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BACKGROUND

- Recreational marijuana product use was legalized in Oregon on July 1, 2015 and evaluation of use among surgical patients has been limited.
- Little data exists regarding the frequency of use among patients undergoing total joint arthroplasty and the influence this may have on perioperative opioid pain medication use.
- Given the current opioid epidemic, limiting post operative pain medication use has become a necessity and more information is needed regarding alternative pain medications such as marijuana products.

OBJECTIVES

- Determine the incidence of marijuana product use in a marijuana legal state in patients undergoing total hip and knee arthroplasty
- Determine if post operative narcotic usage at 3 months after a total hip or knee arthroplasty between patients using marijuana products and those that are not.

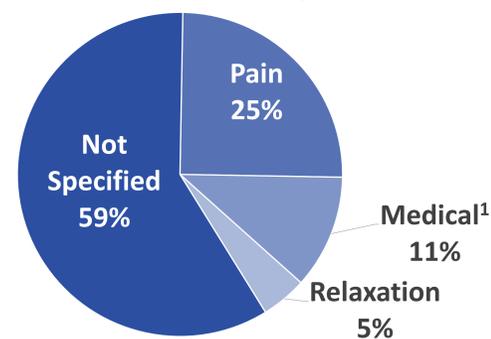
METHODS

- Retrospective review of a single surgeon fellowship-trained in adult reconstruction sub-specialty practice.
- One year of pre-operative history and physical notes of patient's undergoing primary or revision hip and knee arthroplasty within the time period of January 1, 2017 to December 31, 2017 were reviewed. 296 patients were included in the study for final analysis.
- The pre-operative marijuana use data was collected as was their preoperative narcotic pain medication use and narcotic pain medication use at 3 months post-operatively.
- The rate, frequency, and type of marijuana product usage was noted when available. The Oregon Prescription Drug Monitoring Database was used to check narcotic pain medication prescriptions pre and post-operatively.

RESULTS

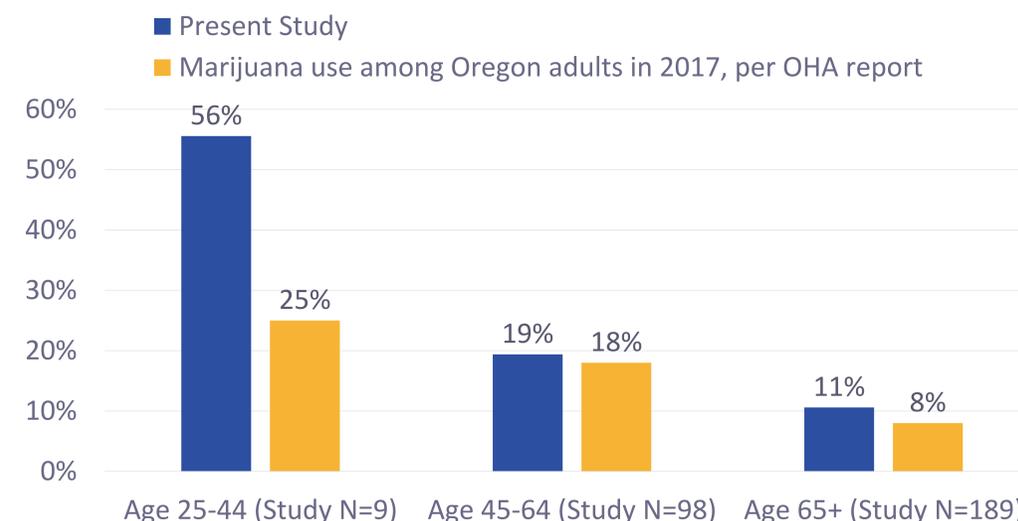
- The data collected over one year demonstrated that the overall incidence of preoperative marijuana product usage in patients undergoing total joint arthroplasty was 15% (44 patients out of 296)
- Pre-operative opioid use was significantly associated with marijuana use ($p=.03$). Compared with patients taking neither opioids nor tramadol, patients taking any opioid were 1.94 times as likely to use marijuana (95% CI = 1.07-3.50) and patients taking only tramadol were 2.26 times as likely to use marijuana (95% CI = 1.04-4.90) as patients taking no prescription pain medication.
- There was a trend of greater tobacco use among marijuana users (, though this was of borderline statistical significance ($p=.05$).
- Compared with never tobacco users, former tobacco users were 1.62 times as likely to use marijuana (95% CI = 0.90-2.92) and current tobacco users were 2.45 times as likely to use marijuana (95% CI = 1.12-5.37) as never tobacco users.
- Continued post-operative opioid use at 3 months ($p=.61$) and alcohol use ($p=.82$) were not significantly associated with pre-operative marijuana use.

Distribution of Reasons for Marijuana Use (N=44)



¹ Medical includes treatment of symptoms other than pain and unspecified medical usage.

Marijuana Use By Age Groups



CONCLUSIONS

- The overall incidence of a marijuana product use in patient's undergoing total joint arthroplasty was 15%.
- This incidence was slightly lower than the average of 19% active users in Oregon according to the 2019 Oregon Health Authority facts sheet regarding marijuana use.
- Orthopedic surgeons performing hip and knee total joint arthroplasty procedures who are practicing in states that have legalized recreational marijuana in its many forms should be aware of these products.
- Surgeons should be prepared to address the usage of these products when discussing the process of undergoing a total joint arthroplasty and strategies for minimizing pain pre and post-operatively.

FUTURE IMPLICATIONS

- Allow for a more open discussion regarding the perioperative usage of marijuana products between patients and arthroplasty surgeons.
- Further studies regarding perioperative pain medication use in those patients who use marijuana products

REFERENCES & ACKNOWLEDGEMENTS

- Oregon Health Authority 2019 Report: **Adult marijuana use, attitudes and related behaviors in Oregon.**
- Manchikanti L, Fellows B, Ailinani H, Pampati V: Therapeutic use, abuse, and nonmedical use of opioids: A ten-year perspective. Pain Physician 2010;13: 401-435.