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Alcohol Screening in a Pain Clinic to Reduce the Risk of Overdose and Improve Patient Care and Compliance with Prescription Opioids

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Alcohol Screening in a Pain Clinic to Reduce the Risk of Overdose and Improve Patient Care and Compliance with Prescription Opioids

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Abstract

Background: The nationwide opioid crisis is having a significant impact on the U.S. population. Patients may turn to alcohol and opioids for pain relief, which can lead to cancer, alcoholic liver disease, and heart disease. Providers can improve outcomes by screening patients for alcohol use prior to getting an opioid prescription using the Audit-C screening tool.

Purpose: This DNP Project started formal screening for alcohol abuse in a small rural pain clinic with five hundred patients per month.

Methods: During the first visit, patients were triaged by the nurse and screened using the AUDIT-C tool and had a urine drug screen performed. A nurse specially trained in the Audit C screening tool discussed education on alcohol, opioids, and the results from the screening tool with the patient on the 1st and 2nd visit.

Results: 16 participants were screened in a three-month period with 68.8% screening negative for alcohol and 31.3% positive. Out of those positive for alcohol, only two of those patients were followed for three months.

Conclusion: The mixing of alcohol and opioids together increases the risk of overdose and contributing to the already high number of deaths that are associated with substance abuse and alcohol abuse related deaths nationwide. Despite limitations, the project has enhanced the understanding of the AUDIT-C tool within the pain clinic and the importance of its use. The providers now have access to important information that can assist in a proper treatment plan and referral if needed.

Keywords: AUDIT-C, alcohol abuse, prescription opioids, screening, education
Alcohol Screening in a Pain Clinic to Reduce the Risk of Overdose and Improve Patient Care and Compliance with Prescription Opioids

Introduction

The opioid crisis is nationwide and is making a significant impact on the adult population as well as the youth. Patients on these medications report feeling labeled when they take pain medication, and many seek other ways to deal with their pain, so they increase their drinking. In 2012 and 2013 the National Epidemiologic Survey on Alcohol and Related Conditions, reports that one in seven adults had met criteria for alcohol disorders (Enos, 2016). Alcohol remains the worst in producing severe effects such as overdose when taken with opioids, and while attention does need to focus on the opioid crisis, we must pay attention to the severe effects of alcohol abuse (Enos, 2016).

When going to a pain clinic one might think that questions about other drugs and alcohol will be asked, however patients may not always be truthful in order to get their pain medications. Providers can use this opportunity for screening patients for alcohol use and educating them on unhealthy use prior to getting an opioid prescription.

Background

The pain clinic is where a patient will come when they have chronic pain that has lasted for more than three consecutive months and their primary care provider has referred them for treatment that is more specialized. The clinic is an interventional clinic where the main treatment is not always pain medication. Due to the nature of the clinic, it is necessary to screen for all substances, which is why a urine drug screen is mandatory. There are protocols that are used so they are not assessed unnecessarily. A gap in screening patients for alcohol abuse at the local pain clinic was noted especially in the more compliant patients that was not tested as often.
or patients that had a very low morphine equivalent daily dose (MEDD). To bridge this gap and to reduce the risk of overdose in these patients there needs to be education for staff and screening for every patient as this action will increase safety to the patient and the community.

**Problem Statement**

There is an increased risk of overdose when alcohol is used with prescription opioids for the adult population, which is indicted by a decrease in screening at the first pain management visit at the clinic and results from a lack of education and use of screening tools at triage by staff. A solution for this problem includes adding the AUDIT-C screening tool and educating the staff to use on every patient. This tool is a systematic way of screening for heavy and binge drinking that patients may not be forthcoming about. With patients not always being dependable with their history, the mandatory urine drug screens will help reduce this limitation.

**Organizational “Gap” Analysis of Project Site**

The pain clinic selected for this project is located in Tennessee. Each new patient was triaged with the knowledge they will be asked about alcohol use. As a nurse practitioner who has worked at the clinic the DNP student has noted a gap in education for staff and patients involving alcohol and prescription opioid use in the clinic. There are no screening tools currently used so initiating the AUDIT-C tool and supplying more education to patients will begin to close the gap this clinic faces.

**Review of the Literature**

The primary aim of the literature search is to find articles that have alcohol use and opioid use concurrently and information on screening for both. A comprehensive search using the following databases CINAHL, PubMed, Cochrane, and ERIC were conducted. The search was limited to randomized control trials (RCT), meta-analyses, systematic reviews, and peer-
reviewed articles. The search was also limited with the search dates of 2014 through 2020. Multiple search terms had to be used to get what was needed for this review. Some of the terms used were “alcoholism or alcohol dependence,” “alcohol abuse,” “alcoholic,” “alcohol addiction,” “chronic pain,” “screening tool,” “brief screening tool.” The CINAHL database yielded 522 articles, PubMed yielded 1345 articles, and the Cochrane yielded 17,239 results. Articles in Cochrane with the first search were then limited to dates within the last six years and results yielded forty-five results.

The John’s Hopkins Model for Evidence Based Practice was used to grade the articles chosen by reading the articles abstract for pertinent information; it was narrowed down to eleven. Using the toolkit provided by John’s Hopkins the following articles; ten are Level III with nine having a Quality rating of A and one having a quality rating of B, the remaining article is a Level II with a quality rating of A. All articles used randomized control trials and systematic reviews and the Level II was a mixed method study but had a high-quality rating of evidence.

Full text articles, peer-reviewed, and year dates within the last ten years was used as an inclusion criterion. The Cochrane database yielded more results with those dates, so it was condensed to the last six years, which decreased the amount of results. The exclusion criteria was if the article did not mention alcohol or opioids together or at least have substance abuse included, if the dates were out of the range of ten years and if the level of evidence was less than three the article was excluded.

The types of literature included in the search were random control trials, case control studies, cross sectional studies, qualitative descriptive and qualitative systematic reviews. The ending resulted in eleven articles with abstracts that were read and applied to this proposal.

**Screening for Alcohol Use**
Alcohol is the third leading preventable cause of death (2020). Using alcohol and opioids together increases this risk. According to the 2018 National Survey on Drug Use and Health (NSDUH), 86.3 percent of people, ages 18 or older reported that they drank alcohol at some point in their lifetime; 70.0 percent reported that they drank in the past year; 55.3 percent reported that they drank in the past month (2020). The AUDIT-C tool will be used to screen for alcohol consumption to help identify those that need treatment in primary care and can be used in any clinic such as the pain clinic where the quality improvement project will take place (Miller, et. al., 2018).

The AUDIT-C tool was developed to screen for excessive drinking and to help practitioners find people who would receive help from reducing or ceasing drinking (Babor, et. al., 2001). This tool has been around for several years and was first developed by the World Health Organization (WHO) as a simple method of screening for persons that had issues with excessive drinking (Babor, et. al., 2001). According to the national guidelines of the United States Preventive Services Task Force and National Institute for Health and Clinical Excellence, they recommend formal screening using an evidence-based tool followed by management (Miller, et. al., 2018). The USPSTF prefers to use the AUDIT, AUDIT-C, and NIAA as it addresses the full alcohol misuse in adults (Tan, et. al., 2018).

**Barriers and Facilitators to Screening for Alcohol**

There are 3.3 million people that die every year due to alcohol (Rosário et. al., 2018). The increase in harm, even a small decrease in alcohol consumption will decrease the risk of death (Rosário et. al., 2018). There are mixed results from lack of evidence from social care and non-healthcare settings due to implementation of improper interventions (Derges, et. al., 2017). This was due to lack of skills, knowledge in implementing interventions, and attitudes towards
alcohol use by health professionals (Derges, et. al., 2017). These issues have all been cited as barriers to screening appropriately for alcohol misuse. There could be more barriers for not screening appropriately such as needing added training for staff, or non-compliant patients who refuse to answer the questions.

**Association between Alcohol and Opioids**

Alcohol dependence does increase the vulnerability dependence on other substances (Pikovsky, et. al., 2018). It is also 13 times more common in people who are taking opioids and are dependent on them or who are getting them off the streets illegally due to being dependent on them (Pikovsky, et. al., 2018). The analysis correlates alcohol dependence and opioid dependence associated with comorbid conditions such as mental health, lower educational levels, and higher rates of unemployment (Pikovsky, et. al., 2018). Mental health seems to always coincide with alcohol and opioid use, which is why education is especially important in the beginning of the visit. Opioid dependence was reported at a higher rate in participants that were shown to be lifetime alcohol dependents (Pikovsky, et. al., 2018). This is consistent with existing literature that shows higher rates of comorbid alcohol dependence amongst those with opioid dependence (Pikovsky, et. al., 2018).

**Pain severity reduction with alcohol use**

Moderate drinking has been associated with lower pain severity, interference, depression, and higher physical function in patients that have fibromyalgia (Scott, et. al., 2018). This relates to chronic pain patients who have a prescription for opioids, which is why it is important to screen patients prior to giving them a prescription and to educate them on the dangers of overdose.
This literature review supplied multiple studies on evidence base practice that alcohol and opioid use together is a problem and that screening for alcohol abuse will be beneficial for the patient. This will allow the provider to learn of their alcohol use prior to getting a prescription, refer them to the proper help, and educate them on the risks of taking the medication with alcohol.

**Plan Do Study Act**

This a universal method cycle that is a way of testing changes in a project (Zann, et. al., 2021). This can be used in healthcare to enhance learning and to assess performance of a change that has been started as part of a policy or education in this case (Zann, et. al., 2021). Using this cycle improves success and gives systematic instructions on what to expect throughout the implementation process. The “Plan” is a test of change that includes what goal was learned (Zann, et. al., 2021). This stage guides the design of the scenario of the what, who, when, and where of the project (Zann, et. al., 2021). The “Do” phase conducts the data collection (Zann, et. al., 2021). The “Study” section defined by the Institute for Healthcare Improvement (IHI) is the time allowed to analyze data (Zann, et. al., 2021). The “Act” part of the cycle is defined by the IHI as the time to reflect the change based on what was learned from the project (Zann, et. al., 2021).

**Evidence Based Practice**

According to the five principles of research ethics, researchers need to devise ways to discuss with patients about sensitive topics without putting them in awkward situations (Smith, 2003). In a pain clinic it is just a given that these types of questions are going to be asked due to the nature of why they are, to get an opioid prescription. Therefore, we as providers must ask these types questions to appropriately triage the patient. This DNP Project will involve an
educational intervention for staff on the use of the alcohol-screening tool Audit-C and the development of more teaching materials on the effects of substance abuse for patients and staff. This quality improvement project should help prevent overdose deaths for those on opioids for chronic pain and improve their quality of life.

**Theoretical Framework or Evidence Based Practice Model**

The theoretical framework used to guide the DNP project was the Lewin’s change theory. This theory was used for educating staff on the use of the AUDIT-C tool in the pain clinic. Three stages make it a straightforward process to implement in a time sensitive situation. The unfreezing process is the first step in starting the change, then moving toward the new, and then the refreezing (2012) (See Appendix B).

Implementing the change within a brief time such as three months is preferred so that the change will take effect with employees (Mulder, 2012.) As with any change to a routine, there will be some resistance so making it as easy in the beginning and time sensitive will be a priority for a rural pain clinic. The Lewin’s change model was a good fit for this clinic and acclimated for this situation.

Involving employees while initiating a change within the company and giving them a chance to voice their opinions helped to ease the transition of adding an extra step to their already busy day. Adding this change is important not only for the patients but for the clinic to be in compliancy with all regulations for prescribing controlled substances.

The Lewin change theory is a simple process that fit this clinical setting. Educating staff on the use of the AUDIT-C tool allowed the provider to have important information prior to prescribing opioids. The goal is to convince staff that change in the company will be good,
having management open to the idea, management and staff being transparent, and honest (Mulder, 2012).

**Goals, Objectives, and Expected Outcomes**

The goal for this DNP project was to have 90% compliance by the end of the 3 months. Staff was educated and trained on use of the AUDIT-C tool using an outline during a 30-minute session prior to their workday that was agreed upon (See Appendix F).

The main objective was to reduce the number of patients who use alcohol and opioids together as this increases their risk of overdose. This was measured by compiling results at the end of the three months to see how many patients receiving opioid prescriptions was drinking alcohol that needed a referral.

The goals were for participation in the pre and post questionnaire and attendance of the education session. The expected outcomes were 90% of staff attending and verbally reporting understanding of instructions given, 80% of patients screened, and 85% of the patients received the education on mixing ETOH and opioids together, which were all met at 100%.

In the intervention phase, the objectives were to increase the education on the risk of overdose and have informational handouts available for patients to take home. The expected outcome was to have 85% compliance with ten patients educated and screened during the triage the rooms had posters and handouts available. The results were met at 100%.

The post-intervention phase goals were to have the AUDIT C completed again on the second visit and the have the UDS results available. The objectives for this phase were to continuing screening patients on the second and third visits continue the education, answer any questions, or concerns that staff may have, and UDS results discussed with patients prior to getting their prescription. The expected outcomes for this phase were 90% compliant of patient
screening and education given along with 80% compliancy with UDS results if patients returned to office. The screening and education goals in this phase were met at 100%.

**Methods**

The population this project focused on adults aged 18 and older that came to the pain clinic for chronic pain prescriptions. Staff was educated on use of the AUDIT-C tool using an outline during a 30-minute session prior to their workday that had been agreed upon. Prior to the session, a questionnaire was handed out to see about the knowledge of the tool itself. The tool was started during triage, so the provider had access to their answers during the visit. Following an educational session on the tool to the staff by the DNP student, a post questionnaire was administered.

The Audit C screening tool was used on each patient as well as urine drug screens as protocol in the pain clinic when patients were prescribed opioids. In implementing this project, the PDSA (Plan Do Study Act) model was used (See Appendix C). The “Plan” was to use the AUDIT C screening tool on each patient triaged by the nurse (See Appendix A).

The results of the UDS were used to report on the project. The “Do” part of this project started in the pre-intervention phase with a meeting scheduled with staff. This meeting consisted of a 30-minute session prior to their workday (see Appendix F for outline) to go over the AUDIT C tool. Questions and concerns were discussed about the tool and a pre and post questionnaire was given to determine their knowledge of the tool prior to its use (See Appendix E).

This material is sensitive to some patients and this session gave staff the chance to ask for tips on how to approach certain patients that resist. The patient was triaged and screened using the AUDIT-C tool then urine drug screen performed. The “Do” also includes the intervention stage, which includes giving education to patients on risks of mixing opioids and alcohol.
together. Education about the use of ETOH and opioids together whether they are prescribed or not causes an increased risk of overdose which is why it is not allowed. There are some that report social drinking, and it was recommended they should not take their pain medication when doing so due to the risk of overdose. Staff performed a urine drug screen (UDS) on the first visit and on the second visit; the provider discussed the results of the UDS. An education sheet was also provided to patients about the risk of using opioids and alcohol together.

The “Study” phase was researching evidence-based data on consumption of alcohol and opioids. Posters were placed in each room that showed the risks associated with mixing alcohol and opioids together (See Appendix G & H). This phase also included the post Intervention phase where on the second visit the patients were screened using the same AUDIT-C tool results from the first urine drug screen was discussed with the patient.

The “Act” stage consisted of follow up with staff about the findings and discussion of how the AUDIT C tool went with their patients. They are continuing to use the tool to assess for alcohol consumption during triage. Staff reports that once they started using the tool it just became part of the workflow and noticed no interruptions. Staff reported that most patients do not seem to mind the questions and have taken the education appreciatively.

**Project Site and Population**

The project took place in a small rural community pain clinic currently seeing on average 400 to 500 patients per month with one provider who is the owner and supervising MD. The setting currently consists of an LPN, MA, lab technician, office manager, and one front office staff. The county has a population of 60,520 persons with an average income of $43,893(2019). This is a very rural part of the county and only one pain clinic in the county. With the current
pandemic, the average income is likely to be lower due to loss of jobs. In 2018, 88,000 people (62,000 men and 26,000 women) died from alcohol-related causes annually (2020).

**Measurement Instruments**

To measure the outcomes of this DNP Project the following instruments were used: the AUDIT-C questionnaire, which is a three-question tool that identifies patients that have consumed alcohol or are active alcohol users (Bradley, et. al., 2003). This brief screen is changed from the original ten-question tool (Bradley, et. al., 2003). The tool is scored using a 12-point system as follows: a= 0 points, b= 1 point, c=2 points, d = 3 points, e = 4 points (Bradley, et. al., 2003). A sample is attached. (See Appendix A.) There were pre and post questionnaires for the education that was used for educating staff on the use of the AUDIT-C tool (See Appendix D).

**Ethical Considerations/Protection of Human Subjects**

The University of Massachusetts, Amherst (UMass) Internal Review Board (IRB) determined that human subject’s approval was not needed, as this was an in-house quality improvement project. The Health Insurance Portability and Accountability Act of 1996 protected all patient information (HIPAA) which, among other guarantees, protects the privacy of patients’ health information (Modifications to the HIPAA Privacy, Security, Enforcement, and Breach Notification Rules, 2013).

The DNP student and other nurses at the clinic always followed the Standards of Care for practice in the rural pain clinic. Patients were asked screening questions that were scanned into their EMR that is password protected. The list of participants and their identifying numbers were kept in locked filing cabinets in the practice office, only accessible to the project coordinators.
All electronic files holding identifiable information were password protected to prevent access by unauthorized users and only the project coordinators had access to the passwords.

**Results**

A total of 16 participants were screened in a three-month period with 68.8% screening negative for alcohol and 31.3% positive. Out of those positive for alcohol, only two of those patients were followed for three months. During the project months, eight patients were lost to follow up.

On the first visit, the patient was triaged and screened using the AUDIT-C tool and had a urine drug screen performed. A total of 16 patients that were screened and educated on the dangers of mixing opioids and alcohol during the three-month period. The participants were males and females that ranged between the ages of 43 through 86. The following Table 1 shows the percentages of the positive urine drug screens that happened during data collection.

Table #1 Positive Drug Screens in Initial Patients Seen

<table>
<thead>
<tr>
<th>UDS Results</th>
<th># Patients</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative</td>
<td>11</td>
<td>68.8</td>
</tr>
<tr>
<td>Positive</td>
<td>5</td>
<td>31.3</td>
</tr>
</tbody>
</table>

%=cumulative percentage

On the second visit the patients were screened using the same AUDIT-C tool, results from the first urine drug screen were discussed with the patient. If ETOH was detected in the UDS and the number on the screening tool was high enough then a referral could be made. When levels are remarkably high, >10,000, the patient had to agree to get help with alcohol and more frequent monitoring would occur. An increased level will raise the risk of overdose if done
on an everyday occasion along with an opioid. Education was handed out to the patient and a referral was made.

The values in Table 2 stand for the number on the AUDIT C that was answered by the patient during triage.

Table #2 Audit C Scores on Triage

<table>
<thead>
<tr>
<th>Audit C Scores</th>
<th>Values</th>
<th>#PT’s</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>9</td>
<td>9</td>
<td>56.3</td>
</tr>
<tr>
<td>1</td>
<td>5</td>
<td>5</td>
<td>31.3</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>1</td>
<td>6.3</td>
</tr>
<tr>
<td>9</td>
<td>1</td>
<td>1</td>
<td>6.3</td>
</tr>
</tbody>
</table>

#Pt’s=number of patients with those values
%= percentage of analysis

Overall, 56.3% of the patients scored a 0 on the tool itself, but there were some that did have a positive screen for ETOH. It is also important to note that the five patients that were discharged or did not return are calculated in these percentages. The nurse discussed the education of alcohol and opioids used together during the triage or when they received a script depending on their time. The urine drug screens are a mandatory part of care at the pain clinic and not part of the DNP project.

Out of the positive for ETOH only two of those patients were followed for three months. The nurse discussed the results at length during triage of the second visit before getting a script. The other three patients that tested positive for ETOH were discharged or did not return for their second visit. The two patients that did test positive for ETOH there levels were <10,000 which is most indicative of social drinking, but none the less still puts them at risk if taking opioids and drinking. The discussion and educational handouts were given to these patients. The number of
patients that scored that value and the percentages were used for calculation. For a small rural pain clinic, the outcome of patient’s that took part in this project was expected. The goal of having every patient screened has been met and exceeded expected outcomes.

The percentages of the month’s patients that were seen during the project are listed in Table #3.

Table # 3 Percentage of Patients seen During Project that were Screened with Audit C Tool

<table>
<thead>
<tr>
<th>Screening Analysis</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Month</td>
<td>#Seen &amp; %</td>
<td>%Screened</td>
<td>#Dc’d/NR</td>
</tr>
<tr>
<td>November</td>
<td>6 (37.5%)</td>
<td>100</td>
<td>5</td>
</tr>
<tr>
<td>December</td>
<td>3 (18.8%)</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>January</td>
<td>7 (43.8%)</td>
<td>100</td>
<td>0</td>
</tr>
</tbody>
</table>

*DC’d/NR=Discharged/No Return

A total of 16 patients were seen during the monitoring phase, however eight needed to be eliminated due to being discharged, not returning, or having only one visit when the information was received leaving a total of eight. The percentages out of the eight that were followed for the full three months were 43.8%, which is what was expected due to the current pandemic and lack of resources.

Of the eight patients, only two had positive urine drug screens for ETOH. These two patients did receive education on the mixing of alcohol and opioids together. The AUDIT-C scores of the two that were positive was a one, which is considered negative per scoring (See Appendix A). This scoring relates to the inconsistency of everyday drinking. There were no referrals made due to the discharge or no returns of the other positive ETOH screenings. The urine drug screens (UDS) are a mandatory part of care at the pain clinic.
The staff did an excellent job in that every patient was screened with the tool so that 100% compliancy was achieved for this project. The education that was provided to staff on the importance of stream lining to the patients before they get a prescription and gaining their trust to get honest answers were successful with the training. There were no complaints from staff about having an extra step in their triage. Staff reports that once they started using the tool it just became part of the workflow and no interruptions noticed. Staff reported that most patients do not seem to mind the questions and have taken the education appreciatively.

**Discussion**

The project was considered a success as the staff continues to use the AUDIT C tool when triaging every patient to screen for alcohol and educate them on the risks involved when mixing opioids and alcohol together. The USPSTF recommends screening for alcohol use in adults 18 years or older, including pregnant women, and providing persons engaged in risky or hazardous drinking with brief behavioral counseling interventions to reduce unhealthy alcohol use (Curry, et. al., 2018). Patients are not always truthful when it comes to screens, which is why a urine drug screen was performed. This gives secondary screening and ensures compliance on part of the patient. Trying to keep the patient safe while confronting their chronic pain is a complex task in a pain clinic. That is why the value of screening for alcohol intake is so important and should be part of the daily task from the beginning of the patients visit.

The purpose of this study was to initiate the AUDIT-C tool during triage by the nursing staff and educating them on the importance utilizing this tool. Using Lewin’s Change Theory to implement this project was acclimated for this clinic. Giving this staff the chance at voicing their opinion on how to influence change made this a smooth transition. Effective leadership plays a pivotal role in the success of change in a clinic.
There were three key findings of Lewin’s change theory that was utilized during the process of initiation. First, the unfreezing process when change is needed giving staff a voice as in the pre and post questionnaires led to the success of the project. Second the moving process when the change was started and third refreezing, the AUDIT C tool was proven, and staff had acclimated to the change. Having effective communication and open relationships with leadership will develop therapeutic relationships, open and remove barriers in the workplace (Mitchell, 2013).

Prior to the initiation of the tool there was a 30-minute meeting scheduled with staff. This meeting consisted of a 30-minute session prior to their workday (see Appendix F for outline) to go over the AUDIT C tool. Questions and concerns were discussed about the tool and a pre and post questionnaire was given to determine their knowledge of the tool prior to its use (See Appendix E). The results of the pre questionnaire from staff consisted of their knowledge of the tool minimal with all staff reporting asking about alcohol consumption during triage and being comfortable with asking. The post questionnaire results consisted of the knowledge of the tool after the presentation at the meeting. The results were consistent with all staff in that the presentation (See Appendix F) was clearly presented, the session alleviated some concerns, and they did use the AUDIT C tool during triage of patients.

The nurse when receiving the script discussed the education of alcohol and opioids used together. During the second visit, education and referrals were made for individuals that met the criteria. There were limitations on urine drugs screens after the first process, as insurance companies will not pay for them if they are not shown to be a necessity and this in turn became the patient’s responsibility.
There were some barriers to the implementation as there was a late start in the month of November where only a few patients were initiated due to staffing. That is why there were some new patients in January with only one visit so the data ended up eliminated from the analysis. There was 100% compliance with all patients using the Audit C tool. Using Lewin’s change theory worked well with the staff and implementing the tool for this rural pain clinic. Giving them the ability to share their ideas in the pre and post questionnaire (See Appendix E) really gave them the sense of helping the patients and clinic.

Monthly visits were made to the clinic to discuss the patients and data collected. Questions were asked, answered any concerns the staff had were discussed. The staff did not have any concerns and reported that all patients were compliant with the tool as it was made part of the triage process and was running smoothly. The urine drug screens were already a part of the clinic protocol so there were no issues to discuss, as this was not part of the DNP project. This DNP student asked if there were any suggestions or improvements that needed to be made and none were voiced. All staff was very appreciative of the tool and is continuing to use with every patient daily. These results represent the first direct demonstration of continuation of the tool that will help the provider supply the patient with needed counseling and appropriate pain management.

Cost-Benefit Analysis

The cost that was incurred during this project was the materials that the AUDIT-C was printed on and educational handouts that were given to the patients about the risks of alcohol and opioids used together. A training session occurred for the staff, which included the nurses and office manager. This session was 30 minutes in length and was “in kind” as to not incur cost for the clinic. The training consisted of how to administer the tool, compassion towards the patient,
and no use of judgement so the patient will have confidence in the staff and provider to share his or her information. (See Appendix D for cost breakdown).

**Conclusion**

The goal of this DNP project was to implement a screening tool to education staff on the importance of screening patients for alcohol prior to getting a script for opioids. The mixing of alcohol and opioids together increases the risk of overdose and contributing to the already high number of deaths that are associated with substance abuse and alcohol abuse. The project was successful in that all patients were screened getting 100% compliancy. Staff is now using the AUDIT C with every patient in the clinic. This allows the provider to have the information along with results of the urine drug screen when the visit occurs.

The value of screening prior to starting a prescription gives the provider a sense of where the patient stands in terms of their health. Patients get the education needed and screened appropriately for alcohol intake prior to receiving a script for their pain medication. Patients were evaluated throughout their visits as per the clinic protocol with urine drug screens.

Despite limitations, the project has enhanced the understanding of the AUDIT-C tool within the pain clinic and the importance of its use. The providers now have access to important information that can assist in a proper treatment plan and referral if needed. The continued use of this tool has shown to be effective in this clinic as it continues to be a part of the nurse’s daily task without being an extra burden, as they once feared.
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## Appendix A

### AUDIT-C Questionnaire for Detecting Alcoholism

1. How often do you have a drink containing alcohol?
   - □ a. Never
   - □ b. Monthly or less
   - □ c. 2-4 times a month
   - □ d. 2-3 times a week
   - □ e. 4 or more times a week

2. How many standard drinks containing alcohol do you have on a typical day?
   - □ a. 1 or 2
   - □ b. 3 or 4
   - □ c. 5 or 6
   - □ d. 7 to 9
   - □ e. 10 or more

3. How often do you have six or more drinks on one occasion?
   - □ a. Never
   - □ b. Less than monthly
   - □ c. Monthly
   - □ d. Weekly
   - □ e. Daily or almost daily

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The AUDIT-C is scored on a scale of 0-12.

Each AUDIT-C question has 5 answer choices. Points allotted are: a = 0 points, b = 1 point, c = 2 points, d = 3 points, e = 4 points

- **Men**, a score of 4 or more is considered positive, optimal for identifying hazardous drinking or active alcohol use disorders.
- **Women**, a score of 3 or more is considered positive, optimal for identifying hazardous drinking or active alcohol use disorders.

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https://images.app.goo.gl/cb7qbBvARtbC1ZGB7
Appendix B

LEWIN’S CHANGE THEORY

Unfreeze
- Determine What Needs To Change
- Ensure There Is Strong Leadership Support
- Create The Need For Change
- Manage & Understand The Doubts & Concerns

Change
- Communicate Often
- Dispel Rumors
- Empower Action
- Involve People In The Process

Refreeze
- Anchor The Changes Into The Culture
- Develop Ways To Sustain The Change
- Provide Support & Training
- Celebrate Successes

https://9mconsulting.com/newsletter/lewins-change-model/
Appendix C

[Image of a PDCA cycle with the steps Act, Plan, Study, Do]

https://greatplainsqin.org/blog/event/utilizing-the-pdsa-cycle-to-focus-your-improvement-efforts/
### Costs

- Education and training: 30-minute session x 1 for all staff “in kind” = $0
- Weekly data collection: MA x 10.00 @ 2 hours = $20.00
- Brochures, education handouts for patients = $500
- Materials: Paper/printer, ink/pens =$200

Total implementation cost $720
Appendix E

PRE-QUESTIONNAIRE

1. How much about the AUDIT-C tool do you know?

2. Do you ask about alcohol consumption on triage?

3. Are you comfortable asking about alcohol on triage?

POST QUESTIONNAIRE

1. Did the presentation help you to understand the Audit C tool?

2. Did the education session alleviate any concerns about how to start the question during triage?

3. Will you start using the Audit-C screening tool for patients on pain medications?
Appendix F

AUDIT C TOOL – OUTLINE FOR EDUCATION FOR STAFF

I. MILD CONSUMPTION
   a) 1-2 beers daily
   b) 1 oz of liquor daily

II. MODERATE CONSUMPTION
   a) 6 pack per day,
   b) 3 to 4 oz of liquor daily (1 pint daily)

III. LARGE CONSUMPTION
   a) 12 pack per day
   b) 1/5 liquor daily

❖ Keep in mind that patients WILL NOT ALWAYS tell the truth on the exact amount that is consumed daily; this is why a UDS is needed on the 1st visit.
❖ Initiating during triage is the most important and should already be done any way

RECOMMENDED PROTOCOL FOR THE AUDIT-C TOOL

a) Start with 5 patients in the morning 5 patients in the evening. New patients preferably but ones that are needing the UDS are okay so that we can have that first urine drug screen.

b) Keep up with same patient information for 3 months (total of 10 patients).

c) 1st visit use the AUDIT-C and get UDS

d) 2nd visit AUDIT-C (should get same answers) review UDS results

e) 3rd visit AUDIT-C (again should get same answers) depending on MEDD another UDS.

f) Rationale patients that are using ETOH will have less use and lower levels and have received education on the risks and potential of overdose.
ALCOHOL SCREENING IN A PAIN CLINIC

Appendix G

ALCOHOL

Stats and Effects of Mixing with Drugs

Alcohol is a depressant and can make you sleepy or lightheaded. So when you combine alcohol with another drug, your brain receives conflicting signals. The effect of each individual substance may be somewhat masked, leading to unchecked combined consumption that can quickly overwhelm the person.

Statistics:

These statistics show that many people are in danger of mixing alcohol with various drugs.

- 26.9% of people aged 10 or older report that they engage in binge drinking.
- 12.1% of underaged students use alcohol and prescription drugs.
- 5% of current users report using drugs other than marijuana in the last 12 months.

The Worst Side Effects

- Nausea
- Drowsiness
- Fainting
- Difficulty breathing

Alcohol & Opioids

Mixing alcohol with opioids such as Vicodin, OxyContin, or Percocet can dangerously slow breathing and lead to coma.

If you combine alcohol with another depressant, such as heroin, the two substances work to intensify the negative effects. This puts the brain and the entire central nervous system at a greater risk of additional harmful side effects.

Source:

https://buzzle.com/taking-drugs-alcohol
https://www.mayoclinic.org
https://www.niddk.nih.gov/health-information/health/niddk/2012/
Appendix H


cOMBINING ALCOHOL WITH OPIOID PAINKILLERS

Both opioids and alcohol have a depressive effect on the central nervous system (CNS)

OPIOID PAINKILLERS INCLUDE
DRUGS LIKE:
- Morphine
- Fentanyl
- Demerol
- Oxycodone
- Codeine
- Hydrocodone

TAKING them together can cause a hazardous slowing of the body's important functions:
- Breathing
- Heartbeat
- Coordination