

Reviewer 1:

The manuscript is an interesting database analysis study comparing the rates of implant complications, 90-day infection rates, 90-day readmission, and hospitalization cost among Opioid Use Disorder patients (OUD) and Non-Users (NUO) undergoing primary TKA. The paper is well-written, the title is appropriate, and the abstract is exhaustive. The authors compared the two groups (11,536 patients for each one) after an age, gender, and Elixhauser-Comorbidity Index 1:1 match. Implant Complications and Length-of-Stay, Readmission Rates, and Reimbursements were analyzed. The authors concluded that patients with OUD are at a greater risk for implant complications and incur in higher episode of care costs. Comment 1: in methods, authors should report the test used to compare the cost in table 3. Comment 2: In methods, the Elixhauser-Comorbidity Index description should be improved. Comment 3: In results, the authors analyzed many types of complications; revision of knee replacement total, infection and wound, peri-prosthetic fracture around the prosthesis, dislocation of prosthetic implants and others. The authors found many statistically significant differences, but in discussion only the periprosthetic fractures, dislocation, and mechanical loosening were partially commented. Could be interesting for the reader to know the authors' other complications hypotheses.

Answer: Thank you very much for the feedback. The co-authors and I expanded further in the Materials & Methods section of the paper to give information about the Elixhauser-Comorbidity Index. We also included additional references discussing the impact opioid use disorder has on TKA.

Reviewer 2:

I have no specific comments at this time. This is an extremely well-written manuscript. The purpose, study design, analysis and conclusions are very appropriate given the findings.

Answer: Thank you!

Reviewer 3:

Title: Main idea is clear and understandable. Abstract: Abstract is readable. Introduction: Previous pertinent literature cited and discussed. Therefore, introduction is adequate. The necessity for the study is clearly indicated. Methods: Study design is appropriate to achieve study aim. Discussion: Discussion is sufficient. Also, limitations of the study were given. References: References are updated and accurate. Also references are relevant and comprehensive.

Answer: Thank you!

Reviewer 4:

Abstract Appropriate Introduction Well-presented, informative and interesting Methods Well-described Line 101-103. The authors should describe how they identified these patients. Line 104-108 Additional details for the matching process would be useful. Results In table 1, detailed demographics for both OUD and NOU groups should be provided. Data for readmission need to be described in one of the tables. Discussion Well presented with brief and concise overview of the literature. The authors should highlight what their study adds to the literature specifically. Line 217-219. The potential of confounding factors for the OUD group that could be related to pain, and therefore the use of opioids and simultaneously with increase rate of complications due to the confounding condition itself. Conclusions Appropriate

Answer: Thank you!