

## Peer Review File

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### Reviewer A

The authors have submitted an interesting paper regarding the extent to which spine health care is multidisciplinary. I have some suggestions that may improve the quality of this manuscript.

Comment 1: In this paper, the authors relied upon online metrics to classify spine care as multidisciplinary or not. While important given the digitisation of society, online metrics seem insufficient to accurately classify a health care provider as being appropriately multidisciplinary or not. However, the authors' approach is understandable given the feasibility/difficulties of assessing multidisciplinary care otherwise. The authors should state in their limitations and perhaps also adjust the title to indicate that their assessment of multidisciplinary care is based only on online access.

Reply 1: Thank you for sharing this comment. We understand the reviewer's viewpoint that although online metrics such as website design may not be the most ideal indicator of whether an institution is indeed multidisciplinary, they are the most optimal factor to consider amongst all the available options.

Changes in text: We have adjusted the title and the "Discussion" section of the manuscript as advised (See Page 1 Line 1 and Page 11 Lines 237-239)

Comment 2: In light of my previous comment, and to demonstrate why the author's work is relevant, the authors could add some points (or elaborate on the line of reasoning mentioned in lines 159-164) about the importance of digital health care/online health care access and its potential to improve efficiency and access to medicine etc.

Reply 2: We appreciate this feedback. We agree with the reviewer's comment regarding the value of further explaining the importance of online health care access as it pertains to the enhancing the patient experiencing and increasing the efficiency of care. We feel that there are many specific patient scenarios where proper online triage makes a major difference, such as in the case of a patient with a classic presentation of low back pain who is referred to orthopedic spine instead of physiatry for further management.

Changes in text: We have adjusted the “Discussion” section to incorporate the aforementioned example of a classic lumbosacral strain patient in order to highlight the importance of optimized online care (Page 9 Line 173-177)

Comment 3: The authors could provide a figure/ flow-chart illustrating a model example of what multidisciplinary spine providers should use in terms of website design/ automated triaging/ online scheduling.

Reply 3: We appreciate this suggestion. We agree that a flow-chart highlighting an optimal example of multidisciplinary spine care coordination would be valuable in enhancing our manuscript.

Changes in text: We have included a new figure illustrating the ideal spine care triaging and scheduling process (Figure 3 Page 11 Line 228-229).

Comment 4: The authors could update their findings based on the newer Newsweek 2022 list.

Reply 4: Thank you for this suggestion. We evaluated the 2022 ranking list and noted it to be similar to the 2021 list. Therefore, we felt redoing the analysis would not enhance the quality of the manuscript to a significant degree, as we simply used Newsweek’s list in the first place to obtain an adequate sample of institutions which the 2021 list already provides.

Changes in text: Given how we are still utilizing the Newsweek 2021 list in our analysis, we have not made any changes to the text.

Comment 5: In lines 154-168, the authors could add some citations/statistics.

Reply 5: Thank you for this feedback. We recognize the importance of including more references to support our statements, such as specific papers highlighting the value of multidisciplinary spine care and also the role of different providers in contributing to spine care.

Changes in text: We have included references supporting our previous statements in the “Discussion” section (Page 9 Line 181 and Page 10 Line 206 and 208).

Comment 6: I found the results from the paper by Yanamadala et al. that the authors have cited to be very interesting and impactful regarding the overutilization of spinal surgery (<https://doi.org/10.1097/BRS.0000000000002065>) and the implications this would have on costs and resource use. The authors could elaborate on their citation and add some numbers/statistics.

Reply 6: We appreciate the positive feedback the reviewer has shared regarding our citation of Yanamadala et al.'s work. We agree regarding the importance of further discussing Yanamadala et al.'s results and tying this in with the consequences for costs and resource utilization.

Changes in text: We have updated the manuscript to further expand upon Yanamadala et al.'s work (Page 5 Lines 74 to 78).

Comment 7: Minor grammatical inconsistencies e.g., the Methods should be reported in past tense.

Reply 7: Thank you for sharing this feedback. We have corrected the referenced grammatical errors.

Changes in text: We have made the corresponding grammatical changes suggested by the reviewer (Page 6 Line 108 and 110 and Page 7 Line 130-131).

## **Reviewer B**

Comment 1: Title of the study is misleading needs revision, description of study does not measure for effectiveness/ multidisciplinary approach to spine care but is only looking at website advertisements of disciplines offered in institutions should be indicated in title.

Reply 1: We appreciate this comment. We understand the reviewer's viewpoint that our manuscript focuses on the website designs of spine care institutions rather than the effectiveness of true multidisciplinary spine care.

Changes in text: We have updated the title of the manuscript to better reflect how we investigate the online presentation of spine care institutions rather than the true efficacy of multidisciplinary care (Page 1 Line 1).

Comment 2: Minor revisions for syntax/grammar/spelling

170 need for spine care

183 - a burden on surgeons' schedules. Therefore systems need to be updated to allow for

208 nature of this list. Regardless, we feel that this Nesweek source provided an adequate

Reply 2: Thank you for sharing these syntax errors.

Changes in text: We have made the corresponding grammatical changes suggested by the reviewer (Page 9 Line 183, Page 10 Line 210, Page 11 Line 234).

## **Reviewer C**

Comment 1: The authors present a review of multidisciplinary spine centers from the US News and World Report. The authors present criteria for characterizing centers as multidisciplinary, however I do not believe that the authors make a convincing argument that their criteria are exhaustive re: inclusion or exclusion of centers as multidisciplinary. They need to include a more comprehensive literature review re: patient preferences and feelings toward online access/websites. Specifically:

Line 83 - We furthermore hypothesize that the majority 83 of patients will not be able to schedule appointments online without having an online 84 portal with their respective institution or choose their own providers.

Reply 1: Thank you for providing this feedback. We understand the reviewer's viewpoint that our criteria for classifying institutions as multidisciplinary may not be exhaustive, as we solely rely on how institutions describe themselves on their online websites. Despite this being the case, we feel that there is no other more optimal factor to look at when classifying institutions, such as in-person marketing avenues. Additionally, we agree with the reviewer's suggestion regarding the need for further discussion pertaining to patient perceptions of online care access.

Changes in text: We have adjusted the "Discussion" section of the manuscript to further discuss the benefits of online self-scheduling from the patient perspective (Page 9-10 Lines 184-195).

Comment 2: Why Is an online portal portrayed as a negative in this study, and why do the authors use that variable to argue against classifying a program as multidisciplinary?

Reply 2: Thank you for this comment. Your point is well taken that an online portal is not by any means a negative. Rather than portray this as a negative, our intention is to promote the value of multidisciplinary information and care. For instance, a patient who presents with a spine care need would significantly benefit from simply registering for an appointment online via multidisciplinary self-scheduling, as this enables greater control over appointment time and provider selection amongst different spine care practitioners while eliminating the additional administrative steps of setting up an online medical record portal.

Changes in text: We have adjusted the “Methods” section of the manuscript to more clearly describe online portals in a neutral manner (Page 7 Lines 122-123).

Comment 3

Additional comments: Line 24 - too should be to

Line 52 - with 1-2% of the U.S. population is disabled due 52 to low back pain (2,3). This is grammatically wrong.

Line 187-203 should be in intro

Reply 3: Thank you for sharing this feedback. We will make the appropriate changes in the abstract and “Introduction” section. We have decided to include the “Limitations” section (i.e. Lines 187-203) in the “Discussion” section given how we feel that this content is best placed after the “Results” section.

Changes in text: We have made the corresponding grammatical changes (Page 2 Line 34 and Page 5 Line 64).