific interventions, and the motivation of individuals involved with change. There is always an opportunity to enhance practice and follow specific evidence-based guidelines to improve the standard of care. Utilizing the plan-do-study-act (PDSA) model provided a method for a successful implementation of a practice change in a healthcare setting.

The initial goal before implementation was to attain a 50% or greater COMM screening tool completion rate in a 3-month period. It may have been better to set a goal of 15% instead of the 50% that was chosen. During this time, the project manager was unaware that the site was going to be implementing a new EHR, thus making it more challenging for screening tools to be completed. This project manager learned that change takes time and sometimes that means not starting off with such a high goal. Additionally, the project manager did not consider the effects of the short clinical staff would have on patients completing the COMM screening tool. In summary, change in practice relies not only on the nature and strength of the evidence but also on the practice environment in which practice is to be placed (Chiwaula & Jere, 2022).

Although adult patients get initially screened with the SOAPP-R assessment tool before prescribing narcotics is in place at the Pain Management Clinic, a standardized, evidence-based practice for monitoring those patients on long-term opioid therapy was not in place. The lack of a standardized procedure for a secondary screening for opioid misuse may have led to missed opportunities in identifying those in need re-evaluation. For example, 10% of patients screened positive for the COMM tool. If there was no screening in place at the time, these patients would have been unidentified while being treated at the clinic.

### **Sustainability**

To achieve sustainable change, quality improvement initiatives must become the new way of working rather than something added on to routine clinical care. Sustainability can be considered a domain of quality in healthcare, extending the responsibility of health services to patients not just of today but of the future (Mortimer et al., 2018). Although reaching sustainability is challenging after a project ends, it is essential to find appropriate strategies to maintain the intended practice change. An action plan for sustainability includes reviewing team members to focus on integration, garnering senior leadership support, internal strategic reporting, and mobilizing QI methods (Cullen et al., 2018).

Sustainability for this project includes continuing education and adapting as needed. Continued on-site education and staff monthly reminders will also be applied. Information for this project and its results will be disseminated to the key stakeholders such as, the practice site founder, the prescribing providers, and the rest of the staff on site, and the ALTOP team members. Sharing this information will allow them to learn that the screening tool was able to identify patients at risk of opioid abuse and who due to this, needed further evaluation. Knowing the value of the COMM screening tool, through its results, should be an incentive to keep the

clinical staff motivated to maintain and improve the utilization of the COMM as a secondary screening tool to prevent future opioid overdoses. Another strategy to pursue integration and sustained use is celebrating progress. Celebrating NPs for complying with screening should be recognized using individual name recognition during meetings and providing small tokens of appreciation, such as a gift card. The COMM screening tool can ultimately be sustained in the Pain Management Clinic by being integrated into the EHR, making it more accessible and convenient to use.

## **Dissemination**

### **Implications of Project Results to Organization, Practice Community**

Prescription opioid abuse is increasing and exacts a high toll on patients, physicians, and society. There are more than 40 people dying every day from overdoses involving prescription opioids (CDC, 2021). Health care professionals must balance aggressive treatment of chronic pain with the need to minimize the risks of opioid abuse, misuse, and diversion. A thorough, ongoing assessment can help fashion a multimodal therapeutic plan, stratify patients by risk, and identify those who may exhibit aberrant behaviors after receiving opioid therapy (Ducharme & Moore, 2019). According to the CDC, clinicians should evaluate the benefits and harms of continued therapy with patients every 3 months or more frequently. If benefits do not outweigh harms of continued opioid therapy, clinicians should optimize other therapies and work with patients to taper opioids to lower dosages or to taper and discontinue opioids (CDC, 2021).

### **Sharing Project Results Locally and Regionally**

Innovative dissemination of research is communicated internally and externally to effectively improve patient outcomes (Ross-Hellauer et al., 2020). Therefore, the results of the

project implemented in the Pain Management Clinic will be disseminated by utilization of an executive summary, project abstract, and project poster and presentations. Reporting project results will be an essential step toward incorporating a standardized secondary screening tool in the clinic.

Internal dissemination of the new practice change includes reporting within the organization where this quality improvement project was implemented. After project implementation, an executive summary (See Appendix J) will be submitted. To expand the knowledge on the COMM screening tool implemented in the Pain Management Clinic and to encourage similar initiatives throughout other healthcare systems, external dissemination is necessary (Cullen et al., 2018). Therefore, a project poster presentation will be prepared for the Davis & Henley College of Nursing faculty and students in April 2023 (See Appendix K). An abstract will also be submitted to the Connecticut Advanced Practice Registered Nurse Society (CTAPRN) and the National Nurse Practitioner Symposium June 2023 conference.

### **Conclusion**

Regular use of opioids can increase risk of overdose and opioid use disorder, which continues to be a significant problem in the United States. To assess for harmful opioid use, healthcare providers should follow an evidence-informed protocol. A validated screening instrument can help providers systematically identify people at risk for a condition and point to the need for further evaluation. Although the implementation of the project encountered many barriers, the results showed significant change by identifying patients at risk of opioid abuse. A missed opioid abuse diagnosis is a missed opportunity to link a person to substance use treatment, improve their quality of life, and reduce the risk of potential overdose and death.



Therefore, this project demonstrates the value of utilizing a secondary screening tool into standard practice of monitoring patients on long-term opioid therapy.

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## Appendix A

### The Current Opioid Misuse Measure (COMM™)

#### COMM™

Please answer each question as honestly as possible. Keep in mind that we are only asking about the **past 30 days**. There are no right or wrong answers. If you are unsure about how to answer the question, please give the best answer you can.

Please answer the questions using the following scale:	Never	Seldom	Sometimes	Often	Very Often
	0	1	2	3	4
1. In the past 30 days, how often have you had trouble with thinking clearly or had memory problems?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. In the past 30 days, how often do people complain that you are not completing necessary tasks? (i.e., doing things that need to be done, such as going to class, work or appointments)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. In the past 30 days, how often have you had to go to someone other than your prescribing physician to get sufficient pain relief from medications? (i.e., another doctor, the Emergency Room, friends, street sources)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. In the past 30 days, how often have you taken your medications differently from how they are prescribed?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. In the past 30 days, how often have you seriously thought about hurting yourself?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. In the past 30 days, how much of your time was spent thinking about opioid medications (having enough, taking them, dosing schedule, etc.)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please answer the questions using the following scale:	Never	Seldom	Sometimes	Often	Very Often
	0	1	2	3	4
7. In the past 30 days, how often have you been in an argument?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. In the past 30 days, how often have you had trouble controlling your anger (e.g., road rage, screaming, etc.)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. In the past 30 days, how often have you needed to take pain medications belonging to someone else?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. In the past 30 days, how often have you been worried about how you're handling your medications?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. In the past 30 days, how often have others been worried about how you're handling your medications?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. In the past 30 days, how often have you had to make an emergency phone call or show up at the clinic without an appointment?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. In the past 30 days, how often have you gotten angry with people?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. In the past 30 days, how often have you had to take more of your medication than prescribed?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. In the past 30 days, how often have you borrowed pain medication from someone else?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. In the past 30 days, how often have you used your pain medicine for symptoms other than for pain (e.g., to help you sleep, improve your mood, or relieve stress)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please answer the questions using the following scale:	Never	Seldom	Sometimes	Often	Very Often
	0	1	2	3	4
17. In the past 30 days, how often have you had to visit the Emergency Room?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Appendix B

Table 1. CINAHL Complete Search Terms and Search Results

Search Terms	Number of hits	Number of title & abstract reviewed	Number of full-text articles reviewed	Number of articles selected for this review without duplicates
Opioids	8,529			
Opioid abuse	303	11	6	3
Opioids and adult patients	513			
Opioids and pain management	1,391			
Opioids and pain management and clinic	87	12	7	1
Opioids and screening tool	39	14	10	3
Opioids and secondary screening tool	0			
Opioids and screening tool and education	6	1	1	1
Opioids and screening tool and adherence	5			
Opioids and screening tool and utilization	7	3	3	1
Barriers to opioid screening tool	7,094	7	4	2

Table 2. MEDLINE Complete Search Terms and Search Results

Search Terms	Number of hits	Number of title & abstract reviewed	Number of full-text articles reviewed	Number of articles selected for this review without duplicates
Opioids	16,275			
Opioid abuse	1,262	8	4	1
Opioids and adult patients	767			
Opioids and pain management	3,534			
Opioids and pain management and clinic	440	6	4	2
Opioids and screening tool	66	8	5	1
Opioids and secondary screening tool	0			
Opioids and screening tool and education	13			
Opioids and screening tool and adherence	4			
Opioids and screening tool and utilization	6			
Barriers to opioid screening tool	14,150	11	2	1



Table 3. The Cochrane Database of Systematic Reviews Complete Search Terms and Search Results

Search Terms	Number of hits	Number of title & abstract reviewed	Number of full-text articles reviewed	Number of articles selected for this review without duplicates
Opioids	48			
Opioid abuse	9	1	1	1
Opioids and adult patients	7			
Opioids and pain management	7	2	2	1
Opioids and pain management and clinic	1			
Opioids and screening tool	0			
Opioids and secondary screening tool	0			
Opioids and screening tool and education	0			
Opioids and screening tool and adherence	0			
Opioids and screening tool and utilization	0			
Barriers to opioid screening tool	2			

## Appendix C

## Evidence Summary

Citation	Conceptual Framework	Design/ Method	Sample/Setting	Major Variables Studied and Their Definitions	Outcome Measurement	Data Analysis	Findings	Level of Evidence/ Quality	Quality of Evidence: Critical Worth to Practice
Author Year Title County Funding	Theoretical basis for study		Number Characteristics Exclusion criteria Attrition	Independent variables IV1 = IV2 = Dependent variables	What scales used - reliability info (alphas)	What stats used	Statistical findings or qualitative findings	Level =	Strengths Limitations Risk or harm if implemented Feasibility of use in your practice
<b>Article 1</b>									
Barclay et al, 2014. Screening for substance abuse risk in cancer patients using the Opioid Risk Tool and urine drug screen. Charlottesville, VA.	N/A	Retrospective chart review; for patients with cancer in a Palliative Care Clinic during September 2012. The Opioid Risk Tool variables & total scores, insurance status & urine drug screen results were evaluated.	Sample; all cancer patients seen in the palliative care clinic during the month of September 2012 (n=114). <b>Inclusion criterion:</b> a current or past diagnosis of cancer. <b>Exclusion criteria:</b> those without a cancer diagnosis.	<b>IV1=</b> Screening for substance abuse risk in cancer patients using the Opioid Risk Tool and urine drug screen <b>IV2=</b> improved early identification of risk of opioid abuse. <b>Dependent variables =</b> Opioid Risk Tool scores and urine drug screen findings.	ORT; Urine drug screen	Chi-square tests were used for bivariate analysis comparing individual elements of the ORT and the results of the urine drug screen, as well as comparing results of the urine drug screen with risk stratification by the ORT.	The mean Opioid Risk Tool score was 3.79, with 43 % of patients defined as medium to high risk. Age (16-45 years old, 23 %) and a personal history of alcohol (23 %) or illicit drugs (21 %) were the most common risk factors identified. Urine drug screens on 40 % of patients, noting abnormal findings in 45.65 %.	Level IV/Good quality	<b>Strengths;</b> evaluation of the ORT variables and total scores, insurance status, and urine drug screen results. <b>Limitations;</b> UDS's were not obtained on every patient by the time of this survey, so some bias exists in the urine drug screen results. The urine drug screening screens for a specific panel and not all opiates are included. Therefore, it is likely not able to detect all aberrant drug behavior. Documented calculation of the ORT at the time of clinic visits was not present for all patients. This would be feasible in my practice setting; No risk/harm if implemented.
<b>Article 2</b>									
Page et al, 2016. Risk of Opioid Abuse and Biopsychosocial Characteristics Associated With This Risk Among Chronic Pain Patients Attending a Multidisciplinary Pain Treatment Facility Quebec, Canada	N/A	Observational prospective design study to determine the proportion of new patients attending a MPITF at risk of opioid abuse; examine biopsychosocial correlates associated with this risk; and compare patients' outcomes among patients at low, moderate, and severe risk of opioid abuse based on their type of treatment over a 6-month period.	Sample; 3040 patients <b>Inclusion Criteria:</b> Adult Patients enrolled in the Quebec Pain Registry between July 2012 and May 2014. Patients answered self-report and nurse-administered questionnaires before initiating treatment and 6 months later. <b>Exclusion criteria:</b> patients under 18, Patients who were enrolled in the QPR but were not candidates for multidisciplinary pain treatment or did not have chronic pain; patients discharged after initial visit without changes in treatment plan.	<b>IV=</b> Self-report and nurse-administered questionnaires (pain and psychosocial constructs, Opioid Risk Tool, pain medication)  <b>DV:</b> Risk of opioid abuse and biopsychosocial characteristics associated with this risk	Self-report and nurse-administered questionnaires (pain and psychosocial constructs, Opioid Risk Tool, pain medication)	Data were analyzed using the Pearson w2 tests, multivariable binary logistic regression, and multivariate general linear model.	Findings showed that 81%, 13%, and 6% of patients were at low, moderate, and severe risk of opioid abuse, respectively. Civil status, pain duration, mental health-related quality of life, and cigarette smoking were significantly associated with risk of opioid abuse (P< 0.001). There was a significant interaction between risk of opioid abuse and type of treatment in predicting 6-month pain outcomes and quality of life.	Level IV/Good quality	<b>Strength;</b> Civil status, pain duration, mental health-related quality of life, and cigarette smoking were significantly associated with risk of opioid abuse. There was a significant interaction between risk of opioid abuse and type of treatment in predicting 6-month pain outcomes and quality of life. <b>Limitations;</b> opioid abuse behaviors were not assessed; rather only risk of abuse was measured using the ORT. It is not clear how these results translate to chronic pain patients who are managed in the community.

Article 3									
Varney et al., 2018. Detecting aberrant opioid behavior in the emergency department: a prospective study using the screener and Opioid Assessment for Patients with Pain-Revised (SOAPP®-R), Current Opioid Misuse Measure (COMM)™, and provider gestalt. San Antonio, TX	N/A	Prospective observational study of adult patients in a high-volume US ED. Patients completed the SOAPP-R and COMM, and treating EM providers evaluated patients' opioid misuse risk. Variable-centered, person-centered, and hierarchical cluster analyses were performed to determine whether provider gestalt, SOAPP-R, or COMM, or a combination, predicted higher misuse risk.	Sample: 169 patients <b>Inclusion criteria:</b> Adults seeking treatment in the ED for a painful condition; must have received at least one opioid prescription within the 90 days preceding their visit; most of had a prescription within the past 90 days. <b>Exclusion criteria:</b> patients that had not received an opioid prescription in the preceding 3 months, if the provider determined them to have medical or psychiatric conditions that prevented their participation in the study, or if they could not read or speak English.	<b>IV1:</b> Screening ED patients with SOAPP® -R, COMM™, and provider gestalt  <b>DV:</b> Detecting aberrant opioid behavior in the emergency department	SOAPP-R, COMM, and provider gestalt	Statistical analyses using JMP version 10. Descriptive statistics of patient and provider characteristics were calculated as mean, standard deviation and median [interquartile range, IQR] for continuous variables or count for nominal variables. Provider risk scores, SOAPP-R, COMM, and number of opioid prescriptions at 6 and 12 months were non-normally distributed.	SOAPP-R and COMM scores strongly correlate with each other ( $r=0.71$ , $p<0.0001$ ), as do the numbers of opioid prescriptions at 6 and 12 months ( $r=0.74$ , $p<0.0001$ ). Provider risk scores (representing provider gestalt on prescription opioid misuse) only weakly correlate with COMM scores ( $r=0.21$ , $p=0.0068$ ) and do not correlate with SOAPP-R scores. Patients' SOAPP-R scores directly correlate with increase in the number of opioid prescriptions at both 6 months ( $r=0.26$ , $p=0.0097$ ) and 12 months ( $r = 0.22$ , $p = 0.0327$ ) from the ED encounter, although overall, the correlations are moderate. Provider scores correlate with pain exaggeration ( $r=0.53$ , $p<0.0001$ ) such that providers gave higher risk scores to patients who displayed exaggerated symptoms.	Level IV/ Good quality	<b>Strengths;</b> provider gestalt and validated patient self-assessment tools (SOAPP-R, in particular) predict the number of opioid prescriptions in unique ways in ED patients on long-term opioid therapy. A combination of gestalt and self-report scores can be used to identify patients who would otherwise miss the high-risk cutoff scores for SOAPP-R and COMM. <b>Limitations;</b> Study was done at a single military healthcare facility, so the results may not be generalizable. There was no inquire about the use of, or require providers to access the state PDMP. A cluster analysis depends heavily on the current sample studied (i.e., people were grouped based on how closely their risk profiles matched each other within this sample).
Article 4									
Rockne et al., 2019. Identification of substance use disorders in burn patients using simple diagnostic screening tools (AUDIT/DAST -10). Salt Lake City, UT.	N/A	A retrospective chart review of adult burn patients admitted to the University of Utah from 05/01/2014–06/30/2017. Patient demographics, injury data, and substance use data were collected and analyzed.	Sample: 322 adult burn patients admitted to the University of Utah. <b>Inclusion criteria:</b> Patients admitted to the Burn Center within 24 h of burn-related injury between May 1, 2014, and June 30, 2017 <b>Exclusion criteria:</b> Individuals over the age of 18 years.	<b>IV</b> = Screening with AUDIT/DAST-10 on burn patients  <b>DV1</b> = Results of screening tests  <b>DV2</b> = length of stay	AUDIT/DAST -10	Study data were collected and managed using Research Electronic Data Capture tools. Stata 14 was used for data analysis. Inferential statistics (Chi-Squared and t-test) were used for comparisons of gender and age between patients with positive and negative AUDIT and DAST screening. Non-parametric statistics (Wilcoxon rank-sum) were used for comparisons between independent variables with non-normal distribution of data (TBSA, LOS/TBSA). AUDIT and DAST scores were handled as a dichotomous variable based upon positive or negative screening values. A $p < 0.05$ was considered statistically significant	17.4% of patients had positive AUDIT screens. 15/50 with alcohol use at time of injury (TOI) had negative AUDIT screens. Median AUDIT score with TOI alcohol use was 12, without TOI alcohol use was 1. 30/55 patients offered alcohol counseling accepted. 14 patients (4.3%) had positive DAST-10 screens. 9/25 with drug use at TOI had negative DAST-10 screens. No patients without TOI drug use had DAST-10 scores $>2$ . 9/11 patients offered drug counseling accepted. Mean standardized length of stay (LOS) per TBSA burn injury was 1.7 days for positive AUDIT, 1.6 days for negative AUDIT. Median standardized LOS was 1.4 days for positive DAST-10, 1.7 days for negative DAST-10.	Level IV/Good Quality	<b>Strengths include;</b> The use of the AUDIT and DAST-10 in the burn patient population for diagnostic screening provides a simple, low-cost method of identifying patients with problematic drug or alcohol use, allowing an opportunity for early intervention. Positive AUDIT or DAST-10 scores do not appear to be independent predictors of longer hospital stays, increased burn wound severity, noncompliance with treatment, or increased occurrence of unplanned readmission <b>Limitations include;</b> both the AUDIT and DAST-10 are self-reporting assessments, accurate scoring is inherently limited by the reliability and accuracy of patient responses. May not be generalizable to other types of patients.

Article 5									
Chalmers et al., 2019. Screening Tools Validated in the Outpatient Pain Management Setting Poorly Predict Opioid Misuse in the Emergency Department: A Pilot Study. San Diego, California	N/A	Prospective observational study	Sample: 154 participants presenting to an academic ED. <b>Inclusion criteria:</b> Patients had to report chronic pain persisting > 6 months, even if unrelated to the current visit, or present with a refill request for a prescription opioid medication. <b>Exclusion criteria:</b> Patients under 18 years of age, were incarcerated, were unable to read or understand the consent forms, or had a historical or current cancer diagnosis.	IV: Risk assessment tools  DV1: Categorized risk of patients	Opioid Risk Tool, the Screener and Opioid Assessment for Patients with Pain-Revised, and the Current Opioid Misuse Measure	The primary outcome measure was the sensitivity and specificity of opioid misuse categorization by the three assessment tools as measured by either EMR data alone or EMR + PDMP + ME data. The sensitivity, specificity, likelihood ratios, diagnostic odds ratio, and 95% confidence intervals for all screening performance characteristics were calculated for each of the screening tools. The C-statistic was calculated as the area under the receiver operating characteristic curve.	Using the combined reference standard, 55.8% of participants displayed at least one aberrant behavior. Regardless of the reference standard, the test characteristics of these screening tools were modest at best, with likelihood ratios close to 1.	Level IV/ Good quality	<b>Strengths:</b> Review of the EMR alone or together with the PDMP may be more useful methods to assess drug-aberrant behaviors in the ED setting. <b>Limitations:</b> the sensitivity of these screening tools were unexpectedly poorer than anticipated. Given that participants were recruited from a single academic ED during only certain time periods, the sample may not be representative of all opioid-treated patients or those seeking prescription opioids in all ED settings. Given the need to obtain consent for searching patient records, the study sample may suffer from Hawthorne effect or selection bias. The screening tools were not blinded and it is possible that study participants were able to guess the goal of the study.

Article 6									
Nuckols et al., (2014) Opioid prescribing: a systematic review and critical appraisal of guidelines for chronic pain.	N/A	A Systematic Review and Critical Appraisal of Guidelines for Chronic Pain. Study steps included searching for guidelines, applying selection criteria, assessing guideline quality, and extracting relevant content.	Sample =N/A <b>Inclusion criteria:</b> Guidelines published between January 2007 and July 2013 addressing the use of opioids for chronic pain in adults were selected. <b>Exclusion criteria:</b> non-English-language guidelines. Also excluded included Guidelines on specific settings, populations, and conditions	N/A	Appraisal of Guidelines for Research and Evaluation II (AGREE II) instrument and A Measurement Tool to Assess Systematic Reviews (AMSTAR)	Guidelines and associated systematic reviews were evaluated using the Appraisal of Guidelines for Research and Evaluation II (AGREE II) instrument and A Measurement Tool to Assess Systematic Reviews (AMSTAR), respectively, and recommendations for mitigating opioid-related risks were compared.	Thirteen guidelines met selection criteria. Overall AGREE II scores were 3.00 to 6.20 (on a scale of 1 to 7). The AMSTAR ratings were poor to fair for 10 guidelines. Two received high AGREE II and AMSTAR scores. Most guidelines recommend that clinicians avoid doses greater than 90 to 200 mg of morphine equivalents per day, have additional knowledge to prescribe methadone, recognize risks of fentanyl patches, titrate cautiously, and reduce doses by at least 25% to 50% when switching opioids. Guidelines also agree that opioid risk assessment tools, written treatment agreements, and urine drug testing can mitigate risks. Most recommendations are supported by observational data or expert consensus	Level I: High quality	<b>Strengths:</b> Despite limited evidence and variable development methods, recent guidelines on chronic pain agree on several opioid risk mitigation strategies, including upper dosing thresholds; cautions with certain medications; attention to drug-drug and drug disease interactions; and use of risk assessment tools, treatment agreements, and urine drug testing <b>Limitations:</b> Exclusion of non-English-language guidelines and reliance on published information

Article 7									
Skala et al. (2013). Can We Predict Addiction to Opioid Analgesics? A Possible Tool to Estimate the Risk of Opioid Addiction in Patients with Pain. Vienna, Austria	N/A	Retrospective review/ Setting: Four Austrian hospitals.	Setting: Four Austrian hospitals. Sample: 741 patients were interviewed. Of these, 634 patients were affected with chronic pain while 107 patients had a history of opioid addiction. Patients were interviewed about alcohol and nicotine consumption and family history of psychiatric disorders. Attitudes towards medication and the origin of pain were examined. Patients with an opioid addiction and patients suffering from chronic pain were asked to complete a short questionnaire intended to help screen for addiction potential.  <b>Inclusion criteria:</b>  <b>Exclusion criteria:</b>	N/A	Self-rating questionnaire	Differences in characteristics between patients with an opioid addiction and patients without an opioid addiction were assessed by t tests and Mann-Whitney-U tests for nonparametric variables. P values at the level < .05 were considered significant. The data were analyzed with SPSS Statistics 19.0 software	Compared to the patients suffering from chronic pain, patients with an opioid addiction significantly more often had alcohol- and nicotine-related pathologies and psychiatric comorbidity. A family history of mental illness and developmental problems were significantly more frequent in this group. Compared to those not addicted, those with an opioid addiction had significantly higher expectations concerning the potential of medication to change one's mental state; they thought that psychological factors might contribute to the pain they feel.	Level IV/Good quality	<b>Strengths:</b> The study found differences in questionnaire responses between patients with an opioid addiction and patients suffering from chronic pain to be dependent upon the prevalence of current or former addiction, psychiatric history, attitudes towards medication, and ideas about the origin of pain. The study found these factors have predictive value in estimating a patient with pain's risk of addiction. <b>Limitations:</b> The main limitation of this study is the use of a self-rating instrument which reduces objectivity and introduces the possibility of misreporting. Also, the 2 groups differ in number and are not homogenous.

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## Appendix D

Levels of Evidence Synthesis Table

<b>X (copy symbol as needed)</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>Level I: Systematic review or meta-analysis</b>						X	
<b>Level II: Randomized controlled trial</b>							
<b>Level III: Controlled trial without randomization</b>							
<b>Level IV: Case-control or cohort study</b>	X	X	X	X	X		X
<b>Level V: Systematic review of qualitative or descriptive studies</b>							
<b>Level VI: Qualitative or descriptive study, CPG, Lit Review, QI or EBP project</b>							
<b>Level VII: Expert opinion</b>							

### LEGEND

1= Barclay et al, 2014. 2= Pagé et al, 2016. 3= Varney et al., 2018. 4= Rockne et al., 2019. 5= Chalmers et al., 2019. 6= Nuckols et al., 2014. 7= Skala et al., 2013.

## Appendix E

### Outcome Synthesis Table

↑, ↓, —, NE, NR, ✓ (select symbol and copy as needed)	1	2	3	4	5	6	7
IROA	↑	↑	↑	↑	↑	↑	↑
SSA	↑	↑	↑	↑	↑	↑	↑
LOS	✓	✓	✓	↓	✓	✓	✓
RST	↑	↑	↑	↑	↑	↑	↑
CRP	↑	↑	↑	NE	↑	NE	NR
UDS	↑	NE	NE	↑	NE	↑	NR
SRNAQ	✓	↑	↑	↑	↑	↑	↑

#### **SYMBOL KEY**

↑ = Increased, ↓ = Decreased, — = No Change, NE = Not Examined, NR = Not Reported (introduced at beginning but never reported at the end), ✓ = not applicable or present

#### **LEGEND**

1= Barclay et al, 2014. 2= Pagé et al, 2016. 3= Varney et al., 2018. 4= Rockne et al., 2019.  
5= Chalmers et al., 2019. 6= Nuckols et al., 2014. 7= Skala et al., 2013

IROA= Identification of risk of opioid abuse; SSA= Screening for Substance abuse;  
LOS=Length of Stay; RST=Results of Screening Tests; CRP=Categorized risk of patients;  
UDS= Urine Drug Screenings; SRNAQ= Self-report and nurse-administered questionnaires



## Appendix F

<b>Doctor of Nursing Practice Project Timeline</b>		
<b>Component</b>	<b>Definition</b>	<b>Date Done</b>
<b><i>Phase 1: Problem Identification and Evidence Review</i></b>		
Clinical Inquiry including background and significance of problem	Describe local problem and its significance. Include data to frame local problem.	2/2/2022
Organizational priority	Summarize information that supports topic/problem is an organizational priority.	2/2/2022
Searchable Question	Write a focused, searchable question using an established method (e.g. PICO).	2/2/2022
Evidence search	External evidence <ul style="list-style-type: none"> <li>Summarize search strategy (e.g. databases, keywords, filters/limits, criteria for article selection, tools for critical appraisal). Include practice-based evidence (e.g. evidence-based solutions that experts/other health systems have implemented to address practice problem).</li> </ul>	4/25/2022
	Internal evidence <ul style="list-style-type: none"> <li>Summarize applicable unit/community/department/hospital/organizational level data or data required for national entities (e.g. CMS, NDNQI, AHRQ).</li> </ul>	4/25/2022
	Perform needs assessment if applicable.	N/A
Evidence appraisal, summary, and recommendations	Organize evidence that answers focused clinical question in a clear concise format (e.g. table or matrix).	06/20/2022
	Appraise literature for quality and applicability of evidence using established method (e.g. Johns Hopkins Nursing EBP Research Evidence Appraisal Tool, Joanna Briggs Institute Critical Appraisal Tools, Fuld Institute for EBP critical appraisal tools etc.).	06/20/2022
	State recommendations(s) and link to evidence strength and quality and risk/benefits.	06/27/2022
<b><i>Phase 2: Project Planning</i></b>		

Project goals	State intended, realistic outcomes of project using established method (e.g. SMART criteria).	7/10/2022
Framework	Select framework/model to guide implementation (e.g. EBP model, QI framework, Change model).	7/10/2022
Context	Describe project setting and participants or population, or other elements that are central to where the change will occur.	7/10/2022
Key stakeholders	Identify agencies, departments, units, individuals needed to complete the project and/or affected by project, and strategies to gain buy-in.	7/10/2022
Practice change/intervention	Provided detailed description of practice change or intervention (e.g. new or revised policy).	7/24/2022
Evaluation	Summarize plan for evaluating the effectiveness of the practice change. Identify applicable process and outcome data to be collected/tracked and tools to do this. Identify the methods for analyzing/interpreting the data (e.g. control, run or Pareto charts).	7/24/2022
Possible barriers to implementation	Identify possible barriers and implementation strategies to mitigate these barriers.	7/24/2022
Sustainment	Identify strategies to sustain the change.	7/24/2022
Timeline	Create a realistic timeline for project completion.	7/24/2022
Resources	Identify all resources (e.g. indirect and direct) needed to complete the project.	7/24/2022
Ethical merit	Identify and obtain the required review and approval needed for implementation (e.g. institution, community agency, IRB).	7/24/2022
<b><i>Phase 3: Implementation</i></b>		
Implement project	Carry out the project using selected implementation framework/model.	9/19/2022
	Track any deviations/changes from the project plan.	12/19/2022
<b><i>Phase 4: Evaluation</i></b>		
Results/Interpretation	Using an established method (e.g. run or control charts) display data and interpret project outcomes.	2/16/2023
	Report evaluation of the effectiveness of the practice change, including extent the practice change was implemented (process outcome) and extent to which the desired outcome(s) were achieved.	2/16/2023

Return on investment	Identify the final resources that were used to implement the project. Calculate and report the return on investment.	2/16/20233
<b><i>Phase 5: Dissemination</i></b>		
Traditional	<p>Disseminate to the project setting in a manner meaningful to them (e.g. executive report, poster, presentation at a meeting, poster with QR code to access details of project, etc.)</p> <p>Disseminate in the format required by the academic institution (e.g. poster, public presentation) and</p> <p>Prepare final project write-up using established reporting guidelines (e.g. EPQA, SQUIRE) and academic institution requirements.</p>	Complete oral & written DNP project presentation by 4/15/23

## Appendix G

### Differentiating Quality Improvement and Research Activities Tool

Question	Yes	No
1. Is the project designed to bring about immediate improvement in patient care?	X	
2. Is the purpose of the project to bring new knowledge to daily practice?	X	
3. Is the project designed to sustain the improvement?	X	
4. Is the purpose to measure the effect of a process change on delivery of care?	X	
5. Are findings specific to this hospital?	X	
6. Are all patients who participate in the project expected to benefit?	X	
7. Is the intervention at least as safe as routine care?	X	
8. Will all participants receive at least usual care?	X	
9. Do you intend to gather just enough data to learn and complete the cycle?	X	
10. Do you intend to limit the time for data collection in order to accelerate the rate of improvement?	X	
11. Is the project intended to test a novel hypothesis or replicate one?		X
12. Does the project involve withholding any usual care?		X
13. Does the project involve testing interventions/practices that are not usual or standard of care?		X
14. Will any of the 18 identifiers according to the HIPAA Privacy Rule be included?		X

Adapted from Foster, J. (2013). Differentiating quality improvement and research activities. *Clinical Nurse Specialist*, 27(1), 10–3. <https://doi.org/10.1097/NUR.0b013e3182776db5>

## Appendix H

### Institutional Review Board Exemption Approval

Taber, Prof. Christopher B.



To: Kastanaras, Monica

Wed 8/24/2022 9:51 AM

Cc: Alp, Feride F. 'Funda'; Londo, Madeline C.

Dear Applicant,

Thank you for your submission to the IRB requesting exempt review. Based on the application submitted, the IRB is pleased to approve your submission and we wish you great success in your research.

Sincerely,

Christopher Taber

Chair, IRB

Christopher B. Taber, PhD, CSCS, USAW3, EP-C, PES

Director, Exercise and Sport Science M.S. Program

Associate Professor

College of Health Professions

Sacred Heart University

(203) 396-6342



### Appendix I

#### Run Charts

Figure 2. Total Number of Patients Screened

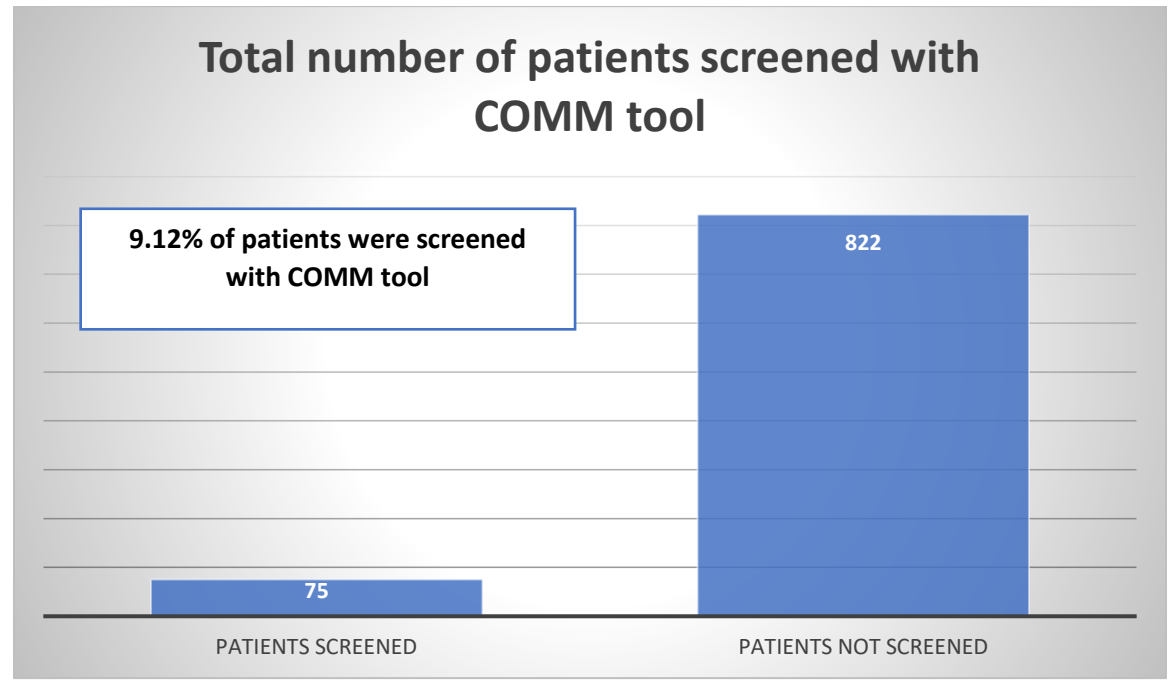


Figure 3. Patient Scores from COMM Screening Tool

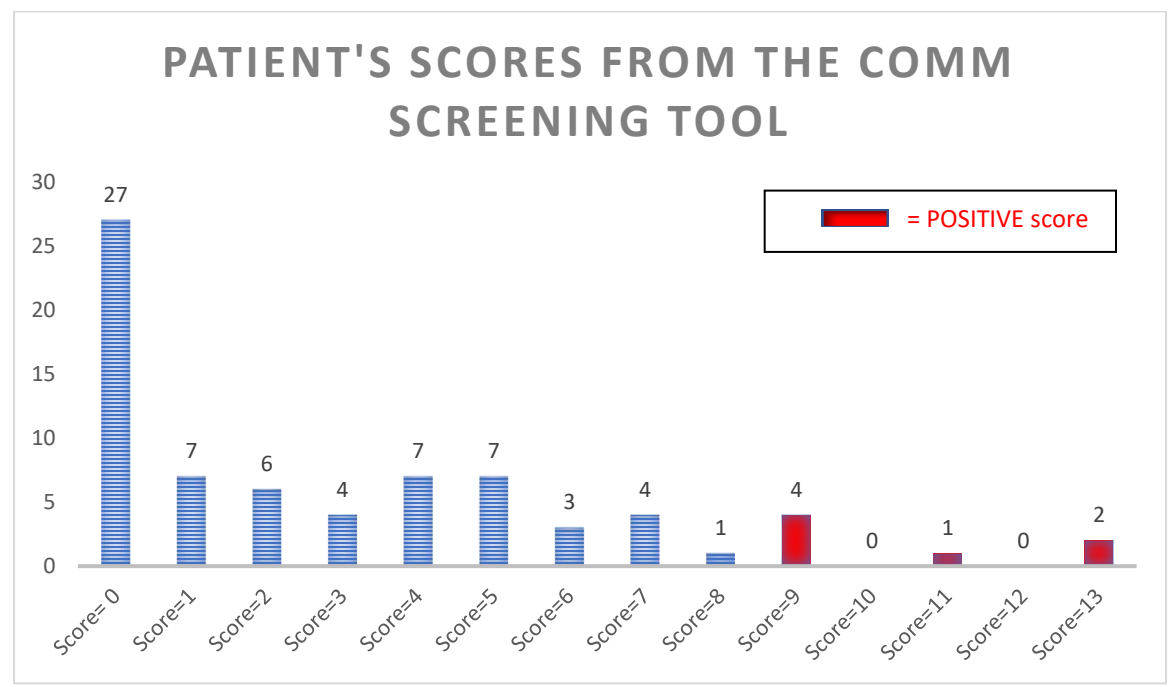
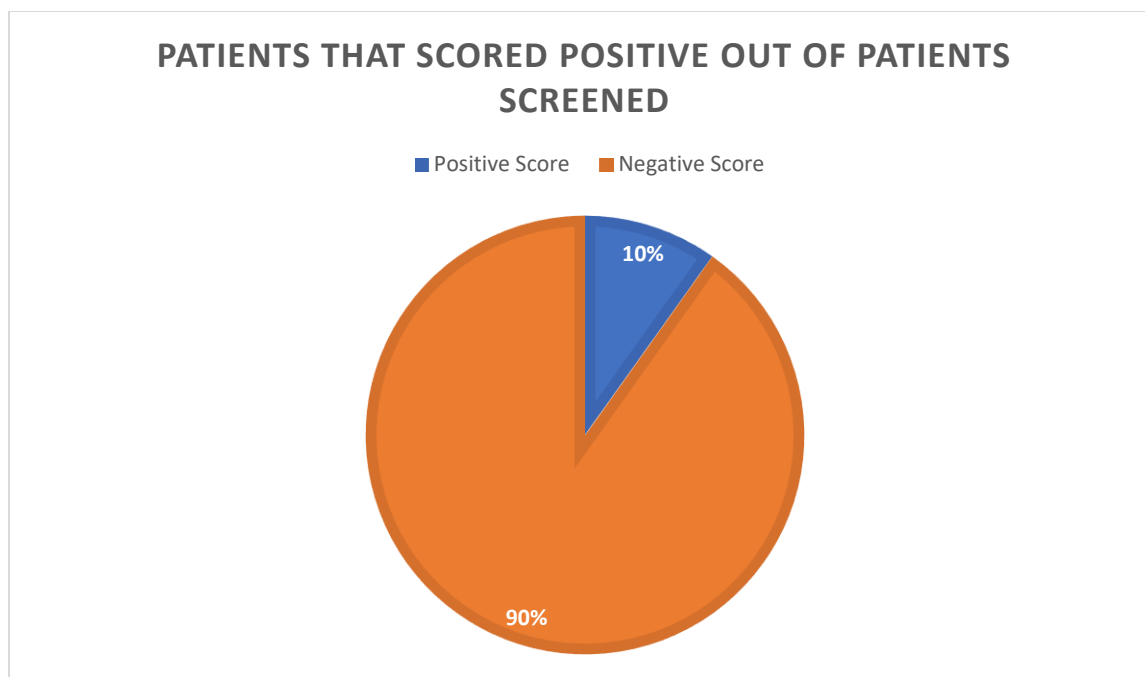


Figure 4. Percentage of Negative and Positive Scores



## Appendix J

### Executive Summary

Aggressive opioid prescription practices play the biggest role in opioid-related behaviors and contribute to an epidemic of abuse. If started on long-term opioid therapy without screening, patients who are high risk for opioid abuse could overdose on their prescribed opioids. Current practice does not follow guidelines on monitoring opioid misuse behaviors utilizing a secondary screening tool for patients on long-term therapy. The Current Opioid Misuse Measure (COMM) is a self-report measure of risk for aberrant medication related behavior among persons with chronic pain who are prescribed opioids for pain. This well-validated tool can be used to help clinicians identify whether a patient, currently on long-term opioid therapy, may be exhibiting aberrant behaviors associated with misuse of opioid medications.

This project was implemented in a Pain Management Clinic, located in New Haven County, Connecticut. The population of focus was adult patients on long-term opioid therapy. The Plan-Do-Study-Act (PDSA) Cycle was implemented to help guide the project. Educational seminars took place for the providers at the Pain Management Clinic, on utilizing the COMM™ as a secondary screening tool. From September 19 to December 19, 2022, the COMM™ was given to all eligible patients either in the waiting room or during their visit with the provider. Copies of the form were placed it into the patient's electronic health record. Based on the overall score on the screening tool, the provider would further assess the patient for opioid misuse. Each month the number of eligible patients were recorded as well as completed forms, total scores, and number of patients identified as high risk.

All quantitative data was analyzed using bar charts, pie charts and histograms to display a detailed interpretation of project results. Methods for analyzing/interpreting the data will be



displayed on bar charts, pie charts and histograms. During 12-weeks of implementation, there were 75 patients out of 855 eligible patients that were screened. This calculated a 9.12% screening compliance. Out of the 75 patients screened, 7 (10%) were found to have positive screenings. Each screening tool result value ranged between 0 to 13.

Overall, this project did not require any additional resources in terms of capital and was a positive return on investment. The attainment goal of a 50% or greater COMM screening tool completion rate was not met. The project did, however, show that the screening tool was able to identify 7 patients who scored positive. The project also showed an overall increased knowledge in the COMM screening tool in the staff at the clinic as evidenced by the positive feedback of the screening tool.

The COMM screening tool can ultimately be sustained in the Pain Management Clinic by being integrated into the EHR, making it more accessible and convenient to use. Continuing education and adapting as needed will also be useful to maintain practice change. The results showed significant change by identifying 10% of patients that screened positive for the COMM™ tool. Since the COMM™ examines concurrent misuse, it is ideal for helping clinicians monitor patients' aberrant medication-related behaviors over the course of treatment with opioids.

