Title: Differences in Characteristics and Downstream Drug Use among Opioid Naïve and Prior Opioid Users with Low Back Pain

Abstract Body:

Purpose/Hypothesis: Sales of prescription opioids have nearly quadrupled since 1999, despite insignificant improvements in pain and function, and concomitant increases in opioid-related morbidity and mortality noted with longitudinal use. Recent clinical practice guidelines have suggested that conservative treatment approaches, including physical therapy, are indicated as first line treatments for patients presenting with low back pain (LBP). The purpose of this study was to explore differences in personal characteristics, comorbidities, and downstream drug use between prior opioid users and opioid-naïve individuals with LBP. We hypothesized that categorization by prior use of opioids would result in significant differences, regardless of disability severity.

Number of Subjects: 709

Methods: 709 participants with LBP were evaluated in an observational study using baseline self-report and longitudinal healthcare utilization data from the Military Health System Data Repository. Participants were dichotomized into opioid-naïve or prior opioid use groups based upon prescription of an opioid medication prior to the index date. Patient characteristics and comorbidity comparisons were analyzed using t-tests and chi square analyses. After adjusting for significant variables, drug use counts were analyzed using Poisson log-linear regression. Participants were subdivided into high and low disability severity groups using the mean value of the Oswestry Disability Index (ODI), and Poisson log-linear regression was performed again, adjusting for control variables.

Results: Prior opioid users were found to have higher baseline ODI and Fear Avoidance Beliefs Questionnaire physical activity and work subscale scores, as well as instances of mental health disorders, chronic-pain, and insomnia. Prior opioid users were also found to fill more prescriptions for opioid and non-opioid pain medications in the year after index date. When classified by disability severity, the proportion of individuals still taking opioids at one year was significantly different in favor of prior opioid users.

Conclusion: Prior opioid exposure could significantly increase the likelihood for longitudinal opioid and non-opioid analgesic usage in patients presenting with LBP. Future studies are needed to validate these relationships in patients presenting with other types of pain.

Clinical Relevance: Prescribers of analgesics should be aware of the apparent relationship between prior opioid exposure and increased risk for longitudinal use in patients with LBP. These findings support continued efforts to educate clinicians on the importance of utilizing nonpharmacologic treatments for LBP. Moreover, these findings support provisions for explicit pain management education for prior opioid users, as these individuals may be more likely to use these medications long-term, regardless of disease severity and despite a noted lack of efficacy.