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Non-Opioid Pain Relief: Use of Vitamin D in Central Appalachia

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Non-Opioid Pain Relief for Patients in Central Appalachia

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Background

- 30 – 40 % of opioid users will become addicted.
- \$75 billion are spent related to the opioid epidemic annually.
- 100 million people in the US suffer from chronic pain.
- Reducing chronic pain is a goal of HealthyPeople 2030.
- Multi-modal pain relief is needed to decrease opioid use.
- Research demonstrates that patients with chronic pain may have hypovitaminosis D.
- Vitamin D dampens the effect of proinflammatory cytokines.

Guiding Framework

John Hopkins Evidence-Based Practice Model (JHEBP)

PICOT Question

In patients with chronic pain (P), how does supplementing with vitamin D (I) compared to no vitamin D supplementation (C) affect chronic pain levels (O) in a twelve-week timeframe (T)?

Evidence

- Systemic Reviews with meta-analysis were Level I with A Quality Rating.
- Quasi-experimental studies were Level II with A and B Quality Rating.
- The most common vitamin D dose and duration recommended was 50,000 IUs by mouth weekly for twelve weeks.

Methods

- August 2022: 30 patients were selected from the EMR and assigned a random number to deidentify them.
- September 2022: Patients were seen for a previously scheduled appointment and completed a pre-implementation survey.
- During the visit, a prescription for vitamin D 50,000 IUs PO weekly x 12 weeks was provided.
- January 2023: Patients returned to the clinic for follow-up and completed a post-implementation survey.

VITAMIN D MAY BE USED FOR THE TREATMENT OF CHRONIC PAIN

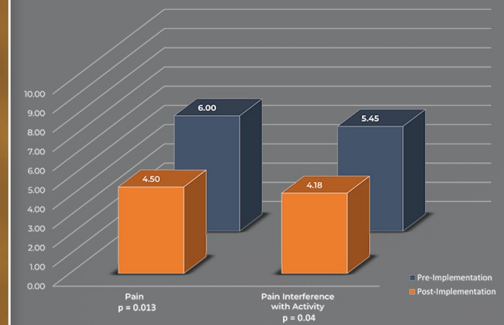
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Results

- 30 participants were selected for the scholarly project.
- 36% returned for follow-up, resulting in a sample size of n=11.
- N=11 where white; 4 female 7 male; average age 53; average time experiencing chronic pain 13 years
- Clinically significant decrease in how much pain interfered with participant's life
- 91% of participants identified a benefit to taking vitamin D for pain

Pre and Post Implementation: Pain and Interference with Activity



Conclusion

Vitamin D has been found to reduce chronic pain levels and should be considered as part of a multi-modal approach.

