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Managing Chronic Back Pain in a Rural Primary Care Setting

Kaitlin Behnken and Cassandra Chambers

Executive Summary

Introduction of Problem

Chronic back pain management is complex and is often challenging for Primary Care Providers (PCPs). Current recommendations suggest initial use of non-pharmacological treatments (therapy) for chronic back pain and followed, if necessary, by nonsteroidal anti-inflammatory drugs (NSAIDs) (Qaseem, Wilt, McLean, & Forciea, 2017). However, some PCPs are using opioids as a first line treatment, bypassing the use of NSAIDs and therapy, failing to control chronic back pain long-term (Shaheed et al., 2016). Pain complaints are more frequent in areas with limited access to specialty care; therefore, many of these patients are being treated by PCPs (Anderson et al., 2017).

Providers in a rural clinic in the Midwest identified back pain is one of the most common chronic complaints (Provider 2, personal communication, January 31, 2018). Primary Care Providers in rural practices are managing chronic back pain despite limited training because of the lack of adequate numbers of pain management specialists in this geographic area. The PCPs in rural settings have noted how uncomfortable and underprepared they are to deal with pain management (Anderson et al., 2017). Although there are some therapy facilities in the geographic area, referrals were difficult because there was no organized directory providing the name of the facilities, their location, their hours, their contact information, and other important details that could have provided helpful information in making patient referrals. Thus, providing a directory of local facilities that offer physical and/or aquatic therapy, as well as a review of

clinical practice guidelines for the health care providers, may be helpful in the decision-making process in treating and properly managing chronic back pain.

The primary goal of this project was to develop and provide a physical therapy and aquatic therapy directory for PCPs at the clinic to facilitate referral to therapy available in the region. Use of these resources was intended to help decrease reliance on pharmacological options and increase reliance on non-pharmacologic options, including physical and aquatic therapy, when treating chronic back pain.

Literature Review

Because of the recent opioid crisis, the Center for Disease Control (CDC) has published a national guideline for the use of opioids and the correct management of chronic back pain. The use of opioids may be considered if all other first-line treatments have failed (CDC, 2016). Initial treatments include non-pharmacological interventions, such as multidisciplinary rehabilitation, acupuncture, mindfulness-based stress reduction, tai chi, yoga, motor control exercise, progressive relaxation, behavioral counseling, and spinal manipulation (Qaseem, Wilt, McLean, & Forciea, 2017). If patients do not respond to non-pharmacological treatments, clinicians should then consider use of NSAIDs (Qaseem, Wilt, McLean, & Forciea, 2017). Furthermore, the CDC supports therapy when managing chronic pain (CDC, 2016). Additionally, the American College of Physicians (ACP), the largest medical-specialty society in the world, revised its back pain treatment guidelines in 2017, which encourages a conservative approach for back pain management (Qaseem, Wilt, McLean, & Forciea, 2017). Non-pharmacological measures are preferred treatment options for patients with chronic back pain due to decreased harm associated with these options when compared with pharmacologic options (Qaseem, Wilt, McLean, & Forciea, 2017).

The non-pharmacological interventions (physical and aquatic therapy) have both clinical and statistical significance in terms of successful management of chronic back pain. In fact, the use of physical therapy and aquatic therapy interventions were shown to reduce post-treatment visual analog scale (VAS) pain scores when compared to pre-treatment pain VAS scores (Kamioka et al., 2010; Cuesta-Vargas et al., 2012; Beana-Beato et al., 2014; Ronzi et al., 2017). Addressing this enormous burden of chronic back pain mismanagement overall by all healthcare providers will require a cultural transformation.

Methodology

This project was deemed exempt from the Institutional Review Board at Southern Illinois University Edwardsville and approved by the office of healthcare providers, the manager, and the legal team at the facility. Participation was voluntary.

The newly developed directory was given to PCPs to use when managing patients with chronic back pain. The directory included the names of the 31 physical and/or aquatic therapies within a fifty-mile radius, as well as the contact information, location, and hours available to the patient. The project was implemented at a rural primary care office in the Midwest June 15 through September 15, 2018.

Current management practices for patients with chronic back pain at the rural clinic were first assessed by the project team. An educational plan was then developed, and the education was presented to the clinic health care providers in May 2018 to ensure standardized implementation of the new directory, as well as to help staff understand their roles in implementation. The targeted staff included a Family Practice physician, two Family Nurse Practitioners, and three Registered Nurses.

Providers recorded the date each patient was originally diagnosed with chronic back pain, the current VAS score, current prescribed opioid treatment, current prescribed non-opioid pharmacological treatment, non-pharmacological treatment, and type of treatment chosen at the visit. If physical/aquatic therapy was the chosen treatment, the directory was discussed with the patient by the provider, with the goal of identifying the most effective therapy in the most effective workable environment.

Evaluation

After the project implementation timeframe was complete, the data were de-identified and analyzed to compare the numbers of pre (February-May) and post (June-September) physical and aquatic therapy referrals. Based on the overwhelming numbers of patient encounters for specific chronic back pain diagnoses, team members decided for the purpose of this project evaluation, to narrow ICD-10 codes to the most frequent diagnoses encountered by each provider. Provider's most frequent diagnoses overlapped, which resulted in six top diagnoses. These diagnoses included: low back pain (M54.5), cervicalgia (M54.2), dorsalgia (M54.9), other intervertebral disc degeneration (lumbar region) (M51.36) other intervertebral disc displacement (lumbar region) (M51.26), and lumbago (M54.40). To analyze the data, t-tests via SPSS25 software were used; pre- and post-implementation groups of patients were found to be highly correlated (0.001)

During the pre-education time frame, the three providers had a total 595 patient encounters for the most frequent three diagnoses. Of these 595 encounters, 35 were referred to physical therapy or aquatic therapy (5.88%). During the post education time frame, providers had a total of 641 encounters, with 55 of these encounters receiving a physical therapy or aquatic therapy referral (8.58%). Overall, results demonstrated an increase in the percentage of therapy

referrals, particularly aquatic therapy referrals. Though not statistically significant, results were clinically relevant.

All three providers participated in the debriefing process to assess their reactions, suggestions, and whether the directory had been helpful in changing their management of chronic back pain in patients. The PCPs were then interviewed to assess their reactions, suggestions, and whether the resource directory had been helpful in changing their management of chronic back pain patients. Strengths and limitations of the project were revealed. Usefulness of the therapy directory provided by the project team was believed to be particularly helpful. The providers particularly appreciated the aquatic therapy information and hours that facilities were open, specifically facilities with extended hours/weekend hours. They noted that the project made a difference in their practice and that they would continue to use the directory to help them utilize conservative measures, such as therapy, for chronic back pain management.

Impact on Practice

This project impacted the clinic by heightening awareness for use of non-pharmacological interventions, such as physical and aquatic therapy, for chronic back pain management. Potential long-term changes related to this project include an increased use of non-pharmacological interventions, particularly physical therapy and aquatic therapy, possibly reducing the reliance on the use of opioids for pharmacological interventions.

Chronic back pain management continues to be complicated for PCPs. Despite the providers' knowledge of first-line treatment options, barriers are often met when managing chronic back pain. Specific barriers listed by the three providers included, but were not limited to: absorbing patients who were already taking narcotics which had been prescribed by previous providers, the costs of therapy for uninsured patients, the costs for patients with a high/unmet

insurance deductible, insurance denials for therapy referrals, patient refusal of therapy, past failures of therapy trials, lack of coverage for NSAIDs beyond ibuprofen, and time constraints to provide proper education about chronic pain management to the patient.

Further DNP projects might be replicated from this project within additional, similar, rural clinics and other geographic locations. The data collection process to monitor the management of patients with chronic back pain via the use of an electronic medical record (EMR) will facilitate the success of the use of a directory. Further DNP projects may also focus on the development of partnerships between rural primary care offices and local facilities, such as local gyms, YMCAs, and therapy programs to aid in patient access and engage participation. An additional recommendation can include clinical personnel at the clinic surveillance the geographic region to keep the directory up to date annually.

Conclusion

The short-term goal of this project was to implement a practice change in which evidence-based education and a therapy directory were introduced to healthcare providers in a rural practice. After three months of implementing the project, the percentage of therapy referrals for patients with chronic back pain increased from 5.88% to 8.58%. Ideally, long term outcomes might include increased reliance on therapy and decreased reliance on opioids for chronic back pain management and therefore, decreasing the risks associated with opioid use. Risks associated with opioid use include, but are not limited to, addiction, unwanted side effects, and overdose (CDC, 2016). Providers need to remain diligent to prescribe therapy and other first-line treatment modalities whenever possible when managing chronic back pain.

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