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Dear WJO Editorial Board and Reviewers,

Thank you for your suggestions on and support of our manuscript. Please find the requested response to reviewers below.

Sincerely,

The Authors

Reviewer's code: 02739495

SPECIFIC COMMENTS TO AUTHORS

The whole manuscript is well designed and with a fluently style.

Author response: Thank you for your support of our manuscript.

Reviewer's code: 00505755

SPECIFIC COMMENTS TO AUTHORS

This is an interesting research about social media influencers in orthopaedic surgery. The figure 1 may be revised to include the detailed explanation for primary care sports medicine and physical therapy.

Author response: Thank you for your support of our manuscript. We have provided additional description of primary care sports medicine and physical therapy in the figure caption.

We added the following text to the figure legend: Primary care sports medicine refers to internal medicine, family practice, or pediatric doctors who undergo additional fellowship training in sports medicine. Physical therapy refers to those practicing physical therapy/physiotherapy.

Reviewer's code: 02689304



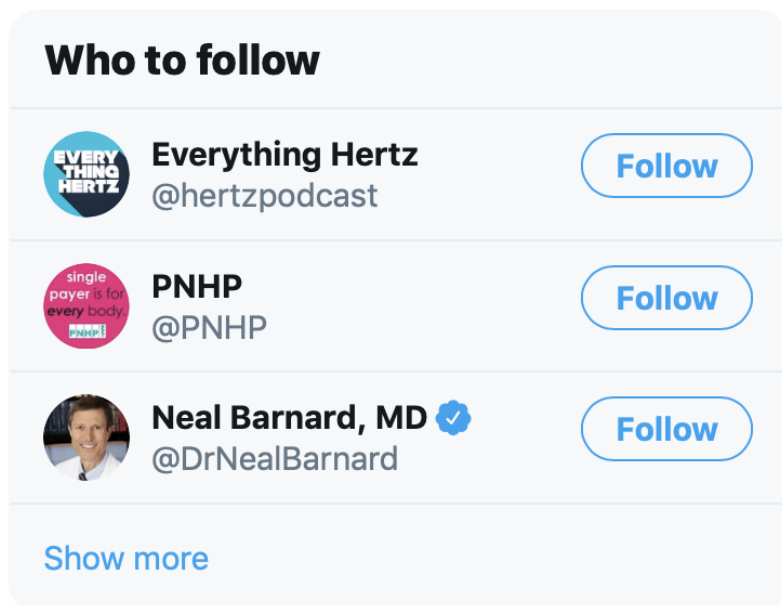
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SPECIFIC COMMENTS TO AUTHORS

The framework of this manuscript is intact and English writing is smooth. The value of this study is unrelated to an orthopedic special field and it therefore will not be commented. Only one doubt is suggested: 1. The title “Who you should be following” is unusual. It should be “Whom you should be following”?

Author response: Thank you for your support of our manuscript. We appreciate your attention to our title and agree that in traditional (old) English “whom” would be the correct construct. However, in the case of following people on social media the accepted norm is actually to use “who.” This is reflected by professional English writers in the lay press ([1](#), [2](#), [3](#), [4](#), etc.), [previous scientific studies](#) in English journals, and even Twitter itself (see supporting Twitter screenshot). For this reason, we have left the title as is.



Responses to Dr. Jia-Ping Yan:



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- (1) Running title, ORCIDs, author contributions, conflict-of-interest statement, PRISMA 2009 checklist statement, telephone/fax numbers have been added to the cover page.
- (2) BACKGROUND and AIM have been revised: “**BACKGROUND:** Social media has been credited with the potential to transform medicine, and Twitter was recently named “an essential tool” for the academic surgeon. Despite this, peer-to-peer and educational influence on social media has not been studied within orthopaedic surgery. This knowledge is important to identify who is controlling the conversation about orthopaedics to the public. We hypothesized that the plurality of top influencers would be sports medicine surgeons, that social media influence would not be disconnected from academic productivity, and that some of the top social media influencers in orthopaedic surgery would not be orthopaedic surgeons.
AIM: To identify the top 100 social media influencers within orthopaedics, characterize who they are, and relate their social media influence to academic influence.”
- (3) Core tip has been added: “In this study, we identify and characterize the top 100 social media influencers in orthopaedic surgery. We find that the top influencers were predominantly board-certified, sports-medicine subspecialists working in private practice in the United States (though 22% of top influencers were not orthopaedic surgeons).



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Social media influence was highly concordant with academic productivity as measured by the academic h-index.”

- (4) Reference styling has been updated to WJO standards.
- (5) ARTICLE HIGHLIGHTS has been added:

“Research background

Social media is playing an increasingly large role in medicine, and several studies have described how orthopaedic patients use social media. In addition to patient use, Twitter was named an “essential tool” for the academic surgeon given its ability to serve as a tool to share findings, collaborate, network, and educate. Despite the large emerging role of social media in medicine, however, no study has assessed the top social media influencers in orthopaedic surgery.

Research motivation

Given that social media is playing an increasingly large role as a face by which patients are exposed to orthopaedics, identifying who is sharing information to patients is highly important. These individuals play a critical role in setting patient expectations, encouraging appropriate utilization, and providing accurate orthopaedic education.

Research objectives

The purpose of this study was to identify the top 100 social media influencers within orthopaedics, characterize who they are, and relate their social media influence to



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academic influence. This analysis will allow us to identify who is controlling the conversation about orthopaedics to the public.

Research methods

In this observational study, we queried the Right Relevance API for the topic of “orthopaedics.” This API uses sophisticated partitioning techniques to calculate influence based on a variety of factors, including connections (follower/following) to other influencers and engagement (views, likes, retweets). We then used these individuals’ public Twitter bios and other public sources to characterize them with respect to specialty, subspecialty, practice setting, location, board certification, and academic *h*-index.

Research results

We identified the 100 top influencers in orthopaedic surgery; these individuals represented 9 different countries. The mean academic *h*-index of the top influencers ($N=79$) was 13.67 ± 4.12 (mean \pm 95% CI) and median 7 (range 1-89), which can be references against the median reported *h*-index of academic orthopaedic faculty of 5 and orthopaedic chairpersons of 13. Of the 100 top influencers, 78% were orthopaedic surgeons. Sports medicine (54%), hand & upper extremity (18%), and spine (8%) were the most common orthopaedic subspecialties. Most influencers worked in private practice (53%), followed by academics (17%), privademics (14%), and hospital-based (9%). All board-eligible orthopaedic surgeons were board-certified.



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Research conclusions

The top orthopaedic social media influencers on Twitter were predominantly board-certified, sports-medicine orthopaedic surgeons, representing countries from around the world. However, 22% of top influencers were not orthopaedic surgeons, which is important to identify given the potential for these individuals to influence patients' perceptions and expectations. Social media influence within orthopaedics was not disconnected from academic index: the median *h*-index among top influencers (7) was higher than the median reported *h*-index of orthopaedic academic faculty (5). Here we also provide the top influencer network for other sports surgeons to engage with on social media to improve their own social media influence.

Research perspectives

While we find that the majority of orthopaedic influencers are board-certified orthopaedic surgeons, more than 1/5 of the top influencers are not. Moving forward, orthopaedic surgeons should continue to increase their social media presence to ensure they are controlling the conversation about orthopaedics to the public. From an academic perspective, future work is indicated to identify the specific impact social media has on patient decision making and outcomes."

(6) References have been checked and modified accordingly.



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(7) Figure 1 has been made editable and title has been updated: “**Figure 1.**

Occupations of the top social media influencers in orthopaedic surgery.”