Author’s response to reviews

Title: Leveraging healthcare utilization to explore outcomes from musculoskeletal disorders: methodology for defining relevant variables from a health services data repository

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Editor Comments:

Please make sure that your manuscript has been properly and adequately copy-edited by an English native speaker/service.

RESPONSE: Thank you for the thorough review of our manuscript and we certainly agree with the majority of the comments. We have gone through and carefully scrutinized the manuscript for appropriate grammar and technical prose, and have provided adequate copy editing. We agree that this feedback has helped improve the quality of the report. Thank you to the reviewers for their comments. We have addressed individual concerns below under each reviewer comment. We have uploaded a clean and tracked-changes copy of the manuscript to highlight the specific changes made.

Reviewer reports:

Jane Zhao (Reviewer 1): The manuscript is original and the authors are insightful for taking on the challenge of exploring a topic of growing interest, that of defining relevant variables from a health services database. That being said, the numerous grammatical errors littered throughout the manuscript detracts from the actual writing and make the manuscript appear sloppy and
rushed in its execution, almost like the authors rushed to meet a deadline and did not perform the last one to two rounds of necessary meticulous copy editing. Below are a few of the errors that stood out, though the authors are recommended to finely comb through the entire manuscript again, rather than rely solely on fixing the mistakes noted below.

"Data" are plural. "Datum" is singular. Please make the appropriate copy edits throughout the manuscript.

Line 126- "This includes record..." Record should be plural.

Line 162 and in subsequent areas: rendering care should be rendering care.

Line 222- "Because a dedicated diagnosis code for FAI do not exist.." should be "does not exist"

Line 234- "and use of accessory care options are also available and an essential." And an essential... what?

Line 238- as established by Health Insurance Portability and Accountability (HIPAA). The extra A stands for Act.

RESPONSE: Thank you for pointing out these issues. We have addressed all of the ones listed here, as well as carefully combed over the manuscript in detail for any other copy edit issues.

Genevieve Melton (Reviewer 2): MIDM-D-17-00156 "Leveraging healthcare utilization to explore outcomes after arthroscopic hip surgery: methodology for defining relevant variables from a health services database" This paper, its approach and results are of interest to the BMC Medical Informatics and Decision Making Audience. The work associated with the described outcomes database is worthy to report. There are two items that detract significantly and currently make publishing the manuscript a concern. First, the authors should follow standard
scientific headers to the manuscript. Second, the manuscript has many many grammatical errors and if poorly written overall. This needs multiple rounds of editing and review by a technical writer before being potentially acceptable for publication.

RESPONSE: Thank you for the thorough review of our manuscript. We have gone through the manuscript carefully to provide extensive copy editing, having all authors (all primary English speakers) review it independently. Regarding your first item, we do agree that the scientific headers are different from ones commonly utilized in standard papers, however we followed strictly the header guidelines provided in the instructions to authors from this journal for this article type: https://bmcmedinformdecismak.biomedcentral.com/submission-guidelines/preparing-your-manuscript/database-article

Please shorten structured abstract language.

RESPONSE: The abstract has been reduced from 363 down to 306 words.

In the introduction, please remove the paragraph about "Big Data". This database does not technically qualify as big data or require techniques to manage as would be required for big data.

RESPONSE: Thank you for your comment, and I believe we did not do the best job in describing this database accurately. It certainly meets the definition of a big data set (volume, velocity, variety) and referred to as Big Data often by the US Government. It has an incredible amount of data, from 38 different files, and 100’s of sources worldwide. It is unique in that it has to account for healthcare capture in military deployments, as well as aircraft carriers and submarines. There is an incredible amount of resources allotted to the maintenance and upkeep the data repository. We added more in the description that speaks more to the 3 Vs. https://www.pdhealth.mil/news/blog/intro-data-moving-data-bits-evidence-based-planning-and-evaluation-military-health-system

Discussion should elaborate further on the limitations of the MDR database including estimates of the time/effort around maintaining MDR.
RESPONSE: We have updated the limitations section of the database and expanded on some of the limitation as well as add discussion related to the management/maintenance of MDR as requested.

The title "Restructuring Data to a Usable Format" might be better characterized as "Data Management and Normalization". Restructuring implies something else in the information management landscape.

RESPONSE: We agree that restructuring was not the best choice of terms. We have changed this section to instead be called “Organization of Data for Clinical Relevance” as our focus is on clinically relevant use of the data for better understanding of outcomes in MSK disorders.

The results about Utility should be placed into the utility section. Around use, etc.. And separated from discussion.

RESPONSE: Thank you – this was a helpful recommendation. We have separated the UTILITY and DISCUSSION sections (previously they were both merged into one section), and have moved utility related dialogue from the discussion and also from other areas into the separate Utility Section.

The discussion overall is limited in scope and should be expanded upon.

RESPONSE: We have added several paragraphs to the discussion section, expanding on the limitations of the database as requested.