Benefits of a Continuing Education Module to Enhance New Jersey Primary Care Providers' Attitudes about Recommending Medical Marijuana rather than Prescribing Opioids to Patients with Chronic Pain

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Introduction

- Treatment for chronic pain has become increasingly complex with the widespread opioid epidemic in the United States
- Medical Marijuana is a legal treatment option for chronic pain in more than half the states but primary care providers are given little education on its use
  - This decreases the comfort and confidence in recommending medical marijuana to patients with chronic pain (Sideris, Khan, Boltunova, Cuff, Gharibo, and Doan, 2018)

Background & Significance

- Chronic pain affects more than 100 million Americans a year
  - Most common form of treatment for chronic pain is opioids
  - Risks of this treatment option include **addiction, morbidity, and mortality** (Boehnke et al., 2016)
- Between 1999 to 2014, there were over **165,000 deaths** due to prescription overdoses
- **1.9 million people** were dependent on or abused prescription opioid analgesics in 2013
- New Jersey passed the "New Jersey Compassionate Use of Medical Marijuana Act," in 2010 which made it the 15th state to legalize medical marijuana
- It was found that there was an annual decreased average of 24.8% opioid-related overdoses in states that passed medical marijuana laws (Bachhuber et al., 2014)
- Medical marijuana was also used as an alternative for many drugs including opioids to reduce pain, improve sleep, improve appetite, and reduce anxiety (Bruce, Brady, Foster, & Shattell, 2018)

Clinical Question

Does presenting New Jersey primary care providers with a continuing education module on the use of medical marijuana for chronic pain enhance their attitudes of recommending medical marijuana rather than prescribing opioids to patients with chronic pain?

Methods

Setting

- New Jersey through Rutgers University Canvas Platform

Study Population

- Convenience sample of New Jersey nurse practitioners (NP), NP students, and nurses

Subject Recruitment

- Email were sent out to all current APN students, APN alumni, and APN faculty at Rutgers University School of Nursing once a week for three weeks prior to the intervention period and weekly during the intervention period

Consent Form

- Presented at the beginning of the module and participants had the chance to accept or deny participation

Risks/Harms

- There was no potential, immediate, or long term physical, psychological, social, financial, or reproductive risks involved in participating in this study
- Personal information and identifiers were not collected in this study

Subject Costs and Compensations

- Participants were provided this module free of cost and were not compensated for their participation in the study

Design

- Pre/posttest designed to measure a change in primary care providers' attitudes on the uses of medical marijuana

Results

- 29 participants out of 328 individuals that were invited to participate in this study
  - The sample size of the study represents 48% of the 60 participants initially pursued
  - Out of the 29 participants, 21 identified their specialty as primary care/internal medicine, 7 identified as Other, and one declined to provide an answer
- A Shapiro-Wilk test was conducted on the total 29 participants and the 21 participants who identified as primary care/Internal Medicine providers and found that the data was normally distributed for both sets
- Given these results, a paired t-test was conducted on both sets of data to determine significance

Results for 21 Participants

- Shapiro-Wilk Test
  - P-value = 0.297543
  - Since p-value > α, H0 was accepted, it is assumed that the data is normally distributed.
- Paired T-Test
  - Two-tailed P-value of -.000014955 with an alpha value of 0.05
  - P-value is less than the chosen alpha, the null hypothesis is rejected and the data is accepted as statistically significant

Results for 29 Participants

- Shapiro-Wilk Test
  - P-value = 0.282896
  - Since p-value > α, H0 was accepted, it is assumed that the data is normally distributed.
- Paired T-Test
  - Two-tailed P-value of .000002965 with an alpha value of 0.05
  - P-value is less than the chosen alpha, the null hypothesis is rejected and the data is accepted as statistically significant

Discussion

- The results of this study show that presenting New Jersey primary care providers with a CE module on the uses of medical marijuana for chronic pain enhances their attitudes of recommending medical marijuana rather than prescribing opioids to patients with chronic pain
- The results imply that the continuing education module not only increases confidence in primary care/internal medicine specialties, but is effective among a broad range of specialties.

Implications

- **Implications for Clinical Practice:** With increased confidence, primary care providers will have the ability to talk with their patients about the uses of medical marijuana as well as answer any questions that their patients may have
- **Implications for Healthcare Policy:** One of the healthcare policy goals for the implementation of this module is to push for nurse practitioners to be given the authority to recommend medical marijuana
- **Implications for Quality/Safety:** This module can lead to a better quality of care in patients who suffer from chronic pain who are receiving inadequate relief from their current pain regiments
- **Implications for Education:** It is important that modules such as the one presented in this study be provided to medical professionals not only in their place of work but also in the academic settings
- **Implications for Economics:** By expanding the knowledge on the uses of medical marijuana, a practical alternative to opioids can be more broadly introduced within the healthcare industry with the potential to decrease the economic burden caused by the opioid epidemic

References

Abrams, D. I., & Guzman, M. (2015). Cannabis in cancer care. *Clinical Pharmacology & Therapeutics, 97*(6), 575-586. doi:10.1002/cpt.108
Agency for Healthcare Research and Quality. (2018). HCUP Fast Stats - Opioid-Related Hospital Use. Retrieved February 4, 2019, from https://www.hcup-us.ahrq.gov/faststats/OpioidUseServlet?setting1=IP
Aviram, J., & Samuelly-Leichtag, G. (2017). Efficacy of Cannabis-Based Medicines for Pain Management: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. *Pain Physician, 20*(6), E755-e796.
Bachhuber, M. A., Saloner, B., Cunningham, C. O., & Barry, C. L. (2014). Medical cannabis laws and opioid analgesic overdose mortality in the United States, 1999-2010. *JAMA Intern Med, 174*(10), 1668-1673. doi:10.1001/jamainternmed.2014.4005
Boehnke, K. F., Litinas, E., & Clauw, D. J. (2016). Medical Cannabis Use Is Associated with Decreased Opiate Medication Use in a Retrospective Cross-Sectional Survey of Patients with Chronic Pain. *J Pain, 17*(6), 739-744. doi:10.1016/j.jpain.2016.03.002
Bruce, D., Brady, J. P., Foster, E., & Shattell, M. (2018). Preferences for Medical Marijuana over Prescription Medications Among Persons Living with Chronic Conditions: Alternative, Complementary, and Tapering Uses. *J Altern Complement Med, 24*(2), 146-153. doi:10.1089/acm.2017.0184
Busse, J. W., Wang, L., Kamaleldin, M., Craigie, S., Riva, J. J., Montoya, L., . . . Guyatt, G. H. (2018). Opioids for Chronic Noncancer Pain: A Systematic Review and Meta-analysis. *Jama, 320*(23), 2448-2460. doi:10.1001/jama.2018.18472
Carlini, B. H., Garrett, S. B., & Carter, G. T. (2017). Medicinal Cannabis: A Survey Among Health Care Providers in Washington State. *American Journal of Hospice & Palliative Medicine, 34*(1), 85-91. doi:10.1177/1049909115604669
Centers for Disease Control and Prevention. (2018). Opioid Overdose. Retrieved April 15, 2019, from https://www.cdc.gov/drugoverdose/data/index.html
Dowell, D., Haegerich, T. M., & Chou, R. (2016). CDC Guideline for Prescribing Opioids for Chronic Pain—United States, 2016. *Jama, 315*(15), 1624. doi:10.1001/jama.2016.1464
Florence, S., Zhou, S., Luo, S., & Xu, S. (2016). The Economic Burden of Prescription Opioid Overdose, Abuse, and Dependence in the United States, 2013. *Medical Care, 54*(10), 901–906. https://doi.org/10.1097/MLR.0000000000000625
Gomes, T., Tadrous, M., Mamdani, M. M., Paterson, J. M., & Juurlink, D. N. (2018). The Burden of Opioid-Related Mortality in the United States. *JAMA Netw Open, 1*(2), e180217. doi:10.1001/jamanetworkopen.2018.0217
Gowen, K., Cahill, M., Russell, K., & Cronquist, R. (2018). Medical Marijuana and Nursing Practice: Current Legislation, Scientific Literature Review, and Nursing Implications [PDF
Adults With Chronic Pain and an Overview of General Harms: A Systematic ReviewEffects of Cannabis Among Adults With Chronic Pain. *Annals of Internal Medicine, 167*(5), 319-331. doi:10.7326/M17-0155
Philpot, L. M., Ebbert, J. O., & Hurt, R. T. (2019). A survey of the attitudes, beliefs and knowledge about medical cannabis among primary care providers. *BMC Family Practice, 20*(1), N.PAG-N.PAG. doi:10.1186/s12875-019-0906-y
Rapp, L., Michalec, B., & Whittle, T. (2015). Delaware Physicians' Knowledge and Opinions on Medical Marijuana. *Delaware Medical Journal, 87*(10), 304–309.
Sideris, A., Khan, F., Boltunova, A., Cuff, G., Gharibo, C., & Doan, L. V. (2018). New York Physicians' Perspectives and Knowledge of the State Medical Marijuana Program. *Cannabis Cannabinoid Res, 3*(1), 74-84. doi:10.1089/can.2017.0046
State of New Jersey Department of Health. (2019). Medicinal Marijuana Program. Retrieved February 1, 2019, from https://www.nj.gov/health/medicalmarijuana/
Wen, H., & Hockenberry, J. M. (2018). Association of Medical and Adult-Use Marijuana Laws With Opioid Prescribing for Medicaid Enrollees. *JAMA Intern Med, 178*(5), 673-679. doi:10.1001/jamainternmed.2018.1007
White, K. M., Dudley-Brown, S., & Terhaar, M. F. (2016). *Translation of Evidence Into Nursing and Health Care, Second Edition* (Vol. Second edition). New York, NY: Springer Publishing Company.
Whiting, P. F., Wolff, R. F., Deshpande, S., Di Nisio, M., Duffy, S., Hernandez, A. V., . . . Kleijnen, J. (2015). Cannabinoids for Medical Use: A Systematic Review and Meta-analysis. *Jama, 313*(24), 2456-2473. doi:10.1001/jama.2015.6358
Williams, B. W., Kessler, H. A., & Williams, M. V. (2015). Relationship Among Knowledge Acquisition, Motivation to Change, and Self-Efficacy in CME Participants. *Journal of Continuing Education in the Health Professions, 35*(1), S13-21. doi:10.1002/chp.21291

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